

COLUMBIA HOUSING AUTHORITY

Bear Creek Development Renovations

Solicitation Number: 20251107

Project Location: Bear Creek Apartments, Elleta Boulevard, Columbia, MO 65201

Procurement Type: Request for Proposals (RFP)

RFP Distribution: <https://columbiaha.com/job-bid-opportunities/>

SECTION 1 — Request for Proposals

Owner: Columbia Housing Authority (CHA)

201 Switzler Street, Columbia, MO 65203

Contact: Justin Anthony, Director of Facilities & Modernization

Email: Janthony@Columbiaha.com

Phone: (573) 819-1195 | Fax: (573) 443-0051

Project Description

CHA requests sealed **proposals** from qualified General Contractors for the **Bear Creek Development Renovations** project, which includes:

- **Security Cameras:** Installation, integration, and testing of a complete camera system.
- **Roof Replacement:** Removal of existing roofing, repair of decking, and installation of a new system with insulation and waterproofing.
- **Unit Renovation:** Conversion of the existing office and maintenance storage unit back into a residential unit, including demolition, MEP, flooring, paint, and finishes.

Refer to **Attachment E: Specifications & Drawings** — *Prepared by Rosemann & Associates for full details.*

Funding Source: Boone County Missouri ARPA allocation

Federal Funding Notice

This project is funded in whole with **American Rescue Plan Act (ARPA)** funds administered by Boone County Missouri and the U.S. All applicable federal regulations under **2 CFR Part 200**, including **Appendix II contract provisions**, and the **HUD Handbook 7460.8 REV 2** apply.

Key Dates

- **RFP Run Time-** 24 days, Friday November 7th until Monday December 1st
- **Mandatory Pre-Proposal Meeting:** Monday, November 17, 2025, 10:00 AM CT
Location: Property Management Office, Bear Creek Housing Development, 1109B Elleta Blvd, Columbia, MO 65201
- **Sealed Proposal Deadline:** Monday, December 1st, 2025, 10:00 AM CT
Delivery: Mailed or hand-delivered, SEALED and CLEARLY MARKED to:
Columbia Housing Authority
201 Switzler Street, Columbia, MO 65203
Attention: Justin Anthony, Director of Facilities & Modernization
(Project Description – Project Number 20251107)
- **Public Proposal Opening:** Monday, December 1, 2025, at 10:05 AM
All interested parties are invited to attend. The opening will be conducted in person at: Columbia Housing Authority, 201 Switzler Street, Columbia, MO 65203
- **Contract Execution Deadline: December 19, 2025** (fully executed with selected General Contractor)
- **Estimated Start:** ASAP
- **Completion Deadline: May 1st, 2026**

Requirements

- **Proposal Security:** 5% of total base proposal (Bid Bond, Certified Check, or Bank Draft).
- **Wage & Employment Standards:** Must comply with Davis-Bacon prevailing wage.
- **Equal Opportunity:** Subject to Section 3 and Executive Order 11246.
- **Conflict of Interest:** Offerors must certify that no officer, employee, or agent of the Columbia Housing Authority has any direct or indirect interest, financial or otherwise, in this solicitation or any resulting contract.
- **Site Review:** Required before submission during Pre- Bid meeting
- **Addenda:** Any clarifications or changes will be issued in writing through CHA's website and emailed to plan-holders from Pre Bid Meeting.

SECTION 2 — Table of Contents (Formal Project Manual)

Project Manual

1. Request for Proposals (Section 1)
2. Instructions to Offerors (HUD Form 5369-B, Construction)
3. Bidding / Contracting Notations
4. Missouri Tax Exemption
5. Insurance Requirements

6. Wage Requirements (Davis-Bacon Act)
7. HUD Section 3 Clause
8. General Conditions of the Contract (HUD Form 5370)
9. Sample Agreement Between Contractor and Owner
10. Specifications and Drawings (Attached Specification Book and Drawings by **Rosemann & Associates**)

Proposal Packet

11. Proposal Form (RFP Response Form)
12. HUD Form 5369-A – Representations & Certifications
13. HUD Form 5369-C – Certifications & Representations of Offerors (Construction Contract)
14. Proposal Bond (5% of Base Proposal)
15. E-Verify Affidavit
16. Non-Collusion Affidavit (Notarized)
17. Statement of Offeror's Qualifications (Notarized)
18. Certification Regarding Debarment (HUD Form 2992)
19. Certification Regarding Lobbying (Appendix A to 24 CFR Part 87)
20. Pre-Proposal Sign-In Sheet Template
21. Proposal Submission Checklist
22. Evaluation Scoring Sheet

SECTION 3 — Proposal Submission & Evaluation

3.1 Proposal Contents

To be considered responsive, each proposal must include:

1. Cover Letter
2. Executive Summary
3. Relevant Experience and Qualifications
4. Technical Approach and Schedule
5. Cost Proposal / Pricing Breakdown
6. References
7. Section 3 Plan (if applicable)
8. Required HUD and CHA Forms

3.2 Evaluation Criteria and Scoring

See attachment M

Proposals shall remain valid for **sixty (60) calendar days** following the submission deadline. CHA reserves the right to conduct interviews, seek clarifications, and request **Best and Final Offers (BAFOs)** prior to final selection. Evaluation results and scoring shall be documented and retained in the procurement file.

SECTION 4 — Bidding and Contracting Requirements

4.1 Insurance Requirements

- Certificates must list CHA as Certificate Holder.
- **Workers' Compensation:** Per MO law.
- **CGL:** \$1,000,000 per occurrence.
- **Auto Liability:** \$1,000,000 combined single limit.
- **Employee Dishonesty Bond:** \$10,000 minimum.
- **Certificates and Bonds:** Must be submitted within **5 calendar days** of Notice to Proceed.

4.2 Wage Requirements (Davis-Bacon)

- Pay prevailing wage rates as issued by the U.S. Department of Labor.
- Submit **weekly certified payrolls (WH-347)** within 10 days of each pay period.
- Payrolls must include signed **Statement of Compliance**.
- All payroll documentation required before final payment.

4.3 HUD Section 3 Clause

- Must comply with **Section 3 of the HUD Act of 1968 (12 U.S.C. 1701u)**.
- Employment and contracting opportunities to be directed to low- and very-low-income persons.
- Must notify labor organizations and post Section 3 notices at site.

SECTION 5 — Proposal Form Highlights

- Offerors shall provide all pricing, subcontractors, and acknowledgments of addenda.
 - Proposal valid for **60 calendar days** from deadline.
 - Completion: by **April 1, 2026**.
 - Liquidated Damages: \$__ per day (to be finalized).
 - Include Subcontractor List and full contact info.
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SECTION 6 — Bonds and Affidavits

- **Proposal Bond:** 5% of base proposal, binding Principal and Surety to CHA.
 - **Performance and Payment Bonds:** 100% of Contract Price each, including Power of Attorney; venue Columbia, MO.
 - **E-Verify Affidavit:** Compliance with RSMO 285.530 and federal authorization.
 - **Non-Collusive Affidavit:** Certifies proposal is genuine and not collusive.
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SECTION 7 — Contract Form & Federal Clauses

7.1 Standard Form of Agreement

This project will utilize a **Lump Sum, Fixed-Price Construction Contract** with progress payments based on verified work completed.

The **Standard Form of Agreement (Attachment Q)** shall serve as the contract template. The selected contractor shall execute this agreement by **December 19, 2025**, without modification except as approved in writing by CHA. All clauses, certifications, and federal requirements contained within this solicitation are incorporated by reference.

7.2 ARPA Federal Clauses (Exhibit D)

Includes the following mandatory provisions per **2 CFR 200 Appendix II**:

- Termination for Convenience/Default/Non-Appropriation.
 - Equal Employment Opportunity (Exec. Order 11246).
 - Davis-Bacon Act (prevailing wages).
 - Contract Work Hours & Safety Standards Act.
 - Clean Air Act & Federal Water Pollution Control Act.
 - Suspension & Debarment (SAM.gov compliance).
 - Byrd Anti-Lobbying Amendment.
 - Procurement of Recovered Materials.
 - Prohibition on Certain Telecom Equipment (2 CFR 200.216).
 - Domestic Preference (2 CFR 200.322).
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SECTION 8 — Attachments

- **Attachment A:** HUD 5369-B – Instructions to Offerors
- **Attachment B:** HUD 5370 – General Conditions
- **Attachment C:** Davis-Bacon Wage Determination
- **Attachment D:** Sample Agreement (Included)
- **Attachment E:** Specifications & Drawings — *Prepared by Rosemann & Associates (Attached Specification Book and Plan Set)*
- **Attachment F:** HUD 5369A – Reqs & Certs

- **Attachment G:** Proposal Bond Form
- **Attachment H:** E-Verify Affidavit
- **Attachment I:** Non-Collusion Affidavit
- **Attachment J:** Performance & Payment Bonds
- **Attachment K:** ARPA Federal Contract Clauses
- **Attachment L:** Pre-Proposal Sign-In Sheet Template
- **Attachment M:** Evaluation Scoring Sheet

Instructions to Offerors

Non-Construction

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

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-03291 -

1. Preparation of Offers

(a) Offerors are expected to examine the statement of work, the proposed contract terms and conditions, and all instructions. Failure to do so will be at the offeror's risk.

(b) Each offeror shall furnish the information required by the solicitation. The offeror shall sign the offer and print or type its name on the cover sheet and each continuation sheet on which it makes an entry. Erasures or other changes must be initialed by the person signing the offer. Offers signed by an agent shall be accompanied by evidence of that agent's authority, unless that evidence has been previously furnished to the HA.

(c) Offers for services other than those specified will not be considered.

2. Submission of Offers

(a) Offers and modifications thereof shall be submitted in sealed envelopes or packages (1) addressed to the office specified in the solicitation, and (2) showing the time specified for receipt, the solicitation number, and the name and address of the offeror.

(b) Telegraphic offers will not be considered unless authorized by the solicitation; however, offers may be modified by written or telegraphic notice.

(c) Facsimile offers, modifications or withdrawals will not be considered unless authorized by the solicitation.

3. Amendments to Solicitations

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

(b) Offerors shall acknowledge receipt of any amendments to this solicitation by

- (1) signing and returning the amendment;
- (2) identifying the amendment number and date in the space provided for this purpose on the form for submitting an offer,
- (3) letter or telegram, or
- (4) facsimile, if facsimile offers are authorized in the solicitation. The HA/HUD must receive the acknowledgment by the time specified for receipt of offers.

4. Explanation to Prospective Offerors

Any prospective offeror desiring an explanation or interpretation of the solicitation, statement of work, etc., must request it in writing soon enough to allow a reply to reach all prospective offerors before the submission of their offers. Oral explanations or instructions given before the award of the contract will not be binding. Any information given to a prospective offeror concerning a solicitation will be furnished promptly to all other prospective offerors as an amendment of the solicitation, if that information is necessary in submitting offers or if the lack of it would be prejudicial to any other prospective offerors.

5. Responsibility of Prospective Contractor

(a) The HA shall award a contract only to a responsible prospective contractor who is able to perform successfully under the terms and conditions of the proposed contract. To be determined responsible, a prospective contractor must -

- (1) Have adequate financial resources to perform the contract, or the ability to obtain them;

- (2) Have a satisfactory performance record;
- (3) Have a satisfactory record of integrity and business ethics;
- (4) Have a satisfactory record of compliance with public policy (e.g., Equal Employment Opportunity); and
- (5) Not have been suspended, debarred, or otherwise determined to be ineligible for award of contracts by the Department of Housing and Urban Development or any other agency of the U.S. Government. Current lists of ineligible contractors are available for inspection at the HA/HUD.

(b) Before an offer is considered for award, the offeror may be requested by the HA to submit a statement or other documentation regarding any of the foregoing requirements. Failure by the offeror to provide such additional information may render the offeror ineligible for award.

6. Late Submissions, Modifications, and Withdrawal of Offers

(a) Any offer 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 HA/ HUD that the late receipt was due solely to mishandling by the HA/ HUD after receipt at the HA;
- (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 U.S. Federal holidays; or
- (4) Is the only offer received.

(b) Any modification of an offer, except a modification resulting from the HA's request for "best and final" offer (if this solicitation is a request for proposals), is subject to the same conditions as in subparagraphs (a)(1), (2), and (3) of this provision.

(c) A modification resulting from the HA's request for "best and final" offer received after the time and date specified in the request will not be considered unless received before award and the late receipt is due solely to mishandling by the HA after receipt at the HA.

(d) The only acceptable evidence to establish the date of mailing of a late offer, 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 offer, 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, offerors should request the postal clerk to place a hand cancellation bull's-eye postmark on both the receipt and the envelope or wrapper.

(e) The only acceptable evidence to establish the time of receipt at the HA is the time/date stamp of HA on the offer wrapper or other documentary evidence of receipt maintained by the HA.

(f) The only acceptable evidence to establish the date of mailing of a late offer, 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, offerors should request the postal clerk to place a legible hand cancellation bull's eye postmark on both the receipt and the envelope or wrapper.

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

(h) If this solicitation is a request for proposals, proposals 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 award. Proposals may be withdrawn in person by a offeror or its authorized representative if the identity of the person requesting withdrawal is established and the person signs a receipt for the offer before award. If this solicitation is an Invitation for bids, bids may be withdrawn at any time prior to bid opening.

7. Contract Award

(a) The HA will award a contract resulting from this solicitation to the responsible offeror whose offer conforming to the solicitation will be most advantageous to the HA, cost or price and other factors, specified elsewhere in this solicitation, considered.

(b) The HA may

- (1) reject any or all offers if such action is in the HA's interest,
- (2) accept other than the lowest offer,
- (3) waive informalities and minor irregularities in offers received, and (4) award more than one contract for all or part of the requirements stated.

(c) If this solicitation is a request for proposals, the HA may award a contract on the basis of initial offers received, without discussions. Therefore, each initial offer should contain the offeror's best terms from a cost or price and technical standpoint.

(d) A written award or acceptance of offer mailed or otherwise furnished to the successful offeror within the time for acceptance specified in the offer shall result in a binding contract without further action by either party. If this solicitation is a request for proposals, before the offer's specified expiration time, the HA may accept an offer, whether or not there are negotiations after its receipt, unless a written notice of withdrawal is received before award. Negotiations conducted after receipt of an offer do not constitute a rejection or counteroffer by the HA.

(e) Neither financial data submitted with an offer, nor representations concerning facilities or financing, will form a part of the resulting contract.

8. Service of Protest

Any protest against the award of a contract pursuant to this solicitation shall be served on the HA by obtaining written and dated acknowledgment of receipt from the HA at the address shown on the cover of this solicitation. The determination of the HA with regard to such protest or to proceed to award notwithstanding such protest shall be final unless appealed by the protester.

9. Offer Submission

Offers shall be submitted as follows and shall be enclosed in a sealed envelope and addressed to the office specified in the solicitation. The proposal shall show **the hour and date specified in the solicitation for receipt, the solicitation number, and the name and address of the offeror, on the face of the envelope.**

It is very important that the offer be properly identified on the face of the envelope as set forth above in order to insure that the date and time of receipt is stamped on the face of the offer envelope. Receiving procedures are: date and time stamp those envelopes identified as proposals and deliver them immediately to the appropriate contracting official, and only date stamp those envelopes which do not contain identification of the contents and deliver them to the appropriate procuring activity only through the routine mail delivery procedure.

[Describe bid or proposal preparation instructions here:]

Attachment B: HUD 5370 – General Conditions

General Conditions for Construction Contracts - Public Housing Programs

U.S. Department of Housing and Urban
Development
Office of Public and Indian Housing
OMB Approval No. 2577-0157 (exp. 1/31/2027)

**Applicability. This form is applicable to any
construction/development contract greater than \$250,000.**

Public reporting burden for this collection of information is estimated to average 1.0 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Comments regarding the accuracy of this burden estimate and any suggestions for reducing this burden can be sent to the Reports Management Officer, Office of Policy Development and Research, REE, Department of Housing and Urban Development, 451 7th St SW, Room 4176, Washington, DC 20410-5000. When providing comments, please refer to OMB Approval No. 2577-0157. **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 75. 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. Responses to the collection of information are required to obtain a benefit or to retain a benefit. The information requested does not lend itself to confidentiality. HUD may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a currently valid OMB number.

Clause		Page	Clause		Page
1.	Definitions	2	Administrative Requirements		
2.	Contractor's Responsibility for Work	2	25.	Contract Period	9
3.	Architect's Duties, Responsibilities and Authority	2	26.	Order of Precedence	9
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	9	48.	Procurement of Recovered	19
Liens			Materials		

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.
- (j) **"Specifications"** means the written description of the technical requirements for construction and includes the criteria and tests for determining whether the requirements are met.
- (i) **"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.

2. Contractor's Responsibility for Work

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.

- (b) The Architect shall serve as the Contracting Officer's technical representative with respect to architectural, Schedule 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 of the work, and that it has investigated and satisfied itself

- (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

- (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 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. Construction 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

(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 Construction 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

- (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

accordance with the terms and conditions of the 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

retain ten (10) percent of the amount of progress

- (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 subcontract.

Name:

Title:

Date:

- (f) Except as otherwise provided in State law, the PHA shall

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 Convenience 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

within

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

35. Assignment of Contract

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

36. Insurance

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

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

- (3) Automobile Liability on owned and non-owned motor vehicles used on the site(s) or in connection therewith for a combined single limit for bodily injury and property damage of not less than \$ _____
[Contracting Officer insert amount] per occurrence.

- (b) Before commencing work, the Contractor shall furnish the PHA with a certificate of insurance evidencing that Builder's Risk (fire and extended coverage) Insurance on all work in place and/or materials stored at the building site(s), including foundations and building equipment, is in force. The Builder's Risk Insurance shall be for the benefit of the Contractor and the PHA as their interests may appear and each shall be named in the policy or policies as an insured. The Contractor in installing equipment supplied by the PHA shall carry insurance on such equipment from the time the Contractor takes possession thereof until the Contract work is accepted by the PHA. The Builder's Risk Insurance need not be carried on excavations, piers, footings, or foundations until such time as work on the superstructure is started. It need not be carried on landscape work. Policies shall furnish coverage at all times for the full cash value of all completed construction, as well as materials in place and/or stored at the site(s), whether or not partial payment has been made by the PHA. The Contractor may terminate this insurance on buildings as of the date taken over for occupancy by the PHA. The Contractor is not required to carry Builder's Risk Insurance for modernization work which does not involve structural alterations or additions and where the PHA's existing fire and extended coverage policy can be endorsed to include such work.

- (c) All insurance shall be carried with companies which are financially responsible and admitted to do business in the State in which the project is located. If any such insurance is due to expire during the construction period, the Contractor (including subcontractors, as applicable) shall not permit the coverage to lapse and shall furnish evidence of coverage to the Contracting Officer. All certificates of insurance, as evidence of coverage, shall provide that no coverage may be canceled or non-renewed by the insurance company until at least 30 days prior written notice has been given to the Contracting Officer.

37. Subcontracts

- (a) Definitions. As used in this contract -

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

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

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

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

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

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

39. Equal Employment Opportunity

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

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

(c) **The Contractor/Seller** agrees 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/Seller 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/Seller 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/Seller shall comply with Executive Order 11246, as amended, and the rules, regulations, and orders of the Secretary of Labor.**

(g) **The Contractor/Seller 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/Seller 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/Seller is in noncompliance 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 75, 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 75 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 prioritization requirements and shall state the minimum percentages of labor hour requirements established in the Benchmark Notice (FR-6085-N-04).**

(d) **The contractor agrees to include this section 3 clause in every subcontract subject to compliance with regulations in 24 CFR Part 75, 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 75. 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 75.**

(e) **Noncompliance with HUD's regulations in 24 CFR Part 75 may result in sanctions, termination of this contract for default, and debarment or suspension from future HUD assisted contracts.**

(f) **Contracts, subcontracts, grants, or subgrants subject to Section 7(b) of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 5307(b)) or subject to tribal preference requirements as authorized under 101(k) of the Native American Housing Assistance and Self-Determination Act (25 U.S.C. 4111(k)) must provide preferences in employment, training, and business opportunities to Indians and Indian organizations, and are therefore not subject to the requirements of 24 CFR Part 75.**

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 Acts 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

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 \$27 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. DOL posts current fines at: <https://www.dol.gov/whd/govcontracts/cwhssa.htm#cmp>
 - (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.
- () 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.

COLUMBIA HOUSING AUTHORITY

WAGE REQUIREMENTS

1. Davis-Bacon Act Compliance

The Contractor is hereby notified that this project is subject to the provisions of the **Davis-Bacon Act (40 U.S.C. §§ 3141–3148)**.

- The Act requires the payment of **prevailing wage rates**, as determined by the U.S. Department of Labor, to all laborers and mechanics employed on federal government construction projects in excess of \$2,000.
- “Construction” includes alteration, repair, painting, decorating, and related work on public buildings or public works.
- No employee engaged in work under this Contract shall be paid less than the wage rates established in the applicable **Wage Rate Determination** furnished by the Owner.

2. Prevailing Wage Rates

- The Contractor shall comply with the **Prevailing Wage Rate Determination** issued by the U.S. Department of Labor for the project location.
- The Contractor is responsible for ensuring that **all Subcontractors** also comply with these wage requirements.
- The Contractor shall maintain accurate records of wages paid to each employee and make such records available for inspection by the Owner or authorized federal representatives.

3. Payroll Submissions

To demonstrate compliance with the Davis-Bacon Act and related labor standards, the Contractor shall:

1. **Submit Weekly Payroll Reports**
 - Payrolls for all employees and Subcontractors must be submitted to the Owner for each week in which any contract work is performed.
 - Reports must be submitted no later than **ten (10) days after the end of the pay period**.
2. **Form and Documentation**
 - Payrolls may be submitted in any format; however, the Owner will provide **U.S. Department of Labor Form WH-347** for this purpose.
 - Each payroll submission must be accompanied by a **Statement of Compliance**, signed by the Contractor or Subcontractor (or their authorized agent).

- The Statement of Compliance is included on Form WH-347.

3. Final Payment Requirement

- All payroll submissions must be complete and in compliance **prior to issuance of final payment** under the Contract.

4. Enforcement

- Failure to comply with the Davis-Bacon Act, prevailing wage requirements, or payroll submission obligations may result in **withholding of payments, contract termination**, or other remedies available under federal law.
- The Contractor is responsible for ensuring that all tiers of Subcontractors are fully informed of and comply with these requirements.



Housing Authority of the City of Columbia, Missouri

201 Switzler Street, Columbia MO 65203

Office: (573) 443-2556 ♦ Fax: (573) 443-0051 ♦ TTY: (800) 735-2966 ♦ www.ColumbiaHA.com

STANDARD FORM OF AGREEMENT

Between the Housing Authority of the City of Columbia
and the Contractor

Be it understood that as of this day, **XXXXXXXXXX**, the Housing Authority of the City of Columbia, Missouri (hereafter called the "Owner") has entered into this Agreement ("Contract") with **XXXXXXXXXX** (hereafter called the "Contractor") to perform the work of Contract Number: **20251107** as proposed on **XXXXXXXXXX**, for the sum of:

\$ **XXXXXXXXXX.00** and subject to the conditions herein contained.

ARTICLE I

CONTRACT DOCUMENTS

The Contract Documents consist of:

1. Standard Form of Agreement between the Housing Authority of the City of Columbia and Contractor
2. ARPA Clauses
3. Specifications & Drawings
4. General Conditions of the Contract for Construction (HUD Form 5370-EZ)

These form the Contract and all are as fully a part of the Contract as if attached to this Agreement or repeated herein.

ARTICLE II

STATEMENT OF WORK

The Contractor shall furnish all labor, materials, supplies, transportation, tools, machinery, equipment and other facilities necessary to accomplish the Work of **Bear Creek Development Renovations** project, which includes:

- Security Cameras: Installation, integration, and testing of a complete camera system.
- Roof Replacement: Removal of existing roofing, repair of decking, and installation of a new system with insulation and waterproofing.
- Unit Renovation: Conversion of the existing office and maintenance storage unit back into a residential unit, including demolition, MEP, flooring, paint, and finishes.

Refer to Attachment E: Specifications & Drawings — Prepared by Rosemann & Associates for full details.

ARTICLE III

TIME TO PERFORM

The Work on this Contract is to commence by **XXXXXXXXXX**, and is to be completed within **XXXX** days from "Notice to Proceed", or no later than 5 P.M. prevailing time **May 1, 2026**, or Liquidated Damages of **\$0.** per DAY shall be deducted from the Contract Price, unless the Owner agrees, in writing, to an extension of this deadline.

ARTICLE IV
PREVAILING WAGE RATES

The Contractor will be responsible for compliance with the Davis-Bacon Act, including the Prevailing Wage Rate requirements as applicable to the location where the work is performed, as outlined in the Department of Labor Wage Rate Determination furnished by the Owner. The Contractor is responsible for ensuring that all Subcontractors also pay the Prevailing Wage Rates and comply with any other requirements of the Davis-Bacon Act.

ARTICLE V
PAYROLL SUBMISSIONS

The Contractor shall submit a WEEKLY Payroll Submission of all payrolls (including Subcontractors) to the Owner for each week in which any Contract work is performed, as required by Davis-Bacon Act. This information may be submitted in any form desired, although the Owner will provide Form WH-347 for this purpose. A "Statement of Compliance" signed by the Contractor or Subcontractors (or his/her agent who pays or supervises the persons employed under the contract) shall accompany each payroll submitted. This Statement is included on Form WH-347. These reports are proof of compliance with prevailing wage rates and fair labor standards and must be submitted promptly within (10) days after the end of the pay period and in entirety before issuance of the final payment.

ARTICLE VI
METHOD OF PAYMENT

Multiple Progress Payments- Based upon Application for Payment submitted on the first working day of the month to the Architect/Engineer/Owner by the Contractor for progress up to the last day of the previous month and Certificates for Payments issued by the Architect/Engineer, the Owner shall make Partial Progress Payments on account of the Contract Sum to the Contractor as provided in the General Conditions of the Contract for Construction as follows:

- the portion of the Contract Sum properly attributable to labor, materials and equipment incorporated in the Work, less the aggregate of previous payments.
- the portion of the contract Sum properly attributable to materials and equipment suitably stored in a approved bonded warehouse or other location agreed upon, in writing, by both parties involved.
- upon substantial completion of the entire work, a sum sufficient to increase the total payments to ninety percent (90%) of the Contract Sum, less such retainage as the Architect/Engineer/Owner shall determine for all warranties, incomplete work and unsettled claims, to be held until end of job.

ARTICLE VII
FINAL PAYMENT

The Final Payment, consisting of the entire unpaid balance of the Contract Sum, shall be paid by the Owner to the Contractor within 30 days after substantial completion of the work, unless otherwise stipulated in the Certificate of Completion, provided the work has been completed, inspected, and approved by all parties concerned, the Contract fully performed, and a Final Certificate for Payment has been issued by the Architect/Engineer/Owner and approved by the Department of Housing and Urban Development.

ARTICLE VIII

ASSURANCE OF COMPLETION

Prior to the issuance of the "Notice to Proceed", the Contractor agrees to:

- X 1. Provide the Owner with Performance and Payment Bonds in acceptable form for 100% of Contract amount.
2. Provide the Owner with Cash Deposit in the form of a Cashier's Check or Bank Draft made payable to the Owner in an amount representing percent of the Contract Sum to be retained by Owner until all work is completed and forfeited in the event of a breach or default on the terms of this Agreement; and/or,
3. Provide 25 percent irrevocable letter of credit.
4. Provide no performance bond, cash deposit, or letter of credit

ARTICLE IX

INSURANCE

Prior to the issuance of the "Notice to Proceed", the Contractor and each Subcontractor shall furnish the Owner with certificates of insurance showing that the following insurance is in force and will insure all operations under this Contract. All insurance shall be carried with companies that are financially responsible and authorized to do business in Missouri. The Owner shall be designated as additionally insured on the Contractor's insurance policies.

- Worker's Compensation, in accordance with the State of Missouri's Workers' Compensation laws, for all employees engaged under this contract.
- Commercial and General Liability, which is comprehensive general liability insurance with bodily injury and property damage. The minimum amount of required coverage is \$1,000,000.00 per occurrence. The policy shall cover all operations of the Contractor in connection with this Contract, including use of all equipment, hoists, and vehicles on the project site.
- Automobile Liability on owned, non-owned, and hired motor vehicles used on, or in connection with, the job site for a combined single limit for bodily injury and property damage of not less than \$1,000,000.00 per occurrence.

ARTICLE X

CITY CONSTRUCTION PERMITS/CERTIFICATES OF REGISTRATION

Prior to the issuance of the "Notice to Proceed", the Contractor shall provide the Owner a copy of all necessary City Construction Permits and Certificates of Registration. All permits, licenses, fees, taxes and other expenses necessary for the completion of Work will be the responsibility of the Contractor.

ARTICLE XI

CERTIFICATION OF ELIGIBILITY

The Contractor certifies that he/she and all Subcontractors are eligible for award of a Contract in connection with Federal Assistance and is not currently on the HUD List of Debarred, Suspended, or Ineligible Contractors.

ARTICLE XII

APPROVAL OF SUBCONTRACTORS

The Contractor shall prepare and submit a list of all Subcontractors with their specific job designations to the Owner for approval before executing any Subcontract. The Contractor shall not Subcontract any part of the work covered by this Contract or permit subcontracted work to be further subcontracted without the Owner's prior written approval. It is the responsibility of the Contractor to provide Form HUD-5370 "General Conditions of the Contract for Construction" to all Subcontractors.

ARTICLE XIII

INSPECTIONS

All work shall be inspected and approved by an authorized Housing Authority of the City of Columbia representative or a duly authorized Owner's representative prior to issuance of payment.

ARTICLE XIV

AFFIDAVIT & LIEN WAIVER SUBMISSION

The Contractor shall provide the Owner with:

- an Affidavit attesting to the fact that all labor and materials will be supplied by the Contractor and that there shall be no other Subcontractor and/or Material Suppliers required to complete the work of the Contract; -(or)-
- Affidavits and Lien Waivers for all Subcontractor and Materials Suppliers involved in the completion of the Work of the Contract.

The Contractor shall deliver to the Owner a complete release in an acceptable form of all liens arising out of the Contract prior to Final Payment.

ARTICLE XV

SHOP DRAWINGS AND CATALOG DATA

The Contractor agrees to provide the Owner/Consultant/Architect/Engineer with copies of Shop Drawings and Catalog Data for all Work of this Contract.

ARTICLE XVI

OSHA / EEO ENFORCEMENT/Americans with Disabilities Act

The Contractor agrees that all Work will be performed in compliance with all applicable State and Federal Laws relating to Occupational Safety, Equal Employment Opportunity and Americans with Disabilities Act.

ARTICLE XVII

NO INTEREST CLAUSE

No member, officer or employee of the Housing Authority of the City of Columbia, during his/her tenure or from (1) year thereafter, shall have any interest, direct or indirect, in this Contract or the proceeds thereof.

ARTICLE XVIII

WARRANTIES

The Contractor agrees to Warranty the workmanship, materials, and equipment of the Contract Work against any defect for a period of one (1) year from the date of final payment in the form of a good faith agreement, or:

_____ 1. A Performance Bond with 100% of Contract Sum Warranties Clause

_____ 2. A Warranty Bond for 100% of Contract Sum

_____ 3. Cash Warranty retainage held by the Owner for a period of _____ days after completion of work.

ARTICLE XIX
CODE COMPLIANCE

The Contractor agrees that all Work will be performed conformance with all applicable Local, State and Federal Codes whether or not covered by the Contract Articles specified in Article I.

ARTICLE XX
CONTRACTOR RESPONSIBILITY

During the course of the Work, the Contractor will be responsible for tenant safety, well-being and property damage.

ARTICLE XXI
CHANGES, ADDITIONS, DELETIONS, CONFLICTS

The Contractor shall make no changes, additions, or deletions to this Contract or Contract Documents without written approval from the Owner. Should conflicts between the "General Conditions of the Contract for Construction" (Form HUD-5370) and the Specifications exist, provisions of the "General Conditions of the Contract for Construction" shall prevail.

ARTICLE XXII
TERMINATION CLAUSE

The Owner has the right to terminate this Contract at any time should the Contractor not perform the Work in accordance with this Contract or the quality of Work is not acceptable.

THIS INSTRUMENT, together with the other documents enumerated in Article I, form the Contract. In the event that any provisions of any component part of this Contract conflict with any provisions of any other component part, the provisions of the component part first enumerated shall govern, unless otherwise specifically stated.

IN WITNESS THEREOF, the Parties hereto have caused this Instrument to be executed in two (2) original counterparts as of the day and year first above written.

Housing Authority of the City of Columbia Approval:

Name: Randy Cole Title: Chief Executive Officer

Signature: _____ Dated this _____ day of _____, 2023

Contractor's acceptance of conditions:

Contractor: _____

Name: _____ Title: _____

Signature: _____ Dated this _____ day of _____, 2023

EXHIBIT D

Contract Clauses Required under the American Rescue Plan Act (ARPA) State and Local Fiscal Recover Fund

1. Termination.

- a Termination for Convenience: The Contract may be terminated by the Contractee without cause, in whole or in part, at any time during the term specified in the Contract, by providing the other party thirty (30) calendar days advance written notice of the termination. The Contract may be suspended by the Contractee without cause, in whole or in part, at any time during the term specified in the Contract, by providing the Contractor thirty (30) calendar days advance written notice of the suspension.
- b Termination for Default: The Contractee may terminate or suspend this Contract, in whole or in part, upon ten (10) days advance written notice if: (1) the Contractor breaches any duty, obligation, or service required pursuant to this Contract. If the Contract is terminated by the Contractee pursuant to Contract or this Appendix, the Contractor shall be liable for damages, including any additional costs of procuring similar goods or services from another source. If the termination results from acts or omissions of the Contractor, including but not limited to misappropriation or nonperformance of required goods, the Contractor shall return to the Contractee immediately any funds, misappropriated or unexpended, that have been paid to the Contractor by the Contractee.
- c Termination for Non-Appropriation: If expected or actual funding is withdrawn, reduced, or limited in any way prior to the termination date set forth in the Contractor, the Contractee may, upon ten (10) days advance written notice to the Contractor, terminate or suspend this Contract in whole or in part. If the Contract is terminated or suspended as provided in this Section: (1) the Contractee will be liable only for payment in accordance with the terms of this Contract for goods delivered prior to the effective date of termination or suspension; and (2) the Contractor shall be released from any obligation to provide such further goods pursuant to the Contract as are affected by the termination or suspension.
- d Non-Waiver of Rights: Nothing herein shall limit, waive, or extinguish any right or remedy provided by this Contract or by law or equity that either party may have if any of the obligations, terms, and conditions set forth in this Contract are breached by the other party.

2. Equal Employment Opportunity. The Contractor hereby agrees that it will incorporate or cause to be incorporated into any contract for construction work, or modification thereof, as defined in the regulations of the Secretary of Labor at 41 CFR Chapter 60, which is paid for in whole or in part with funds obtained from the

Federal Government or borrowed on the credit of the Federal Government pursuant to a grant, contract, loan, insurance, or guarantee, or undertaken pursuant to any Federal program involving such grant, contract, loan, insurance, or guarantee, the following equal opportunity clause:

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

- (1) The Contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, or national origin. The Contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, sexual orientation, gender identity, or national origin. Such action shall include, but not be limited to the following: Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.
- (2) The Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin.
- (3) The Contractor will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or applicants as a part of such employee's essential job functions discloses the compensation of such other employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with the contractor's legal duty to furnish information.
- (4) The Contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
- (5) The Contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.
- (6) The Contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his

books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

- (7) In the event of the Contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be canceled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.
- (8) The Contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through (8) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The Contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance: Provided, however, that in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

The Contractor further agrees that it will be bound by the above equal opportunity clause with respect to its own employment practices when it participates in federally assisted construction work: Provided, that if the party so participating is a State or local government, the above equal opportunity clause is not applicable to any agency, instrumentality or subdivision of such government which does not participate in work on or under the contract.

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

The Contractor further agrees that it will refrain from entering into any contract or contract modification subject to Executive Order 11246 of September 24, 1965, with a contractor debarred from, or who has not demonstrated eligibility for, Government contracts and federally assisted construction contracts pursuant to the Executive

Order and will carry out such sanctions and penalties for violation of the equal opportunity clause as may be imposed upon contractors and sub-contractors by the administering agency or the Secretary of Labor pursuant to Part II, Subpart D of the Executive Order. In addition, the Contractor agrees that if it fails or refuses to comply with these undertakings, the administering agency may take any or all of the following actions: Cancel, terminate, or suspend in whole or in part this grant (contract, loan, insurance, guarantee); refrain from extending any further assistance to the applicant under the program with respect to which the failure or refund occurred until satisfactory assurance of future compliance has been received from such applicant; and refer the case to the Department of Justice for appropriate legal proceedings.

3. Davis-Bacon; Prevailing Wage. If any purchase exceeds \$2,000 and federal funds in addition to ARPA funds will be used, the Contract shall include the necessary Davis-Bacon Act clause addressing prevailing wage rates, as applicable.

Alternatively, to the extent required by Law, Contractor agrees to pay not less than the prevailing hourly rate of wages to all of its workers performing work for the public use or benefit or that uses public funds under this Agreement, or, alternatively, as applicable, the public works contracting minimum wage. The prevailing hourly rate of wages shall be those as set out in the Wage Order attached to and made part of the Contract. Each worker shall be paid the locally prevailing wage or public works contracting minimum wage, as applicable, pursuant §§ 290.210 – 290.340, RSMo. and pursuant to each workers' scope of work and in accordance with the occupational titles and work descriptions set forth in state regulation.

Contractor agrees to keep full and accurate records of the names, occupations and crafts of every worker employed by it in connection with the Agreement, together with an accurate record of the number of hours worked by each worker and the actual wages paid for a period of one year following completion of the Work. Contractor shall provide these records at the end of each month during the Project. Contractor shall post a legible list of prevailing wage rates in a prominent and easily accessible place at the work site for the full time that any worker is on the job. Upon completion of the Project and prior to final payment, Contractor agrees to complete and certify in an affidavit stating that the Contractor has fully complied with the Missouri Prevailing Wage law.

Contractor agrees to be responsible for payment of any penalty to the Contractee of One Hundred Dollars (\$100) per day (or portion of a day) for each worker that is paid less than the prevailing rate for any work performed under this Agreement by Contractor.

4. Contract Work Hours and Safety Standards Act. Where applicable, all contracts in excess of \$100,000 that involve the employment of mechanics or laborers shall include a provision for compliance with 40 U.S.C 3702 and 3704 of the Contract Work Hours and Safety Standards Act, as supplemented by the Department of Labor regulations (29 CFR part 5). Under Section 3702 of the Act, each Contractor shall be required to compute the wages of every mechanic and laborer on the basis of a standard workweek of forty (40) hours. Work in excess of the standard workweek is permissible provided that the worker is compensated at a rate of not less than one and a half times the basic rate of pay for all hours worked in excess of forty (40) hours in the workweek. The requirements of 40 U.S.C. 3704 are applicable to construction work and provides that no laborer or mechanic shall be required to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous. These requirements do not apply to the purchases of supplies or materials or articles ordinarily available on the open market, or contracts for transportation or transmission of intelligence.

5. Rights to Inventions Made Under a Contract or Agreement. If a Contractor wishes to enter into a contract with a small business firm or nonprofit organization regarding the substitution of parties, assignment or performance of experimental, developmental, or research work under that “funding agreement,” the recipient or subrecipient must comply with the requirements of 37 CFR Part 401.

6. Clean Air Act & Federal Water Pollution Control Act. Where applicable, all contracts for the purchase of goods in excess of \$150,000, Contractor agrees to comply with all applicable standards, orders, and regulations issued pursuant to the Clean Air Act, as amended, 42 U.S.C. § 7401. Contractor agrees to comply with all applicable standards, orders, or regulations issued pursuant to the Federal Water Pollution Control Act, as amended, 33 U.S.C. 1251. Contractor agrees to report each violation of the Clean Air Act and the Water Pollution Control Act to Contractee and understands that the Contractee will, in turn, report each violation as required to assure notification to the Federal Emergency Management Agency, and the appropriate Environmental Protection Agency Regional Office. Contractor agrees to include these requirements in each subcontract exceeding \$150,000 financed in whole or in part with Federal assistance.

7. Suspension and Debarment. If this Contract is a covered transaction for purposes of federally funded grant requirements, the Contractor is required to verify that none of the Contractor, its principals, as defined at 49 CFR 29.995, or affiliates, as defined at 49 CFR 29.905, are excluded or disqualified as defined at 49 CFR 29.940 and 29.945. The Contractor is required to comply with 49 CFR 29, Subpart C and must include the requirement to comply with 49 CFR 29, Subpart C in any lower tier covered transaction it enters into. Debarment status may be verified at <https://www.sam.gov>. By signing and submitting this Contract, the Contractor certifies as follows:

The certification in this clause is a material representation of fact relied upon by Contractee. If it is later determined that the Contractor knowingly rendered an erroneous certification, in addition to remedies available to Contractee, the Federal Government may pursue available remedies, including but not limited to suspension and/or debarment. The Contractor agrees to comply with the requirements of 49 CFR 29, Subpart C while performing this Contract and further agrees to include a provision requiring such compliance in its lower tier covered transactions

8. Byrd Anti-Lobbying Amendment. Contractor certifies that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, officer or employee of Congress, or an employee or a Member of Congress in connection with obtaining any Federal contract, grant, or any other award covered by 31 U.S.C. § 1352. Contractor shall also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the recipient who in turn will forward the certifications to the awarding agency.

9. Procurement of Recovered Materials. Where applicable, within the performance of this Contract involving the use of materials, the Contractor shall make maximum use of products containing recovered materials that are EPA-designated items unless the product cannot be acquired. Contractor agrees to comply with all other applicable requirements of Section 6002 of the Solid Waste Disposal Act.

10. Prohibition on Certain Telecommunications and Video Surveillance Services or Equipment. Contractor agrees to comply with all requirements of 2 CFR 200.216 regarding prohibition on certain telecommunications and video surveillance services or equipment. Contractor asserts that this Contract does not relate to such prohibited telecommunications and video surveillance services or equipment.

11. Domestic Preference. Contractor should, to the greatest extent practicable under Federal award, provide a preference of the purchase, acquisition, or use of goods, products, or materials produced in the United States (including but not limited to iron, aluminum, steel, cement, and other manufactured products) pursuant with 2 CFR § 200.322. The requirements of this section must be included in all subawards including all contracts and purchase orders for work or products under this award.

COMPLIANCE WITH LAW: comply with all applicable local, state, and federal laws and regulations, regardless of whether laws are specifically reference in the Agreement.

General Contract Conditions for Small Construction/Development Contracts

U.S. Department of Housing and Urban Development
Office of Public and Indian Housing
OMB Approval No. 2577-0157 (exp. 1/31/2027)

See Page 7 for Burden Statement

Applicability. The following contract clauses are applicable and must be inserted into **small construction/development contracts, greater than \$2,000 but not more than \$250,000.**

1. Definitions

Terms used in this form are the same as defined in form HUD-5370

2. 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. The only liens on the PHA's property shall be the Declaration of Trust or other liens approved by HUD.

3. Disputes

- (a) Except for disputes arising under the **Labor Standards** clauses, 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.
- (b) 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.
- (c) The Contracting Officer shall, within 30 days after receipt of the request, decide the claim or notify the Contractor of the date by which the decision will be made.
- (d) 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 days after receipt of the Contracting Officer's decision.
- (e) 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.

4. 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 the 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

- (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; and
 - (2) The Contractor, within 10 days from the beginning of such delay 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 obligation of the parties will be the same as if the termination had been for convenience of the PHA.

5. 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

6. 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.

7. 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.

8. 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.
- (b) 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.
- (c) Many 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.
- (d) 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
- (e) 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.

(f) 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.

9. Examination and Retention of Contractor's Records

The HA, HUD, or Comptroller General of the United States, or any of their duly authorized representatives shall, until three 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.

10. Rights in Data and Patent Rights (Ownership and Proprietary Interest)

The HA shall have exclusive ownership of, all proprietary interest in, and the right to full and exclusive possession of all information, materials, and documents discovered or produced by Contractor pursuant to the terms of this Contract, including but not limited to reports, memoranda or letters concerning the research and reporting tasks of this Contract.

11. Energy Efficiency

The Contractor shall comply with all 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 this contract is performed.

12. 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

13. Training and Employment Opportunities for Residents in the Project Area (Section 3, HUD Act of 1968; 24 CFR 75)

- (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 75, 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 75 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 **prioritization requirements**, and shall state the minimum percentages of labor hour requirements established in the Benchmark Notice (FR-6085-N-04).

- (d) The contractor agrees to include this section 3 clause in every subcontract subject to compliance with regulations in 24 CFR Part 75, 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 75. 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 75.
- (e) Noncompliance with HUD's regulations in 24 CFR Part 75 may result in sanctions, termination of this contract for default, and debarment or suspension from future HUD assisted contracts.
- (f) Contracts, subcontracts, grants, or subgrants subject to Section 7(b) of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 5307(b)) or subject to tribal preference requirements as authorized under 101(k) of the Native American Housing Assistance and Self-Determination Act (25 U.S.C. 4111(k)) must provide preferences in employment, training, and business opportunities to Indians and Indian organizations, and are therefore not subject to the requirements of 24 CFR Part 75.

14. Labor Standards - Davis-Bacon and Related

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.

(1) Minimum wages—(i) Wage rates and fringe benefits.

All laborers and mechanics employed or working upon the site of the work (or otherwise working in construction or development of the project under a development statute), 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 basic hourly 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. As provided in 29 CFR 5.5(d) and (e), the appropriate wage determinations are effective by operation of law even if they have not been attached to the contract. Contributions made or costs reasonably anticipated for bona fide fringe benefits under the Davis-Bacon Act (40 U.S.C. 3141(2)(B)) on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph (a)(1)(v) of these contract clauses; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics must be paid the appropriate wage rate and fringe benefits on the wage determination for the classifications(s) 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

The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(E) The contracting officer must promptly notify the contractor of the action taken by the Wage and Hour Division under 29 CFR 5.5(a)(1)(iii)(C) and (D). The contractor must furnish a written copy of such determination to each affected worker or it must be posted as a part of the wage determination. The wage rate (including fringe benefits where appropriate) determined pursuant to 29 CFR 5.5(a)(1)(iii)(C) or (D) must be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

(iv) Fringe benefits not expressed as an hourly rate. 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 may either pay the benefit as stated in the wage determination or may pay another bona fide fringe benefit or an hourly cash equivalent thereof.

(v) Unfunded plans. 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, in accordance with the criteria set forth in 29 CFR 5.28, 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.

(vi) Interest. In the event of a failure to pay all or part of the wages required by the contract, the contractor will be required to pay interest on any underpayment of wages.

(2) Withholding—(i) Withholding requirements. The [write in name of Federal agency or the recipient of Federal assistance] may, upon its own action, or must, upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor so much of the accrued payments or advances as may be considered necessary to satisfy the liabilities of the prime contractor or any subcontractor for the full amount of wages and monetary relief, including interest, required by the clauses set forth in 29 CFR 5.5(a) for violations of this contract, or to satisfy any such liabilities required by any other Federal contract, or federally assisted contract subject to Davis-Bacon labor standards, that is held by the same prime contractor (as defined in 29 CFR 5.2). The necessary funds may be withheld from the contractor under this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract that is subject to Davis-Bacon labor standards requirements and is held by the same prime contractor, regardless of whether the other contract was awarded or assisted by the same agency, and such funds may be used to satisfy the contractor liability for which the funds were withheld. In the event of a contractor's failure to pay any laborer or mechanic, including any apprentice or helper working on the site of the work (or otherwise working in construction or development of the project under a development statute) all or part of the wages required by the contract, or upon the contractor's failure to submit the required records as discussed in 29 CFR 5.5(a)(3)(iv), the [Agency] may on its own initiative and after written notice to the contractor, sponsor, applicant, owner, or other entity, as the case may be, 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.

(ii) Priority to withheld funds. The Department has priority to funds withheld or to be withheld in accordance with 29 CFR 5.5 (a)(2)(i) or (b)(3)(i), or both, over claims to those funds by:

(A) A contractor's surety(ies), including without limitation performance bond sureties and payment bond sureties;

(B) A contracting agency for its procurement costs;

(C) A trustee(s) (either a court-appointed trustee or a U.S. trustee, or both) in bankruptcy of a contractor, or a contractor's bankruptcy estate;

(D) A contractor's assignee(s);

(E) A contractor's successor(s); or

(F) A claim asserted under the Prompt Payment Act, 31

U.S.C. 3901-3907. (3) Records and certified payrolls—(i)

Basic record requirements—(A) Length of record

retention. All regular payrolls and other basic records must be maintained by the contractor and any subcontractor during the course of the work and preserved for all laborers and mechanic s working at the site of the work (or otherwise working in construction or development of the project under a development statute) for a period of at least 3 years after all the work on the prime contract is completed.

(B) *Information required.* Such records must contain the name; Social Security number; last known address, telephone number, and email address of each such worker; each worker's correct classification(s) of work actually performed; 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 40 U.S.C. 3141(2)(B) of the Davis-Bacon Act); daily and weekly number of hours actually worked in total and on each covered contract; deductions made ; and actual wages paid.

(C) *Additional records relating to fringe benefits.* Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(v) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in 40 U.S.C. 3141(2)(B) of the Davis-Bacon Act, the contractor must 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.

(D) *Additional records relating to apprenticeship.* Contractors with apprentices working under approved programs must maintain written evidence of the registration of apprenticeship programs, the registration of the apprentices, and the ratios and wage rates prescribed in the applicable programs.

(ii) *Certified payroll requirements*—(A) Frequency and method of submission. The contractor or subcontractor must submit weekly, for each week in which any DBA- or Related Acts-covered work is performed, certified payrolls to the [write in name of appropriate Federal agency] if the agency is a party to the contract, but if the agency is not such a party, the

the case may be, that maintains such records, for transmission to the [write in name of agency]. The prime contractor is responsible for the submission of all certified payrolls by all subcontractors. A contracting agency or prime contractor may permit or require contractors to submit certified payrolls through an electronic system, as long as the electronic system requires a legally valid electronic signature; the system allows the contractor, the contracting agency, and the Department of Labor to access the certified payrolls upon request for at least 3 years after the work on the prime contract has been completed; and the contracting agency or prime contractor permits other methods of submission in situations where the contractor is unable or limited in its ability to use or access the electronic system.

(B) *Information required.* The certified payrolls submitted must set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i)(B), except that full Social Security numbers and last known addresses, telephone numbers, and email addresses must not be included on weekly transmittals. Instead, the certified payrolls need only include an individually identifying number for each worker (e.g., the last four digits of the worker's Social Security number). The required weekly certified payroll information may be submitted using Optional Form WH-347 or in any other format desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <https://www.dol.gov/sites/dolgov/files/WHD/legacy/files/wh347.pdf> or its successor website. It is not a violation of this section for a prime contractor to require a subcontractor to provide full Social Security numbers and last known addresses, telephone numbers, and email addresses to the prime contractor for its own records, without weekly submission by the subcontractor to the sponsoring government agency (or the applicant, sponsor, owner, or other entity, as the case may be, that maintains such records).

(C) *Statement of Compliance.* Each certified payroll submitted must be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor, or the contractor's or subcontractor's agent who pays or supervises the payment of the persons working on the contract, and must certify the following:

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

(2) That each laborer or mechanic (including each helper and apprentice) working 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

(3) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification(s) of work actually performed, as specified in the applicable wage determination incorporated into the contract.

(D) *Use of Optional Form WH-347.* The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 will satisfy the requirement for submission of the "Statement of Compliance" required by 29 CFR 5.5(a)(3)(ii) (C).

(E) *Signature*. The signature by the contractor, subcontractor, or the contractor's or subcontractor's agent must be an original handwritten signature or a legally valid electronic signature.

(F) *Falsification*. The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under 18 U.S.C. 1001 and 31 U.S.C. 3729.

(G) *Length of certified payroll retention*. The contractor or subcontractor must preserve all certified payrolls during the course of the work and for a period of 3 years after all the work on the prime contract is completed.

(iii) Contracts, subcontracts, and related documents. The contractor or subcontractor must maintain this contract or subcontract and related documents including, without limitation, bids, proposals, amendments, modifications, and extensions. The contractor or subcontractor

must preserve these contracts, subcontracts, and related documents during the course of the work and for a period of 3 years after all the work on the prime contract is completed.

(iv) *Required disclosures and access*—(A) Required record disclosures and access to workers. The contractor or subcontractor must make the records required under 29 CFR 5.5(a)(3)(i)–(iii), and any other documents that the [write the name of the agency] or the Department of Labor deems necessary to determine compliance with the labor standards provisions of any of the applicable statutes referenced by 29 CFR 5.1, available for inspection, copying, or transcription by authorized representatives of the [write the name of the agency] or the Department of Labor, and must permit such representatives to interview workers during working hours on the job.

(B) *Sanctions for non-compliance with records and worker access requirements*. If the contractor or subcontractor fails to submit the required records or to make them available, or refuses to permit worker interviews during working hours on the job, the Federal agency may, after written notice to the contract or, sponsor, applicant, owner, or other entity, as the case may be, that maintains such records or that employs such workers, 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, or to permit worker interviews during working hours on the job, may be grounds for debarment action pursuant to 29 CFR 5.12. In addition, any contractor or other person that fails to submit the required records or make those records available to WHD within the time WHD requests that the records be produced will be precluded from introducing as evidence in an administrative proceeding under 29 CFR part 6 any of the required records that were not provided or made available to WHD. WHD will take into consideration a reasonable request from the contractor or person for an extension of the time for submission of records. WHD will determine the reasonableness of the request and may consider, among other things, the location of the records and the volume of production.

(C) *Required information disclosures*. Contractors and subcontractors must maintain the full Social Security number and last known address, telephone number, and email address of each covered worker, and must provide them upon request to the [write in name of appropriate Federal agency] if the agency is a party to the contract, or to the Wage and Hour Division of the Department of Labor. If the Federal agency is not such a party to the contract, the contractor, subcontractor, or both, must, upon request, provide the full Social Security number and last known address, telephone number, and email address of each covered worker to the applicant, sponsor, owner, or other entity, as the case may be, that maintains such records, for transmission to the [write in name of agency], the contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or other compliance action.

(4) *Apprentices and equal employment opportunity*—(i) *Apprentices*—(A) Rate of pay. Apprentices will be permitted to work at less than the predetermined rate for the work they perform 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 (OA), or with a State Apprenticeship Agency recognized by the OA. A person who is not individually registered in the program, but who has

been certified by the OA or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice, will be permitted to work at less than the predetermined rate for the work they perform in the first 90 days of probationary employment as an apprentice in such a program. In the event the OA or a State Apprenticeship Agency recognized by the OA withdraws approval of an apprenticeship program, the contractor will no longer be permitted to use apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(B) *Fringe benefits*. Apprentices must be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringe benefits must be paid in accordance with that determination.

(C) *Apprenticeship ratio*. The allowable ratio of apprentices to journeymen on the job site in any craft classification must not be greater than the ratio permitted to the contractor as to the entire work force under the registered program or the ratio applicable to the locality of the project pursuant to 29 CFR 5.5(a)(4)(i)(D). Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated in 29 CFR 5.5(a)(4)(i)(A), must 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 this section must be paid not less than the applicable wage rate on the wage determination for the work actually performed.

(D) *Reciprocity of ratios and wage rates*. Where a contractor is performing construction on a project in a locality other than the locality in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyworker's hourly rate) applicable within the locality in which the construction is being performed must be observed. If there is no applicable ratio or wage rate for the locality of the project, the ratio and wage rate specified in the contractor's registered program must be observed.

(ii) *Equal employment opportunity*. The use of apprentices and journeymen under this part must be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

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

(6) *Subcontracts*. The contractor or subcontractor must insert in any subcontracts the clauses contained in 29 CFR 5.5(a)(1) through (11), along with the applicable wage determination(s) and such other clauses or contract modifications as the [write in the name of the Federal agency] may by appropriate instructions require, and a clause requiring the subcontractors to include these clauses and wage determination(s) in any lower tier subcontracts. The prime contractor is responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in this section. In the event of any violations of these clauses, the prime contractor and any subcontractor(s) responsible will be liable for any unpaid wages and monetary relief, including interest from the date of the underpayment or loss, due to any workers of lower-tier subcontractors, and may be subject to debarment, as appropriate.

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

(8) *Compliance with Davis-Bacon and Related Act requirements.* All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

(9) Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

(10) *Certification of eligibility.* (i) By entering into this contract, the contractor certifies that neither it nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of 40 U.S.C. 3144(b) or 29 CFR 5.12(a).

(ii) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of 40 U.S.C. 3144(b) or 29 CFR 5.12(a).

(iii) The penalty for making false statements is prescribed in the U.S. Code, Title 18 Crimes and Criminal Procedure, 18 U.S.C. 1001.

(11) *Anti-retaliation.* It is unlawful for any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, or to cause any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, any worker or job applicant for:

(i) Notifying any contractor of any conduct which the worker reasonably believes constitutes a violation of the DBA, Related Acts, or 29 CFR parts 1, 3, or 5;

(ii) Filing any complaint, initiating or causing to be initiated any proceeding, or otherwise asserting or seeking to assert on behalf of themselves or others any right or protection under the DBA, Related Acts, or 29 CFR parts 1, 3, or 5;

(vii) Cooperating in any investigation or other compliance action, or testifying in any proceeding under the DBA, Related Acts, or 29 CFR parts 1, 3, or 5; or

(viii) Informing any other person about their rights under the DBA, Related Acts, or 29 CFR parts 1, 3, or 5.

(b) *Contract Work Hours and Safety Standards Act (CWHSSA).* The Agency Head must cause or require the contracting officer to insert the following clauses set forth in 29 CFR 5.5(b)(1), (2), (3), (4), and (5) in full, or (for contracts covered by the Federal Acquisition Regulation) by reference, in any contract in an amount in excess of \$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses must be inserted in addition to the clauses required by 29 CFR 5.5(a) or 4.6. As used in this paragraph, the terms "laborers and mechanics" include watchpersons and guards.

(1) *Overtime requirements.* No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

(2) *Violation; liability for unpaid wages; liquidated damages.* In the event of any violation of the clause set forth in 29 CFR 5.5(b) (1) the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages and interest from the date of the underpayment. 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 watchpersons and guards, employed in violation of the clause set forth in 29 CFR 5.5 (b)(1), in the sum of \$31 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in 29 CFR 5.5(b)(1).

(3) *Withholding for unpaid wages and liquidated damages—(i) Withholding process.* The [write in the name of the Federal agency or the recipient of Federal assistance] may, upon its own action, or must, upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor so much of the accrued payments or advances as may be considered necessary to satisfy the liabilities of the prime contractor or any subcontractor for any unpaid wages; monetary relief, including interest; and liquidated damages required by the clauses set forth in 29 CFR 5.5(b) on this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract subject to the Contract Work Hours and Safety Standards Act that is held by the same prime contractor (as defined in 29 CFR 5.2). The necessary funds may be withheld from the contractor under this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract that is subject to the Contract Work Hours and Safety Standards Act and is held by the same prime contractor, regardless of whether the other contract was awarded or assisted by the same agency, and such funds may be used to satisfy the contractor liability for which the funds were withheld.

(ii) *Priority to withheld funds.* The Department has priority to funds withheld or to be withheld in accordance with 29 CFR 5.5(a) (2)(i) or (b)(3)(i), or both, over claims to those funds by:

(A) A contractor's surety(ies), including without limitation performance bond sureties and payment bond sureties;

(B) A contracting agency for its procurement costs;

(C) A trustee(s) (either a court-appointed trustee or a U.S. trustee, or both) in bankruptcy of a contractor, or a contractor's bankruptcy estate;

(D) A contractor's assignee(s);

(E) A contractor's successor(s); or

(F) A claim asserted under the Prompt Payment Act, 31 U.S.C. 3901-3907.

(4) *Subcontracts.* The contractor or subcontractor must insert in any subcontracts the clauses set forth in 29 CFR 5.5(b)(1) through (5) and a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor is responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in 29 CFR 5.5(b)(1) through (5). In the event of any violations of these clauses, the prime contractor and any subcontractor(s) responsible will be liable for any unpaid wages and monetary relief, including interest from the date of the underpayment or loss, due to any workers of lower-tier subcontractors, and associated liquidated damages and may be subject to debarment, as appropriate.

(5) *Anti-retaliation.* It is unlawful for any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, or to cause any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, any worker or job applicant for:

(i) Notifying any contractor of any conduct which the worker reasonably believes constitutes a violation of the Contract Work Hours and Safety Standards Act (CWHSSA) or its implementing regulations in 29 CFR part 5;

(ii) Filing any complaint, initiating or causing to be initiated any proceeding, or otherwise asserting or seeking to assert on behalf of themselves or others any right or protection under CWHSSA or 29 CFR part 5;

(ix) Cooperating in any investigation or other compliance action, or testifying in any proceeding under CWHSSA or 29 CFR part 5; or

(x) Informing any other person about their rights under CWHSSA or 29 CFR part 5.

(c) *CWHSSA required records clause.* In addition to the clauses contained in 29 CFR 5.5(b), in any contract subject only to the Contract Work Hours and Safety Standards Act and not to any of the other laws referenced by 29 CFR 5.1, the Agency Head must cause or require the contracting officer to insert a clause requiring that the contractor or subcontractor must maintain regular payrolls and other basic records during the course of the work and must preserve them for a period of 3 years after all the work on the prime contract is completed for all laborers and mechanics, including guards and watchpersons, working on the contract. Such records must contain the name; last known address, telephone number, and email address; and social security number of each such worker; each worker's correct classification(s) of work actually performed; hourly rates of wages paid; daily and weekly number of hours actually worked; deductions made; and actual wages paid. Further, the Agency Head must cause or require the contracting officer to insert in any such contract a clause providing that the records to be maintained under this

paragraph must be made available by the contractor or subcontractor for inspection, copying, or transcription by authorized representatives of the (write the name of agency) and the Department of Labor, and the contractor or subcontractor will permit such representatives to interview workers during working hours on the job.

(d) *Incorporation of contract clauses and wage determinations by reference.* Although agencies are required to insert the contract clauses set forth in this section, along with appropriate wage determinations, in full into covered contracts, and contractors and subcontractors are required to insert them in any lower-tier subcontracts, the incorporation by reference of the required contract clauses and appropriate wage determinations will be given the same force and effect as if they were inserted in full text.

(e) *Incorporation by operation of law.* The contract clauses set forth in this section (or their equivalent under the Federal Acquisition Regulation), along with the correct wage determinations will be considered to be a part of every prime contract required by the applicable statutes referenced by 29 CFR 5.1 to include such clauses, and will be effective by operation of law, whether or not they are included or incorporated by reference into such contract, unless the Administrator grants a variance, tolerance, or exemption from the application of this paragraph. Where the clauses and applicable wage determinations are effective by operation of law under this paragraph, the prime contractor must be compensated for any resulting increase in wages in accordance with applicable law.

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 75. 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. Comments regarding the accuracy of this burden estimate and any suggestions for reducing this burden can be sent to the Reports Management Officer, Office of Policy Development and Research, REE, Department of Housing and Urban Development, 451 7th St SW, Room 4176, Washington, DC 20410-5000. When providing comments, please refer to OMB Approval No. 2577-0157.

**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**



ARCHITECTURE
INTERIOR DESIGN
ENGINEERING
PLANNING

Scope of Work Narrative

For:

Bear Creek Apartments

**1109 Elleta Blvd.
Columbia, MO 63301**

**Owner:
Columbia Housing Authority
201 Switzler St
Columbia, MO 65203**

**Project No.: 24127
11/07/2025**

SCOPE OF WORK NARRATIVE

Bear Creek Apartments

November 07, 2025

Project: **Bear Creek Apartments**
1109 Elleta Boulevard
Columbia, MO 65202

Architect's
Project No.: 24127

Owner: Columbia Housing Authority
201 Switzler St
Columbia, MO 65203

Description: Bear Creek Apartments is an existing residential complex located at 1109 Elleta Boulevard, Columbia, Missouri, owned by the Housing Authority of the City of Columbia. The project encompasses site-wide renovations and building improvements as illustrated on Sheet AS-100, including Buildings 32, 42, and 43, together with associated parking, walks, and open spaces.

The scope of work includes targeted building and site upgrades to address accessibility, life-safety, and functional improvements. Building 32 will undergo a change of occupancy to Group R-2 and be renovated to serve as two residential dwelling units in accordance with the 2018 International Existing Building Code (IEBC). Building 43 will be modified internally to divide the existing space into two separate tenant areas—one accommodating office functions and the other a reduced laundry facility. Building 42 includes replacement-in-kind work for the existing membrane roof and internal roof-drain system, as well as replacement-in-kind of the exterior ramp and stair to maintain safe and accessible entry.

Site and exterior improvements include roof replacements, selective siding, fascia, and soffit repairs, new gutters and downspouts tied into the storm system, and replacement of concrete flatwork as necessary to maintain accessible routes in accordance with ICC/ANSI A117.1-2009. No new exterior windows, doors, or lighting are included in this scope.

Interior improvements are limited to the renovation areas indicated in the construction documents and include finish replacement, new flooring, cabinets, countertops, and fixtures, along with selective HVAC, plumbing, and electrical upgrades only where required to support new work. Existing systems not affected by construction will remain in service. Hard-wired smoke and carbon-monoxide detectors and LED lighting will be provided where indicated.

All work shall comply with the 2018 International Building Code (IBC), 2018 IEBC, 2018 International Fire Code (IFC), 2018 International Plumbing, Mechanical, Fuel Gas, and Energy Conservation Codes, and the 2017 National Electrical Code (NEC). The project is limited to the existing building footprints and site improvements as shown in the Construction Document set dated November 3, 2025.

Bear Creek Apartments Scope of Work

November 07, 2025

Page 2 of 7

1. SITE RENOVATION

A. Parking & Site

1. Power wash and clean the existing asphalt parking area located in front of Building 32.
2. Restripe the existing parking lot to clearly delineate regular and accessible parking spaces in accordance with City of Columbia and IEBC accessibility standards.
3. No asphalt resurfacing, milling, base repair, or regrading is included in this scope. Existing pavement, curb lines, and drainage patterns are to remain as-is.

B. Sidewalks / Concrete Flatwork

1. Repair or replace cracked or deteriorated concrete walks and landings only where required to correct tripping hazards or to provide compliant accessible routes.
2. Replace existing concrete landings at building entries as required to achieve flush transitions and accessible entry per IEBC and ICC/ANSI A117.1-2009 standards.
3. At Building 42, replace the existing exterior ramp and stair in kind, maintaining original configuration and alignment while providing compliant handrails and landings.
4. No new sidewalk extensions, grading, or site reconfiguration is included in this scope.
5. Concrete finishes, slopes, and jointing shall match adjacent existing work unless otherwise noted on the drawings.

F. Site Security

1. Provide and install new exterior security camera system as shown on the drawings. Coordinate camera locations, mounting heights, and conduit routing with the electrical design.
2. Connect new cameras to the existing site security network and verify full system functionality upon completion.
3. Reuse existing power and data infrastructure where feasible. No new poles, lighting fixtures, or site-wide wiring expansion is included in this scope.
4. All exterior devices and junction boxes shall be weather-rated and color-matched to adjacent finishes.
5. Final camera locations, field of view, and network integration shall be confirmed with the Owner prior to installation.

2. EXTERIOR RENOVATIONS

A. Exterior Wall

1. Inspect existing brick veneer, siding, fascia, and soffits; repair minor damage as needed to ensure sound condition prior to painting.
2. Prepare and paint all existing siding, fascia, and soffits as shown on the drawings. Surface preparation shall include cleaning, scraping loose or peeling paint, spot-

- priming bare areas, and applying finish coats in accordance with manufacturer's recommendations.
3. Replace exterior metal flashing at brick wainscot and other transition locations where damaged or missing.
 4. No new siding, windows, or doors are included in this scope.

B. Roofing, Gutters, and Soffits

1. At Buildings 32,36,37,38 and 43, remove existing roofing materials and install new asphalt shingle roofing system complete with underlayment, flashings, and ridge vents as shown on the drawings. Shingles shall meet applicable code requirements for wind and impact resistance and shall be installed in accordance with manufacturer's instructions.
2. At Building 42, remove the existing membrane roof system and replace in kind with a new membrane roofing assembly matching the existing type and configuration. Include replacement of associated internal roof drains, flashing, and insulation as indicated on the plans.
3. Inspect roof sheathing and substrate for damage; replace deteriorated areas as needed to provide a sound surface for new roofing installation.
4. Install new gutters and downspouts where damaged or missing, tying into existing storm drainage connections.
5. Replace existing soffit materials where damaged or deteriorated, matching existing profiles, venting, and finish.
6. No structural roof modifications or reconfiguration of existing roof slopes are included in this scope.

C. Signage

1. Replace unit number signage at each building with new acrylic signage as selected.
2. Replace building number signage at each building.
3. Provide new signage at unit and building entries as indicated. Verify final design, color, and numbering with Owner prior to fabrication.

D. HVAC Equipment

1. Reuse existing outdoor mechanical equipment unless otherwise noted on the MEP drawings. Replace units only where specifically indicated or where existing equipment is determined to be non-functional.
2. Reconnect existing condensate drains and verify proper discharge; rework piping only as required by MEP design to maintain proper slope and connection.
3. Clean, repair, and reinstall existing exhaust vent covers or replace only where damaged or missing.
4. Contractor shall verify refrigerant line compatibility and electrical connections prior to reconnection.

3. LAUNDRY (BUILDING 42) INTERIOR RENOVATION

A. General

1. Renovate the existing Laundry Building (Building 42) to reconfigure the interior layout into two separate tenant spaces—a reduced laundry area and a new office space—as shown on the drawings.
2. Provide selective demolition and new interior construction, including new partitions, doors, and finishes to establish the revised layout and maintain compliant separation between tenant areas.
3. All new work shall comply with the 2018 International Existing Building Code (IEBC) and applicable provisions of the 2018 International Building Code (IBC).

B. Finishes

1. Provide new interior paint on all wall and ceiling surfaces throughout both tenant spaces.
2. Clean and refinish existing flooring to remain; no new flooring installation is included in this scope.
3. Patch and repair existing gypsum board and trim where damaged or disturbed by new construction prior to painting.

C. Space reconfiguration

1. Construct new demising wall and interior partitions as shown on the drawings to establish separate tenant areas for the laundry and office functions.
2. Install new interior doors, frames, and hardware where indicated; reuse existing doors where feasible and in good condition.
3. Coordinate layout with existing utility connections to minimize system modifications.

D. Mechanical, Electrical, and Plumbing (MEP)

1. Reuse existing HVAC, plumbing, and electrical systems wherever feasible. Provide new or modified connections, ductwork, and devices only where required by the new configuration and as shown on the MEP drawings.
2. Verify operation of existing systems remaining in service and repair as necessary to ensure proper function.
3. Relocate or reconnect existing laundry equipment, lighting, and receptacles as required to accommodate the new layout.

E. Accessibility

1. Verify that existing restroom and accessible route conditions meet IEBC and ICC/ANSI A117.1-2009 standards.
2. Provide minor adjustments, grab bars, or clearances only where indicated on the drawings to achieve accessibility compliance.

4. APARTMENT UNIT (BUILDING 32) INTERIOR RENOVATION

A. General

1. Renovate the interior of Building 32 to create two residential dwelling units as shown on the drawings.
2. Provide selective demolition and interior build-out including new partitions, doors, flooring, ceilings, and trim to establish the new layouts.
3. All new work shall comply with the 2018 IEBC (Change of Occupancy to R-2) and applicable provisions of the 2018 IBC.

B. Finishes

1. Provide new interior paint, flooring, trim, and ceiling finishes throughout each unit per the finish schedule.
2. Patch and repair existing gypsum board surfaces where removed or disturbed by new work prior to painting.
3. Install new interior doors, casing, and hardware where indicated; reuse existing components where in good condition.

C. Space Reconfiguration

1. Construct new partitions and door openings as shown on the drawings to create two separate dwelling units.
2. Coordinate locations of new kitchens, bathrooms, and mechanical systems with existing structure and utilities to minimize modifications.

D. Kitchens and Bathrooms

1. Provide new kitchen cabinetry, countertops, plumbing fixtures, and appliances per the floor plans.
2. Provide new bathroom fixtures, accessories, and finishes including tub/shower surrounds, vanities, toilets, and mirrors.
3. Install new grab-bar blocking and grab bars where required for accessibility compliance.

E. Mechanical, Electrical, and Plumbing (MEP)

1. Reuse existing HVAC, plumbing, and electrical systems where feasible. Provide new or modified connections only as required to serve the new layout and as shown on the MEP drawings.
2. Provide new bath and kitchen exhaust fans where indicated; clean and reconnect existing ductwork to remain.
3. Install new smoke and carbon-monoxide detectors and LED light fixtures as shown.
4. Verify proper function of all existing mechanical and electrical systems remaining in service.

F. Miscellaneous

1. Replace all interior window blinds and sliding glass door blinds with 2" polymer slat blinds. Color: white.
2. Replace 100% interior hinged and sliding doors and door hardware to lever type hardware. Install door stops.

3. Provide solid wood fire blocking and draft stopping where missing, modified to be non-compliant, or abandoned equipment openings between units.
4. Expanding Fire foam/ caulk all through penetrations, membrane penetrations per IBC 714.
5. Replacement of Interior wall board shall comply with IBC 715 to maintain unit fire rating. Provide Smoke / carbon monoxide alarms in all existing Dwelling Units per IEBC 403.10.
7. Clean entire unit.

5. GENERAL COORDINATION AND CLOSE-OUT

A. General coordination and close-out

1. Contractor shall verify all existing conditions prior to commencing work and notify the Architect of any discrepancies or concealed conditions.
2. Provide submittals for paint, roofing, and major replacement items for review prior to installation.
3. Upon completion, provide product data, warranties, and maintenance information for all new roofing, paint, and mechanical items replaced under this scope.

END OF SCOPE OF WORK



ARCHITECTURE
INTERIOR DESIGN
ENGINEERING
PLANNING

Specifications

BEAR CREEK APARTMENTS

1109 ELLETA BLVD
COLUMBIA, MO 65202

Architect:
Rosemann & Associates, P.C.

Project No.: 24127
100% BID SET
November 06, 2025

**SECTION 00 0110
TABLE OF CONTENTS**

PROCUREMENT AND CONTRACTING REQUIREMENTS

1.01 DIVISION 00 -- PROCUREMENT AND CONTRACTING REQUIREMENTS

- A. 00 0110 - Table of Contents
- B. 00 3100 - Available Project Information

SPECIFICATIONS

2.01 DIVISION 01 -- GENERAL REQUIREMENTS

- A. 01 1000 - Summary
- B. 01 3000 - Administrative Requirements
- C. 01 4100 - Regulatory Requirements
- D. 01 5713 - Temporary Erosion and Sediment Control
- E. 01 6116 - Volatile Organic Compound (VOC) Content Restrictions
- F. 01 7419 - Construction Waste Management and Disposal

2.02 DIVISION 02 -- EXISTING CONDITIONS

- A. 02 4100 - Demolition

2.03 DIVISION 03 -- CONCRETE

2.04 DIVISION 04 -- MASONRY

- A. 04 0100 - Maintenance of Masonry

2.05 DIVISION 05 -- METALS

- A. 05 5213 - Pipe and Tube Railings

2.06 DIVISION 06 -- WOOD, PLASTICS, AND COMPOSITES

- A. 06 6100 - Cast Polymer Fabrications

2.07 DIVISION 07 -- THERMAL AND MOISTURE PROTECTION

- A. 07 0150.19 - Preparation for Re-Roofing
- B. 07 2126 - Blown Insulation
- C. 07 2500 - Weather Barriers
- D. 07 3113 - Asphalt Shingles
- E. 07 6200 - Sheet Metal Flashing and Trim
- F. 07 7123 - Manufactured Gutters and Downspouts
- G. 07 7200 - Roof Accessories
- H. 07 8400 - Firestopping

2.08 DIVISION 08 -- OPENINGS

- A. 08 1116 - Aluminum Doors and Frames
- B. 08 8000 - Glazing
- C. 08 8300 - Mirrors
- D. 08 9100 - Louvers

2.09 DIVISION 09 -- FINISHES

- A. 09 2116 - Gypsum Board Assemblies

2.10 DIVISION 10 -- SPECIALTIES

- A. 10 2800 - Toilet, Bath, and Laundry Accessories

B. 10 4400 - Fire Protection Specialties

2.11 DIVISION 11 -- EQUIPMENT

A. 11 3013 - Residential Appliances

2.12 DIVISION 12 -- FURNISHINGS

A. 12 2113 - Horizontal Louver Blinds

2.13 DIVISION 13 -- SPECIAL CONSTRUCTION

2.14 DIVISION 14 -- CONVEYING EQUIPMENT

2.15 DIVISION 21 -- FIRE SUPPRESSION

2.16 DIVISION 22 -- PLUMBING

2.17 DIVISION 23 -- HEATING, VENTILATING, AND AIR-CONDITIONING (HVAC)

2.18 DIVISION 25 -- INTEGRATED AUTOMATION

2.19 DIVISION 26 -- ELECTRICAL

2.20 DIVISION 27 -- COMMUNICATIONS

2.21 DIVISION 28 -- ELECTRONIC SAFETY AND SECURITY

2.22 DIVISION 31 -- EARTHWORK

2.23 DIVISION 32 -- EXTERIOR IMPROVEMENTS

2.24 DIVISION 33 -- UTILITIES

2.25 DIVISION 34 -- TRANSPORTATION

2.26 DIVISION 40 -- PROCESS INTEGRATION

2.27 DIVISION 46 -- WATER AND WASTEWATER EQUIPMENT

END OF SECTION 00 0110

**SECTION 00 3100
AVAILABLE PROJECT INFORMATION**

PART 1 GENERAL

1.01 EXISTING CONDITIONS

- A. Certain information relating to existing surface and subsurface conditions and structures is available to bidders but will not be part of Contract Documents, as follows:

1.02 SCOPE OF WORK

- A. Certain written scope of work documents made by the architect as approved by the owner are available to the bidders but will not be part of the contract Documents, as follows:
- B. Scope of work: Entitled "Bear Creek Apartments, Scope of Work Narrative"; dated 11/07/2025
 - 1. A copy is included in this specification for reference as Section 003101.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION 00 3100

Scope of Work Narrative

For:

Bear Creek Apartments

1109 Elleta Blvd.
Columbia, MO 63301

Owner:
Columbia Housing Authority
201 Switzler St
Columbia, MO 65203

Project No.: 24127
11/07/2025

SCOPE OF WORK NARRATIVE

Bear Creek Apartments
November 07, 2025

Project: **Bear Creek Apartments**
1109 Elleta Boulevard
Columbia, MO 65202

Architect's

Project No.: 24127

Owner: Columbia Housing Authority
201 Switzler St
Columbia, MO 65203

Description: Bear Creek Apartments is an existing residential complex located at 1109 Elleta Boulevard, Columbia, Missouri, owned by the Housing Authority of the City of Columbia. The project encompasses site-wide renovations and building improvements as illustrated on Sheet AS-100, including Buildings 32, 42, and 43, together with associated parking, walks, and open spaces.

The scope of work includes targeted building and site upgrades to address accessibility, life-safety, and functional improvements. Building 32 will undergo a change of occupancy to Group R-2 and be renovated to serve as two residential dwelling units in accordance with the 2018 International Existing Building Code (IEBC). Building 43 will be modified internally to divide the existing space into two separate tenant areas—one accommodating office functions and the other a reduced laundry facility. Building 42 includes replacement-in-kind work for the existing membrane roof and internal roof-drain system, as well as replacement-in-kind of the exterior ramp and stair to maintain safe and accessible entry.

Site and exterior improvements include roof replacements, selective siding, fascia, and soffit repairs, new gutters and downspouts tied into the storm system, and replacement of concrete flatwork as necessary to maintain accessible routes in accordance with ICC/ANSI A117.1-2009. No new exterior windows, doors, or lighting are included in this scope.

Interior improvements are limited to the renovation areas indicated in the construction documents and include finish replacement, new flooring, cabinets, countertops, and fixtures, along with selective HVAC, plumbing, and electrical upgrades only where required to support new work. Existing systems not affected by construction will remain in service. Hard-wired smoke and carbon-monoxide detectors and LED lighting will be provided where indicated.

All work shall comply with the 2018 International Building Code (IBC), 2018 IEBC, 2018 International Fire Code (IFC), 2018 International Plumbing, Mechanical, Fuel Gas, and Energy Conservation Codes, and the 2017 National Electrical Code (NEC). The project is limited to the existing building footprints and site improvements as shown in the Construction Document set dated November 3, 2025.

1. SITE RENOVATION

A. Parking & Site

1. Power wash and clean the existing asphalt parking area located in front of Building 32.
2. Restripe the existing parking lot to clearly delineate regular and accessible parking spaces in accordance with City of Columbia and IEBC accessibility standards.

3. No asphalt resurfacing, milling, base repair, or regrading is included in this scope. Existing pavement, curb lines, and drainage patterns are to remain as-is.

B. Sidewalks / Concrete Flatwork

1. Repair or replace cracked or deteriorated concrete walks and landings only where required to correct tripping hazards or to provide compliant accessible routes.
2. Replace existing concrete landings at building entries as required to achieve flush transitions and accessible entry per IEBC and ICC/ANSI A117.1-2009 standards.
3. At Building 42, replace the existing exterior ramp and stair in kind, maintaining original configuration and alignment while providing compliant handrails and landings.
4. No new sidewalk extensions, grading, or site reconfiguration is included in this scope.
5. Concrete finishes, slopes, and jointing shall match adjacent existing work unless otherwise noted on the drawings.

F. Site Security

1. Provide and install new exterior security camera system as shown on the drawings. Coordinate camera locations, mounting heights, and conduit routing with the electrical design.
2. Connect new cameras to the existing site security network and verify full system functionality upon completion.
3. Reuse existing power and data infrastructure where feasible. No new poles, lighting fixtures, or site-wide wiring expansion is included in this scope.
4. All exterior devices and junction boxes shall be weather-rated and color-matched to adjacent finishes.
5. Final camera locations, field of view, and network integration shall be confirmed with the Owner prior to installation.

2. EXTERIOR RENOVATIONS

A. Exterior Wall

1. Inspect existing brick veneer, siding, fascia, and soffits; repair minor damage as needed to ensure sound condition prior to painting.
2. Prepare and paint all existing siding, fascia, and soffits as shown on the drawings. Surface preparation shall include cleaning, scraping loose or peeling paint, spot-priming bare areas, and applying finish coats in accordance with manufacturer's recommendations.
3. Replace exterior metal flashing at brick wainscot and other transition locations where damaged or missing.
4. No new siding, windows, or doors are included in this scope.

B. Roofing, Gutters, and Soffits

1. At Buildings 32,36,37,38 and 43, remove existing roofing materials and install new asphalt shingle roofing system complete with underlayment, flashings, and ridge vents as shown on the drawings. Shingles shall meet applicable code requirements

- for wind and impact resistance and shall be installed in accordance with manufacturer's instructions.
2. At Building 42, remove the existing membrane roof system and replace in kind with a new membrane roofing assembly matching the existing type and configuration. Include replacement of associated internal roof drains, flashing, and insulation as indicated on the plans.
 3. Inspect roof sheathing and substrate for damage; replace deteriorated areas as needed to provide a sound surface for new roofing installation.
 4. Install new gutters and downspouts where damaged or missing, tying into existing storm drainage connections.
 5. Replace existing soffit materials where damaged or deteriorated, matching existing profiles, venting, and finish.
 6. No structural roof modifications or reconfiguration of existing roof slopes are included in this scope.

C. Signage

1. Replace unit number signage at each building with new acrylic signage as selected.
2. Replace building number signage at each building.
3. Provide new signage at unit and building entries as indicated. Verify final design, color, and numbering with Owner prior to fabrication.

D. HVAC Equipment

1. Reuse existing outdoor mechanical equipment unless otherwise noted on the MEP drawings. Replace units only where specifically indicated or where existing equipment is determined to be non-functional.
2. Reconnect existing condensate drains and verify proper discharge; rework piping only as required by MEP design to maintain proper slope and connection.
3. Clean, repair, and reinstall existing exhaust vent covers or replace only where damaged or missing.
4. Contractor shall verify refrigerant line compatibility and electrical connections prior to reconnection.

3. LAUNDRY (BUILDING 42) INTERIOR RENOVATION

A. General

1. Renovate the existing Laundry Building (Building 42) to reconfigure the interior layout into two separate tenant spaces—a reduced laundry area and a new office space—as shown on the drawings.
2. Provide selective demolition and new interior construction, including new partitions, doors, and finishes to establish the revised layout and maintain compliant separation between tenant areas.
3. All new work shall comply with the 2018 International Existing Building Code (IEBC) and applicable provisions of the 2018 International Building Code (IBC).

B. Finishes

1. Provide new interior paint on all wall and ceiling surfaces throughout both tenant spaces.
2. Clean and refinish existing flooring to remain; no new flooring installation is included in this scope.
3. Patch and repair existing gypsum board and trim where damaged or disturbed by new construction prior to painting.

C. Space reconfiguration

1. Construct new demising wall and interior partitions as shown on the drawings to establish separate tenant areas for the laundry and office functions.
2. Install new interior doors, frames, and hardware where indicated; reuse existing doors where feasible and in good condition.
3. Coordinate layout with existing utility connections to minimize system modifications.

D. Mechanical, Electrical, and Plumbing (MEP)

1. Reuse existing HVAC, plumbing, and electrical systems wherever feasible. Provide new or modified connections, ductwork, and devices only where required by the new configuration and as shown on the MEP drawings.
2. Verify operation of existing systems remaining in service and repair as necessary to ensure proper function.
3. Relocate or reconnect existing laundry equipment, lighting, and receptacles as required to accommodate the new layout.

E. Accessibility

1. Verify that existing restroom and accessible route conditions meet IEBC and ICC/ANSI A117.1-2009 standards.
2. Provide minor adjustments, grab bars, or clearances only where indicated on the drawings to achieve accessibility compliance.

4. APARTMENT UNIT (BUILDING 32) INTERIOR RENOVATION

A. General

1. Renovate the interior of Building 32 to create two residential dwelling units as shown on the drawings.
2. Provide selective demolition and interior build-out including new partitions, doors, flooring, ceilings, and trim to establish the new layouts.
3. All new work shall comply with the 2018 IEBC (Change of Occupancy to R-2) and applicable provisions of the 2018 IBC.

B. Finishes

1. Provide new interior paint, flooring, trim, and ceiling finishes throughout each unit per the finish schedule.

2. Patch and repair existing gypsum board surfaces where removed or disturbed by new work prior to painting.
3. Install new interior doors, casing, and hardware where indicated; reuse existing components where in good condition.

C. Space Reconfiguration

1. Construct new partitions and door openings as shown on the drawings to create two separate dwelling units.
2. Coordinate locations of new kitchens, bathrooms, and mechanical systems with existing structure and utilities to minimize modifications.

D. Kitchens and Bathrooms

1. Provide new kitchen cabinetry, countertops, plumbing fixtures, and appliances per the floor plans.
2. Provide new bathroom fixtures, accessories, and finishes including tub/shower surrounds, vanities, toilets, and mirrors.
3. Install new grab-bar blocking and grab bars where required for accessibility compliance.

E. Mechanical, Electrical, and Plumbing (MEP)

1. Reuse existing HVAC, plumbing, and electrical systems where feasible. Provide new or modified connections only as required to serve the new layout and as shown on the MEP drawings.
2. Provide new bath and kitchen exhaust fans where indicated; clean and reconnect existing ductwork to remain.
3. Install new smoke and carbon-monoxide detectors and LED light fixtures as shown.
4. Verify proper function of all existing mechanical and electrical systems remaining in service.

F. Miscellaneous

1. Replace all interior window blinds and sliding glass door blinds with 2" polymer slat blinds. Color: white.
2. Replace 100% interior hinged and sliding doors and door hardware to lever type hardware. Install door stops.
3. Provide solid wood fire blocking and draft stopping where missing, modified to be non-compliant, or abandoned equipment openings between units.
4. Expanding Fire foam/ caulk all through penetrations, membrane penetrations per IBC 714.
5. Replacement of Interior wall board shall comply with IBC 715 to maintain unit fire rating. Provide Smoke / carbon monoxide alarms in all existing Dwelling Units per IEBC 403.10.
7. Clean entire unit.

5. GENERAL COORDINATION AND CLOSE-OUT

A. General coordination and close-out

1. Contractor shall verify all existing conditions prior to commencing work and notify the Architect of any discrepancies or concealed conditions.

2. Provide submittals for paint, roofing, and major replacement items for review prior to installation.
3. Upon completion, provide product data, warranties, and maintenance information for all new roofing, paint, and mechanical items replaced under this scope.

END OF SCOPE OF WORK

**SECTION 00 5000
CONDITIONS OF THE CONTRACT**

PART 1 GENERAL

1.01 SCOPE OF WORK

- A. The work included under these Specifications consists of furnishing all items, materials, operations, or methods listed, mentioned, indicated, or scheduled on the Drawings and/or in these Specifications, including all labor, materials, equipment transportation temporary facilities, services, and incidentals necessary and required for construction completion of the project named in title page in accordance with Contract Documents.

1.02 FORM OF SPECIFICATIONS

- A. Conditions of the Contract, Supplementary General Conditions, and Division 1 apply to every Division of these Specifications.
- B. These Specifications are of abbreviated form and contain incomplete sentences. Omissions of words or phrases such as "the Contractor shall", "shall be", "as noted on the Drawings", "according to the Drawings", "a", "the", and "all" are intentional. Omitted words and phrases shall be supplied by inference in the same manner as they are when a "note" occurs on the Drawings.
- C. All Specification instructions are directed to the Contractor, and inclusion of any work by mention, note, or itemization, however brief, implies Contractor shall provide same unless specifically directed otherwise.
- D. In specifying an item by manufacturer's name and/or catalog number, unless specifically stated otherwise, such item shall be provided with all standard devices and accessories indicated in latest edition of manufacture's catalog or brochure published at date of Invitation to Bid: furnished such item complete with component parts necessary for obviously intended use and installation, whether or not description or catalog number contains all supplemental information and/or numbers of such components.

1.03 UNIFORM FEDERAL ACCESSIBILITY STANDARDS

- A. General Contractor shall complete all work in accordance with latest printed edition of the Fair Housing Act Guidelines, Section 504 of the Rehabilitation Act of 1973, the Americans with Disabilities Act and/or the Uniform Federal Accessibility Standards as applicable. Where work is required to comply with the standards and conflict exist with the architectural plans and/or specifications, notify Architect immediately of such conflict and request written clarification prior to proceeding with the work.

1.04 AIA GENERAL CONDITIONS

- A. AIA Document A201, "General Conditions of the Contract for Construction", 2017 Edition, 14 Articles, hereinafter referred to as "AIA General Conditions", is hereby made a part of this Specification. Contractor shall consult this Document and become intimately familiar with its content.

PART 2 (NOT USED)

PART 3 EXECUTION

3.01 SUPPLEMENTS AND AMENDMENTS TO THE AIA GENERAL CONDITIONS

- A. The AIA General Conditions are hereinafter supplemented and/or amended. All supplementary provisions shall be considered as added thereto. Where any Article is amended, deleted or superseded hereby, unaltered provisions of such. Article shall remain in effect.

3.02 GENERAL PROVISIONS

- A. Supplement Subparagraph 1.2.1 as follows:
 - 1. Drawings, Specifications and Other Contract Documents are not intended as "Shop Drawings" or extensively detailed documents; they are intended to indicate general design concept of Project in sufficient detail that all work required is reasonable inferable there

from and Contractor shall provide all work thus indicated or reasonably inferred as necessary to produce intended results of complete, structurally sound, aesthetically desirable, durable, properly performing work of quality. Should conflict occur between Drawings and Specifications, Contractor shall obtain written decision of same from Architect prior to submitting Bid, Signing Agreement or proceeding with the work.

- B. Supplement Subparagraph 1.4,1 Interpretation, as follows:
1. When a word, "approval", "approved", "proper", "satisfactory", "equal", and "as directed", is used, it implies such reference as to the Architect's approval or direction.
 2. "Approve", "approval", or "approved" means the Architect will observe or review items or construction referred to him for such approval and that his review represents his opinion that such item or construction is acceptable for the circumstances and conditions of the project, based on his observations and/or information made available to him by Contractor. However, such review shall not represent that Architect checked item or construction in detail, nor that he thereby waives original requirements or assumes any responsibility for its correctness or performance.
 3. "Equal", "equivalent", means the item or construction possesses similar physical size and characteristics, similar performance qualities and characteristics and fulfills utilitarian functions required by Contract Documents without any decrease in quality, appearance or durability, responsibility for "equal" or "equivalent" item of construction fulfill the Architect's intent of Contract Documents (expressed or implied) rests with the Contractor.
 4. "Extent" means general checklist or outline of work included: not constructed as all inclusive nor limiting and not relieving Contractor from providing all similar or related work elsewhere indicated or inferable in Contract Documents.
 5. "Indicated" means as indicated on Contract Documents.
 6. "Provide" means furnish and install.

3.03 ARTICLE 2 OWNER

- A. Delete Subparagraph 2.2.5 and insert: The successful Contractor awarded the contract shall purchase Drawings and Project Manuals as needed for the execution of the work.

3.04 ARTICLE 3 CONTRACTOR

- A. Supplement Subparagraph 3.7.1 as follows:
1. Contractor shall give notice to public or private utility companies and others required to make installations, in ample time for them to complete such installations and not delay the project, whether such installations are under contract or reasonable inferable necessary for completion of project. Contractor is responsible for staking or surveying as may be required to complete the installation of utilities either on or off site by any Utility Companies or by private contract.
- B. Supplement Subparagraph 3.12.5 as follows:
1. By submitting Shop Drawings and samples, Contractor thereby represents he has approved them (whether they bear his approval stamp or not) and he has determined and verified all field measurements, quantities, field construction criteria, materials, catalog numbers, and similar data, or will do so, and he has checked and coordinated Shop Drawings and sample with requirements of work and Contract Documents and with work of all other trades and Contractors on project.
- C. Supplement Subparagraph 3.12.8 as follows:
1. When material or equipment is specified by manufacturer's name or names, the intent is to establish quality required. Materials other than those specified will be considered after Contract has been executed provided they are submitted in writing by successful bidder with sufficient data to establish that their quality for the use intended is equivalent to the quality of materials specified.
 2. By making request for substitution, the Contractor represents that he has personally investigated the substitute product and determined that it is equal or superior to that specified, that he will provide the same warranty as for that specified, that he waives all claims for any additional cost related to the substitution, and that eh will coordinate the

installation of any accepted substitution making changes as may be required such that the work shall be complete in all respects.

3. Requests for substitutions shall be submitted in sufficient time to allow for proper consideration and so as to cause no delay in the work. All materials and equipment shall be applied, installed, connected, cleaned and placed in operation in accordance with manufacturer's directions.
4. When material or equipment is required to be installed by manufacture's approved applicator, it shall be the contractor's responsibility to insure such approval.

3.05 ARTICLE 4 ADMINISTRATION OF THE CONTRACT

- A. Insert after first sentence in Subparagraph 4.1.1: The term Architect means Architect or his authorized representative (including his Consulting Engineer). The term Architect/Engineer means Architect and/or his Consulting Engineer.

3.06 ARTICLE 8 TIME

- A. Add the following Subparagraph 8.1.5: As between the Owner and the Contractor: as to all acts or failures to act occurring prior to the relevant Date of Substantial Completion, any applicable statute of limitations shall commence to run and any alleged cause of action shall be deemed to have accrued in any and all events not later than such Date of Substantial Completion; as to all acts or failures to act occurring subsequent to the relevant Date of Substantial Completion, any applicable statute of limitation shall commence to run and any alleged cause of action shall be deemed to have accrued in any and all events not later than the date of issuance of final Certificate of Payment.

3.07 ARTICLE 11 INSURANCE AND BONDS

- A. Supplement Paragraph 11.1 Contractor's Insurance and bonds, add the following: 11.1.4 Certificates of Insurance: General Contractor shall, before commencing work under this Contract, submit duplicate copies to Architect and Owner showing evidence that all Certificates of Insurance are in effect, covering Contractor and owner as their interests may appear, and that these minimum insurance coverage will not be canceled or changed until 30 days after written notice is given to Owner and Architect. Coverage are as follows:
 1. Workmen's Compensation: Statutory for applicable states, except provide \$100,000.00 minimum coverage.
 2. Comprehensive General Liability including Contractor's Liability: Contingent Liability; Contractual Liability, Completed Operations and Products Liability all on occurrences with Bodily Injury Coverage and broad from Property Damage. Remove XCU exclusion relating to Explosion, Collapse and Underground Property Damage. Completed Operations Liability shall be kept in force for at least 2 years after date of final completion. Provide \$500,000.00 minimum coverage.
 3. Comprehensive Automobile Liability including nonowner or hired care coverage as well as owned vehicles. Provide \$500,000.00 minimum coverage.
 4. Employer's Liability: Provide \$100,000.00 minimum coverage.
 5. Builder's Risk Insurance: Contractor will effect and maintain, Fire Insurance with extended coverage and vandalism and malicious mischief insurance upon the entire structure on which the work to be performed under this Contract is to be done to the extent of 100% of the insurable value thereof. Contractor will be responsible for any and all deductibles.
 6. In addition to the above minimum coverage, Contractor shall provide \$1,000,000.00 umbrella coverage.
- B. Add Paragraph 11.4 Performance Bond and Payment Bond as follows:
 1. Performance Bond and Labor and Materials Payment Bonds shall be furnished to the Owner, by General Contractor, in an amount equal to 100% of the contract sum as security for the faithful performance of the contract and the payment of all persons performing labor and furnishing materials in connection with the contract.
 2. Surety: Bonds furnished shall be written by a Surety approved by the U.S. Treasury Department and licensed to do business in the State where project is to be constructed. No work shall be commenced until bonds are in force. Power of Attorney for the Surety

Company Agent must accompany each bond issued, and must be certified to include the date of the bonds.

3. Bid Proposal: Contractor shall include cost of bonds in contract price.

END OF SECTION 005000 00 5000

**SECTION 00 5436
BUILDING INFORMATION MODELING EXHIBIT**

PART 1 GENERAL

1.01 SCOPE OF WORK

- A. The work included under these Specifications consists of furnishing all operations, or methods listed, mentioned, indicated or scheduled on the Drawings and/or in these Specifications concerning the preparation of electronic drawings by Architect and/or Architect's Consultants for the Project. This information is being made available to the Contractor, sub-contractor and material suppliers to set forth the basis of design.
- B. This Section establishes the terms and protocols governing the reliance upon, and the ownership, development, uses, transmission and sharing of Building Information Models (BIM) and other Digital Data for the Project.

1.02 DEFINITIONS

- A. Building Information Model or Model: A BIM or Model is a digital representation of the Project or a subset of the Project. A Model is a collection of one or more Model Portions, each of which is an assemblage of Model Elements.
- B. Model Portion: A model Portion, or Portion, is a subset of a Model. The parties may designate a Model Portion by discipline, trade, area, location, phase, or other mutually agreeable distinction.
- C. Model Element: A Model Element is a digital representation of a component, system, object, or assembly within a Model.
- D. Model Version: A Model Version, is a specific edition of a Model or Model Portion that is sufficiently identifiable as unique and unchanged as of the time it is saved by its Author or the Architect
- E. Confidential Digital Data: Unless otherwise stated, Confidential Digital Data is Digital Data containing confidential or business proprietary information that the transmitting party designates as "confidential". For purposes of this Project – all information transmitted by Architect and Architect's Consultants shall be treated as confidential.
- F. Contract Document: The term Contract Document shall have the same meaning as in the Agreement between the Owner and Architect and subsequently to the preparation of Drawings between the Owner and Contractor for the construction of the Project. The Model will not be enumerated as part of the Contract Document and should be considered as such.
- G. Level of Development: The Level of Development (LOD) establishes the minimum dimensional, spatial, quantitative, and qualitative aspects of a Model Element, and the degree to which Project Participants may rely upon the Model Element when developed to that level in the Model. The Levels of Development is described further below in this Section.

1.03 MODEL USES AND RELIANCE

- A. Model Uses, Sharing and Reliance: Project Participants may share, use and rely upon a Model or Model Portion only to the extent set forth in Items in this Section. Model sharing includes sharing within Design Team, with Contractor, and within the Construction Team
- B. Model Uses: The Project Participants shall develop Models on the Project for the following uses:
 - 1. Planning: Examples include programming, site analysis, scheduling, and documentation of existing conditions
 - 2. Design: Examples include design authoring, design review, 3D coordination, structural analysis, lighting analysis, and engineering analysis.
 - 3. Any other uses or preparation of supplemental information or drawings utilizing the BIM model may be developed by the Contractor and/or subcontractors at their own discretion, expense, and risk.

- C. Model Reliance: A Project Participant may only rely on Models, Model Portions, and Model Elements as indicated in Paragraph A. The Parties agree that the extent of their reliance on any Model Version shall be limited to the uses identified in Paragraph B above. Any reliance on a Model Version not in accordance with this Section shall be at the Project Participant's sole risk.
- D. Liability: To the fullest extent permitted by law, the Receiving Party shall indemnify and defend the Architect and Architect's Consultants from and against all claims arising from or related to the Receiving Party's modification to, or unlicensed use of, the Digital Data.
- E. Model Coordination: If Project Participants discover or become aware of any discrepancies, inconsistencies, errors, or omissions in any Model Version, consistent with the LOD scope described below, they shall promptly report the discrepancy, inconsistency, error, or omission in writing to the Architect; prior to commencing any work.

1.04 LEVEL OF DEVELOPMENT

- A. Level of Development Descriptions: The LOD descriptions below shall be used to identify the minimum required characteristics for each Model Element for the Project. Other Project Participants may only rely on a Model Element consistent with the minimum required characteristics for the designated LOD.
- B. LOD 100. The Model Element designated for the Project by the Architect and Architect's Consultants for the Project is established to be LOD 100. The Model Element may be graphically represented in the Model with a symbol or other generic representation. Information related to the Model Element (e.g., cost per square foot, quantity, etc). Model Elements are not required to be an actual representation of a specific product as enumerated in the Construction Documents.

1.05 DIGITAL DATA LICENSING AGREEMENT

- A. The purpose of this Agreement will be to grant a license from the Architect or Architect's Consultants (the Transmitting Party) to the Receiving Party for the Receiving Party's use of Digital Data and to set forth the license terms. This Exhibit is anticipated to utilize AIA Document C106-2022 Digital Data Licensing Agreement, and will be required to be executed prior to any data transfer.
- B. Transmission of Digital Data: The Transmitting Party grants to the Receiving Party a nonexclusive limited license to use the Digital Data solely and exclusively for the uses, and in accordance with the terms, set forth in this Section, and in the Digital Data Licensing Agreement.
- C. Access: Only the Receiving Party is permitted to access and use the Digital Data. Unlicensed and unauthorized access or use by third parties is strictly prohibited.
- D. License Conditions: The Receiving Party may use and rely upon the Digital Data to the extent set forth below:
 - 1. The Digital Data is transmitted solely for the Receiving Party's information. Receiving Party acknowledges that any use of the Digital Data shall be at Receiving Party's sole risk. The Receiving Party accepts the Digital Data "as is" without any warranty or representations from the Transmitting Party as to whether the Digital Data is accurate, complete, or fit for use as intended by the Receiving Party. The Receiving Party is solely responsible for verifying whether the Digital Data is accurate, complete, or fit for the Receiving Party's intended use.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION 00 5436

**SECTION 00 7000
GENERAL CONDITIONS**

PART 1 GENERAL

1.01 FORM OF GENERAL CONDITIONS

- A. AIA DOCUMENT A201, GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION, 2017 EDITION, ATTACHED, IS HEREBY INCORPORATED HEREIN AND MADE A PART OF THE GENERAL CONDITIONS BETWEEN THE OWNER AND THE CONTRACTOR. DOCUMENT FOLLOWS AS SECTION 007000A.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION 00 7000

**SECTION 01 1000
SUMMARY**

PART 1 GENERAL

1.01 PROJECT

- A. Project Name: Bear Creek Apartments
- B. Owner's Name: Housing Authority of the City of Columbia Missouri.
- C. Architect's Name: Rosemann & Associates, P.C..
- D. The Project consists of the alteration of and selective building and site improvements at 1109 Elleta Boulevard in Columbia, Missouri. Work includes reconfiguration of the existing laundry building (Building 42) to create a reduced laundry facility and separate office tenant space, conversion of Building 32 to two Group R-2 residential dwelling units, and limited roofing, soffit, and finish repairs at Buildings 32, 42, and 43. All work shall be performed in accordance with the 2018 International Existing Building Code and related adopted building codes for Level 2 alterations..

1.02 CONTRACT DESCRIPTION

1.03 OWNER OCCUPANCY

- A. Owner intends to occupy the Project upon Substantial Completion.
- B. Cooperate with Owner to minimize conflict and to facilitate Owner's operations.
- C. Schedule the Work to accommodate Owner occupancy.

1.04 CONTRACTOR USE OF SITE

- A. Provide access to and from site as required by law and by Owner:
 - 1. Emergency Building Exits During Construction: Keep all exits required by code open during construction period; provide temporary exit signs if exit routes are temporarily altered.
 - 2. Do not obstruct roadways, sidewalks, or other public ways without permit.
- B. Existing building spaces may not be used for storage.

1.05 WORK SEQUENCE

- A. Coordinate construction schedule and operations with Owner.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION 01 1000

SECTION 01 2100 ALLOWANCES

GENERAL

1.01 SUMMARY

- A. Section includes administrative and procedural requirements governing allowances.
- B. Types of allowances include the following:
 - 1. Base Bid Allowances.
- C. Related Sections:
 - 1. Division 01 Section "Unit Prices" for procedures for using unit prices.
 - 2. Division 01 Section "Quality Requirements" for procedures governing the use of allowances for testing and inspecting.

1.02 SELECTION AND PURCHASE

- A. At the earliest practical date after award of the Contract, advise Architect of the date when final selection and purchase of each product or system described by an allowance must be completed to avoid delaying the Work.
- B. At Architect's request, obtain proposals for each allowance for use in making final selections. Include recommendations that are relevant to performing the Work.
- C. Purchase products and systems selected by Architect from the designated supplier.

1.03 SUBMITTALS

- A. Submit proposals for purchase of products or systems included in allowances, in the form specified for Change Orders.
- B. Submit invoices or delivery slips to show actual quantities of materials delivered to the site for use in fulfillment of each allowance.
- C. Submit time sheets and other documentation to show labor time and cost for installation of allowance items that include installation as part of the allowance.
- D. Coordinate and process submittals for allowance items in same manner as for other portions of the Work.

1.04 COORDINATION

- A. Coordinate allowance items with other portions of the Work. Furnish templates as required to coordinate installation.

1.05 LUMP SUM ALLOWANCES

- A. Allowance shall include cost to Contractor of specific products and materials ordered by Owner or selected by Architect under allowance and shall include taxes, freight, and delivery to Project site.
- B. Unless otherwise indicated, Contractor's costs for receiving and handling at Project site, labor, installation, overhead and profit, and similar costs related to products and materials selected by Architect under allowance shall be included as part of the Contract Sum and not part of the allowance.
- C. Unused Materials: Return unused materials purchased under an allowance to manufacturer or supplier for credit to Owner, after installation has been completed and accepted.
 - 1. If requested by Architect, retain and prepare unused material for storage by Owner. Deliver unused material to Owner's storage space as directed.

1.06 CONTINGENCY ALLOWANCES

- A. Use the contingency allowance only as directed by Architect for Owner's purposes and only by Change Orders that indicate amounts to be charged to the allowance.
- B. Contractor's overhead, profit, and related costs for products and equipment ordered by Owner under the contingency allowance are included in the allowance and are not part of the Contract

Sum. These costs include delivery, installation, taxes, insurance, equipment rental, and similar costs.

- C. Change Orders authorizing use of funds from the contingency allowance will include Contractor's related costs and reasonable overhead and profit margins.
- D. At Project closeout, credit unused amounts remaining in the contingency allowance to Owner by Change Order.

1.07 TESTING AND INSPECTING ALLOWANCES

- A. Testing and inspecting allowances include the cost of engaging testing agencies, actual tests and inspections, and reporting results.
- B. The allowance does not include incidental labor required to assist the testing agency or costs for retesting if previous tests and inspections result in failure. The cost for incidental labor to assist the testing agency shall be included in the Contract Sum.
- C. Costs of services not required by the Contract Documents are not included in the allowance.
- D. At Project closeout, credit unused amounts remaining in the testing and inspecting allowance to Owner by Change Order.

1.08 ADJUSTMENT OF ALLOWANCES

- A. Allowance Adjustment: To adjust allowance amounts, prepare a Change Order proposal based on the difference between purchase amount and the allowance, multiplied by final measurement of work-in-place where applicable. If applicable, include reasonable allowances for cutting losses, tolerances, mixing wastes, normal product imperfections, and similar margins.
 - 1. Include installation costs in purchase amount only where indicated as part of the allowance.
 - 2. If requested, prepare explanation and documentation to substantiate distribution of overhead costs and other margins claimed.
 - 3. Submit substantiation of a change in scope of work, if any, claimed in Change Orders related to unit-cost allowances.
 - 4. Owner reserves the right to establish the quantity of work-in-place by independent quantity survey, measure, or count.
- B. Submit claims for increased costs because of a change in scope or nature of the allowance described in the Contract Documents, whether for the purchase order amount or Contractor's handling, labor, installation, overhead, and profit.
 - 1. Do not include Contractor's or subcontractor's indirect expense in the Change Order cost amount unless it is clearly shown that the nature or extent of work has changed from what could have been foreseen from information in the Contract Documents.
 - 2. No change to Contractor's indirect expense is permitted for selection of higher- or lower-priced materials or systems of the same scope and nature as originally indicated.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.01 EXAMINATION

- A. Examine products covered by an allowance promptly on delivery for damage or defects. Return damaged or defective products to manufacturer for replacement.

3.02 PREPARATION

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

END OF SECTION 01 2100

**SECTION 01 2600
CONTRACT MODIFICATION PROCEDURES**

PART 1 GENERAL

1.01 MINOR CHANGES IN THE WORK

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

1.02 PROPOSAL REQUESTS

- A. Owner-Initiated Proposal Requests: Architect will issue a detailed description of proposed changes in the Work that may require adjustment to the Contract Sum or the Contract Time. If necessary, the description will include supplemental or revised Drawings and Specifications.
 - 1. Proposal Requests issued by Architect are not instructions either to stop work in progress or to execute the proposed change.
 - 2. Within time specified in Proposal Request after receipt of Proposal Request, submit a quotation estimating cost adjustments to the Contract Sum and the Contract Time necessary to execute the change.
 - a. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
 - b. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
 - c. Include costs of labor and supervision directly attributable to the change.
 - d. Include an updated Contractor's construction schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
 - e. Quotation Form: Use forms acceptable to Architect.
- B. Contractor-Initiated Proposals: If latent or changed conditions require modifications to the Contract, Contractor may initiate a claim by submitting a request for a change to Architect.
 - 1. Include a statement outlining reasons for the change and the effect of the change on the Work. Provide a complete description of the proposed change. Indicate the effect of the proposed change on the Contract Sum and the Contract Time.
 - 2. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
 - 3. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
 - 4. Include costs of labor and supervision directly attributable to the change.
 - 5. Include an updated Contractor's construction schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
 - 6. Comply with requirements in Division 01 Section "Substitution Procedures" if the proposed change requires substitution of one product or system for product or system specified.
 - 7. Proposal Request Form: Use form acceptable to Architect.

1.03 CHANGE ORDER PROCEDURES

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

1.04 CONSTRUCTION CHANGE DIRECTIVE

- A. Construction Change Directive: Architect may issue a Construction Change Directive on AIA Document G714. Construction Change Directive instructs Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.
 - 1. Construction Change Directive contains a complete description of change in the Work. It also designates method to be followed to determine change in the Contract Sum or the Contract Time.
- B. Documentation: Maintain detailed records on a time and material basis of work required by the Construction Change Directive.
 - 1. After completion of change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION 01 2600

**SECTION 01 2900
PAYMENT PROCEDURES**

PART 1 GENERAL

1.01 SCHEDULE OF VALUES

- A. Coordination: Coordinate preparation of the schedule of values with preparation of Contractor's construction schedule.
 - 1. Correlate line items in the schedule of values with other required administrative forms and schedules, including the following:
 - a. Application for Payment forms with continuation sheets.
 - b. Submittal schedule.
 - c. Items required to be indicated as separate activities in Contractor's construction schedule.
 - 2. Submit the schedule of values to Architect at earliest possible date but no later than seven days before the date scheduled for submittal of initial Applications for Payment.
 - 3. Subschedules for Phased Work: Where the Work is separated into phases requiring separately phased payments, provide subschedules showing values correlated with each phase of payment.
- B. Format and Content: Use the specifications table of contents as a guide to establish line items for the schedule of values. Provide at least one line item for each Specification Section.
 - 1. Identification: Include the following Project identification on the schedule of values:
 - a. Project name and location.
 - b. Name of Architect.
 - c. Architect's project number.
 - d. Contractor's name and address.
 - e. Date of submittal.
 - 2. Arrange schedule of values consistent with format of AIA Document G702
 - 3. Provide a breakdown of the Contract Sum in enough detail to facilitate continued evaluation of Applications for Payment and progress reports. Coordinate with the Project Manual table of contents. Provide multiple line items for principal subcontract amounts in excess of five percent of Contract Sum.
 - 4. Round amounts to nearest whole dollar; total shall equal the Contract Sum.
 - 5. Provide a separate line item in the schedule of values for each part of the Work where Applications for Payment may include materials or equipment purchased or fabricated and stored, but not yet installed.
 - 6. Provide separate line items in the schedule of values for initial cost of materials, for each subsequent stage of completion, and for total installed value of that part of the Work.
 - 7. Allowances: Provide a separate line item in the schedule of values for each allowance. Show line-item value of unit-cost allowances, as a product of the unit cost, multiplied by measured quantity. Use information indicated in the Contract Documents to determine quantities.
 - 8. Each item in the schedule of values and Applications for Payment shall be complete. Include total cost and proportionate share of general overhead and profit for each item.
 - a. Temporary facilities and other major cost items that are not direct cost of actual work-in-place may be shown either as separate line items in the schedule of values or distributed as general overhead expense, at Contractor's option.
 - 9. Schedule Updating: Update and resubmit the schedule of values before the next Applications for Payment when Change Orders or Construction Change Directives result in a change in the Contract Sum.

1.02 APPLICATIONS FOR PAYMENT

- A. Each Application for Payment shall be consistent with previous applications and payments as certified by Architect and paid for by Owner.

1. Initial Application for Payment, Application for Payment at time of Substantial Completion, and final Application for Payment involve additional requirements.
- B. Payment Application Times: The date for each progress payment is indicated in the Agreement between Owner and Contractor. The period of construction work covered by each Application for Payment is the period indicated in the Agreement.
- C. Payment Application Times: Progress payments shall be submitted to Architect by the fifteenth (15) of the month. The period covered by each Application for Payment is one month, ending on the last day of the month.
- D. Application for Payment Forms: Use AIA Document G702 as form for Applications for Payment.
- E. Application for Payment Forms: Use forms provided by Owner for Applications for Payment. Sample copies are included in the Project Manual.
- F. Application Preparation: Complete every entry on form. Notarize and execute by a person authorized to sign legal documents on behalf of Contractor. Architect will return incomplete applications without action.
 1. Entries shall match data on the schedule of values and Contractor's construction schedule. Use updated schedules if revisions were made.
 2. Include amounts of Change Orders and Construction Change Directives issued before last day of construction period covered by application.
- G. Transmittal: Submit three signed and notarized original copies of each Application for Payment to Architect by a method ensuring receipt. One copy shall include waivers of lien and similar attachments if required.
 1. Transmit each copy with a transmittal form listing attachments and recording appropriate information about application.
- H. Waivers of Mechanic's Lien: With each Application for Payment, submit waivers of mechanic's lien from entities lawfully entitled to file a mechanic's lien arising out of the Contract and related to the Work covered by the payment.
 1. Submit partial waivers on each item for amount requested in previous application, after deduction for retainage, on each item.
 2. When an application shows completion of an item, submit conditional final or full waivers.
 3. Owner reserves the right to designate which entities involved in the Work must submit waivers.
 4. Waiver Forms: Submit waivers of lien on forms, executed in a manner acceptable to Owner.
- I. Initial Application for Payment: Administrative actions and submittals that must precede or coincide with submittal of first Application for Payment include the following:
 1. List of subcontractors.
 2. Schedule of values.
 3. Contractor's construction schedule (preliminary if not final).
 4. Schedule of unit prices.
 5. Submittal schedule (preliminary if not final).
 6. List of Contractor's staff assignments.
 7. List of Contractor's principal consultants.
 8. Copies of building permits.
 9. Copies of authorizations and licenses from authorities having jurisdiction for performance of the Work.
 10. Initial progress report.
 11. Report of preconstruction conference.
- J. Application for Payment at Substantial Completion: After issuing the Certificate of Substantial Completion, submit an Application for Payment showing 100 percent completion for portion of the Work claimed as substantially complete.

1. Include documentation supporting claim that the Work is substantially complete and a statement showing an accounting of changes to the Contract Sum.
 2. This application shall reflect Certificates of Partial Substantial Completion issued previously for Owner occupancy of designated portions of the Work.
- K. Final Payment Application: Submit final Application for Payment with releases and supporting documentation not previously submitted and accepted, including, but not limited, to the following:
1. Evidence of completion of Project closeout requirements.
 2. Insurance certificates for products and completed operations where required and proof that taxes, fees, and similar obligations were paid.
 3. Updated final statement, accounting for final changes to the Contract Sum.
 4. AIA Document G706-1994, "Contractor's Affidavit of Payment of Debts and Claims."
 5. AIA Document G706A-1994, "Contractor's Affidavit of Release of Liens."
 6. AIA Document G707-1994, "Consent of Surety to Final Payment."
 7. Evidence that claims have been settled.
 8. Final meter readings for utilities, a measured record of stored fuel, and similar data as of date of Substantial Completion or when Owner took possession of and assumed responsibility for corresponding elements of the Work.
 9. Final liquidated damages settlement statement.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION 01 2900

**SECTION 01 3000
ADMINISTRATIVE REQUIREMENTS**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. General administrative requirements.
- B. Preconstruction meeting.
- C. Progress meetings.
- D. Construction progress schedule.
- E. Submittals for review, information, and project closeout.
- F. Number of copies of submittals.
- G. Requests for Interpretation (RFI) procedures.
- H. Submittal procedures.

1.02 GENERAL ADMINISTRATIVE REQUIREMENTS

- A. Comply with requirements of Section 01 7000 - Execution and Closeout Requirements for coordination of execution of administrative tasks with timing of construction activities.
- B. Make the following types of submittals to Architect:
 - 1. Requests for Interpretation (RFI).
 - 2. Requests for substitution.
 - 3. Shop drawings, product data, and samples.
 - 4. Test and inspection reports.
 - 5. Design data.
 - 6. Manufacturer's instructions and field reports.
 - 7. Applications for payment and change order requests.
 - 8. Progress schedules.
 - 9. Coordination drawings.
 - 10. Correction Punch List and Final Correction Punch List for Substantial Completion.
 - 11. Closeout submittals.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 PRECONSTRUCTION MEETING

- A. Attendance Required:
 - 1. Owner.
 - 2. Architect.
 - 3. Contractor.
- B. Agenda:
 - 1. Execution of Owner-Contractor Agreement.
 - 2. Submission of executed bonds and insurance certificates.
 - 3. Distribution of Contract Documents.
 - 4. Submission of list of subcontractors, list of products, schedule of values, and progress schedule.
 - 5. Designation of personnel representing the parties to Contract, _____ and Architect.
 - 6. Procedures and processing of field decisions, submittals, substitutions, applications for payments, proposal request, Change Orders, and Contract closeout procedures.
 - 7. Scheduling.
- C. Record minutes and distribute copies within two days after meeting to participants, with two copies to Architect, Owner, participants, and those affected by decisions made.

3.02 PROGRESS MEETINGS

- A. Attendance Required:
 - 1. Contractor.
 - 2. Owner.
 - 3. Architect.
 - 4. Contractor's superintendent.
 - 5. Major subcontractors.
- B. Agenda:
 - 1. Review minutes of previous meetings.
 - 2. Review of work progress.
 - 3. Field observations, problems, and decisions.
 - 4. Identification of problems that impede, or will impede, planned progress.
 - 5. Review of submittals schedule and status of submittals.
 - 6. Maintenance of progress schedule.
 - 7. Corrective measures to regain projected schedules.
 - 8. Planned progress during succeeding work period.
 - 9. Maintenance of quality and work standards.
 - 10. Effect of proposed changes on progress schedule and coordination.
 - 11. Other business relating to work.
- C. Record minutes and distribute copies within two days after meeting to participants, with two copies to Architect, Owner, participants, and those affected by decisions made.

3.03 CONSTRUCTION PROGRESS SCHEDULE

- A. If preliminary schedule requires revision after review, submit revised schedule within 10 days.
- B. Within 20 days after review of preliminary schedule, submit draft of proposed complete schedule for review.
 - 1. Include written certification that major contractors have reviewed and accepted proposed schedule.
- C. Within 10 days after joint review, submit complete schedule.
- D. Submit updated schedule with each Application for Payment.

3.04 REQUESTS FOR INTERPRETATION (RFI)

- A. Preparation: Prepare an RFI immediately upon discovery of a need for interpretation of Contract Documents. Failure to submit a RFI in a timely manner is not a legitimate cause for claiming additional costs or delays in execution of the work.
 - 1. Prepare a separate RFI for each specific item.
- B. RFI Log: Prepare and maintain a tabular log of RFIs for the duration of the project.

3.05 SUBMITTALS FOR REVIEW

- A. When the following are specified in individual sections, submit them for review:
 - 1. Product data.
 - 2. Shop drawings.
 - 3. Samples for selection.
 - 4. Samples for verification.
- B. Submit to Architect for review for the limited purpose of checking for compliance with information given and the design concept expressed in Contract Documents.
- C. Samples will be reviewed for aesthetic, color, or finish selection.
- D. After review, provide copies and distribute in accordance with SUBMITTAL PROCEDURES article below and for record documents purposes described in Section 01 7800 - Closeout Submittals.

3.06 SUBMITTALS FOR INFORMATION

- A. When the following are specified in individual sections, submit them for information:
 - 1. Design data.
 - 2. Certificates.
 - 3. Test reports.
 - 4. Inspection reports.
 - 5. Manufacturer's instructions.
 - 6. Manufacturer's field reports.
 - 7. Other types indicated.
- B. Submit for Architect's knowledge as contract administrator or for Owner.

3.07 SUBMITTALS FOR PROJECT CLOSEOUT

- A. Submit Correction Punch List for Substantial Completion.
- B. Submit Final Correction Punch List for Substantial Completion.
- C. When the following are specified in individual sections, submit them at project closeout in compliance with requirements of Section 01 7800 - Closeout Submittals:
 - 1. Project record documents.
 - 2. Operation and maintenance data.
 - 3. Warranties.
 - 4. Bonds.
 - 5. Other types as indicated.
- D. Submit for Owner's benefit during and after project completion.

3.08 NUMBER OF COPIES OF SUBMITTALS

- A. Electronic Documents: Submit one electronic copy in PDF format; an electronically-marked up file will be returned. Create PDFs at native size and right-side up; illegible files will be rejected.
- B. Samples: Submit the number specified in individual specification sections; one of which will be retained by Architect.
 - 1. After review, produce duplicates.
 - 2. Retained samples will not be returned to Contractor unless specifically so stated.

3.09 SUBMITTAL PROCEDURES

- A. General Requirements:
 - 1. Use a separate transmittal for each item.
 - 2. Submit separate packages of submittals for review and submittals for information, when included in the same specification section.
 - 3. Transmit using approved form.
 - a. Use Contractor's form, subject to prior approval by Architect.
 - b. Use form generated by Electronic Document Submittal Service software.
 - 4. Sequentially identify each item. For revised submittals use original number and a sequential numerical suffix.
 - 5. Identify: Project; Contractor; subcontractor or supplier; pertinent drawing and detail number; and specification section number and article/paragraph, as appropriate on each copy.
 - 6. Apply Contractor's stamp, signed or initialed certifying that review, approval, verification of products required, field dimensions, adjacent construction work, and coordination of information is in accordance with the requirements of the work and Contract Documents.
 - a. Submittals from sources other than the Contractor, or without Contractor's stamp will not be acknowledged, reviewed, or returned.
- B. Product Data Procedures:
 - 1. Submit only information required by individual specification sections.
 - 2. Collect required information into a single submittal.

3. Do not submit (Material) Safety Data Sheets for materials or products.
- C. Shop Drawing Procedures:
 1. Prepare accurate, drawn-to-scale, original shop drawing documentation by interpreting Contract Documents and coordinating related work.
 2. Generic, non-project-specific information submitted as shop drawings do not meet the requirements for shop drawings.

3.10 SUBMITTAL REVIEW

- A. Submittals for Review: Architect will review each submittal, and approve, or take other appropriate action.
- B. Submittals for Information: Architect will acknowledge receipt and review. See below for actions to be taken.
- C. Architect's actions will be reflected by marking each returned submittal using virtual stamp on electronic submittals.
- D. Architect's and consultants' actions on items submitted for review:
 1. Authorizing purchasing, fabrication, delivery, and installation:
 - a. "Approved", or language with same legal meaning.
 - b. "Approved as Noted, Resubmission not required", or language with same legal meaning.
 - 1) At Contractor's option, submit corrected item, with review notations acknowledged and incorporated.
 - c. "Approved as Noted, Resubmit for Record", or language with same legal meaning.
 2. Not Authorizing fabrication, delivery, and installation:
- E. Architect's and consultants' actions on items submitted for information:
 1. Items for which no action was taken:
 - a. "Received" - to notify the Contractor that the submittal has been received for record only.
 2. Items for which action was taken:
 - a. "Reviewed" - no further action is required from Contractor.

END OF SECTION 01 3000

**SECTION 01 3100
PROJECT MANAGEMENT AND COORDINATION**

PART 1 GENERAL

1.01 COORDINATION

- A. Coordination: Coordinate construction operations included in different Sections of the Specifications to ensure efficient and orderly installation of each part of the Work. Coordinate construction operations, included in different Sections, that depend on each other for proper installation, connection, and operation.
 - 1. Schedule construction operations in sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
 - 2. Coordinate installation of different components to ensure maximum performance and accessibility for required maintenance, service, and repair.
 - 3. Make adequate provisions to accommodate items scheduled for later installation.
- B. Prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include required notices, reports, and list of attendees at meetings.
 - 1. Prepare similar memoranda for Owner and separate contractors if coordination of their Work is required.
- C. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities to avoid conflicts and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:
 - 1. Preparation of Contractor's construction schedule.
 - 2. Preparation of the schedule of values.
 - 3. Installation and removal of temporary facilities and controls.
 - 4. Delivery and processing of submittals.
 - 5. Progress meetings.
 - 6. Preinstallation conferences.
 - 7. Project closeout activities.
 - 8. Startup and adjustment of systems.
 - 9. Project closeout activities.

1.02 REQUESTS FOR INFORMATION (RFIS)

- A. General: Immediately on discovery of the need for additional information or interpretation of the Contract Documents, Contractor shall prepare and submit an RFI in the form specified.
 - 1. Architect will return RFIs submitted to Architect by other entities controlled by Contractor with no response.
 - 2. Coordinate and submit RFIs in a prompt manner so as to avoid delays in Contractor's work or work of subcontractors.
- B. Content of the RFI: Include a detailed, legible description of item needing information or interpretation and the following:
 - 1. Project name.
 - 2. Project number.
 - 3. Date.
 - 4. Name of Contractor.
 - 5. Name of Architect.
 - 6. RFI number, numbered sequentially.
 - 7. RFI subject.
 - 8. Specification Section number and title and related paragraphs, as appropriate.
 - 9. Drawing number and detail references, as appropriate.
 - 10. Field dimensions and conditions, as appropriate.
 - 11. Contractor's suggested resolution. If Contractor's solution(s) impacts the Contract Time or the Contract Sum, Contractor shall state impact in the RFI.

12. Contractor's signature.
 13. Attachments: Include sketches, descriptions, measurements, photos, Product Data, Shop Drawings, coordination drawings, and other information necessary to fully describe items needing interpretation.
- C. RFI Forms: Software-generated form with substantially the same content as indicated above, acceptable to Architect.
- D. Architect's Action: Architect will review each RFI, determine action required, and respond. Allow seven working days for Architect's response for each RFI. RFIs received by Architect after 1:00 p.m. will be considered as received the following working day.
1. The following RFIs will be returned without action:
 - a. Requests for approval of submittals.
 - b. Requests for approval of substitutions.
 - c. Requests for coordination information already indicated in the Contract Documents.
 - d. Requests for adjustments in the Contract Time or the Contract Sum.
 - e. Requests for interpretation of Architect's actions on submittals.
 - f. Incomplete RFIs or inaccurately prepared RFIs.
 2. Architect's action may include a request for additional information, in which case Architect's time for response will date from time of receipt of additional information.
 3. Architect's action on RFIs that may result in a change to the Contract Time or the Contract Sum may be eligible for Contractor to submit Change Proposal according to Division 01 Section "Contract Modification Procedures."
 - a. If Contractor believes the RFI response warrants change in the Contract Time or the Contract Sum, notify Architect in writing within 10 days of receipt of the RFI response.
- E. On receipt of Architect's action, update the RFI log and immediately distribute the RFI response to affected parties. Review response and notify Architect within seven days if Contractor disagrees with response.
- F. RFI Log: Prepare, maintain, and submit a tabular log of RFIs organized by the RFI number. Submit log weekly. Include the following:
1. Project name.
 2. Name and address of Contractor.
 3. Name and address of Architect.
 4. RFI number including RFIs that were dropped and not submitted.
 5. RFI description.
 6. Date the RFI was submitted.
 7. Date Architect's response was received.
 8. Identification of related Minor Change in the Work, Construction Change Directive, and Proposal Request, as appropriate.

1.03 PROJECT MEETINGS

- A. Preconstruction Conference: Schedule and conduct a preconstruction conference before starting construction, at a time convenient to Owner and Architect, but no later than 15 days after execution of the Agreement.
1. Attendees: Authorized representatives of Owner, Architect, and their consultants; Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the conference. Participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
 2. Agenda: Discuss items of significance that could affect progress, including the following:
 - a. Tentative construction schedule.
 - b. Phasing.
 - c. Critical work sequencing and long-lead items.
 - d. Designation of key personnel and their duties.
 - e. Procedures for processing field decisions and Change Orders.
 - f. Procedures for RFIs.

- g. Procedures for testing and inspecting.
 - h. Procedures for processing Applications for Payment.
 - i. Distribution of the Contract Documents.
 - j. Submittal procedures.
 - k. Sustainable design requirements.
 - l. Preparation of record documents.
 - m. Use of the premises.
 - n. Work restrictions.
 - o. Working hours.
 - p. Owner's occupancy requirements.
 - q. Responsibility for temporary facilities and controls.
 - r. Procedures for moisture and mold control.
 - s. Procedures for disruptions and shutdowns.
 - t. Construction waste management and recycling.
 - u. Parking availability.
 - v. Office, work, and storage areas.
 - w. Equipment deliveries and priorities.
 - x. First aid.
 - y. Security.
 - z. Progress cleaning.
3. Minutes: Entity responsible for conducting meeting will record and distribute meeting minutes.
- B. Progress Meetings: Conduct progress meetings at biweekly intervals.
- 1. Attendees: In addition to representatives of Owner and Architect, each contractor, subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the meeting shall be familiar with Project and authorized to conclude matters relating to the Work.
 - 2. Agenda: Review and correct or approve minutes of previous progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to status of Project.
 - a. Contractor's Construction Schedule: Review progress since the last meeting. Determine whether each activity is on time, ahead of schedule, or behind schedule, in relation to Contractor's construction schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.
 - 1) Review schedule for next period.
 - b. Review present and future needs of each entity present, including the following:
 - 1) Interface requirements.
 - 2) Sequence of operations.
 - 3) Status of submittals.
 - 4) Deliveries.
 - 5) Off-site fabrication.
 - 6) Access.
 - 7) Site utilization.
 - 8) Temporary facilities and controls.
 - 9) Progress cleaning.
 - 10) Quality and work standards.
 - 11) Status of correction of deficient items.
 - 12) Field observations.
 - 13) Status of RFIs.
 - 14) Status of proposal requests.

- 15) Pending changes.
- 16) Status of Change Orders.
- 17) Pending claims and disputes.
- 18) Documentation of information for payment requests.
- 3. Minutes: Entity responsible for conducting the meeting will record and distribute the meeting minutes to each party present and to parties requiring information.
 - a. Schedule Updating: Revise Contractor's construction schedule after each progress meeting where revisions to the schedule have been made or recognized. Issue revised schedule concurrently with the report of each meeting.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION 01 3100

**SECTION 01 3300
SUBMITTAL PROCEDURES**

PART 1 GENERAL

1.01 DEFINITIONS

- A. Action Submittals: Written and graphic information and physical samples that require Architect's responsive action.
- B. Informational Submittals: Written and graphic information and physical samples that do not require Architect's responsive action. Submittals may be rejected for not complying with requirements.

1.02 ACTION SUBMITTALS

- A. Submittal Schedule: Submit a schedule of submittals, arranged in chronological order by dates required by construction schedule. Include time required for review, ordering, manufacturing, fabrication, and delivery when establishing dates. Include additional time required for making corrections or modifications to submittals noted by the Architect and additional time for handling and reviewing submittals required by those corrections.

1.03 SUBMITTAL ADMINISTRATIVE REQUIREMENTS

- A. Architect's Digital Data Files: Electronic copies of CAD Drawings of the Contract Drawings will be provided by Architect for Contractor's use in preparing submittals.
 - 1. Architect will furnish Contractor one set of digital data drawing files of the of requested Contract Drawings for use in preparing Shop Drawings.
 - a. Architect makes no representations as to the accuracy or completeness of digital data drawing files as they relate to the Contract Drawings.
 - b. Contractor shall execute a data licensing agreement in the form prepared by the Architect
- B. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.
 - 1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
 - 2. Coordinate transmittal of different types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination.
 - a. Architect reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.
- C. Processing Time: Allow time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Architect's receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.
 - 1. Initial Review: Allow 15 calendar days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Architect will advise Contractor when a submittal being processed must be delayed for coordination.
 - 2. Intermediate Review: If intermediate submittal is necessary, process it in same manner as initial submittal.
 - 3. Resubmittal Review: Allow 15 calendar days for review of each resubmittal.
- D. Identification and Information: Place a permanent label or title block on each paper copy submittal item for identification.
 - 1. Indicate name of firm or entity that prepared each submittal on label or title block.
 - 2. Provide a space approximately 6 by 8 inches (150 by 200 mm) on label or beside title block to record Contractor's review and approval markings and action taken by Architect.
 - 3. Include the following information for processing and recording action taken:
 - a. Project name.

- b. Date.
 - c. Name of Architect.
 - d. Name of Construction Manager.
 - e. Name of Contractor.
 - f. Name of subcontractor.
 - g. Name of supplier.
 - h. Name of manufacturer.
 - i. Submittal number or other unique identifier, including revision identifier.
 - j. Number and title of appropriate Specification Section.
 - k. Drawing number and detail references, as appropriate.
 - l. Location(s) where product is to be installed, as appropriate.
 - m. Other necessary identification.
- E. Options: Identify options requiring selection by the Architect.
- F. Deviations: Identify deviations from the Contract Documents on submittals.
- G. Transmittal: Assemble each submittal individually and appropriately for transmittal and handling. Transmit each submittal using a transmittal form. Architect will return submittals, without review, received from sources other than Contractor.
- H. Resubmittals: Make resubmittals in same form and number of copies as initial submittal.
- 1. Note date and content of previous submittal.
 - 2. Note date and content of revision in label or title block and clearly indicate extent of revision.
 - 3. Resubmit submittals until they are marked with approval notation from Architect's action stamp.
- I. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, installers, authorities having jurisdiction, and others as necessary for performance of construction activities. Show distribution on transmittal forms.
- J. Use for Construction: Use only final submittals that are marked with approval notation from Architect's action stamp.

PART 2 PRODUCTS

2.01 SUBMITTAL PROCEDURES

- A. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.
- 1. If information must be specially prepared for submittal because standard published data are not suitable for use, submit as Shop Drawings, not as Product Data.
 - 2. Mark each copy of each submittal to show which products and options are applicable.
 - 3. Include the following information, as applicable:
 - a. Manufacturer's catalog cuts.
 - b. Manufacturer's product specifications.
 - c. Standard color charts.
 - d. Statement of compliance with specified referenced standards.
 - e. Testing by recognized testing agency.
 - f. Application of testing agency labels and seals.
 - g. Notation of coordination requirements.
 - h. Availability and delivery time information.
 - 4. For equipment, include the following in addition to the above, as applicable:
 - a. Wiring diagrams showing factory-installed wiring.
 - b. Printed performance curves.
 - c. Operational range diagrams.
 - d. Clearances required to other construction, if not indicated on accompanying Shop Drawings.
 - 5. Submit Product Data before or concurrent with Samples.

6. Submit Product Data in the following format:
 - a. Three paper copies of Product Data, unless otherwise indicated. Architect will return two copies.
- 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, unless submittal based upon Architect's digital data drawing files is otherwise permitted.
 1. Preparation: Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:
 - a. Identification of products.
 - b. Schedules.
 - c. Compliance with specified standards.
 - d. Notation of coordination requirements.
 - e. Notation of dimensions established by field measurement.
 - f. Relationship and attachment to adjoining construction clearly indicated.
 - g. Seal and signature of professional engineer if specified.
 2. Sheet Size: Except for templates, patterns, and similar full-size drawings, submit Shop Drawings on sheets at least 8-1/2 by 11 inches (215 by 280 mm) but no larger than 30 by 42 inches (750 by 1067 mm).
 3. Submit Shop Drawings in the following format:
 - a. Three opaque copies of each submittal. Architect will retain two copies; remainder will be returned.
- C. Samples: Submit Samples for review of kind, color, pattern, and texture for a check of these characteristics with other elements and for a comparison of these characteristics between submittal and actual component as delivered and installed.
 1. Transmit Samples that contain multiple, related components such as accessories together in one submittal package.
 2. Identification: Attach label on unexposed side of Samples that includes the following:
 - a. Generic description of Sample.
 - b. Product name and name of manufacturer.
 - c. Sample source.
 - d. Number and title of applicable Specification Section.
 3. Disposition: Maintain sets of approved Samples at Project site, available for quality-control comparisons throughout the course of construction activity. Sample sets may be used to determine final acceptance of construction associated with each set.
 - a. Samples that may be incorporated into the Work are indicated in individual Specification Sections. Such Samples must be in an undamaged condition at time of use.
 - b. Samples not incorporated into the Work, or otherwise designated as Owner's property, are the property of Contractor.
 4. Samples for Initial Selection: Submit manufacturer's color charts consisting of units or sections of units showing the full range of colors, textures, and patterns available.
 - a. Number of Samples: Submit two full set(s) of available choices where color, pattern, texture, or similar characteristics are required to be selected from manufacturer's product line. Architect will return one submittal with options selected.
 5. Samples for Verification: Submit full-size units or Samples of size indicated, prepared from same material to be used for the Work, cured and finished in manner specified, and physically identical with material or product proposed for use, and that show full range of color and texture variations expected. Samples include, but are not limited to, the following: partial sections of manufactured or fabricated components; small cuts or containers of materials; complete units of repetitively used materials; swatches showing color, texture, and pattern; color range sets; and components used for independent testing and inspection.
 - a. Number of Samples: Submit three sets of Samples. Architect will retain one Sample sets; remainder will be returned.

- b. If variation in color, pattern, texture, or other characteristic is inherent in material or product represented by a Sample, submit at least three sets of paired units that show approximate limits of variations.
- D. Product Schedule: As required in individual Specification Sections, prepare a written summary indicating types of products required for the Work and their intended location. Include the following information in tabular form:
 - 1. Submit product schedule in the following format:
 - a. Three paper copies of product schedule or list, unless otherwise indicated. Architect will return two copies.
- E. Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, contact information of architects and owners, and other information specified.
- F. Welding Certificates: Prepare written certification that welding procedures and personnel comply with requirements in the Contract Documents. Submit record of Welding Procedure Specification and Procedure Qualification Record on American Welding Society (AWS) forms. Include names of firms and personnel certified.
- G. Installer Certificates: Submit written statements on manufacturer's letterhead certifying that Installer complies with requirements in the Contract Documents and, where required, is authorized by manufacturer for this specific Project.
- H. Manufacturer Certificates: Submit written statements on manufacturer's letterhead certifying that manufacturer complies with requirements in the Contract Documents. Include evidence of manufacturing experience where required.
- I. Product Certificates: Submit written statements on manufacturer's letterhead certifying that product complies with requirements in the Contract Documents.
- J. Material Certificates: Submit written statements on manufacturer's letterhead certifying that material complies with requirements in the Contract Documents.
- K. Material Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements in the Contract Documents.
- L. Product Test Reports: Submit written reports indicating current product produced by manufacturer complies with requirements in the Contract Documents. Base reports on evaluation of tests performed by manufacturer and witnessed by a qualified testing agency, or on comprehensive tests performed by a qualified testing agency.
- M. Research Reports: Submit written evidence, from a model code organization acceptable to authorities having jurisdiction, that product complies with building code in effect for Project.

2.02 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 Services Certification: In addition to Shop Drawings, Product Data, and other required submittals, submit three paper copies of certificate, 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.

PART 3 EXECUTION

3.01 CONTRACTOR'S REVIEW

- A. Action and Informational Submittals: 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. Project Closeout and Maintenance/Material Submittals: Refer to requirements in Division 01 Section "Closeout Procedures."
- C. Approval Stamp: Stamp each submittal with a uniform, approval stamp. Include Project name and location, submittal number, Specification Section title and number, name of reviewer, date of Contractor's approval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents.

3.02 ARCHITECT'S ACTION

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

END OF SECTION 01 3300

**SECTION 01 4000
QUALITY REQUIREMENTS**

PART 1 GENERAL

1.01 CONFLICTING REQUIREMENTS

- A. Referenced Standards: If compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer conflicting requirements that are different, but apparently equal, to Architect for a decision before proceeding.

1.02 INFORMATIONAL SUBMITTALS

- A. Contractor's Statement of Responsibility: When required by authorities having jurisdiction, submit copy of written statement of responsibility sent to authorities having jurisdiction before starting work on the following systems.
 - 1. Main wind-force resisting system or a wind-resisting component listed in the wind-force-resisting system quality assurance plan prepared by the Architect.
- B. Testing Agency Qualifications: For testing agencies specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include proof of qualifications in the form of a recent report on the inspection of the testing agency by a recognized authority.

1.03 REPORTS AND DOCUMENTS

- A. Test and Inspection Reports: Prepare and submit certified written reports specified in other Sections. Include the following:
 - 1. Date of issue.
 - 2. Project title and number.
 - 3. Name, address, and telephone number of testing agency.
 - 4. Dates and locations of samples and tests or inspections.
 - 5. Names of individuals making tests and inspections.
 - 6. Description of the Work and test and inspection method.
 - 7. Identification of product and Specification Section.
 - 8. Complete test or inspection data.
 - 9. Test and inspection results and an interpretation of test results.
 - 10. Record of temperature and weather conditions at time of sample taking and testing and inspecting.
 - 11. Comments or professional opinion on whether tested or inspected Work complies with the Contract Document requirements.
 - 12. Name and signature of laboratory inspector.
 - 13. Recommendations on retesting and reinspecting.
- B. Permits, Licenses, and Certificates: For Owner's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents, established for compliance with standards and regulations bearing on performance of the Work.

1.04 QUALITY ASSURANCE

- A. General: Qualifications paragraphs in this article establish the minimum qualification levels required; individual Specification Sections specify additional requirements.
- B. Manufacturer Qualifications: A firm experienced in manufacturing products or systems similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.
- C. Fabricator Qualifications: A firm experienced in producing products similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.

- D. Installer Qualifications: A firm or individual experienced in installing, erecting, or assembling work similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in-service performance.
- E. Professional Engineer Qualifications: A professional engineer who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing engineering services of the kind indicated. Engineering services are defined as those performed for installations of the system, assembly, or product that are similar to those indicated for this Project in material, design, and extent.
- F. Testing Agency Qualifications: An NRTL, an NVLAP, or an independent agency with the experience and capability to conduct testing and inspecting indicated, as documented according to ASTM E 329; and with additional qualifications specified in individual Sections; and where required by authorities having jurisdiction, that is acceptable to authorities.
 - 1. NRTL: A nationally recognized testing laboratory according to 29 CFR 1910.7.
 - 2. NVLAP: A testing agency accredited according to NIST's National Voluntary Laboratory Accreditation Program.
- G. Mockups: Before installing portions of the Work requiring mockups, build mockups for each form of construction and finish required to comply with the following requirements, using materials indicated for the completed Work:
 - 1. Build mockups in location and of size indicated or, if not indicated, as directed by Architect.
 - 2. Notify Architect seven days in advance of dates and times when mockups will be constructed.
 - 3. Demonstrate the proposed range of aesthetic effects and workmanship.
 - 4. Obtain Architect's approval of mockups before starting work, fabrication, or construction.
 - a. Allow five days for initial review and each re-review of each mockup.
 - 5. Maintain mockups during construction in an undisturbed condition as a standard for judging the completed Work.
 - 6. Demolish and remove mockups when directed, unless otherwise indicated.

1.05 QUALITY CONTROL

- A. Owner Responsibilities: Where quality-control services are indicated as Owner's responsibility, Owner will engage a qualified testing agency to perform these services.
 - 1. Owner will furnish Contractor with names, addresses, and telephone numbers of testing agencies engaged and a description of types of testing and inspecting they are engaged to perform.
 - 2. Costs for retesting and reinspecting construction that replaces or is necessitated by work that failed to comply with the Contract Documents will be charged to Contractor.
- B. Contractor Responsibilities: Tests and inspections not explicitly assigned to Owner are Contractor's responsibility. Perform additional quality-control activities required to verify that the Work complies with requirements, whether specified or not.
 - 1. Where services are indicated as Contractor's responsibility, engage a qualified testing agency to perform these quality-control services.
 - a. Contractor shall not employ same entity engaged by Owner, unless agreed to in writing by Owner.
 - 2. Notify testing agencies at least 24 hours in advance of time when Work that requires testing or inspecting will be performed.
 - 3. Where quality-control services are indicated as Contractor's responsibility, submit a certified written report, in duplicate, of each quality-control service.
 - 4. Testing and inspecting requested by Contractor and not required by the Contract Documents are Contractor's responsibility.
 - 5. Submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.

- C. Manufacturer's Field Services: Where indicated, engage a manufacturer's representative to observe and inspect the Work. Manufacturer's representative's services include examination of substrates and conditions, verification of materials, inspection of completed portions of the Work, and submittal of written reports.
- D. Retesting/Reinspecting: Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and reinspecting, for construction that replaced Work that failed to comply with the Contract Documents.
- E. Testing Agency Responsibilities: Cooperate with Architect and Contractor in performance of duties. Provide qualified personnel to perform required tests and inspections.
 - 1. Notify Architect and Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.
 - 2. Determine the location from which test samples will be taken and in which in-situ tests are conducted.
 - 3. Conduct and interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from requirements.
 - 4. Submit a certified written report, in duplicate, of each test, inspection, and similar quality-control service through Contractor.
 - 5. Do not release, revoke, alter, or increase the Contract Document requirements or approve or accept any portion of the Work.
 - 6. Do not perform any duties of Contractor.
- F. Associated Services: Cooperate with agencies performing required tests, inspections, and similar quality-control services, and provide reasonable auxiliary services as requested. Notify agency sufficiently in advance of operations to permit assignment of personnel. Provide the following:
 - 1. Access to the Work.
 - 2. Incidental labor and facilities necessary to facilitate tests and inspections.
 - 3. Adequate quantities of representative samples of materials that require testing and inspecting. Assist agency in obtaining samples.
 - 4. Preliminary design mix proposed for use for material mixes that require control by testing agency.
- G. Coordination: Coordinate sequence of activities to accommodate required quality-assurance and -control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspecting.
 - 1. Schedule times for tests, inspections, obtaining samples, and similar activities.

1.06 SPECIAL TESTS AND INSPECTIONS

- A. Special Tests and Inspections: Owner shall engage and Contractor Shall coordinate a qualified special inspector to conduct special tests and inspections required by authorities having jurisdiction as the responsibility of Owner, and as follows:
- B. Special Tests and Inspections: Conducted by a qualified special inspector as required by authorities having jurisdiction, as indicated in individual Specification Sections, and as follows:
 - 1. Verifying that manufacturer maintains detailed fabrication and quality-control procedures and reviewing the completeness and adequacy of those procedures to perform the Work.
 - 2. Notifying Architect and Contractor promptly of irregularities and deficiencies observed in the Work during performance of its services.
 - 3. Submitting a certified written report of each test, inspection, and similar quality-control service to Architect with copy to Contractor and to authorities having jurisdiction.
 - 4. Submitting a final report of special tests and inspections at Substantial Completion, which includes a list of unresolved deficiencies.
 - 5. Interpreting tests and inspections and stating in each report whether tested and inspected work complies with or deviates from the Contract Documents.
 - 6. Retesting and reinspecting corrected work.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.01 REPAIR AND PROTECTION

- A. General: On completion of testing, inspecting, sample taking, and similar services, repair damaged construction and restore substrates and finishes.
 - 1. Provide materials and comply with installation requirements specified in other Specification Sections or matching existing substrates and finishes. Restore patched areas and extend restoration into adjoining areas with durable seams that are as invisible as possible. Comply with the Contract Document requirements for cutting and patching in Division 01 Section "Execution."
- B. Protect construction exposed by or for quality-control service activities.
- C. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

END OF SECTION 01 4000

**SECTION 01 4100
REGULATORY REQUIREMENTS**

PART 1 GENERAL

1.01 SUMMARY OF REFERENCE STANDARDS

- A. Regulatory requirements applicable to this project are the following:
- B. 29 CFR 1910 - Occupational Safety and Health Standards; Current Edition.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION 01 4100

**SECTION 01 5000
TEMPORARY FACILITIES AND CONTROLS**

PART 1 GENERAL

1.01 USE CHARGES

- A. General: Installation and removal of and use charges for temporary facilities shall be included in the Contract Sum unless otherwise indicated. Allow other entities to use temporary services and facilities without cost, including, but not limited to, Owner's construction forces, Architect, testing agencies, and authorities having jurisdiction.

1.02 INFORMATIONAL SUBMITTALS

- A. Site Plan: Show temporary facilities, utility hookups, staging areas, and parking areas for construction personnel.
- B. Erosion- and Sedimentation-Control Plan: Show compliance with requirements of EPA Construction General Permit or authorities having jurisdiction, whichever is more stringent.

1.03 QUALITY ASSURANCE

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

1.04 PROJECT CONDITIONS

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

PART 2 PRODUCTS

2.01 MATERIALS

- A. Chain-Link Fencing: Minimum 2-inch (50-mm), 0.148-inch- (3.8-mm-) thick, galvanized steel, chain-link fabric fencing; minimum 6 feet (1.8 m) high with galvanized steel pipe posts; minimum 2-3/8-inch- (60-mm-) OD line posts and 2-7/8-inch- (73-mm-) OD corner and pull posts, with 1-5/8-inch- (42-mm-) OD top rails.
- B. Portable Chain-Link Fencing: Minimum 2-inch (50-mm), 0.148-inch- (3.8-mm-) thick, galvanized steel, chain-link fabric fencing; minimum 6 feet (1.8 m) high with galvanized steel pipe posts; minimum 2-3/8-inch- (60-mm-) OD line posts and 2-7/8-inch- (73-mm-) OD corner and pull posts, with 1-5/8-inch- (42-mm-) OD top and bottom rails. Provide galvanized steel bases for supporting posts.

2.02 TEMPORARY FACILITIES

- A. Field Offices, General: Prefabricated or mobile units with serviceable finishes, temperature controls, and foundations adequate for normal loading.
- B. Storage and Fabrication Sheds: Provide sheds sized, furnished, and equipped to accommodate materials and equipment for construction operations.

2.03 EQUIPMENT

- A. Fire Extinguishers: Portable, UL rated; with class and extinguishing agent matching 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 and clean HVAC systems as noted in Division 01 Section "Closeout Procedures."

PART 3 EXECUTION

3.01 INSTALLATION, GENERAL

- A. Locate facilities where they will serve Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities in coordination with the progress of the Work.
 1. Locate facilities to limit site disturbance as specified in Division 01 Section "Summary."
- B. Provide each facility ready for use when needed to avoid delay. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.

3.02 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. Water Service: Install water service and distribution piping in sizes and pressures adequate for construction.
- C. Sanitary Facilities: Provide temporary toilets, wash facilities, and drinking water for use of construction personnel. Comply with requirements of authorities having jurisdiction for type, number, location, operation, and maintenance of fixtures and facilities.
- D. Heating and Cooling: Provide temporary heating and cooling required by construction activities for curing or drying of completed installations or for protecting installed construction from adverse effects of low temperatures or high humidity. Select equipment that will not have a harmful effect on completed installations or elements being installed.
- E. Ventilation and Humidity Control: Provide temporary ventilation required by construction activities for curing or drying of completed installations or for protecting installed construction from adverse effects of high humidity. Select equipment that will not have a harmful effect on completed installations or elements being installed. Coordinate ventilation requirements to produce ambient condition required and minimize energy consumption.
- F. Electric Power Service: Provide electric power service and distribution system of sufficient size, capacity, and power characteristics required for construction operations.
 1. Install electric power service underground, unless otherwise indicated.
- G. Lighting: Provide temporary lighting with local switching that provides adequate illumination for construction operations, observations, inspections, and traffic conditions.
 1. Install and operate temporary lighting that fulfills security and protection requirements without operating entire system.
- H. Telephone Service: Provide temporary telephone service in common-use facilities for use by all construction personnel. Install one telephone line(s) for each field office.
 1. At each telephone, post a list of important telephone numbers.
 - a. Police and fire departments.
 - b. Ambulance service.
 - c. Contractor's home office.
 - d. Architect's office.
 - e. Engineers' offices.
 - f. Owner's office.
 - g. Principal subcontractors' field and home offices.

2. Provide superintendent with cellular telephone or portable two-way radio for use when away from field office.

3.03 SUPPORT FACILITIES INSTALLATION

- A. General: Comply with the following:
 1. Provide construction for temporary offices, shops, and sheds located within construction area or within 30 feet (9 m) of building lines that is noncombustible according to ASTM E 136. Comply with NFPA 241.
 2. Maintain support facilities until Architect schedules Substantial Completion inspection. Remove before Substantial Completion. Personnel remaining after Substantial Completion will be permitted to use permanent facilities, under conditions acceptable to Owner.
- B. Temporary Roads and Paved Areas: Construct and maintain temporary roads and paved areas adequate for construction operations. Locate temporary roads and paved areas within construction limits indicated on Drawings.
 1. Provide dust-control treatment that is nonpolluting and nontracking. Reapply treatment to minimize dust.
- C. Temporary Use of Permanent Roads and Paved Areas: Locate temporary roads and paved areas in same location as permanent roads and paved areas. Construct and maintain temporary roads and paved areas adequate for construction operations. Extend temporary roads and paved areas, within construction limits indicated, as necessary for construction operations.
 1. Coordinate elevations of temporary roads and paved areas with permanent roads and paved areas.
 2. Prepare subgrade and install subbase and base for temporary roads and paved areas according to Division 31 Section "Earth Moving."
 3. Recondition base after temporary use, including removing contaminated material, regrading, proofrolling, compacting, and testing.
 4. Delay installation of final course of permanent hot-mix asphalt pavement until immediately before Substantial Completion. Repair hot-mix asphalt base-course pavement before installation of final course according to Division 32 Section "Asphalt Paving."
- D. Traffic Controls: Comply with requirements of authorities having jurisdiction.
 1. Protect existing site improvements to remain including curbs, pavement, and utilities.
 2. Maintain access for fire-fighting equipment and access to fire hydrants.
- E. Parking: Provide temporary parking areas for construction personnel.
- F. Dewatering Facilities and Drains: Comply with requirements of authorities having jurisdiction. Maintain Project site, excavations, and construction free of water.
 1. Dispose of rainwater in a lawful manner that will not result in flooding Project or adjoining properties nor endanger permanent Work or temporary facilities.
 2. Remove snow and ice to minimize accumulations.
- G. Project Signs: Provide Project signs as indicated. Unauthorized signs are not permitted.
 1. Identification Signs: Provide Project identification signs as indicated on Drawings.
 2. Temporary Signs: Provide other signs as indicated to inform public and individuals seeking entrance to Project.
 - a. Provide temporary, directional signs for construction personnel and visitors.
- H. Waste Disposal Facilities: Comply with requirements specified in Division 01 Section "Construction Waste Management and Disposal."
- I. Waste Disposal Facilities: Provide waste-collection containers in sizes adequate to handle waste from construction operations. Comply with requirements of authorities having jurisdiction. Comply with Division 01 Section "Execution" for progress cleaning requirements.
- J. Lifts and Hoists: Provide facilities necessary for hoisting materials and personnel.

1. Truck cranes and similar devices used for hoisting materials are considered "tools and equipment" and not temporary facilities.
- K. Temporary Elevator Use: Refer to Division 14 Sections for temporary use of new elevators.
- L. Temporary Stairs: Until permanent stairs are available, provide temporary stairs where ladders are not adequate.
- M. Temporary Use of Permanent Stairs: Use of new stairs for construction traffic will be permitted, provided stairs are protected and finishes restored to new condition at time of Substantial Completion.

3.04 SECURITY AND PROTECTION FACILITIES INSTALLATION

- A. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction to comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.
- B. Temporary Erosion and Sedimentation Control: Comply with requirements of 2003 EPA Construction General Permit or authorities having jurisdiction, whichever is more stringent and requirements specified in Division 31 Section "Site Clearing."
- C. Temporary Erosion and Sedimentation Control: Provide measures to prevent soil erosion and discharge of soil-bearing water runoff and airborne dust to undisturbed areas and to adjacent properties and walkways, according to erosion- and sedimentation-control Drawings.
- D. Stormwater Control: Comply with requirements of authorities having jurisdiction. Provide barriers in and around excavations and subgrade construction to prevent flooding by runoff of stormwater from heavy rains.
- E. Tree and Plant Protection: Comply with requirements specified in Division 01 Section "Temporary Tree and Plant Protection."
- F. Tree and Plant Protection: Install temporary fencing located as indicated or outside the drip line of trees to protect vegetation from damage from construction operations. Protect tree root systems from damage, flooding, and erosion.
- G. Site Enclosure Fence: Prior to commencing earthwork, furnish and install site enclosure fence in a manner that will prevent people and animals from easily entering site except by entrance gates.
 1. Extent of Fence: As required to enclose entire Project site or portion determined sufficient to accommodate construction operations.
 2. Maintain security by limiting number of keys and restricting distribution to authorized personnel. Furnish one set of keys to Owner.
- H. Security Enclosure and Lockup: Install temporary enclosure around partially completed areas of construction. Provide lockable entrances to prevent unauthorized entrance, vandalism, theft, and similar violations of security. Lock entrances at end of each work day.
- I. Barricades, Warning Signs, and Lights: Comply with requirements of authorities having jurisdiction for erecting structurally adequate barricades, including warning signs and lighting.
- J. Temporary Egress: Maintain temporary egress from existing occupied facilities as indicated and as required by authorities having jurisdiction.
- K. Temporary Enclosures: Provide temporary enclosures for protection of construction, in progress and completed, from exposure, foul weather, other construction operations, and similar activities. Provide temporary weathertight enclosure for building exterior.
 1. Where heating or cooling is needed and permanent enclosure is not complete, insulate temporary enclosures.
 2. Protect air-handling equipment.
 3. Provide walk-off mats at each entrance through temporary partition.

- L. Temporary Fire Protection: Install and maintain temporary fire-protection facilities of types needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 241.
 - 1. Prohibit smoking in construction areas.
 - 2. Supervise welding operations, combustion-type temporary heating units, and similar sources of fire ignition according to requirements of authorities having jurisdiction.
 - 3. Develop and supervise an overall fire-prevention and -protection program for personnel at Project site. Review needs with local fire department and establish procedures to be followed. Instruct personnel in methods and procedures. Post warnings and information.

3.05 MOISTURE AND MOLD CONTROL

- A. Contractor's Moisture Protection Plan: Avoid trapping water in finished work. Document visible signs of mold that may appear during construction.
- B. Exposed Construction Phase: Before installation of weather barriers, when materials are subject to wetting and exposure and to airborne mold spores, protect materials from water damage and keep porous and organic materials from coming into prolonged contact with concrete.
- C. Partially Enclosed Construction Phase: After installation of weather barriers but before full enclosure and conditioning of building, when installed materials are still subject to infiltration of moisture and ambient mold spores, protect as follows:
 - 1. Do not load or install drywall or other porous materials or components, or items with high organic content, into partially enclosed building.
 - 2. Keep interior spaces reasonably clean and protected from water damage.
 - 3. Discard or replace water-damaged and wet material.
 - 4. Discard, replace or clean stored or installed material that begins to grow mold.
 - 5. Perform work in a sequence that allows any wet materials adequate time to dry before enclosing the material in drywall or other interior finishes.
- D. Controlled Construction Phase of Construction: After completing and sealing of the building enclosure but prior to the full operation of permanent HVAC systems, maintain as follows:
 - 1. Control moisture and humidity inside building by maintaining effective dry-in conditions.
 - 2. Remove materials that can not be completely restored to their manufactured moisture level within 48 hours.

3.06 OPERATION, TERMINATION, AND REMOVAL

- A. Supervision: Enforce strict discipline in use of temporary facilities. To minimize waste and abuse, limit availability of temporary facilities to essential and intended uses.
- B. Maintenance: Maintain facilities in good operating condition until removal.
 - 1. Maintain operation of temporary enclosures, heating, cooling, humidity control, ventilation, and similar facilities on a 24-hour basis where required to achieve indicated results and to avoid possibility of damage.
- C. Temporary Facility Changeover: Do not change over from using temporary security and protection facilities to permanent facilities until Substantial Completion.
- D. Termination and Removal: Remove each temporary facility when need for its service has ended, when it has been replaced by authorized use of a permanent facility, or no later than Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with temporary facility. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.
 - 1. Materials and facilities that constitute temporary facilities are property of Contractor. Owner reserves right to take possession of Project identification signs.
 - 2. At Substantial Completion, repair, renovate, and clean permanent facilities used during construction period. Comply with final cleaning requirements specified in Division 01 Section "Closeout Procedures."

END OF SECTION 01 5000

**SECTION 01 5713
TEMPORARY EROSION AND SEDIMENT CONTROL**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Prevention of erosion due to construction activities.
- B. Prevention of sedimentation of waterways, open drainage ways, and storm and sanitary sewers due to construction activities.
- C. Restoration of areas eroded due to insufficient preventive measures.
- D. Compensation of Owner for fines levied by authorities having jurisdiction due to non-compliance by Contractor.

1.02 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

END OF SECTION 01 5713

**SECTION 01 5850
PROJECT SIGNS**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Project identification sign.

1.02 QUALITY ASSURANCE

- A. Design sign and structure to withstand 50 miles/hr wind velocity.
- B. Sign Painter: Experienced as a professional sign painter for minimum three years.
- C. Finishes, Painting: Adequate to withstand weathering, fading, and chipping for duration of construction.

1.03 SUBMITTALS

1.04 SEE SECTION 013000 - ADMINISTRATIVE REQUIREMENTS FOR SUBMITTAL PROCEDURES.

PART 2 PRODUCTS

2.01 SIGN MATERIALS

- A. Structure and Framing: New, wood, structurally adequate.
- B. Sign Surfaces: Exterior grade plywood with medium density overlay, minimum 3/4 inch thick, standard large sizes to minimize joints.
- C. Rough Hardware: Galvanized.
- D. Paint and Primers: Exterior quality, two coats; sign background of color as selected.
- E. Lettering: Exterior quality paint, colors as needed.

2.02 PROJECT IDENTIFICATION SIGN

- A. One painted sign, 32 sq. ft area, and bottom 6 feet above ground.
- B. Content: Project sign content to be verified by the Architect. Sign to include but not limited to the following.
 - 1. Project number, title, logo and name of project.
 - 2. Names and titles of authorities.
 - 3. Names and titles of Rosemann & Associates, P.C. and Consultants.
 - 4. Graphic Design, Colors, Style of Lettering: Designated by Rosemann & Associates, P.C.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install project identification sign within 30 days after date fixed by Notice to Proceed.
- B. Erect at designated location.
- C. Erect supports and framing on secure foundation, rigidly braced and framed to resist wind loadings.
- D. Install sign surface pump and level, with butt joints. Anchor securely.
- E. Paint exposed surfaces of sign, supports, and framing.

3.02 MAINTENANCE

- A. Maintain signs and supports clean, repair deterioration and damage.

3.03 REMOVAL

- A. Remove signs, framing, supports, and foundations at completion of Project and restore the area.

END OF SECTION 01 5850

**SECTION 01 6000
PRODUCT REQUIREMENTS**

PART 1 GENERAL

1.01 ACTION SUBMITTALS

- A. Comparable Product Requests: Submit request for consideration of each comparable product. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.
 - 1. Include data to indicate compliance with the requirements specified in "Comparable Products" Article.
 - 2. Architect's Action: If necessary, Architect will request additional information or documentation for evaluation within one week of receipt of a comparable product request. Architect will notify Contractor of approval or rejection of proposed comparable product request within [10] days of receipt of request, or [7] days of receipt of additional information or documentation, whichever is later.
 - a. Form of Approval: As specified in Section 013300 "Submittal Procedures."
 - b. Use product specified if Architect does not issue a decision on use of a comparable product request within time allocated.
- B. Basis-of-Design Product Specification Submittal: Comply with requirements in Section 013300 "Submittal Procedures." Show compliance with requirements.

1.02 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, and handle products using means and methods that will prevent damage, deterioration, and loss, including theft and vandalism. Comply with manufacturer's written instructions.
- B. Delivery and Handling:
 - 1. Schedule delivery to minimize long-term storage at Project site and to prevent overcrowding of construction spaces.
 - 2. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.
 - 3. Deliver products to Project site in an undamaged condition in manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
 - 4. Inspect products on delivery to determine compliance with the Contract Documents and to determine that products are undamaged and properly protected.
- C. Storage:
 - 1. Store products to allow for inspection and measurement of quantity or counting of units.
 - 2. Store materials in a manner that will not endanger Project structure.
 - 3. Store products that are subject to damage by the elements, under cover in a weathertight enclosure above ground, with ventilation adequate to prevent condensation.
 - 4. Protect foam plastic from exposure to sunlight, except to extent necessary for period of installation and concealment.
 - 5. Comply with product manufacturer's written instructions for temperature, humidity, ventilation, and weather-protection requirements for storage.
 - 6. Protect stored products from damage and liquids from freezing.
 - 7. Provide a secure location and enclosure at Project site for storage of materials and equipment by Owner's construction forces. Coordinate location with Owner.

1.03 PRODUCT WARRANTIES

- A. 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.

1. Manufacturer's Warranty: Written warranty furnished by individual manufacturer for a particular product and specifically endorsed by manufacturer to Owner.
- B. Submittal Time: Comply with requirements in Section 017700 "Closeout Procedures."

PART 2 PRODUCTS

2.01 PRODUCT SELECTION PROCEDURES

- A. General Product Requirements: Provide products that comply with the Contract Documents, are undamaged and, unless otherwise indicated, are new at time of installation.
 1. Provide products complete with accessories, trim, finish, fasteners, and other items needed for a complete installation and indicated use and effect.
 2. Standard Products: If available, and unless custom products or nonstandard options are specified, provide standard products of types that have been produced and used successfully in similar situations on other projects.
 3. Owner reserves the right to limit selection to products with warranties not in conflict with requirements of the Contract Documents.
 4. Where products are accompanied by the term "as selected," Architect will make selection.
 5. Descriptive, performance, and reference standard requirements in the Specifications establish salient characteristics of products.
- B. Product Selection Procedures:
 1. Product: Where Specifications name a single manufacturer and product, provide the named product that complies with requirements. Comparable products or substitutions for Contractor's convenience will not be considered.
 2. Manufacturer/Source: Where Specifications name a single manufacturer or source, provide a product by the named manufacturer or source that complies with requirements.
 3. Products:
 - a. Restricted List: Where Specifications include a list of names of both manufacturers and products, provide one of the products listed that complies with requirements.
 - b. Nonrestricted List: 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 in "Comparable Products" Article for consideration of an unnamed product.
 4. Basis-of-Design Product: Where Specifications name a product, or refer to a product indicated on Drawings, and include a list of manufacturers, provide the specified or indicated product or a comparable product by one of the other named manufacturers. Drawings and Specifications indicate sizes, profiles, dimensions, and other characteristics that are based on the product named.
- C. Visual Matching Specification: 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.

PART 3 EXECUTION (NOT USED)

END OF SECTION 01 6000

**SECTION 01 6116
VOLATILE ORGANIC COMPOUND (VOC) CONTENT RESTRICTIONS**

PART 1 GENERAL

1.01 SECTION INCLUDES

1.02 REFERENCE STANDARDS

- A. CAL (CDPH SM) - Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions From Indoor Sources Using Environmental Chambers; 2017, v1.2.
- B. CHPS (HPPD) - High Performance Products Database; Current Edition at www.chps.net/.
- C. CRI (GLP) - Green Label Plus Testing Program - Certified Products; Current Edition.
- D. SCS (CPD) - SCS Certified Products; Current Edition.
- E. UL (GGG) - GREENGUARD Gold Certified Products; Current Edition.

1.03 SUBMITTALS

- A. Product Data: For each VOC-restricted product used in the project, submit evidence of compliance.

1.04 QUALITY ASSURANCE

- A. Indoor Emissions Standard and Test Method: CAL (CDPH SM), using New Single-Family Residence exposure scenario and the allowable concentrations specified in the method, and range of total VOC's after 14 days.
 - 1. Evidence of Compliance: Acceptable types of evidence are the following;
 - a. Current UL (GGG) certification.
 - b. Current SCS (CPD) Floorscore certification.
 - c. Current SCS (CPD) Indoor Advantage Gold certification.
 - d. Current listing in CHPS (HPPD) as a low-emitting product.
 - e. Current CRI (GLP) certification.
 - f. Test report showing compliance and stating exposure scenario used.
 - 2. Product data submittal showing VOC content is NOT acceptable evidence.
 - 3. Manufacturer's certification without test report by independent agency is NOT acceptable evidence.
- B. Testing Agency Qualifications: Independent firm specializing in performing testing and inspections of the type specified in this section.

PART 2 PRODUCTS

2.01 MATERIALS

- A. All Products: Comply with the most stringent of federal, State, and local requirements, or these specifications.
- B. Indoor-Emissions-Restricted Products: Comply with Indoor Emissions Standard and Test Method, except for:
 - 1. Inherently Non-Emitting Materials.

PART 3 EXECUTION

3.01 FIELD QUALITY CONTROL

- A. Owner reserves the right to reject non-compliant products, whether installed or not, and require their removal and replacement with compliant products at no extra cost to Owner.
- B. Additional costs to restore indoor air quality due to installation of non-compliant products will be borne by Contractor.

END OF SECTION 01 6116

SECTION 01 7300 EXECUTION

PART 1 GENERAL

1.01 QUALITY ASSURANCE

- A. Cutting and Patching: Comply with requirements for and limitations on cutting and patching of construction elements.
 - 1. Operational Elements: Do not cut and patch operating elements and related components in a manner that results in reducing their capacity to perform as intended or that results in increased maintenance or decreased operational life or safety. Operational elements include the following:
 - a. Primary operational systems and equipment.
 - b. Fire separation assemblies.
 - c. Air or smoke barriers.
 - d. Fire-suppression systems.
 - e. Mechanical systems piping and ducts.
 - f. Control systems.
 - g. Communication systems.
 - h. Fire-detection and -alarm systems.
 - i. Conveying systems.
 - j. Electrical wiring systems.
 - k. Operating systems of special construction.
 - 2. Other Construction Elements: Do not cut and patch other construction elements or components in a manner that could change their load-carrying capacity, that results in reducing their capacity to perform as intended, or that results in increased maintenance or decreased operational life or safety. Other construction elements include but are not limited to the following:
 - a. Water, moisture, or vapor barriers.
 - b. Membranes and flashings.
 - c. Exterior curtain-wall construction.
 - d. Sprayed fire-resistive material.
 - e. Equipment supports.
 - f. Piping, ductwork, vessels, and equipment.
 - g. Noise- and vibration-control elements and systems.
 - 3. Visual Elements: Do not cut and patch construction in a manner that results in visual evidence of cutting and patching. Do not cut and patch exposed construction in a manner that would, in Architect's opinion, reduce the building's aesthetic qualities. Remove and replace construction that has been cut and patched in a visually unsatisfactory manner.
- B. Manufacturer's Installation Instructions: Obtain and maintain on-site manufacturer's written recommendations and instructions for installation of products and equipment.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.01 EXAMINATION

- A. Existing Conditions: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning sitework, investigate and verify the existence and location of underground utilities, mechanical and electrical systems, and other construction affecting the Work.
 - 1. Before construction, verify the location and invert elevation at points of connection of sanitary sewer, storm sewer, and water-service piping; underground electrical services, and other utilities.
 - 2. Furnish location data for work related to Project that must be performed by public utilities serving Project site.

- B. Examination and Acceptance of Conditions: 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. Record observations.
 - 1. Examine roughing-in for mechanical and electrical systems to verify actual locations of connections before equipment and fixture installation.
 - 2. Examine walls, floors, and roofs for suitable conditions where products and systems are to be installed.
 - 3. Verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.
- C. Written Report: Where a written report listing conditions detrimental to performance of the Work is required by other Sections, include the following:
 - 1. Description of the Work.
 - 2. List of detrimental conditions, including substrates.
 - 3. List of unacceptable installation tolerances.
 - 4. Recommended corrections.
- D. Proceed with installation only after unsatisfactory conditions have been corrected. Proceeding with the Work indicates acceptance of surfaces and conditions.

3.02 PREPARATION

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

3.03 CONSTRUCTION LAYOUT

- A. Verification: Before proceeding to lay out the Work, verify layout information shown on Drawings, in relation to the property survey and existing benchmarks. If discrepancies are discovered, notify Architect promptly.
- B. General: Engage a land surveyor to lay out the Work using accepted surveying practices.
 - 1. Establish benchmarks and control points to set lines and levels at each story of construction and elsewhere as needed to locate each element of Project.
 - 2. Establish limits on use of Project site.
 - 3. Establish dimensions within tolerances indicated. Do not scale Drawings to obtain required dimensions.
 - 4. Inform installers of lines and levels to which they must comply.
 - 5. Check the location, level and plumb, of every major element as the Work progresses.
 - 6. Notify Architect when deviations from required lines and levels exceed allowable tolerances.
 - 7. Close site surveys with an error of closure equal to or less than the standard established by authorities having jurisdiction.
- C. Site Improvements: Locate and lay out site improvements, including pavements, grading, fill and topsoil placement, utility slopes, and rim and invert elevations.

- D. Building Lines and Levels: Locate and lay out control lines and levels for structures, building foundations, column grids, and floor levels, including those required for mechanical and electrical work. Transfer survey markings and elevations for use with control lines and levels. Level foundations and piers from two or more locations.
- E. Record Log: Maintain a log of layout control work. Record deviations from required lines and levels. Include beginning and ending dates and times of surveys, weather conditions, name and duty of each survey party member, and types of instruments and tapes used. Make the log available for reference by Architect.

3.04 FIELD ENGINEERING

- A. Reference Points: Locate existing permanent benchmarks, control points, and similar reference points before beginning the Work. Preserve and protect permanent benchmarks and control points during construction operations.
 - 1. Replace lost or destroyed permanent benchmarks and control points promptly. Base replacements on the original survey control points.
- B. Benchmarks: Establish and maintain a minimum of two permanent benchmarks on Project site, referenced to data established by survey control points. Comply with authorities having jurisdiction for type and size of benchmark.
 - 1. Record benchmark locations, with horizontal and vertical data, on Project Record Documents.
 - 2. Where the actual location or elevation of layout points cannot be marked, provide temporary reference points sufficient to locate the Work.
 - 3. Remove temporary reference points when no longer needed. Restore marked construction to its original condition.
- C. Certified Survey: On completion of foundation walls, major site improvements, and other work requiring field-engineering services, prepare a certified survey showing dimensions, locations, angles, and elevations of construction and sitework.
- D. Final Property Survey: Engage a land surveyor to prepare a final property survey showing significant features (real property) for Project. Include on the survey a certification, signed by land surveyor, that principal metes, bounds, lines, and levels of Project are accurately positioned as shown on the survey.
 - 1. Show boundary lines, monuments, streets, site improvements and utilities, existing improvements and significant vegetation, adjoining properties, acreage, grade contours, and the distance and bearing from a site corner to a legal point.
 - 2. Recording: At Substantial Completion, have the final property survey recorded by or with authorities having jurisdiction as the official "property survey."

3.05 INSTALLATION

- A. General: Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.
 - 1. Make vertical work plumb and make horizontal work level.
 - 2. Where space is limited, install components to maximize space available for maintenance and ease of removal for replacement.
 - 3. Conceal pipes, ducts, and wiring in finished areas unless otherwise indicated.
 - 4. Maintain minimum headroom clearance of 96 inches (2440 mm) in occupied spaces and 90 inches (2300 mm) in unoccupied spaces.
- B. Comply with manufacturer's written instructions and recommendations for installing products in applications indicated.
- C. Install products at the time and under conditions that will ensure the best possible results. Maintain conditions required for product performance until Substantial Completion.
- D. 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.

- E. Sequence the Work and allow adequate clearances to accommodate movement of construction items on site and placement in permanent locations.
- F. Tools and Equipment: Do not use tools or equipment that produce harmful noise levels.
- G. Templates: Obtain and distribute to the parties involved templates for work specified to be factory prepared and field installed. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing products to comply with indicated requirements.
- H. Attachment: Provide blocking and attachment plates and anchors and fasteners of adequate size and number to securely anchor each component in place, accurately located and aligned with other portions of the Work. Where size and type of attachments are not indicated, verify size and type required for load conditions.
 - 1. Mounting Heights: Where mounting heights are not indicated, mount components at heights directed by Architect.
 - 2. Allow for building movement, including thermal expansion and contraction.
 - 3. Coordinate installation of anchorages. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.
- I. Joints: Make joints of uniform width. Where joint locations in exposed work are not indicated, arrange joints for the best visual effect. Fit exposed connections together to form hairline joints.
- J. Hazardous Materials: Use products, cleaners, and installation materials that are not considered hazardous.

3.06 OWNER-INSTALLED PRODUCTS

- A. Site Access: Provide access to Project site for Owner's construction personnel.
- B. Coordination: Coordinate construction and operations of the Work with work performed by Owner's construction personnel.
 - 1. Construction Schedule: Inform Owner of Contractor's preferred construction schedule for Owner's portion of the Work. Adjust construction schedule based on a mutually agreeable timetable. Notify Owner if changes to schedule are required due to differences in actual construction progress.
 - 2. Preinstallation Conferences: Include Owner's construction personnel at preinstallation conferences covering portions of the Work that are to receive Owner's work. Attend preinstallation conferences conducted by Owner's construction personnel if portions of the Work depend on Owner's construction.

3.07 PROGRESS CLEANING

- A. General: Clean Project site and work areas daily, including common areas. Enforce requirements strictly. Dispose of materials lawfully.
 - 1. Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.
 - 2. Do not hold waste materials more than seven days during normal weather or three days if the temperature is expected to rise above 80 deg F (27 deg C).
 - 3. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations.
 - a. Use containers intended for holding waste materials of type to be stored.
 - 4. Coordinate progress cleaning for joint-use areas where Contractor and other contractors are working concurrently.
- B. Site: Maintain Project site free of waste materials and debris.
- C. Work Areas: Clean areas where work is in progress to the level of cleanliness necessary for proper execution of the Work.
 - 1. Remove liquid spills promptly.

2. Where dust would impair proper execution of the Work, broom-clean or vacuum the entire work area, as appropriate.
- D. Installed Work: Keep installed work clean. Clean installed surfaces according to written instructions of manufacturer or fabricator of product installed, using only cleaning materials specifically recommended. If specific cleaning materials are not recommended, use cleaning materials that are not hazardous to health or property and that will not damage exposed surfaces.
- E. Concealed Spaces: Remove debris from concealed spaces before enclosing the space.
- F. Exposed Surfaces in Finished Areas: Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.
- G. Waste Disposal: Do not bury or burn waste materials on-site. Do not wash waste materials down sewers or into waterways. Comply with waste disposal requirements in Section 015000 "Temporary Facilities and Controls."
- H. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.
- I. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.
- J. Limiting Exposures: Supervise construction operations to assure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.

3.08 STARTING AND ADJUSTING

- A. Coordinate startup and adjusting of equipment and operating components with requirements in Section 019113 "General Commissioning Requirements."
- B. Start equipment and operating components to confirm proper operation. Remove malfunctioning units, replace with new units, and retest.
- C. Adjust equipment for proper operation. Adjust operating components for proper operation without binding.
- D. Test each piece of equipment to verify proper operation. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.

3.09 PROTECTION OF INSTALLED CONSTRUCTION

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

END OF SECTION 01 7300

**SECTION 01 7419
CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL**

PART 1 GENERAL

1.01 WASTE MANAGEMENT REQUIREMENTS

- A. Owner requires that this project generate the least amount of trash and waste possible.
- B. Employ processes that ensure the generation of as little waste as possible due to error, poor planning, breakage, mishandling, contamination, or other factors.
- C. Minimize trash/waste disposal in landfills; reuse, salvage, or recycle as much waste as economically feasible.
- D. Contractor shall submit periodic Waste Disposal Reports; all landfill disposal, incineration, recycling, salvage, and reuse must be reported regardless of to whom the cost or savings accrues; use the same units of measure on all reports.
- E. Methods of trash/waste disposal that are not acceptable are:
 - 1. Burning on the project site.
 - 2. Burying on the project site.
 - 3. Dumping or burying on other property, public or private.
 - 4. Other illegal dumping or burying.
- F. Regulatory Requirements: Contractor is responsible for knowing and complying with regulatory requirements, including but not limited to Federal, state and local requirements, pertaining to legal disposal of all construction and demolition waste materials.

1.02 SUBMITTALS

- A. Waste Disposal Reports: Submit at specified intervals, with details of quantities of trash and waste, means of disposal or reuse, and costs; show both totals to date and since last report.
 - 1. Submit updated Report with each Application for Progress Payment; failure to submit Report will delay payment.
 - 2. Submit Report on a form acceptable to Owner.
 - 3. Landfill Disposal: Include the following information:
 - a. Identification of material.
 - b. Amount, in tons or cubic yards, of trash/waste material from the project disposed of in landfills.
 - c. State the identity of landfills, total amount of tipping fees paid to landfill, and total disposal cost.
 - d. Include manifests, weight tickets, receipts, and invoices as evidence of quantity and cost.
 - 4. Incinerator Disposal: Include the following information:
 - a. Identification of material.
 - b. Amount, in tons or cubic yards, of trash/waste material from the project delivered to incinerators.
 - c. State the identity of incinerators, total amount of fees paid to incinerator, and total disposal cost.
 - d. Include manifests, weight tickets, receipts, and invoices as evidence of quantity and cost.
 - 5. Recycled and Salvaged Materials: Include the following information for each:
 - a. Identification of material, including those retrieved by installer for use on other projects.
 - b. Amount, in tons or cubic yards, date removed from the project site, and receiving party.
 - c. Transportation cost, amount paid or received for the material, and the net total cost or savings of salvage or recycling each material.

- d. Include manifests, weight tickets, receipts, and invoices as evidence of quantity and cost.
- e. Certification by receiving party that materials will not be disposed of in landfills or by incineration.
- 6. Material Reused on Project: Include the following information for each:
 - a. Identification of material and how it was used in the project.
 - b. Amount, in tons or cubic yards.
 - c. Include weight tickets as evidence of quantity.
- 7. Other Disposal Methods: Include information similar to that described above, as appropriate to disposal method.

PART 3 EXECUTION

2.01 WASTE MANAGEMENT PROCEDURES

- A. See Section 01 3000 for additional requirements for project meetings, reports, submittal procedures, and project documentation.
- B. See Section 01 5000 for additional requirements related to trash/waste collection and removal facilities and services.
- C. See Section 01 6000 for waste prevention requirements related to delivery, storage, and handling.
- D. See Section 01 7000 for trash/waste prevention procedures related to demolition, cutting and patching, installation, protection, and cleaning.

2.02 WASTE MANAGEMENT PLAN IMPLEMENTATION

- A. Manager: Designate an on-site person or persons responsible for instructing workers and overseeing and documenting results of the Waste Management Plan.
- B. Communication: Distribute copies of the Waste Management Plan to job site foreman, each subcontractor, Owner, and Architect.
- C. Instruction: Provide on-site instruction of appropriate separation, handling, and recycling, salvage, reuse, and return methods to be used by all parties at the appropriate stages of the project.
- D. Meetings: Discuss trash/waste management goals and issues at project meetings.
 - 1. Prebid meeting.
 - 2. Preconstruction meeting.
 - 3. Regular job-site meetings.
- E. Facilities: Provide specific facilities for separation and storage of materials for recycling, salvage, reuse, return, and trash disposal, for use by all contractors and installers.
 - 1. Provide containers as required.
 - 2. Provide adequate space for pick-up and delivery and convenience to subcontractors.
 - 3. Keep recycling and trash/waste bin areas neat and clean and clearly marked in order to avoid contamination of materials.
- F. Hazardous Wastes: Separate, store, and dispose of hazardous wastes according to applicable regulations.
- G. Recycling: Separate, store, protect, and handle at the site identified recyclable waste products in order to prevent contamination of materials and to maximize recyclability of identified materials. Arrange for timely pickups from the site or deliveries to recycling facility in order to prevent contamination of recyclable materials.
- H. Reuse of Materials On-Site: Set aside, sort, and protect separated products in preparation for reuse.
- I. Salvage: Set aside, sort, and protect products to be salvaged for reuse off-site.

END OF SECTION 01 7419

**SECTION 01 7700
CLOSEOUT PROCEDURES**

PART 1 GENERAL

1.01 ACTION SUBMITTALS

- A. Product Data: For cleaning agents.
- B. Contractor's List of Incomplete Items: Initial submittal at Substantial Completion.
- C. Certified List of Incomplete Items: Final submittal at Final Completion.

1.02 CLOSEOUT SUBMITTALS

- A. Certificates of Release: From authorities having jurisdiction.
- B. Certificate of Insurance: For continuing coverage.
- C. Field Report: For pest control inspection.

1.03 MAINTENANCE MATERIAL SUBMITTALS

- A. Schedule of Maintenance Material Items: For maintenance material submittal items specified in other Sections.

1.04 SUBSTANTIAL COMPLETION PROCEDURES

- A. Contractor's List of Incomplete Items: Prepare and submit a list of items to be completed and corrected (Contractor's punch list), indicating the value of each item on the list and reasons why the Work is incomplete.
- B. Submittals Prior to Substantial Completion: Complete the following a minimum of 10 days prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request.
 - 1. Certificates of Release: Obtain and submit releases from authorities having jurisdiction permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
 - 2. Submit closeout submittals specified in other Division 01 Sections, including project record documents, operation and maintenance manuals, final completion construction photographic documentation, damage or settlement surveys, property surveys, and similar final record information.
 - 3. Submit closeout submittals specified in individual Sections, including specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
 - 4. Submit maintenance material submittals specified in individual Sections, including tools, spare parts, extra materials, and similar items, and deliver to location designated by the Owner. Label with manufacturer's name and model number where applicable.
 - a. Schedule of Maintenance Material Items: Prepare and submit schedule of maintenance material submittal items, including name and quantity of each item and name and number of related Specification Section.
 - 5. Submit test/adjust/balance records.
 - 6. Submit changeover information related to Owner's occupancy, use, operation, and maintenance.
- C. Procedures Prior to Substantial Completion: Complete the following a minimum of 10 days prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request.
 - 1. Advise Owner of pending insurance changeover requirements.
 - 2. Make final changeover of permanent locks and deliver keys to Owner. Advise Owner's personnel of changeover in security provisions.
 - 3. Complete startup and testing of systems and equipment.
 - 4. Perform preventive maintenance on equipment used prior to Substantial Completion.

5. Instruct Owner's personnel in operation, adjustment, and maintenance of products, equipment, and systems. Submit demonstration and training video recordings specified in Section 017900 "Demonstration and Training."
 6. Advise Owner of changeover in heat and other utilities.
 7. Terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.
 8. Complete final cleaning requirements, including touchup painting.
 9. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.
- D. Inspection: Submit a written request for final inspection to determine acceptance a minimum of 10 days prior to date the work will be completed and ready for final inspection and tests. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements.
1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.

1.05 LIST OF INCOMPLETE ITEMS (PUNCH LIST)

- A. Organization of List: Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction.
1. Organize list of spaces in sequential order.
 2. Organize items applying to each space by major element, including categories for ceiling, individual walls, floors, equipment, and building systems.
 3. Include the following information at the top of each page:
 - a. Project name.
 - b. Date.
 - c. Name of Architect.
 - d. Name of Contractor.
 - e. Page number.

1.06 SUBMITTAL OF PROJECT WARRANTIES

- A. Time of Submittal: Submit written warranties on request of Architect for designated portions of the Work where commencement of warranties other than date of Substantial Completion is indicated, or when delay in submittal of warranties might limit Owner's rights under warranty.
- B. Partial Occupancy: Submit properly executed warranties within 15 days of completion of designated portions of the Work that are completed and occupied or used by Owner during construction period by separate agreement with Contractor.
- C. Organize warranty documents into an orderly sequence based on the table of contents of Project Manual.
1. Bind warranties and bonds in heavy-duty, three-ring, vinyl-covered, loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2-by-11-inch (215-by-280-mm) paper.
 2. Provide heavy paper dividers with plastic-covered tabs for each separate warranty. Mark tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product and the name, address, and telephone number of Installer.
 3. Identify each binder on the front and spine with the typed or printed title "WARRANTIES," Project name, and name of Contractor.
- D. Provide additional copies of each warranty to include in operation and maintenance manuals.

PART 2 PRODUCTS

2.01 MATERIALS

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

PART 3 EXECUTION

3.01 FINAL CLEANING

- A. General: Perform final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.
- B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.
 - 1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a designated portion of Project:
 - a. Clean Project site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.
 - b. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
 - c. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
 - d. Remove tools, construction equipment, machinery, and surplus material from Project site.
 - e. Remove snow and ice to provide safe access to building.
 - f. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
 - g. Remove debris and surface dust from limited access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.
 - h. Sweep concrete floors broom clean in unoccupied spaces.
 - i. Vacuum carpet and similar soft surfaces, removing debris and excess nap; clean according to manufacturer's recommendations if visible soil or stains remain.
 - j. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compounds and other noticeable, vision-obscuring materials. Polish mirrors and glass, taking care not to scratch surfaces.
 - k. Remove labels that are not permanent.
 - l. Wipe surfaces of mechanical and electrical equipment[, elevator equipment,] and similar equipment. Remove excess lubrication, paint and mortar droppings, and other foreign substances.
 - m. Clean plumbing fixtures to a sanitary condition, free of stains, including stains resulting from water exposure.
 - n. Replace disposable air filters and clean permanent air filters. Clean exposed surfaces of diffusers, registers, and grills.
 - o. Clean ducts, blowers, and coils if units were operated without filters during construction or that display contamination with particulate matter on inspection.
 - p. Clean HVAC system in compliance with NADCA Standard 1992-01. Provide written report on completion of cleaning.
 - q. Clean light fixtures, lamps, globes, and reflectors to function with full efficiency.
 - r. Leave Project clean and ready for occupancy.
- C. Construction Waste Disposal: Comply with waste disposal requirements in Section 015000 "Temporary Facilities and Controls."

3.02 REPAIR OF THE WORK

- A. Complete repair and restoration operations before requesting inspection for determination of Substantial Completion.

- B. Repair or remove and replace defective construction. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment. Where damaged or worn items cannot be repaired or restored, provide replacements. Remove and replace operating components that cannot be repaired. Restore damaged construction and permanent facilities used during construction to specified condition.
1. Remove and replace chipped, scratched, and broken glass, reflective surfaces, and other damaged transparent materials.
 2. Touch up and otherwise repair and restore marred or exposed finishes and surfaces. Replace finishes and surfaces that already show evidence of repair or restoration.
 - a. Do not paint over "UL" and other required labels and identification, including mechanical and electrical nameplates. Remove paint applied to required labels and identification.
 3. Replace parts subject to operating conditions during construction that may impede operation or reduce longevity.
 4. Replace burned-out bulbs, bulbs noticeably dimmed by hours of use, and defective and noisy starters in fluorescent and mercury vapor fixtures to comply with requirements for new fixtures.

END OF SECTION 01 7700

**SECTION 01 7823
OPERATION AND MAINTENANCE DATA**

PART 1 GENERAL

1.01 CLOSEOUT SUBMITTALS

- A. Manual Submittal: Submit each manual in final form prior to requesting inspection for Substantial Completion and at least 15 days before commencing demonstration and training. Architect and Commissioning Agent will return copy with comments.
 - 1. Correct or modify each manual to comply with Architect's and Commissioning Agent's comments. Submit copies of each corrected manual within 15 days of receipt of Architect's and Commissioning Agent's comments and prior to commencing demonstration and training.

PART 2 PRODUCTS

2.01 REQUIREMENTS FOR EMERGENCY, OPERATION, AND MAINTENANCE MANUALS

- A. Organization: Unless otherwise indicated, organize each manual into a separate section for each system and subsystem, and a separate section for each piece of equipment not part of a system. Each manual shall contain the following materials, in the order listed:
 - 1. Title page.
 - 2. Table of contents.
 - 3. Manual contents.
- B. Title Page: Include the following information:
 - 1. Subject matter included in manual.
 - 2. Name and address of Project.
 - 3. Name and address of Owner.
 - 4. Date of submittal.
 - 5. Name and contact information for Contractor.
 - 6. Name and contact information for Construction Manager.
 - 7. Name and contact information for Architect.
 - 8. Name and contact information for Commissioning Agent.
 - 9. Names and contact information for major consultants to the Architect that designed the systems contained in the manuals.
 - 10. Cross-reference to related systems in other operation and maintenance manuals.
- C. Table of Contents: List each product included in manual, identified by product name, indexed to the content of the volume, and cross-referenced to Specification Section number in Project Manual.
- D. Manual Contents: Organize into sets of manageable size. Arrange contents alphabetically by system, subsystem, and equipment. If possible, assemble instructions for subsystems, equipment, and components of one system into a single binder.
- E. Manuals, Paper Copy: Submit manuals in the form of hard copy, bound and labeled volumes.
 - 1. Binders: Heavy-duty, three-ring, vinyl-covered, loose-leaf binders, in thickness necessary to accommodate contents, sized to hold 8-1/2-by-11-inch (215-by-280-mm) paper; with clear plastic sleeve on spine to hold label describing contents and with pockets inside covers to hold folded oversize sheets.
 - a. Identify each binder on front and spine, with printed title "OPERATION AND MAINTENANCE MANUAL," Project title or name, and subject matter of contents, and indicate Specification Section number on bottom of spine. Indicate volume number for multiple-volume sets.
 - 2. Dividers: Heavy-paper dividers with plastic-covered tabs for each section of the manual. Mark each tab to indicate contents. Include typed list of products and major components of equipment included in the section on each divider, cross-referenced to Specification Section number and title of Project Manual.

3. Protective Plastic Sleeves: Transparent plastic sleeves designed to enclose diagnostic software storage media for computerized electronic equipment.
4. Drawings: Attach reinforced, punched binder tabs on drawings and bind with text.
 - a. If oversize drawings are necessary, fold drawings to same size as text pages and use as foldouts.
 - b. If drawings are too large to be used as foldouts, fold and place drawings in labeled envelopes and bind envelopes in rear of manual. At appropriate locations in manual, insert typewritten pages indicating drawing titles, descriptions of contents, and drawing locations.
- F. Emergency Instructions: Describe and explain warnings, trouble indications, error messages, and similar codes and signals. Include responsibilities of Owner's operating personnel for notification of Installer, supplier, and manufacturer to maintain warranties.
- G. Emergency Procedures: Include the following, as applicable:
 1. Instructions on stopping.
 2. Shutdown instructions for each type of emergency.
 3. Operating instructions for conditions outside normal operating limits.
 4. Required sequences for electric or electronic systems.
 5. Special operating instructions and procedures.

2.02 OPERATION MANUALS

- A. Content: In addition to requirements in this Section, include operation data required in individual Specification Sections and the following information:
 1. System, subsystem, and equipment descriptions. Use designations for systems and equipment indicated on Contract Documents.
 2. Operating standards.
 3. Operating procedures.
 4. Wiring diagrams.
 5. Control diagrams.
 6. Piped system diagrams.
 7. Precautions against improper use.
 8. License requirements including inspection and renewal dates.
- B. Descriptions: Include the following:
 1. Product name and model number. Use designations for products indicated on Contract Documents.
 2. Manufacturer's name.
 3. Equipment identification with serial number of each component.
 4. Equipment function.
 5. Operating characteristics.
 6. Limiting conditions.
 7. Performance curves.
 8. Engineering data and tests.
 9. Complete nomenclature and number of replacement parts.
- C. Operating Procedures: Include the following, as applicable:
 1. Startup procedures.
 2. Equipment or system break-in procedures.
 3. Routine and normal operating instructions.
 4. Regulation and control procedures.
 5. Instructions on stopping.
 6. Normal shutdown instructions.
 7. Seasonal and weekend operating instructions.
 8. Required sequences for electric or electronic systems.
 9. Special operating instructions and procedures.

- D. Systems and Equipment Controls: Describe the sequence of operation, and diagram controls as installed.
- E. Piped Systems: Diagram piping as installed, and identify color-coding where required for identification.

2.03 PRODUCT MAINTENANCE MANUALS

- A. Content: Organize manual into a separate section for each product, material, and finish. Include source information, product information, maintenance procedures, repair materials and sources, and warranties and bonds, as described below.
- B. Source Information: List each product included in manual, identified by product name and arranged to match manual's table of contents. For each product, list name, address, and telephone number of Installer or supplier and maintenance service agent, and cross-reference Specification Section number and title in Project Manual.
- C. Product Information: Include the following, as applicable:
 - 1. Product name and model number.
 - 2. Manufacturer's name.
 - 3. Color, pattern, and texture.
 - 4. Material and chemical composition.
 - 5. Reordering information for specially manufactured products.
- D. Maintenance Procedures: Include manufacturer's written recommendations and the following:
 - 1. Inspection procedures.
 - 2. Types of cleaning agents to be used and methods of cleaning.
 - 3. List of cleaning agents and methods of cleaning detrimental to product.
 - 4. Schedule for routine cleaning and maintenance.
 - 5. Repair instructions.
- E. Repair Materials and Sources: Include lists of materials and local sources of materials and related services.
- F. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.

2.04 SYSTEMS AND EQUIPMENT MAINTENANCE MANUALS

- A. Content: For each system, subsystem, and piece of equipment not part of a system, include source information, manufacturers' maintenance documentation, maintenance procedures, maintenance and service schedules, spare parts list and source information, maintenance service contracts, and warranty and bond information, as described below.
- B. Source Information: List each system, subsystem, and piece of equipment included in manual, identified by product name and arranged to match manual's table of contents. For each product, list name, address, and telephone number of Installer or supplier and maintenance service agent, and cross-reference Specification Section number and title in Project Manual.
- C. Manufacturers' Maintenance Documentation: Manufacturers' maintenance documentation including the following information for each component part or piece of equipment:
 - 1. Standard maintenance instructions and bulletins.
 - 2. Drawings, diagrams, and instructions required for maintenance, including disassembly and component removal, replacement, and assembly.
 - 3. Identification and nomenclature of parts and components.
 - 4. List of items recommended to be stocked as spare parts.
- D. Maintenance Procedures: Include the following information and items that detail essential maintenance procedures:
 - 1. Test and inspection instructions.
 - 2. Troubleshooting guide.
 - 3. Precautions against improper maintenance.
 - 4. Disassembly; component removal, repair, and replacement; and reassembly instructions.

5. Aligning, adjusting, and checking instructions.
6. Demonstration and training video recording, if available.
- E. Maintenance and Service Schedules: Include service and lubrication requirements, list of required lubricants for equipment, and separate schedules for preventive and routine maintenance and service with standard time allotment.
- F. Spare Parts List and Source Information: Include lists of replacement and repair parts, with parts identified and cross-referenced to manufacturers' maintenance documentation and local sources of maintenance materials and related services.
- G. Maintenance Service Contracts: Include copies of maintenance agreements with name and telephone number of service agent.
- H. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.

PART 3 EXECUTION

3.01 MANUAL PREPARATION

- A. Operation and Maintenance Manuals: Assemble a complete set of operation and maintenance data indicating operation and maintenance of each system, subsystem, and piece of equipment not part of a system.
- B. Manufacturers' Data: Where manuals contain manufacturers' standard printed data, include only sheets pertinent to product or component installed. Mark each sheet to identify each product or component incorporated into the Work. If data include more than one item in a tabular format, identify each item using appropriate references from the Contract Documents. Identify data applicable to the Work and delete references to information not applicable.
- C. Comply with Division 01 Section "Closeout Procedures" for schedule for submitting operation and maintenance documentation.

END OF SECTION 01 7823

**SECTION 01 7839
PROJECT RECORD DOCUMENTS**

PART 1 GENERAL

1.01 CLOSEOUT SUBMITTALS

- A. Record Drawings: Comply with the following:
 - 1. Number of Copies: Submit copies of record Drawings as follows:
 - a. Final Submittal:
 - 1) Submit PDF electronic files of scanned record prints and two set(s) of prints.
 - 2) Print each drawing, whether or not changes and additional information were recorded.
- B. Record Specifications: Submit two of Project's Specifications, including addenda and contract modifications.
- C. Record Product Data: Submit one paper copy of each submittal.
 - 1. Where record Product Data are required as part of operation and maintenance manuals, submit duplicate marked-up Product Data as a component of manual.
- D. Miscellaneous Record Submittals: See other Specification Sections for miscellaneous record-keeping requirements and submittals in connection with various construction activities. Submit one paper copy of each submittal.

PART 2 PRODUCTS

2.01 RECORD DRAWINGS

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

4. Mark record sets with erasable, red-colored pencil. Use other colors to distinguish between changes for different categories of the Work at same location.
 5. Mark important additional information that was either shown schematically or omitted from original Drawings.
 6. Note Construction Change Directive numbers, alternate numbers, Change Order numbers, and similar identification, where applicable.
- B. Format: Identify and date each record Drawing; include the designation "PROJECT RECORD DRAWING" in a prominent location.
1. Record Prints: Organize prepared record Drawings into manageable sets. Bind each set with durable paper cover sheets. Include identification on cover sheets, including AS Built Survey and other HUD required documents.
 2. Format: Annotated PDF electronic file.

2.02 MISCELLANEOUS RECORD SUBMITTALS

- A. Assemble miscellaneous records required by other Specification Sections for miscellaneous record keeping and submittal in connection with actual performance of the Work. Bind or file miscellaneous records and identify each, ready for continued use and reference.
- B. Format: Submit miscellaneous record submittals as PDF electronic file.
1. Include miscellaneous record submittals directory organized by Specification Section number and title.

PART 3 EXECUTION

3.01 RECORDING AND MAINTENANCE

- A. Recording: Maintain one copy of each submittal during the construction period for project record document purposes. Post changes and revisions to project record documents as they occur; do not wait until end of Project.
- B. Maintenance of Record Documents and Samples: Store record documents and Samples in the field office apart from the Contract Documents used for construction. Do not use project record documents for construction purposes. Maintain record documents in good order and in a clean, dry, legible condition, protected from deterioration and loss. Provide access to project record documents for Architect's reference during normal working hours.

END OF SECTION 01 7839

**SECTION 01 7900
DEMONSTRATION AND TRAINING**

PART 1 GENERAL

1.01 SUMMARY

- A. Section includes administrative and procedural requirements for instructing Owner's personnel, including the following:
 - 1. Demonstration of operation of systems, subsystems, and equipment.
 - 2. Training in operation and maintenance of systems, subsystems, and equipment.

1.02 CLOSEOUT SUBMITTALS

- A. At completion of training, submit complete training manual(s) for Owner's use.

1.03 COORDINATION

- A. Coordinate instruction schedule with Owner's operations. Adjust schedule to minimize disrupting Owner's operations.
- B. Coordinate content of training modules with content of approved emergency, operation, and maintenance manuals.

PART 2 PRODUCTS

2.01 INSTRUCTION PROGRAM

- A. Program Structure: Develop an instruction program that includes individual training modules for each system and for equipment not part of a system, per individual Specification Sections.
- B. Training Modules: For each module, include instruction for the following as applicable to the system, equipment, or component:
 - 1. Basis of System Design, Operational Requirements, and Criteria: Include the following:
 - a. System, subsystem, and equipment descriptions.
 - b. Performance and design criteria if Contractor is delegated design responsibility.
 - c. Operating standards.
 - d. Regulatory requirements.
 - e. Equipment function.
 - f. Operating characteristics.
 - g. Limiting conditions.
 - h. Performance curves.
 - 2. Documentation: Review the following items in detail:
 - a. Emergency manuals.
 - b. Operations manuals.
 - c. Maintenance manuals.
 - d. Project record documents.
 - e. Identification systems.
 - f. Warranties and bonds.
 - g. Maintenance service agreements and similar continuing commitments.
 - 3. Emergencies: Include the following, as applicable:
 - a. Instructions on meaning of warnings, trouble indications, and error messages.
 - b. Instructions on stopping.
 - c. Shutdown instructions for each type of emergency.
 - d. Operating instructions for conditions outside of normal operating limits.
 - e. Sequences for electric or electronic systems.
 - f. Special operating instructions and procedures.
 - 4. Operations: Include the following, as applicable:
 - a. Startup procedures.
 - b. Equipment or system break-in procedures.
 - c. Routine and normal operating instructions.

- d. Regulation and control procedures.
- e. Control sequences.
- f. Safety procedures.
- g. Instructions on stopping.
- h. Normal shutdown instructions.
- i. Operating procedures for emergencies.
- j. Operating procedures for system, subsystem, or equipment failure.
- k. Seasonal and weekend operating instructions.
- l. Required sequences for electric or electronic systems.
- m. Special operating instructions and procedures.
- 5. Adjustments: Include the following:
 - a. Alignments.
 - b. Checking adjustments.
 - c. Noise and vibration adjustments.
 - d. Economy and efficiency adjustments.
- 6. Troubleshooting: Include the following:
 - a. Diagnostic instructions.
 - b. Test and inspection procedures.
- 7. Maintenance: Include the following:
 - a. Inspection procedures.
 - b. Types of cleaning agents to be used and methods of cleaning.
 - c. List of cleaning agents and methods of cleaning detrimental to product.
 - d. Procedures for routine cleaning
 - e. Procedures for preventive maintenance.
 - f. Procedures for routine maintenance.
 - g. Instruction on use of special tools.
- 8. Repairs: Include the following:
 - a. Diagnosis instructions.
 - b. Repair instructions.
 - c. Disassembly; component removal, repair, and replacement; and reassembly instructions.
 - d. Instructions for identifying parts and components.
 - e. Review of spare parts needed for operation and maintenance.

PART 3 EXECUTION

3.01 PREPARATION

- A. Assemble educational materials necessary for instruction, including documentation and training module. Assemble training modules into a training manual organized in coordination with requirements in Division 01 Section "Operations and Maintenance Data."

3.02 INSTRUCTION

- A. Engage qualified instructors to instruct Owner's personnel to adjust, operate, and maintain systems, subsystems, and equipment not part of a system.
 - 1. Owner will furnish Contractor with names and positions of participants.
- B. Scheduling: Provide instruction at mutually agreed on times.
 - 1. Schedule training with Owner with at least seven days' advance notice.

END OF SECTION 01 7900

**SECTION 02 4100
DEMOLITION**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Selective demolition of building elements for alteration purposes.

PART 2 PRODUCTS -- NOT USED

PART 3 EXECUTION

3.01 GENERAL PROCEDURES AND PROJECT CONDITIONS

- A. Comply with applicable codes and regulations for demolition operations and safety of adjacent structures and the public.
 - 1. Obtain required permits.
 - 2. Provide, erect, and maintain temporary barriers and security devices.
 - 3. Conduct operations to minimize effects on and interference with adjacent structures and occupants.
 - 4. Do not close or obstruct roadways or sidewalks without permit.
 - 5. Conduct operations to minimize obstruction of public and private entrances and exits; do not obstruct required exits at any time; protect persons using entrances and exits from removal operations.
 - 6. Obtain written permission from owners of adjacent properties when demolition equipment will traverse, infringe upon or limit access to their property.
- B. Do not begin removal until receipt of notification to proceed from Owner.
- C. Protect existing structures and other elements that are not to be removed.
 - 1. Provide bracing and shoring.
 - 2. Prevent movement or settlement of adjacent structures.
 - 3. Stop work immediately if adjacent structures appear to be in danger.
- D. If hazardous materials are discovered during removal operations, stop work and notify Architect and Owner; hazardous materials include regulated asbestos containing materials, lead, PCB's, and mercury.

3.02 EXISTING UTILITIES

- A. Coordinate work with utility companies; notify before starting work and comply with their requirements; obtain required permits.
- B. Protect existing utilities to remain from damage.
- C. Do not disrupt public utilities without permit from authority having jurisdiction.
- D. Do not close, shut off, or disrupt existing utility branches or take-offs that are in use without at least 3 days prior written notification to Owner.
- E. Locate and mark utilities to remain; mark using highly visible tags or flags, with identification of utility type; protect from damage due to subsequent construction, using substantial barricades if necessary.
- F. Remove exposed piping, valves, meters, equipment, supports, and foundations of disconnected and abandoned utilities.

3.03 SELECTIVE DEMOLITION FOR ALTERATIONS

- A. Drawings showing existing construction and utilities are based on casual field observation and existing record documents only.
 - 1. Verify that construction and utility arrangements are as indicated.
 - 2. Report discrepancies to Architect before disturbing existing installation.
 - 3. Beginning of demolition work constitutes acceptance of existing conditions that would be apparent upon examination prior to starting demolition.

- B. Remove existing work as indicated and to accomplish new work.
 - 1. Remove items indicated on drawings.
- C. Services (Including but not limited to HVAC, Plumbing, Fire Protection, and Electrical):
Remove existing systems and equipment as indicated.
 - 1. Maintain existing active systems that are to remain in operation; maintain access to equipment and operational components.
 - 2. Where existing active systems serve occupied facilities but are to be replaced with new services, maintain existing systems in service until new systems are complete and ready for service.
 - 3. Verify that abandoned services serve only abandoned facilities before removal.
 - 4. Remove abandoned pipe, ducts, conduits, and equipment, including those above accessible ceilings; remove back to source of supply where possible, otherwise cap stub and tag with identification.
- D. Protect existing work to remain.
 - 1. Prevent movement of structure; provide shoring and bracing if necessary.
 - 2. Perform cutting to accomplish removals neatly and as specified for cutting new work.
 - 3. Repair adjacent construction and finishes damaged during removal work.
 - 4. Patch as specified for patching new work.

3.04 DEBRIS AND WASTE REMOVAL

- A. Remove debris, junk, and trash from site.
- B. Leave site in clean condition, ready for subsequent work.
- C. Clean up spillage and wind-blown debris from public and private lands.

END OF SECTION 02 4100

**SECTION 03 3000
CAST-IN-PLACE CONCRETE**

PART 1 GENERAL

1.01 REFERENCE STANDARDS

- A. AISC 303 - Code of Standard Practice for Steel Buildings and Bridges; 2022, with Errata (2025).

1.02 SUMMARY

- A. Section includes cast-in-place concrete, including formwork, reinforcement, concrete materials, mixture design, placement procedures, and finishes.

1.03 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Design Mixtures: For each concrete mixture.
- C. Steel Reinforcement Shop Drawings: Placing Drawings that detail fabrication, bending, and placement. All resubmittals shall have changes clouded. Failure to cloud changes will result in rejection.
- D. Formwork Shop Drawings: Prepared by or under the supervision of a qualified professional engineer, detailing fabrication, assembly, and support of formwork, who shall submit sealed drawings for review.
 - 1. Shoring and reshoring: Indicate proposed schedule and sequence of stripping and formwork, shoring removal, and reshoring installation and removal.

1.04 INFORMATIONAL SUBMITTALS

- A. Material certificates.
- B. Material test reports.
- C. Floor surface flatness and levelness measurements indicating compliance with specified tolerances.

1.05 QUALITY ASSURANCE

- A. Manufacturer Qualifications: A firm experienced in manufacturing ready-mixed concrete products and that complies with ASTM C 94/C 94M requirements for production facilities and equipment.
 - 1. Manufacturer certified according to NRMCA's "Certification of Ready Mixed Concrete Production Facilities."
- B. Testing Agency Qualifications: An independent agency acceptable to authorities having jurisdiction qualified according to ASTM C 1077 and ASTM E 329 for testing indicated.

1.06 PRECONSTRUCTION TESTING

- A. Preconstruction Testing Service: Engage a qualified testing agency to perform preconstruction testing on concrete mixtures.

1.07 FIELD CONDITIONS

- A. Cold-Weather Placement: Comply with ACI 306.1 and ACI 306R-10.
 - 1. Do not use calcium chloride, salt, or other materials containing antifreeze agents or chemical accelerators unless otherwise specified and approved in mixture designs.
- B. Hot-Weather Placement: Comply with ACI 305.1-14 and ACI 305R-10.
 - 1. Maintain concrete temperature below 90 degrees Fahrenheit at time of placement. Chilled mixing water or chopped ice may be used to control temperature, provided water equivalent of ice is calculated to total amount of mixing water. Using liquid nitrogen to cool concrete is Contractor's option.
 - 2. Fog-spray forms, steel reinforcement, and subgrade just before placing concrete. Keep subgrade uniformly moist without standing water, soft spots, or dry areas.

PART 2 PRODUCTS

2.01 CONCRETE, GENERAL

- A. ACI Publications: Comply with the following unless modified by requirements in the Contract Documents:
 - 1. ACI 301 (ACI 301M).
 - 2. ACI 117 (ACI 117M).

2.02 FORM-FACING MATERIALS

- A. Smooth-Formed Finished Concrete: Form-facing panels that provide continuous, true, and smooth concrete surfaces. Furnish in largest practicable sizes to minimize number of joints.
- B. Rough-Formed Finished Concrete: Plywood, lumber, metal, or another approved material. Provide lumber dressed on at least two edges and one side for tight fit.

2.03 STEEL REINFORCEMENT

- A. Reinforcing Bars: ASTM A 615/A 615M, Grade 60 (Grade 420), deformed.
- B. Low-Alloy-Steel Reinforcing Bars: ASTM A 706/A 706M, deformed.
- C. Plain-Steel Welded-Wire Reinforcement: ASTM A 1064/A 1064M, plain, fabricated from as-drawn steel wire into flat sheets.
- D. Deformed-Steel Welded-Wire Reinforcement: ASTM A 1064/A 1064M, flat sheet.
- E. Bar Supports: Bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcing bars and welded-wire reinforcement in place. Manufacture bar supports from steel wire, plastic, or precast concrete according to CRSI's "Manual of Standard Practice."

2.04 CONCRETE MATERIALS

- A. Cementitious Materials:
 - 1. Portland Cement: ASTM C 150/C 150M, Type I/II, gray
 - 2. Fly Ash: ASTM C 618, Class F.
 - 3. Blended Hydraulic Cement: ASTM C 595/C 595M, Type IL, Portland-limestone cement.
- B. Normal-Weight Aggregates: ASTM C 33/C 33M, graded.
 - 1. Maximum Coarse-Aggregate Size: 3/4 inch nominal.
 - 2. Fine Aggregate: Free of materials with deleterious reactivity to alkali in cement and lignite fine
- C. Air-Entraining Admixture: ASTM C 260/C 260M.
- D. Chemical Admixtures: Certified by manufacturer to be compatible with other admixtures and that do not contribute water-soluble chloride ions exceeding those permitted in hardened concrete. Do not use calcium chloride or admixtures containing calcium chloride.
 - 1. Water-Reducing Admixture: ASTM C 494/C 494M, Type A.
 - 2. Retarding Admixture: ASTM C 494/C 494M, Type B.
 - 3. Water-Reducing and Retarding Admixture: ASTM C 494/C 494M, Type D.
 - 4. High-Range, Water-Reducing Admixture: ASTM C 494/C 494M, Type F.
 - 5. High-Range, Water-Reducing and Retarding Admixture: ASTM C 494/C 494M, Type G.
 - 6. Plasticizing and Retarding Admixture: ASTM C 1017/C 1017M, Type II.
 - 7. Waterproofing Admixture:
 - a. Xypex or equal at elevator pits.
- E. Water: ASTM C 94/C 94M and potable.

2.05 WATERSTOPS

- A. Flexible PVC Waterstops: CE CRD-C 572, with factory-installed metal eyelets, for embedding in concrete to prevent passage of fluids through joints. Factory fabricate corners, intersections, and directional changes. Place as indicated on drawings.

- B. Self-Expanding Butyl Strip Waterstops: Manufactured rectangular or trapezoidal strip, butyl rubber with sodium bentonite or other hydrophilic polymers, for adhesive bonding to concrete, 3/4 by 1 inch (19 by 25 mm). Place as indicated on drawings.

2.06 VAPOR RETARDERS

- A. Sheet Vapor Retarder: ASTM E 1745, (15 mils) Class C. Include manufacturer's recommended adhesive or pressure-sensitive joint tape.

2.07 CURING MATERIALS

- A. Evaporation Retarder: Waterborne, monomolecular film forming, manufactured for application to fresh concrete.
- B. Absorptive Cover: AASHTO M 182, Class 2, burlap cloth made from jute or kenaf, weighing approximately 9 oz./sq. yd. (305 g/sq. m) when dry.
- C. Moisture-Retaining Cover: ASTM C 171, polyethylene film or white burlap-polyethylene sheet.
- D. Water: Potable.
- E. Clear, Waterborne, Membrane-Forming Curing Compound: ASTM C 309, Type 1, Class A, dissipating.

2.08 RELATED MATERIALS

- A. Expansion- and Isolation-Joint-Filler Strips: ASTM D 1751, asphalt-saturated cellulosic fiber.

2.09 CONCRETE MIXTURES, GENERAL

- A. Prepare design mixtures for each type and strength of concrete, proportioned on the basis of laboratory trial mixture or field test data, or both, according to ACI 301 (ACI 301M).
- B. Cementitious Materials: Use fly ash or pozzolan as needed to reduce the total amount of portland cement, which would otherwise be used, by not more than 25 percent.
- C. Admixtures: Use admixtures according to manufacturer's written instructions.
 - 1. Use water-reducing or plasticizing admixture in concrete, as required, for placement and workability.
 - 2. Use water-reducing and -retarding admixture when required by high temperatures, low humidity, or other adverse placement conditions.
 - 3. Use air-entraining admixture in exterior exposed concrete unless otherwise indicated. Add air-entraining admixture at manufacturer's prescribed rate to result in concrete at point of placement having total air content with a tolerance of plus or minus 1-1/2 percent within the following limits:
 - a. Concrete structures and slabs exposed to freezing and thawing, deicer chemicals, or hydraulic pressure:
 - 1) percent (moderate exposure); 6.0 percent (severe exposure) for 1 inch maximum aggregate.
 - 2) percent (moderate exposure); 6.0 percent (severe exposure) for 3/4 inch maximum aggregate.
 - 3) percent (moderate exposure); 7.0 percent (severe exposure) for 1/2 inch maximum aggregate.
 - b. Other concrete not exposed to freezing, thawing, or hydraulic pressure, or to receive a surface hardener: 2 to 4 percent.
 - c. Do not allow air content of trowel-finished floors to exceed 3 percent.

2.10 CONCRETE MIXTURES FOR BUILDING ELEMENTS

- A. Conventionally Reinforced Slabs:
 - 1. Minimum Compressive Strength: 6000 psi at 28 days.
- B. Columns:
 - 1. Minimum Compressive Strength: 6000 psi at 28 days.
 - 2. Maximum W/C Ratio: 0.55

- C. Foundations and interior slabs on grade:
 - 1. Minimum Compressive Strength: 4000 psi at 28 days
 - 2. Maximum W/C Ratio: 0.55.
- D. Walls and Elevator Pit Slabs:
 - 1. Minimum Compressive Strength: 6000 psi at 28 days.
 - 2. Maximum W/C Ratio: 0.55.
- E. Fill Slabs, Pan Stairs:
 - 1. Minimum Compressive Strength: 3000 psi at 28 days.
- F. Exterior retaining walls and slabs on grade exposed to weather and deicing chemicals:
 - 1. Minimum Compressive Strength: 4500 psi at 28 days.
 - 2. Maximum W/C Ratio: 0.45
- G. All Other Concrete Unless Noted Otherwise:
 - 1. Minimum Compressive Strength: 4000 psi at 28 days.
 - 2. Maximum W/C Ratio: 0.55.

2.11 FABRICATING REINFORCEMENT

- A. Fabricate steel reinforcement according to CRSI's "Manual of Standard Practice."

2.12 CONCRETE MIXING

- A. Ready-Mixed Concrete: Measure, batch, mix, and deliver concrete according to ASTM C 94/C 94M, and furnish batch ticket information.
 - 1. When air temperature is between 85 and 90 deg F (30 and 32 deg C), reduce mixing and delivery time from 1-1/2 hours to 75 minutes; when air temperature is above 90 deg F (32 deg C), reduce mixing and delivery time to 60 minutes.

2.13 REPAIR MATERIALS

- A. Repair Underlayment: Cement-based, polymer-modified, self-leveling product that can be applied in thicknesses from 1/8 inch and that can be feathered at edges to match adjacent floor elevations.
 - 1. Cement Binder: ASTM C 150/C 150M, Portland cement or hydraulic or blended hydraulic cement as defined in ASTM C 219
 - 2. Primer: Product of underlayment manufacturer recommended for substrate, conditions, and application.
 - 3. Aggregate: Well-graded, washed gravel, 1/8 to 1/4 inch (3.2 to 0.24 inch) or coarse sand as recommended by underlayment manufacturer.
 - 4. Compressive strength: Not less than 4000 psi at 28 days when tested according to ASTM C 109/C 109M.
- B. Repair Overlayment: Cement-based, polymer-modified, self-leveling product that can be applied in thicknesses from 1/4 inch and that can be filled in over a scarified surface to match adjacent floor elevations.
 - 1. Cement Binder: ASTM C 150/C 150M, Portland cement or hydraulic or blended hydraulic cement as defined in ASTM C 219
 - 2. Primer: Product of underlayment manufacturer recommended for substrate, conditions, and application.
 - 3. Aggregate: Well-graded, washed gravel, 1/8 to 1/4 inch (3.2 to 0.24 inch) or coarse sand as recommended by underlayment manufacturer.
 - 4. Compressive strength: Not less than 5000 psi at 28 days when tested according to ASTM C 109/C 109M.

PART 3 EXECUTION

3.01 FORMWORK INSTALLATION

- A. Design, erect, shore, brace, and maintain formwork, according to ACI 301 (ACI 301M), to support vertical, lateral, static, and dynamic loads, and construction loads that might be applied, until structure can support such loads.
- B. Construct formwork so concrete members and structures are of size, shape, alignment, elevation, and position indicated, within tolerance limits of ACI 117 (ACI 117M).
- C. Limit concrete surface irregularities, designated by ACI 347 as abrupt or gradual, as follows:
 - 1. Class A tolerances, 1/8 inch for smooth-formed finished surfaces and other surfaces exposed to view.
 - 2. Class B tolerances, 1/4 inch for rough-formed finished surfaces.
- D. Construct forms tight enough to prevent loss of concrete mortar.
- E. Construct forms for easy removal without hammering or prying against concrete surfaces. Provide crush or wrecking plates where stripping may damage cast-concrete surfaces. Provide top forms for inclined surfaces steeper than 1.5 horizontal to 1 vertical.
 - 1. Install keyways, reglets, recesses, and that like, for easy removal.
 - 2. Do not use rust-stained steel form-facing material.
- F. Set edge forms, bulkheads, and intermediate screed strips for slabs to achieve required elevations and slopes in finished concrete surfaces. Provide and secure units to support screed strips; use strike-off templates or compacting-type screeds.
- G. Provide temporary openings for cleanouts and inspection ports where interior area of formwork is inaccessible. Close openings with panels tightly fitted to forms and securely braced to prevent loss of concrete mortar. Locate temporary openings in forms at inconspicuous locations.
- H. Chamfer exterior corners and edges or permanently exposed concrete.
- I. Form openings, chases, offsets, sinkages, keyways, reglets, blocking, screeds, and bulkheads required in the Work. Determine sizes and locations from trades providing such items.
- J. Clean forms and adjacent surfaces to receive concrete. Remove ships, wood, sawdust, dirt, and other debris just before placing concrete.
- K. Retighten forms and bracing before placing concrete, as required, to prevent mortar leaks and maintain proper alignment.
- L. Coat contact surfaces of forms with form-release agent, according to manufacturer's written instructions, before placing reinforcement.

3.02 EMBEDDED ITEM INSTALLATION

- A. Place and secure anchorage devices and other embedded items required for adjoining work that is attached to or supported by cast-in-place concrete. Use setting drawings, templates, diagrams, instructions, and directions furnished with items to be embedded.
- B. Install anchor rods for steel framing, accurately located, to elevations required, and complying with tolerances in Section 7.5 of AISC 303 (Code of Standard Practice).

3.03 REMOVING AND REUSING FORMS

- A. General: Formwork for sides of beams, walls, columns, and similar parts of the Work that does not support weight of concrete may be removed after cumulatively curing at not less than 50 degrees Fahrenheit for 24 hours after placing concrete. Concrete has to be hard enough to not be damaged by form-removal operations, and curing and protection operations need to be maintained.
 - 1. Leave formwork for beam soffits, joists, slabs, and other structural elements that support weight of concrete in place until concrete has achieved at least 70 percent of its 28-day design compressive strength.
 - 2. Remove forms only if shores have been arranged to permit removal of forms without loosening or disturbing shores.

- B. Clean and repair surfaces of forms to be reused in Work. Split, frayed, delaminated, or otherwise damaged form-facing material are not acceptable for exposed surfaces. Apply new form-release agent.
- C. When forms are reused, clean surfaces, remove fins and laitance, and tighten to close joints. Align and secure joints to avoid offsets. Do not use patched forms for exposed concrete surfaces unless approved by Architect.

3.04 SHORING AND RESHORING INSTALLATION

- A. Comply with ACI 318 (ACI318M) and ACI 301 (ACI 301M) for design, installation, and removal of shoring and reshoring.
 - 1. Do not remove shoring or reshoring until measurement of slab tolerances is complete.

3.05 VAPOR-RETARDER INSTALLATION

- A. Sheet Vapor Retarders: Place, protect, and repair sheet vapor retarder according to ASTM E 1643 and manufacturer's written instructions.
 - 1. Lap joints 6 inches and seal with manufacturer's recommended tape.

3.06 STEEL REINFORCEMENT INSTALLATION

- A. General: Comply with CRSI's "Manual of Standard Practice" for fabricating, placing, and supporting reinforcement.
 - 1. Do not cut or puncture vapor retarder. Repair damage and reseal vapor retarder before placing concrete.
- B. Accurately position, support and secure reinforcement against displacement. Locate and support reinforcement with bar supports to maintain minimum concrete cover. Do not tack weld crossing reinforcing bars.
 - 1. Weld reinforcing bars according to AWS D1.4/D 1.4M, where indicated.
- C. Clean reinforcement of loose rust and mill scale, earth, ice, and other foreign materials that reduce bond to concrete.
- D. Set wire ties with ends directed into concrete, not toward exposed concrete surfaces.
- E. Install welded-wire reinforcement in longest practicable lengths on bar supports spaced to minimize sagging. Lap edges and ends of adjoining sheets at least one mesh spacing. Offset laps of adjoining sheet widths to prevent continuous laps in either direction. Lace overlaps with wire.

3.07 JOINTS

- A. General: Construct joints true to line with faces perpendicular to surface plane of concrete.
- B. Construction Joints: Install so strength and appearance of concrete are not impaired, at locations indicated or as approved by Structural Engineer.
 - 1. Place joints perpendicular to main reinforcement. Continue reinforcement across construction joints unless otherwise indicated. Do not continue reinforcement through sides of strip placements of floor and slabs.
 - 2. Form keyed joints as indicated. Embed keys at least 1-1/2 inches into concrete.
 - 3. Locate joints for beams, slabs, joists, and girders in the middle third of spans. Offset joints in girders a minimum distance of twice the beam width from a beam-girder intersection.
 - 4. Locate horizontal joints in walls and columns at underside of floors, slabs, beams, and girders and at top of footings or floor slabs.
 - 5. Space vertical joints in walls as indicated. Locate joints beside piers integral with walls, near corners, and in concealed locations where possible.
 - 6. Use a bonding agent at locations where fresh concrete is placed against hardened or partially hardened concrete surfaces.
 - 7. Use epoxy-bonding adhesive at locations where fresh concrete is placed against hardened or partially hardened concrete surfaces.

- C. Contraction Joints in Slabs-on-Grade: Form weakened-plane contraction joints, sectioning concrete into areas as indicated. Construct contraction joints for a depth equal to at least one-fourth of concrete thickness as follows:
 - 1. Grooved Joints: Form contraction joints after initial floating by grooving and finishing each edge of joint to a radius of 1/8 inch. Repeat grooving of contraction joints after applying surface finishes. Eliminate groover tool marks on concrete surfaces.
 - 2. Sawed Joints: Form contraction joints with power saws equipped with shatterproof abrasive or diamond-rimmed blades. Cut 1/8-inch- (3.2-mm-) wide joints into concrete when cutting action does not tear, abrade, or otherwise damage surface and before concrete develops random contraction cracks.
- D. Isolation Joints in Slabs-on-Grade: After removing formwork, install joint-filler strips at slab junctions with vertical surfaces, such as column pedestals, foundation walls, grade beams, and other locations, as indicated.

3.08 WATERSTOP INSTALLATION

- A. Waterstops: Install in construction joints and at other locations indicated, according to manufacturer's written instructions.

3.09 CONCRETE PLACEMENT

- A. Before placing concrete, verify that installation of formwork, reinforcement, and embedded items is complete and that required inspections are completed.
- B. Do not add water to concrete during delivery, at Project site, or during placement unless approved by Architect.
- C. Before test sampling and placing concrete, water may be added at Project site, subject to limitations of ACI 301 (ACI 301M)
 - 1. Do not add water to concrete after adding high-range water-reducing admixtures to mixture.
- D. Deposit concrete continuously in one layer or in horizontal layers of such thickness that no new concrete is placed on concrete that has hardened enough to cause seams or planes of weakness. If a section cannot be placed continuously, provide construction joints as indicated. Deposit concrete to avoid segregation.
 - 1. Deposit concrete in horizontal layers of depth not to exceed formwork design pressures and in a manner to avoid inclined construction joints.
 - 2. Consolidate placed concrete with mechanical vibrating equipment according to ACI 301 (ACI 301M).
 - 3. Do not use vibrators to transport concrete inside forms. Insert and withdraw vibrators vertically at uniformly spaced locations to rapidly penetrate placed layer and at least 6 inches into preceding layer. Do not insert vibrators into lower layers of concrete that have begun to lose plasticity. At each insertion, limit duration of vibration to time necessary to consolidate concrete and complete embedment of reinforcement and other embedded items without causing mixture constituents to segregate.
- E. Deposit and consolidate concrete for floors and slabs in a continuous operation, within limits of construction joints, until placement of a panel or section is complete.
 - 1. Consolidate concrete during placement operations, so concrete is thoroughly worked around reinforcement and other embedded items and into corners.
 - 2. Maintain reinforcement in position on chairs during concrete placement.
 - 3. Screed slab surfaces with a straightedge and strike off to correct elevations.
 - 4. Slope surfaces uniformly to drains where required.
 - 5. Begin initial floating using bull floats or darbies to form a uniform and open-textured surface plane, before excess bleedwater appears on the surface. Do not further disturb slab surfaces before starting finishing operations

3.10 FINISHING FORMED SURFACES

- A. Rough-Formed Finish: As-cast concrete texture imparted by form-facing material with tie holes and defects repaired and patched. Remove fins and other projections that exceed specified limits on formed-surface irregularities.
 - 1. Apply to concrete surfaces not exposed to public view.
- B. Smooth-Formed Finish: As-cast concrete texture imparted by form-facing material, arranged in an orderly and symmetrical manner with a minimum of seams. Repair and patch tie holes and defects. Remove fins and other projections that exceed specified limits on formed-surface irregularities.
 - 1. Apply to concrete surfaces exposed to public view.
- C. Rubbed Finish: Apply the following to smooth-formed-finished as-cast concrete where indicated:
 - 1. Smooth-Rubbed Finish: Not later than one day after form removal, moisten concrete surfaces and rub with carborundum brick or another abrasive until producing a uniform color and texture. Do not apply cement grout other than that created by the rubbing process.
 - 2. Grout-Cleaned Finish: Wet concrete surfaces and apply grout of a consistency of thick paint to coat surfaces and fill small holes. Mix 1 part portland cement to 1-1/2 parts fine sand with a 1:1 mixture of bonding admixture and water. Add white portland cement in amounts determined by trial patches, so color of dry grout matches adjacent surfaces. Scrub grout into voids and remove excess grout. When grout whitens, rub surface with clean burlap and keep surface damp by fog spray for at least 36 hours.
 - 3. Cork-Floated Finish: Wet concrete surfaces and apply a stiff grout. Mix 1 part portland cement and 1 part fine sand with a 1:1 mixture of bonding agent and water. Add white portland cement in amounts determined by trial patches, so color of dry grout matches adjacent surfaces. Compress grout into voids by grinding surface. In a swirling motion, finish surface with a cork float.
- D. Related Unformed Surfaces: At tops of walls, horizontal offsets, and similar unformed surfaces adjacent to formed surfaces, strike off smooth and finish with a texture matching adjacent formed surfaces. Continue final surface treatment of formed surfaces uniformly across adjacent unformed surfaces unless otherwise indicated.

3.11 FINISHING FLOORS AND SLABS

- A. Scratch Finish: Apply scratch finish to monolithic slab surfaces to receive concrete floor topping or mortar setting beds for tile, portland cement terrazzo, and other bonded applied cementitious finish flooring material, and where indicated.
 - 1. After placing slabs, finish surface to tolerances of F(F) 15 (floor flatness) and F(L) 13 (floor levelness) measured according to ASTM E 1155 (ASTM E 1155M). Slope surfaces uniformly to drains where required. After leveling, roughen surface before final set with stiff brushes, brooms, or rakes.
- B. Float Finish: Apply float finish to monolithic slab surfaces to receive trowel finish and other finishes as specified; slab surfaces to be covered with membrane or elastic waterproofing, membrane or elastic roofing, or sand-bed terrazzo; and where indicated.
 - 1. After screeding, consolidating, and leveling concrete slabs, do not work surface until ready for floating. Begin floating, using float blades or float shoes only, when surface water has disappeared, or when concrete has stiffened sufficiently to permit operation of power-driven floats, or both. Consolidate surface with power-driven floats or by hand-floating if area is small or inaccessible to power units. Finish surfaces to tolerances of F(F) 18 (floor flatness) and F(L) 15 (floor levelness) measured according to ASTM E 1155 (ASTM E 1155M). Cut down high spots and fill low spots. Uniformly slope surfaces to drains. Immediately after leveling, refloat surface to a uniform, smooth, granular texture.

- C. Trowel Finish: Apply a trowel finish to monolithic slab surfaces exposed to view and slab surfaces to be covered with resilient flooring, carpet, ceramic or quarry tile, paint, or another thin film-finish coating system.
 - 1. After floating, begin first trowel-finish operation using a power-driven trowel. Begin final troweling when surface produces a ringing sound as trowel is moved over surface. Consolidate concrete surface by final hand-troweling operation, free of trowel marks, uniform in texture and appearance, and finish surfaces to tolerances of F(F) 20 (floor flatness) and F(L) 17 (floor levelness) measured according to ASTM E 1155 (ASTM E 1155M). Grind smooth any surface defects that would telegraph through applied floor covering system.
- D. Trowel and Fine Broom Finish: Where ceramic or quarry tile is to be installed with thin-set mortar, apply a trowel finish as specified, then immediately follow by slightly scarifying the surface with a fine broom.
- E. Nonslip Broom Finish: Apply a nonslip broom finish to exterior concrete platforms, steps, and ramps, and elsewhere as indicated.
 - 1. Immediately after float finishing, slightly roughen concrete surface by brooming with fiber-bristle broom perpendicular to main traffic route. Coordinate required final finish with Architect before application.
- F. Nonslip Aggregate Finish: Apply nonslip aggregate finish to concrete stair treads, platforms, ramps, sloped walks, and where indicated.
 - 1. After completing float finishing and before starting trowel finish, uniformly spread dampened nonslip aggregate at a rate of 25 lb per 100 sq. ft. (12 kg/10 sq. m) of surface. Tamp aggregate flush with surface using a steel trowel, but do not force below surface. After broadcasting and tamping, apply trowel finishing as specified.
 - 2. After curing, lightly work surface with a steel wire brush or an abrasive stone, and water to expose nonslip aggregate.
- G. Colored Wear-Resistant Finish: Apply a colored wear-resistant finish to monolithic slab surface indicated.
 - 1. Apply dry shake materials for the colored wear-resistant finish at a rate of 100 lb per 100 sq. ft. (49 kg/10 sq. m), unless a greater amount is recommended by material manufacturer.
 - 2. Cast a trial slab approximately 10 feet square to determine actual application rate, color, and finish, as acceptable to Architect.
 - 3. Immediately following the first floating operation, uniformly distribute with mechanical spreader approximately two-thirds of the required weight of the dry shake material over the concrete surface, and embed by power floating. Follow floating operation with second shake application, uniformly distributing remainder of dry shake material with overlapping applications to ensure uniform color, and embed by power floating.
 - 4. After broadcasting and floating, apply a trowel finish as specified. Cure slab surface with a curing compound recommended by the dry shake material manufacturer. Apply the curing compound immediately after the final finishing.

3.12 CONCRETE PROTECTING AND CURING

- A. General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures. Comply with ACI 306.1 for cold-weather protection and ACI 301 (ACI 301M) for hot-weather protection during curing.
- B. Evaporation Retarder: Apply evaporation retarder to unformed concrete surfaces if hot, dry, or windy conditions cause moisture loss approaching 0.2 lb/sq. ft. x h (1 kg/sq. m x h) before and during finishing operations. Apply according to manufacturer's written instructions after placing, screeding, and bull floating or darbying concrete, but before float finishing.
- C. Formed Surfaces: Cure formed concrete surfaces, including underside of beams, supported slabs, and other similar surfaces. If forms remain during curing period, moist cure after

loosening forms. If removing forms before end of curing period, continue curing for remainder of curing period.

- D. Cure concrete according to ACI 308.1, by one or a combination of the following methods:
 - 1. Moisture Curing: Keep surfaces continuously moist for not less than seven days.
 - 2. Moisture-Retaining-Cover Curing: Cover concrete surfaces with moisture-retaining cover for curing concrete, placed in widest practicable width, with sides and ends lapped at least 12 inches, and sealed by waterproof tape or adhesive. Cure for not less than seven days. Immediately repair any holes or tears during curing period, using cover material and waterproof tape.
 - 3. Curing Compound: Apply uniformly in continuous operation by power spray or roller according to manufacturer's written instructions. Recoat areas subjected to heavy rainfall within three hours after initial application. Maintain continuity of coating and repair damage during curing period.
 - a. Removal: After curing period has elapsed, remove curing compound without damaging concrete surfaces by method recommended by curing compound manufacturer unless manufacturer certifies curing compound does not interfere with bonding of floor covering used on Project.

3.13 CONCRETE SURFACE REPAIRS

- A. Defective Concrete: Repair and patch defective areas when approved by Architect. Remove and replace concrete that cannot be repaired and patched to Architect's approval.
- B. Patching Mortar: Mix dry-pack patching mortar, consisting of 1 part Portland cement to 2-1/2 parts fine aggregate passing a No. 16 sieve, using only enough water for handling and placing.
- C. Repairing Formed Surfaces: Surface defects include color and texture irregularities, cracks, spalls, air bubbles, honeycombs, rock pockets, fins and other projections on the surface, and stains and other discolorations that cannot be removed by cleaning.
 - 1. Immediately after form removal, cut out honeycombs, rock pockets, and voids more than ½ inch (0.51 inch) in any dimension to solid concrete. Limit cut depth to ¾ inch (0.75 inch). Make edges of cuts perpendicular to concrete surface. Clean, dampen with water, and brush-coat holes and voids with bonding agent. Fill and compact with patching mortar before bonding agent has dried. Fill form-tie voids with patching mortar or cone plugs secured in place with bonding agent.
 - 2. Repair defects on surfaces exposed to view by blending white Portland cement and standard Portland cement so that, when dry, patching mortar matches surrounding color. Patch a test area at inconspicuous locations to verify mixture and color match before proceeding with patching. Compact mortar in place and strike off slightly higher than surrounding surface.
 - 3. Repair defects on concealed formed surfaces that affect concrete's durability and structural performance as determined by Architect.
- D. Repairing Unformed Surfaces: Test unformed surfaces, such as floors and slabs, for finish and verify surface tolerances specified for each surface. Correct low and high areas. Test surfaces sloped to drain for trueness of slope and smoothness; use a sloped template.
 - 1. Repair finished surfaces containing defects. Surface defects include spalls, popouts, honeycombs, rock pockets, crazing and cracks in excess of 0.01 inch wide or that penetrate to reinforcement or completely through unreinforced sections regardless of width, and other objectionable conditions.
 - 2. After concrete has cured at least 14 days, correct high areas by grinding.
 - 3. Correct localized low areas during or immediately after completing surface finishing operations by cutting out low areas and replacing with patching mortar. Finish repaired areas to blend into adjacent concrete.
 - 4. Correct other low areas scheduled to receive floor coverings with a repair underlayment. Prepare, mix, and apply repair underlayment and primer according to manufacturer's written instructions to produce a smooth, uniform, plane, and level surface. Feather edges to match adjacent floor elevations.

5. Correct other low areas scheduled to remain exposed with a repair topping. Cut out low areas to ensure a minimum repair topping depth of 1/4 inch to match adjacent floor elevations. Prepare, mix, and apply repair topping and primer according to manufacturer's written instructions to produce a smooth, uniform, plane, and level surface.
 6. Repair defective areas, except random cracks and single holes 1 inch or less in diameter, by cutting out and replacing with fresh concrete. Remove defective areas with clean, square cuts and expose steel reinforcement with at least a 3/4 inch (0.75 inch) clearance all around. Dampen concrete surfaces in contact with patching concrete and apply bonding agent. Mix patching concrete of same materials and mixture as original concrete, except without coarse aggregate. Place, compact, and finish to blend with adjacent finished concrete. Cure in same manner as adjacent concrete.
 7. Repair random cracks and single holes 1 inch or less in diameter with patching mortar. Groove top of cracks and cut out holes to sound concrete and clean off dust, dirt, and loose particles. Dampen cleaned concrete surfaces and apply bonding agent. Place patching mortar before bonding agent has dried. Compact patching mortar and finish to match adjacent concrete. Keep patched area continuously moist for at least 72 hours.
- E. Perform structural repairs in concrete, subject to Architect's approval, using epoxy adhesive and patching mortar.
- F. Repair materials and installation not specified above may be used, subject to Architect's approval.

3.14 FIELD QUALITY CONTROL

- A. Special Inspections: Owner will engage a special inspector to perform field tests and inspections and prepare test reports.
- B. Testing Agency: Engage a qualified testing and inspecting agency to perform tests and inspections and to submit reports.
- C. Inspections:
1. Steel reinforcement placement.
 2. Steel reinforcement welding.
 3. Headed bolts and studs.
 4. Verification of use of required design mixture.
 5. Concrete placement, including conveying and depositing.
 6. Curing procedures and maintenance of curing temperature.
 7. Verification of concrete strength before removal of shoes and forms from beams and slabs.
- D. Concrete Tests: Testing of composite samples of fresh concrete obtained according to ASTM C 172/C 172M shall be performed according to the following requirements.
1. Testing Frequency: Obtain at least one composite sample for each 100 cu. yd. (76 cu. m) or fraction thereof of each concrete mixture placed each day.
 - a. When frequency of testing provides fewer than five compressive-strength tests for each concrete mixture, testing shall be conducted from at least five randomly selected batches or from each batch if fewer than five are used.
 2. Slump: ASTM C 143/C 143M; one test at point of placement for each composite sample, but not less than one test for each day's pour of each concrete mixture. Perform additional tests when concrete consistency appears to change.
 3. Air Content: ASTM C 231/C 231M, pressure method, for normal-weight concrete; one test for each composite sample, but not less than one test for each day's pour of each concrete mixture.
 4. Concrete Temperature: ASTM C 1064/C 1064M; one test hourly when air temperature is 40 degrees Fahrenheit and below or 80 degrees Fahrenheit and above, and one test for each composite sample.
 5. Compression Test Specimens: ASTM C 31/C 31M.

- a. Cast and laboratory cure two sets of two standard cylinder specimens for each composite sample.
- b. Cast and field cure two sets of two standard cylinder specimens for each composite sample.
6. Compressive-Strength Tests: ASTM C 39/C 39M; test one set of two laboratory-cured specimens at 7 days and one set of two specimens at 28 days.
 - a. Test two sets of two field-cured specimens at 7 days and one set of two specimens at 28 days.
 - b. A compressive-strength test shall be the average compressive strength from a set of two specimens obtained from same composite sample and tested at age indicated.
7. When strength of field-cured cylinders is less than 85 percent of companion laboratory-cured cylinders, Contractor shall evaluate operations and provide corrective procedures for protecting and curing in-place concrete.
8. Strength of each concrete mixture will be satisfactory if every average of any three consecutive compressive-strength tests equals or exceeds specified compressive strength and no compressive-strength test value falls below specified compressive strength by more than 500 psi.
9. Test results shall be reported in writing to Architect, concrete manufacturer, and Contractor within 48 hours of testing. Reports of compressive-strength tests shall contain Project identification name and number, date of concrete placement, name of concrete testing and inspecting agency, location of concrete batch in Work, design compressive strength at 28 days, concrete mixture proportions and materials, compressive breaking strength, and type of break for both 7- and 28-day tests.
10. Nondestructive Testing: Testing and inspecting agency shall make additional tests of concrete when test result indicate that slump, air entrainment, compressive strengths, or other requirements have not been met, as directed by Architect. Testing and inspecting agency may conduct tests to determine adequacy of concrete by cored cylinders complying with ASTM C 42/C 42M or by other methods as directed by Architect.
11. Additional testing and inspecting, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.
12. Correct deficiencies in the Work that test reports and inspections indicate do not comply with the Contract Documents.
- E. Measure floor and slab flatness and levelness according to ASTM E 1155 (ASTM E 1155M) within 24 hours of finishing.

END OF SECTION 03 3000

**SECTION 04 0100
MAINTENANCE OF MASONRY**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Water cleaning of existing masonry veneer surfaces.

PART 2 PRODUCTS

2.01 CLEANING MATERIALS

- A. Cleaning Agent: Detergent type.

PART 3 EXECUTION

3.01 PREPARATION

- A. Protect surrounding elements from damage due to restoration procedures.
- B. Carefully remove and store removable items located in areas to be restored, including fixtures, fittings, finish hardware, and accessories; reinstall upon completion.
- C. Separate areas to be protected from restoration areas using means adequate to prevent damage.

3.02 RESTORATION CLEANING

- A. Clean surfaces and remove large particles with wood scrapers or non-ferrous wire brush.
- B. Spray coat masonry with restoration cleaner, mixed into solution in accordance with manufacturer's instructions.
- C. Provide a second application if required to match mock-up area.
- D. Allow sufficient time for solution to remain on masonry and agitate with soft fiber brush or sponge.
- E. Rinse from the bottom up with potable water applied at 400 psi and at a rate of 4 gal/min.

END OF SECTION 04 0100

**SECTION 05 5213
PIPE AND TUBE RAILINGS**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Stair railings and guardrails.
- B. Free-standing railings at steps.

1.02 SUBMITTALS

- A. Shop Drawings: Indicate profiles, sizes, connection attachments, anchorage, size and type of fasteners, and accessories.

1.03 QUALITY ASSURANCE

- A. Structural Designer Qualifications: Professional Structural Engineer experienced in design of this work and licensed in the State in which the Project is located, or personnel under direct supervision of such an engineer.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Handrails and Railings:
 - 1. Alumi-Guard: www.alumi-guard.com/#sle.
 - 2. Avcon Railing Systems; Presidential Aluminum: www.avcon.com/#sle.
 - 3. ATR Technologies Inc; Aluminum Multi-Line Railing: <http://www.atr-technologies.com/#sle>.
 - 4. Kee Safety, Inc; Kee Klamp (steel): www.keesafety.com/#sle.
 - 5. KaneSterling; ____: www.sterlingdula.com/#sle.
 - 6. Spaceguard Products; BeastWire Mezzanine Safety Railguard System: www.spaceguardproducts.com/#sle.
 - 7. Superior Aluminum Products, Inc; Series 500: www.superioraluminum.com/#sle.
 - 8. The Wagner Companies; ____: www.wagnercompanies.com/#sle.
 - 9. Substitutions: See Section 01 6000 - Product Requirements.
- B. Accessibility-Compliant Handrail Brackets:
 - 1. Rakks/Rangine Corporation; ADA Compliant HR-202: www.rakks.com/#sle.
 - 2. Substitutions: See Section 01 6000 - Product Requirements.

2.02 RAILINGS - GENERAL REQUIREMENTS

- A. Design, fabricate, and test railing assemblies in accordance with the most stringent requirements of applicable local code.
- B. Allow for expansion and contraction of members and building movement without damage to connections or members.
- C. Dimensions: See drawings for configurations and heights.
- D. Provide anchors and other components to attach to structure, made of same materials as railing components unless otherwise indicated; where exposed fasteners are unavoidable provide flush countersunk fasteners.
- E. Provide welding fittings to join lengths, seal open ends, and conceal exposed mounting bolts and nuts, including but not limited to elbows, T-shapes, splice connectors, flanges, escutcheons, and wall brackets.
- F. Welded Joints: Make visible joints butt tight, flush, and hairline; use methods that avoid discoloration and damage of finish; grind smooth, polish, and restore to required finish.
 - 1. Ease exposed edges to a small uniform radius.
 - 2. Welded Joints:
 - a. Carbon Steel: Perform welding in accordance with AWS D1.1/D1.1M.

2.03 ALUMINUM MATERIALS

- A. Welding Fittings: No exposed fasteners; cast aluminum.

2.04 STEEL RAILING SYSTEM

- A. Steel Tube: ASTM A500/A500M Grade B cold-formed structural tubing.
- B. Welding Fittings: Factory- or shop-welded from matching pipe or tube; seams continuously welded; joints and seams ground smooth.

2.05 FABRICATION

- A. Accurately form components to suit specific project conditions and for proper connection to building structure.
- B. Fit and shop assemble components in largest practical sizes for delivery to site.
- C. Fabricate components with joints tightly fitted and secured.
- D. Welded Joints:
 - 1. Exterior Components: Continuously seal joined pieces by continuous welds. Drill condensate drainage holes at bottom of members at locations that will not encourage water intrusion.
 - 2. Grind exposed joints flush and smooth with adjacent finish surface. Make exposed joints butt tight, flush, and hairline. Ease exposed edges to small uniform radius.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Install components plumb and level, accurately fitted, free from distortion or defects, with tight joints.
- C. Install railings in compliance with ADA Standards for accessible design at applicable locations.
- D. Anchor railings securely to structure.

3.02 TOLERANCES

- A. Maximum Variation From Plumb: 1/4 inch per floor level, non-cumulative.
- B. Maximum Offset From True Alignment: 1/4 inch.
- C. Maximum Out-of-Position: 1/4 inch.

END OF SECTION 05 5213

**SECTION 06 1000
ROUGH CARPENTRY**

PART 1 GENERAL

1.01 REFERENCE STANDARDS

- A. ASTM D3498 - Standard Specification for Adhesives for Field-Gluing Wood Structural Panels (Plywood or Oriented Strand Board) to Wood Based Floor System Framing; 2019a.

1.02 SUMMARY

- A. Section Includes:
 - 1. Framing with dimension lumber.
 - 2. Framing with engineered wood products.
 - 3. Shear wall panels.
 - 4. Rooftop equipment bases and support curbs.
 - 5. Wood blocking and nailers.
 - 6. Wood furring and grounds.
 - 7. Wood sleepers.
 - 8. Plywood backing panels.
- B. Related Requirements:
 - 1. Section 061600 "Sheathing" for sheathing, subflooring, and underlayment.
 - 2. Section 313116 "Termite Control" for site application of borate treatment to wood framing.

1.03 DEFINITIONS

- A. Boards or Strips: Lumber of less than 2 inches nominal (1.5 inch actual) size in least dimension.
- B. Dimension Lumber: Lumber of 2 inches nominal (1.5 inch actual) size or greater but less than 5 inches nominal (4.49 inch actual) size in least dimension.
- C. Exposed Framing: Framing not concealed by other construction.
- D. OSB: Oriented strand board.
- E. Timber: Lumber of 5 inches nominal (4.49 inch actual) size or greater in least dimension.

1.04 ACTION SUBMITTALS

- A. Product Data: For each type of process and factory-fabricated product. Indicate component materials and dimensions and include construction and application details.
 - 1. Include data for wood-preservative treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements. Indicate type of preservative used and net amount of preservative retained.
 - 2. Include data for fire-retardant treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements. Include physical properties of treated materials based on testing by a qualified independent testing agency.
 - 3. For products receiving a waterborne treatment, include statement that moisture content of treated materials was reduced to levels specified before shipment to Project site.
 - 4. Submit an engineered design for all substitutions.

1.05 INFORMATIONAL SUBMITTALS

- A. Material Certificates: For dimension lumber specified to comply with minimum allowable unit stresses. Indicate species and grade selected for each use and design values approved by the ALSC Board of Review.
- B. Evaluation Reports: For the following, from ICC-ES:
 - 1. Wood-preservative-treated wood.
 - 2. Engineered wood products.
 - 3. Shear panels.
 - 4. Power-driven fasteners.

5. Post-installed anchors.
6. Metal framing anchors.

1.06 QUALITY ASSURANCE

- A. Testing Agency Qualifications: For testing agency providing classification marking for fire-retardant treated material, an inspection agency acceptable to authorities having jurisdiction that periodically performs inspections to verify that the material bearing the classification marking is representative of the material tested.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. Stack wood products flat with spacers beneath and between each bundle to provide air circulation. Protect wood products from weather by covering with waterproof sheeting, securely anchored. Provide for air circulation around stacks and under coverings.

PART 2 PRODUCTS

2.01 WOOD PRODUCTS, GENERAL

- A. Lumber: DOC PS 20 and applicable rules of grading agencies indicated. If no grading agency is indicated, comply with the applicable rules of any rules-writing agency certified by the ALSC Board of Review. Grade lumber by an agency certified by the ALSC Board of Review to inspect and grade lumber under the rules indicated.
 1. Factory mark each piece of lumber with grade stamp of grading agency.
 2. For exposed lumber indicated to receive a stained or natural finish, mark grade-stamp on end or back of each piece.
 3. Dress lumber, S4S, unless otherwise indicated.
- B. Maximum Moisture Content of Lumber: 15 percent for 2-inch nominal (38-mm actual) thickness or less; 19 percent for more than 2-inch nominal thickness unless otherwise indicated.
- C. Engineered Wood Products: Acceptable to authorities having jurisdiction and for which current model code research or evaluation reports exist that show compliance with building code in effect for Project.
 1. Allowable design stresses, as published by manufacturer, shall meet or exceed those indicated. Manufacturer's published values shall be determined from empirical data or by rational engineering analysis and demonstrated by comprehensive testing performed by a qualified independent testing agency.

2.02 WOOD-PRESERVATIVE-TREATED LUMBER

- A. Preservative Treatment by Pressure Process: AWPA U1; Use Category UC2 for interior construction not in contact with ground, Use Category UC3b for exterior construction not in contact with ground, and Use Category UC4a for items in contact with ground.
 1. Preservative Chemicals: Acceptable to authorities having jurisdiction and containing no arsenic or chromium. Do not use inorganic boron (SBX) for sill plates.
- B. Kiln-dry lumber after treatment to a maximum moisture content of 19 percent. Do not use material that is warped or that does not comply with requirements for untreated material.
- C. Mark lumber with treatment quality mark of an inspection agency approved by the ALSC Board of Review.
- D. Application: Treat items indicated on Drawings, and the following:
 1. Wood cants, nailers, curbs, equipment support bases, blocking, stripping, and similar members in connection with roofing, flashing, vapor barriers, and waterproofing.
 2. Wood sills, sleepers, blocking, furring, stripping, and similar concealed members in contact with masonry or concrete.
 3. Wood framing and furring attached directly to the interior of below-grade exterior masonry or concrete walls.
 4. Wood framing members that are less than 18 inches (372.44 inch) above the ground in crawlspaces or unexcavated areas.
 5. Wood floor plates that are installed over concrete slabs-on-grade.

2.03 DIMENSION LUMBER FRAMING

- A. Non-Load-Bearing Interior Partitions: Construction or No. 2 grade.
 - 1. Application: Interior partitions not indicated as load bearing.
 - 2. Species:
 - a. Spruce Pine Fur (SPF)
- B. Framing Other Than Non-Load-Bearing Partitions: No. 2 grade unless noted otherwise on structural drawings.
 - 1. Application: Bearing Framing.
 - 2. Species:
 - a. Southern pine; SPIB.
 - b. Spruce Pine Fur, SPF
- C. Exposed Framing: Hand-select material for uniformity of appearance and freedom from characteristics, on exposed surfaces and edges, that would impair finish appearance, including decay, honeycomb, knot-holes, shake, splits, torn grain, and wane
 - 1. Species and Grade: As indicated above for load-bearing construction of same type.

2.04 ENGINEERED WOOD PRODUCTS

- A. Source Limitations: Obtain each type of engineered wood product from single source from a single manufacturer.
- B. Laminated-Veneer Lumber: Structural composite lumber made from wood veneers with grain primarily parallel to member lengths, evaluated and monitored according to ASTM D 5456 and manufactured with an exterior-type adhesive complying with ASTM D 2559.
 - 1. Boise Cascade Corporation
 - 2. Finnforest USA
 - 3. Georgia-Pacific Building
 - 4. Jager Building Systems
 - 5. Louisiana-Pacific Corporation
 - 6. Pacific Woodtech Corporation
 - 7. Roseburg Forest Products
 - 8. Standard Structures
 - 9. West Fraser Timber Co.
 - 10. Weyerhaeuser Company
 - 11. Extreme Fiber Stress in Bending, Edgewise: 2600 psi for 12-inch nominal- (286-mm actual-) depth members.
 - 12. Modulus of Elasticity, Edgewise: 1,800,000 psi.
- C. Wood I-Joists: Prefabricated units, I-shaped in cross section, made with solid or structural composite lumber flanges and wood-based structural panel webs, let into and bonded to flanges. Comply with material requirements of and with structural capacities established and monitored according to ASTM D 5055.
 - 1. Anthony-Domtar Inc
 - 2. Boise Cascade Corporation
 - 3. Georgia-Pacific Building
 - 4. International Beams
 - 5. International Paper Corporation
 - 6. J.M. Huber Corporation
 - 7. Louisiana-Pacific Corporation
 - 8. Nascor Incorporated
 - 9. Pacific Woodtech Corporate
 - 10. Roseburg Forest Products
 - 11. Superior Wood Systems
 - 12. Weyerhaeuser Company

13. Web Material: Either OSB or plywood, complying with DOC PS 1 or DOC PS 2, Exposure 1.
 14. Structural Properties: Depths and design values not less than those indicated.
 15. Comply with APA PRI-400. Factory mark I-joists with APA-EWS trademark indicating nominal joist depth, joist class, span ratings, mill identification, and compliance with APA-EWS standard.
- D. Rim Boards: Product designed to be used as a load-bearing member and to brace wood I-joists at bearing ends, complying with research or evaluation report for I-joists.
1. Manufacturer: Provide products by same manufacturer as I-joists.
 2. Material: All-veneer product.
 3. Fire-retardant-treated as indicated.
 4. Thickness: 1-1/4 inches for as indicated.
 5. Comply with APA PRR-401, rim board grade. Factory mark rim boards with APA-EWS trademark indicating thickness, grade, and compliance with APA-EWS standard.

2.05 MISCELLANEOUS LUMBER

- A. General: Provide miscellaneous lumber indicated and lumber for support or attachment of other construction, including the following:
1. Blocking.
 2. Nailers.
 3. Rooftop equipment bases and support curbs.
 4. Cants.
 5. Furring.
 6. Grounds.
- B. Dimension Lumber Items: No. 2 grade lumber of any species.
- C. Concealed Boards: 15 percent maximum moisture content and any of the following species and grades:
1. Mixed southern pine or southern pine No. 2 grade; SPIB
 2. Eastern softwoods; No. 2 grade; NeLMA
- D. For blocking and nailers used for attachment of other construction, select and cut lumber to eliminate knots and other defects that will interfere with attachment of other work.
- E. For furring strips for installing plywood or hardboard paneling, select boards with no knots capable of producing bent-over nails and damage to paneling.

2.06 PLYWOOD BACKING PANELS

- A. Equipment Backing Panels: Plywood, DOC PS 1, Exterior, A-C fire-retardant treated, in thickness indicated or, if not indicated, not less than 3/4-inch (19-mm) nominal thickness.

2.07 FASTENERS

- A. General: Fasteners shall be of size and type indicated and shall comply with requirements specified in this article for material and manufacture.
1. Where rough carpentry is exposed to weather, in ground contact, pressure-preservative treated, or in area of high relative humidity, provide fasteners with hot-dip zinc coating complying with ASTM A 153/A 153M.
- B. Power-Driven Fasteners: Fastener systems with an evaluation report acceptable to authorities having jurisdiction, based on ICC-ES AC70.
- C. Post-Installed Anchors: Fastener systems with an evaluation report acceptable to authorities having jurisdiction, as appropriate for the substrate.
1. Material: Carbon-steel components, zinc plated to comply with ASTM B 633, Class Fe/Zn 5.
 2. Material: Stainless steel with bolts and nuts complying with ASTM F 593 and ASTM F 594, Alloy Group 1 or 2 (ASTM F 738M and ASTM F 836M, Grade A1 or A4).

2.08 METAL FRAMING ANCHORS

- A. Acceptable products by the following manufacturers:
 - 1. Cleveland Steel Specialty
 - 2. KC Metals Products
 - 3. Phoenix Metal Products
 - 4. Simpson Strong-Tie
 - 5. USP Structural Connections
- B. Allowable design loads, as published by manufacturer, shall meet or exceed those of basis-of-design products. Manufacturer's published values shall be determined from empirical data or by rational engineering analysis and demonstrated by comprehensive testing performed by a qualified independent testing agency. Framing anchors shall be punched for fasteners adequate to withstand same loads as framing anchors.
- C. Galvanized-Steel Sheet: Hot-dip, zinc-coated steel sheet complying with ASTM A 653/A 653M, G60 (Z180) coating designation.
 - 1. Use for interior locations unless otherwise indicated.
- D. Hot-Dip, Heavy-Galvanized Steel Sheet: ASTM A 653/A 653M; structural steel (SS), high-strength low-alloy steel Type A (HSLAS Type A), or high-strength low-alloy steel Type B (HSLAS Type B); G185 (Z550) coating designation; and not less than 0.036 inch thick.
 - 1. Use for wood-preservative-treated lumber and where indicated.
- E. Stainless-Steel Sheet: ASTM A 666, Type 304 or Type 316.
 - 1. Use for exterior locations and where indicated.

2.09 MISCELLANEOUS MATERIALS

- A. Sill-Sealer Gaskets for use 18" or higher above grade: Glass-fiber-resilient insulation, fabricated in strip form, for use as a sill sealer; 1-inch (25-mm) nominal thickness, compressible to 1/32 inch; selected from manufacturer's standard widths to suit width of sill members indicated.
 - 1. Contractor Option: Use closed-cell neoprene foam as described below.
- B. Sill-Sealer Gaskets for use within 18" of grade: Closed-cell neoprene foam, 1/4 inch thick, selected from manufacturer's standard widths to suit width of sill members indicated.
- C. Adhesives for Gluing Furring to Concrete: Formulation complying with ASTM D3498 that is approved for use indicated by adhesive manufacturer.

PART 3 EXECUTION

3.01 INSTALLATION, GENERAL

- A. Framing Standard: Comply with AF&PA's WCD 1, "Details for Conventional Wood Frame Construction," unless otherwise indicated.
- B. Framing with Engineered Wood Products: Install engineered wood products to comply with manufacturer's written instructions.
- C. Set rough carpentry to required levels and lines, with members plumb, true to line, cut, and fitted. Fit rough carpentry accurately to other construction. Locate furring, nailers, blocking, grounds, and similar supports to comply with requirements for attaching other construction.
- D. Install shear wall panels to comply with manufacturer's written instructions.
- E. Install metal framing anchors to comply with manufacturer's written instructions. Install fasteners through each fastener hole.
- F. Install sill sealer gasket to form continuous seal between sill plates and foundation walls.
- G. Do not splice structural members between supports unless otherwise indicated.
- H. Provide blocking and framing as indicated and as required to support facing materials, fixtures, specialty items, and trim.

1. Provide metal clips for fastening gypsum board at corners and intersections where framing or blocking does not provide a surface for fastening edges of panels. Space clips not more than 16 inches o.c.
- I. Provide fire blocking in furred spaces, stud spaces, and other concealed cavities as indicated and as follows:
 1. Fire block furred spaces of walls, at each floor level, at ceiling, and at not more than 96 inches o.c. with solid wood blocking or noncombustible materials accurately fitted to close furred spaces.
 2. Fire block concealed spaces of wood-framed walls and partitions at each floor level, at ceiling line of top story, and at not more than 96 inches o.c. Where fire blocking is not inherent in framing system used, provide closely fitted solid wood blocks of same width as framing members and 2-inch nominal (38-mm actual) thickness.
 3. Fire block concealed spaces between floor sleepers with same material as sleepers to limit concealed spaces to not more than 100 sq. ft. (9.3 sq. m) and to solidly fill space below partitions.
- J. Sort and select lumber so that natural characteristics do not interfere with installation or with fastening other materials to lumber. Do not use materials with defects that interfere with function of member or pieces that are too small to use with minimum number of joints or optimum joint arrangement.
- K. Comply with AWPAC M4 for applying field treatment to cut surfaces of preservative-treated lumber.
 1. Use inorganic boron for items that are continuously protected from liquid water.
 2. Use copper naphthenate for items not continuously protected from liquid water.
- L. Where wood-preservative-treated lumber is installed adjacent to metal decking, install continuous flexible flashing separator between wood and metal decking.
- M. Securely attach rough carpentry work to substrate by anchoring and fastening as indicated, complying with the following:
 1. Table 2304.9.1, "Fastening Schedule," in ICC's International Building Code (IBC).
 2. ICC-ES evaluation report for fastener.
- N. Use steel common nails unless otherwise indicated. Select fasteners of size that will not fully penetrate members where opposite side will be exposed to view or will receive finish materials. Make tight connections between members. Install fasteners without splitting wood. Drive nails snug but do not countersink nail heads unless otherwise indicated.

3.02 WOOD BLOCKING, AND NAILER INSTALLATION

- A. Install where indicated and where required for attaching other work. Form to shapes indicated and cut as required for true line and level of attached work. Coordinate locations with other work involved.
- B. Attach items to substrates to support applied loading. Recess bolts and nuts flush with surfaces unless otherwise indicated.
- C. Provide permanent grounds of dressed, pressure-preservative-treated, key-beveled lumber not less than 1-1/2 inches wide and of thickness required to bring face of ground to exact thickness of finish material. Remove temporary grounds when no longer required.

3.03 WOOD FURRING INSTALLATION

- A. Install level and plumb with closure strips at edges and openings. Shim with wood as required for tolerance of finish work.

3.04 WALL AND PARTITION FRAMING INSTALLATION

- A. General: Provide single bottom plate and double top plates using members of 2-inch nominal (38-mm actual) thickness whose widths equal that of studs unless noted otherwise, except single top plate may be used for non-load-bearing partitions. Fasten plates to supporting construction unless otherwise indicated.

1. Provide continuous horizontal blocking at midheight of partitions more than 96 inches high, using members of 2-inch nominal (38-mm actual) thickness and of same width as wall or partitions.
- B. Construct corners and intersections with three or more studs, except that two studs may be used for interior non-load-bearing partitions.
- C. Frame openings with multiple studs and headers. Provide nailed header members of thickness equal to width of studs. Support headers on jamb studs.

3.05 FLOOR JOIST FRAMING INSTALLATION

- A. General: Install floor joists with crown edge up and support ends of each member with not less than 1-1/2 inches of bearing on wood or metal, or 3 inches on masonry. Attach floor joists as follows:
 1. Where supported on wood members, using metal framing anchors.
 2. Where framed into wood supporting members, use metal joist hangers.
- B. Frame openings with headers and trimmers supported by metal joist hangers.
- C. Follow manufacturer's recommendations for notches and openings in joists.
- D. Provide solid blocking of 2-inch nominal (38-mm actual) thickness by depth of joist at ends of joists unless nailed to header or band.
- E. Provide solid blocking between joists under jamb studs for openings.
- F. Under non-load-bearing partitions, provide double joists separated by solid blocking equal to depth of studs above.
- G. Provide bridging of type indicated below, at intervals of 96 inches o.c., between joists.

3.06 CEILING JOIST AND RAFTER FRAMING INSTALLATION

- A. Ceiling Joists: Install with crown edge up and complying with requirements specified above for floor joists. Face nail to ends of parallel rafters.
- B. Rafters: Notch to fit exterior wall plates and use metal framing anchors. Double rafters to form headers and trimmers at openings in roof framing, if any, and support with metal hangers. Where rafters abut at ridge, place directly opposite each other and nail to ridge member or use metal ridge hangers.
 1. At valleys, provide double-valley rafters of size indicated or, if not indicated, of same thickness as regular rafters and 2 inches deeper. Bevel ends of jack rafters for full bearing against valley rafters.
 2. At hips, provide hip rafter of size indicated or, if not indicated, of same thickness as regular rafters and 2 inches deeper. Bevel ends of jack rafters for full bearing against hip rafter.
- C. Provide special framing as indicated for eaves, overhangs, dormers, and similar conditions if any.

3.07 PROTECTION

- A. Protect rough carpentry from weather. If, despite protection, rough carpentry becomes wet enough that moisture content exceeds that specified, apply EPA-registered borate treatment. Apply borate solution by spraying to comply with EPA-registered label.

END OF SECTION 06 1000

SECTION 06 1600 SHEATHING

PART 1 GENERAL

1.01 REFERENCE STANDARDS

- A. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2018b.
- B. UL 723 - Standard for Test for Surface Burning Characteristics of Building Materials; Current Edition, Including All Revisions.
- C. UL 1715 - Standard for Safety Fire Test of Interior Finish Material; Current Edition, Including All Revisions.

1.02 SUMMARY

- A. Section Includes:
 - 1. Wall sheathing.
 - 2. Roof sheathing.
 - 3. Parapet sheathing.
 - 4. Subflooring.
 - 5. Underlayment.
 - 6. Sheathing joint and penetration treatment.

1.03 ACTION SUBMITTALS

- A. Product Data: For each type of process and factory-fabricated product.

1.04 INFORMATIONAL SUBMITTALS

- A. Evaluation Reports: For the following, from ICC-ES:
 - 1. Wood-preservative-treated plywood.
 - 2. Fire-retardant-treated plywood.

PART 2 PRODUCTS

2.01 PERFORMANCE REQUIREMENTS

- A. Fire-Resistance Ratings: As tested according to ASTM E 119; testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.
 - 1. Fire-Resistance Ratings: Indicated by design designations from UL's "Fire Resistance Directory" or from the listings of another qualified testing agency.

2.02 PRESERVATIVE-TREATED PLYWOOD

- A. Preservative Treatment by Pressure Process: AWWA U1; Use Category UC2 for interior construction not in contact with ground, Use Category UC3b for exterior construction not in contact with ground, and Use Category UC4a for items in contact with ground.
- B. Mark plywood with appropriate classification marking of an inspection agency acceptable to authorities having jurisdiction.
- C. Application: Treat items indicated on Drawings.

2.03 WALL SHEATHING

- A. APA Rated Sheathing: Exterior, Structural I sheathing. Fire treated as indicated.
- B. Fire-Resistant OSB Sheathing
 - 1. Basis-of-Design product: LP FlameBlock Fire-Rated OSB Sheathing, as manufactured by LP - Building Products, Nashville, TN www.lpcorp.com
 - 2. Single-Source Responsibility: Provide components and materials specified in this section from a single manufacturer.
 - 3. Description and Performance Requirements: Oriented Strand Board with a proprietary, fire-resistant coating, produced and applied by Barrier Technology Corporation, Watkins, MN. Panels shall meet the following minimum standards:

- a. Flamespread and Smoke-Developed Performance:
 - 1) Panels shall exhibit a flamespread rating of less than 25 and a smoke developed index of less than 100 when tested on the coated side in a standard 10-minute test in accordance with ASTM E84, UL 723, or NFPA 255. Advance of flame shall not exceed 10.5 feet after extending test to 30 minute duration.
 - 2) Each panel shall bear an Underwriters Laboratories (UL) and Omega Point Laboratory (OPL) classification and inspection stamp.
 - 3) Coated panels in Category 15/32 and higher shall exhibit a thermal barrier index of at least 20 minutes when tested in accordance with ASTM E-119, UBC 26.2 or UL 1715.
 - 4) Treatment shall not promote corrosion of metal fasteners.
- b. Structural Performance and Durability:
 - 1) Panels in each Performance Category (formerly called Thickness Category) shall meet or exceed the structural and Exposure 1 requirements described in the manufacturer's specifications, as well as the properties for structural panels described in US Voluntary Product Standard PS2-04.
 - 2) Panels shall meet or exceed the bond durability and weather-resistance requirements of all tests described in ICC Acceptance Criteria AC264.
 - 3) Each panel shall bear a Progressive Engineering Inc (PEI) stamp as certification of compliance with the AC264 criteria and PS2-04 standards.
 - 4) Each panel shall bear a stamp describing the Performance Category (formerly called Thickness Category) and span rating of the panel.

2.04 ROOF SHEATHING

- A. APA Rated Sheathing: Exterior, Structural I sheathing. Fire treated as indicated.
 - 1. Fire-retardant-Treatment by Pressure Process: Products with a flame-spread index of 25 or less when tested according to ASTM E 84, and with no evidence of significant progressive combustion when the test is extended an additional 20 minutes, and with the flame front not extending more than 10.5 feet beyond the centerline of the burners at any time during the test.
 - a. Treated exterior-type materials shall comply with requirements specified above for fire-retardant-treated plywood by pressure process after being subjected to accelerated weathering according to ASTM D 2898. Use for exterior locations and where indicated.

2.05 SUBFLOORING AND UNDERLAYMENT

- A. Plywood Combination Subfloor-Underlayment: Per architectural drawings.

2.06 FASTENERS

- A. General: Provide fasteners of size and type indicated that comply with requirements specified in this article for material and manufacture.
 - 1. For roof parapet and wall sheathing, provide fasteners with hot-dip zinc coating complying with ASTM A 153/A 153M.
 - 2. Provide fasteners compatible with treated sheathing in terms of corrosion-resistance.

2.07 MISCELLANEOUS MATERIALS

- A. Adhesives for Field Gluing Panels to Wood Framing: Formulation complying with APA AFG-01 that is approved for use with type of construction panel indicated by manufacturers of both adhesives and panels.

PART 3 EXECUTION

3.01 INSTALLATION, GENERAL

- A. Do not use materials with defects that impair quality of sheathing or pieces that are too small to use with minimum number of joints or optimum joint arrangement. Arrange joints so that pieces do not span between fewer than three support members.

- B. Cut panels at penetrations, edges, and other obstructions of work; fit tightly against abutting construction unless otherwise indicated.
- C. Securely attach to substrate by fastening as indicated, complying with the following:
 - 1. Table 2304.9.1, "Fastening Schedule," in the ICC's International Building Code.
 - 2. ICC-ES evaluation report for fastener.
- D. Coordinate wall parapet and roof sheathing installation with flashing and joint-sealant installation so these materials are installed in sequence and manner that prevent exterior moisture from passing through completed assembly.
- E. Do not bridge building expansion joints; cut and space edges of panels to match spacing of structural support elements.

3.02 WOOD STRUCTURAL PANEL INSTALLATION

- A. General: Comply with applicable recommendations in APA Form No. E30, "Engineered Wood Construction Guide," for types of structural-use panels and applications indicated.
- B. Fastening Methods: Fasten panels as indicated below:
 - 1. Combination Subfloor-Underlayment:
 - a. Glue and nail to wood framing.
 - b. Screw to cold-formed metal framing.
 - c. Space panels 1/8 inch apart at edges and ends.
 - 2. Subflooring:
 - a. Glue and nail to wood framing.
 - b. Screw to cold-formed metal framing.
 - c. Space panels 1/8 inch apart at edges and ends.
 - 3. Wall and Roof Sheathing:
 - a. Nail to wood framing.
 - b. Screw to cold-formed metal framing.
 - c. Space panels 1/8 inch apart at edges and ends.
 - 4. Underlayment:
 - a. Glue and nail to subflooring.
 - b. Space panels 1/32 inch apart at edges and ends.
 - c. Fill and sand edge joints of underlayment receiving resilient flooring immediately before installing flooring.

END OF SECTION 06 1600

**SECTION 06 2000
FINISH CARPENTRY AND MILLWORK**

PART 1 GENERAL

1.01 RELATED DOCUMENTS

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

1.02 SUMMARY

- A. Furnish all materials, labor and equipment necessary to complete the standing and running trim, cabinets and countertops where not manufactured cabinets, shelving, cabinet hardware, wood blocking, shims, hanging strips and similar work as shown and detailed on drawings and as specified including:
 - 1. Interior painted wood or hardboard standing and running trim.
 - 2. Interior painted wood or hardboard door trim
 - a. 3-1/2" MDF or pine casing square molding at interior apartment doors
 - 3. Interior painted wood or hardboard base boards
 - a. 3-1/2" MDF or pine casing square molding at interior apartment base board
- B. Related Sections include the following:
 - 1. Divisions 12 Residential Casework for kitchen and bath casework.

1.03 SUBMITTALS

- A. Shop Drawings: Include location of each item, plans and elevations, large-scale details, attachment devices, and other components.

1.04 QUALITY ASSURANCE

- A. Except as otherwise shown or specified, comply with specified provisions of the Architectural Woodwork Institute (AWI) for premium quality work.

1.05 PROJECT CONDITIONS

- A. Environmental Limitations: Do not deliver or install woodwork until building is enclosed, wet work is complete, and HVAC system is operating and maintaining temperature and relative humidity at levels planned for building occupants during the remainder of the construction period.
- B. Job Measurements - Field verify measurements before beginning finished carpentry and millwork to insure perfect fitting

PART 2 PRODUCTS

2.01 MATERIALS

- A. Wood for Opaque Finish: Any closed-grain hardwood.
- B. Hardboard: AHA A135.4.
- C. Medium-Density Fiberboard: ANSI A208.2, Grade MD-Exterior Glue.

2.02 FABRICATION

- A. Primed trim prior to installation.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Condition woodwork to average prevailing humidity conditions in installation areas. Remove packing materials and back prime before installation.
- B. Quality Standard: Install woodwork to comply with AWI Section 1700 for the same grade specified in this Section for type of woodwork involved.
- C. Install woodwork level, plumb, true, and straight to a tolerance of 1/8 inch in 96 inches. Shim as required with concealed shims.

- D. Scribe and cut woodwork to fit adjoining work, and refinish cut surfaces and repair damaged finish at cuts.
- E. Anchor woodwork to anchors or blocking built in or directly attached to substrates. Secure with countersunk, concealed fasteners and blind nailing as required for complete installation. Use fine finishing nails or finishing screws for exposed fastening, countersunk and filled flush with woodwork and matching final finish if transparent finish is indicated.

END OF SECTION 06 2000

**SECTION 06 2023
INTERIOR FINISH CARPENTRY**

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Interior trim, including non-fire-rated interior door frames.
 - 2. Fire-rated interior door frames.
 - 3. Shelving.
 - 4. Interior

1.02 ACTION SUBMITTALS

- A. Product Data: For each type of process and factory-fabricated product. Indicate component materials, dimensions, profiles, textures, and colors and include construction and application details.
- B. Samples for Initial Selection: For each type of product involving selection of colors, profiles, or textures.
- C. Samples for Verification:
 - 1. For each species and cut of lumber and panel products with non-factory-applied finish, with 1/2 of exposed surface finished, 50 sq. in. (300 sq. cm) for lumber and 8 by 10 inches (200 by 250 mm) for panels.
 - 2. For foam plastic moldings, with 1/2 of exposed surface finished; 50 sq. in. (300 sq. cm).
 - 3. For each finish system and color of lumber and panel products with factory-applied finish, 50 sq. in. (300 sq. cm) for lumber and 8 by 10 inches (200 by 250 mm) for panels.

1.03 DELIVERY, STORAGE, AND HANDLING

- A. Stack lumber, plywood, and other panels flat with spacers between each bundle to provide air circulation. Protect materials from weather by covering with waterproof sheeting, securely anchored. Provide for air circulation around stacks and under coverings.
- B. Deliver interior finish carpentry materials only when environmental conditions meet requirements specified for installation areas. If interior finish carpentry materials must be stored in other than installation areas, store only where environmental conditions meet requirements specified for installation areas.

1.04 FIELD CONDITIONS

- A. Environmental Limitations: Do not deliver or install interior finish carpentry materials until building is enclosed and weatherproof, wet work in space is completed and nominally dry, and HVAC system is operating and maintaining temperature and relative humidity at occupancy levels during the remainder of the construction period.
- B. Do not install finish carpentry materials that are wet, moisture damaged, or mold damaged.
 - 1. Indications that materials are wet or moisture damaged include, but are not limited to, discoloration, sagging, or irregular shape.
 - 2. Indications that materials are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.

PART 2 PRODUCTS

2.01 MATERIALS, GENERAL

- A. Certified Wood: The following wood products shall be produced from wood obtained from forests certified by an FSC-accredited certification body to comply with FSC STD-01-001, "FSC Principles and Criteria for Forest Stewardship":
 - 1. Interior trim.
 - 2. Interior paneling.
 - 3. Shelving.
 - 4. Interior

- B. Lumber: DOC PS 20 and the following grading rules:
 - 1. NeLMA: Northeastern Lumber Manufacturers' Association, "Standard Grading Rules for Northeastern Lumber."
 - 2. NHLA: National Hardwood Lumber Association, "Rules for the Measurement and Inspection of Hardwood & Cypress."
 - 3. NLGA: National Lumber Grades Authority, "Standard Grading Rules for Canadian Lumber."
 - 4. SPIB: The Southern Pine Inspection Bureau, "Standard Grading Rules for Southern Pine Lumber."
 - 5. WCLIB: West Coast Lumber Inspection Bureau, Standard No. 17, "Grading Rules for West Coast Lumber."
 - 6. WWPA: Western Wood Products Association, "Western Lumber Grading Rules."
- C. Factory mark each piece of lumber with grade stamp of inspection agency indicating grade, species, moisture content at time of surfacing, and mill.
 - 1. For exposed lumber, mark grade stamp on end or back of each piece.
- D. Softwood Plywood: DOC PS 1.
- E. Hardboard: AHA A135.4.
- F. MDF: ANSI A208.2,.
- G. Particleboard: ANSI A208.1,.
- H. Melamine-Faced Particleboard: Particleboard complying with ANSI A208.1, Grade M-2, finished on both faces with thermally fused, melamine-impregnated decorative paper and complying with requirements of NEMA LD3, Grade VGL, for test methods 3.3, 3.4, 3.6, 3.8, and 3.10.

2.02 WOOD-PRESERVATIVE-TREATED MATERIALS

- A. Preservative Treatment by Pressure Process: AWWA U1; Use Category UC2.
 - 1. Kiln dry lumber and plywood after treatment to a maximum moisture content of 19 and 18 percent respectively.
 - 2. Preservative Chemicals: Acceptable to authorities having jurisdiction.
 - 3. For exposed items indicated to receive transparent finish, do not use chemical formulations that contain colorants or that bleed through or otherwise adversely affect finishes.
 - 4. Do not use material that is warped or does not comply with requirements for untreated material.
 - 5. Mark lumber with treatment-quality mark of an inspection agency approved by the American Lumber Standard Committee's Board of Review.
 - a. For exposed lumber indicated to receive a stained or natural finish,.
 - 6. Mark plywood with appropriate classification marking of an inspection agency acceptable to authorities having jurisdiction.
 - a. For exposed plywood indicated to receive a stained or natural finish, mark back of each piece.

2.03 INTERIOR TRIM

- A. Softwood Lumber Trim for Transparent Finish (Stain or Clear Finish):
 - 1. Species and Grade: Eastern white pine,; NeLMA or NLGA.
 - 2. Species and Grade: Idaho white, lodgepole, ponderosa, radiata, or sugar pine,; NLGA or WWPA.
 - 3. Species and Grade: Eastern white, Idaho white, lodgepole, ponderosa, radiata, or sugar pine,; NeLMA, NLGA, or WWPA.
 - 4. Species and Grade: White woods,; WWPA.
 - 5. Species and Grade: Douglas fir-larch or Douglas fir south, finish; NLGA, WCLIB, or WWPA.
 - 6. Species and Grade: Southern pine, finish; SPIB.
 - 7. Species and Grade: Western red cedar,; NLGA, WCLIB, or WWPA.

8. Maximum Moisture Content: percent.
 9. Finger Jointing: .
 10. Face Surface: .
- B. Hardwood Lumber Trim for Transparent Finish (Stain or Clear Finish):
1. Species and Grade: ; ; NHLA.
 2. Maximum Moisture Content: percent.
 3. Finger Jointing: Not allowed.
 4. Gluing for Width: .
 5. Veneered Material: .
 6. Face Surface: .
 7. Matching: Selected for compatible grain and color.
- C. Lumber Trim for Opaque Finish (Painted Finish):
1. Species and Grade: Eastern white pine,; NeLMA or NLGA.
 2. Species and Grade: Idaho white, lodgepole, ponderosa, radiata, or sugar pine;; NLGA or WWPA.
 3. Species and Grade: Eastern white, Idaho white, lodgepole, ponderosa, radiata, or sugar pine;; NeLMA, NLGA, or WWPA.
 4. Species and Grade: White woods,; WWPA.
 5. Species and Grade: Douglas fir-larch or Douglas fir south, finish; NLGA, WCLIB, or WWPA.
 6. Species and Grade: Spruce-pine-fir,; NeLMA, NLGA, WCLIB, or WWPA.
 7. Species and Grade: Alder, aspen, basswood, cottonwood, gum, magnolia, soft maple, sycamore, tupelo, or yellow poplar;; NHLA.
 8. Maximum Moisture Content: percent.
 9. Maximum Moisture Content: percent.
 10. Finger Jointing: .
 11. Face Surface: .
 12. Optional Material: Primed MDF of same actual dimensions as lumber indicated may be used in lieu of lumber.
- D. Softwood Moldings for Transparent Finish (Stain or Clear Finish): WMMPA WM 4, N-grade wood moldings. Made to patterns included in WMMPA WM 12.
1. Species: .
 2. Maximum Moisture Content: 15 percent with at least 85 percent of shipment at 12 percent or less.
 3. Finger Jointing: Not allowed.
 4. Matching: Selected for compatible grain and color.
 5. Base Pattern: base.
 6. Shoe-Mold Pattern: shoe mold.
 7. Casing Pattern: casing.
 8. Mull-Casing Pattern: casing.
 9. Stop Pattern: stop.
 10. Chair-Rail Pattern: WM 297, 11/16-by-3-inch (17-by-76-mm) chair rail.
- E. Hardwood Moldings for Transparent Finish (Stain or Clear Finish): WMMPA HWM 2, N-grade wood moldings made to patterns included in WMMPA HWM 1.
1. Species: .
 2. Kiln-dried softwood or MDF, with exposed surfaces veneered with species indicated, may be used in lieu of solid wood.
 3. Maximum Moisture Content: 9 percent.
 4. Finger Jointing: Not allowed.
 5. Matching: Selected for compatible grain and color.
 6. Base Pattern: base.
 7. Shoe-Mold Pattern: shoe mold.

8. Casing Pattern: casing.
 9. Mull-Casing Pattern: casing.
 10. Stop Pattern: stop.
 11. Chair-Rail Pattern: HWM 297, 11/16-by-3-inch (17-by-76-mm) chair rail.
- F. Moldings for Opaque Finish (Painted Finish): Made to patterns included in WMMPA WM 12.
1. Softwood Moldings: WMMPA WM 4, P grade.
 - a. Species: .
 - b. Maximum Moisture Content: 15 percent with at least 85 percent of shipment at 12 percent or less.
 2. Hardwood Moldings: WMMPA HWM 2, P-grade.
 - a. Species: .
 - b. Maximum Moisture Content: 9 percent.
 3. Optional Material: Primed MDF.
 4. Finger Jointing: .
 5. Base Pattern: base.
 6. Shoe-Mold Pattern: shoe mold.
 7. Casing Pattern: casing.
 8. Mull-Casing Pattern: casing.
 9. Stop Pattern: stop.
 10. Chair-Rail Pattern: WM 297, 11/16-by-3-inch (17-by-76-mm) chair rail.

2.04 SHELVING AND CLOTHES RODS

- A. Shelving: Made from , 3/4 inch (19 mm) thick.
 1. Particleboard with front edge.
 2. MDF with front edge.
 3. MDO softwood plywood with solid-wood edge.
 4. Melamine-faced particleboard with front edge.
 5. Wood boards as specified above for finish.
 6. Softwood Boards: Eastern white, Idaho white, lodgepole, ponderosa, radiata, or sugar pine;; NeLMA, NLGA, or WWPA; kiln dried.
 7. Softwood Boards: Douglas fir-larch, Douglas fir south, or hem-fir; finish; NLGA, WCLIB, or WWPA; or southern pine, finish; SPIB; kiln dried.
- B. Shelf Cleats: , as specified above for
- C. Shelf Brackets with Rod Support: BHMA A156.16, B04051; prime-painted formed steel.
- D. Shelf Brackets without Rod Support: BHMA A156.16, B04041; prime-painted formed steel.
- E. Standards for Adjustable Shelf Brackets: BHMA A156.9, B04102; steel.
- F. Adjustable Shelf Brackets: BHMA A156.9, B04112;.
- G. Clothes Rods: 1-1/2-inch- (38-mm-) diameter,.
- H. Rod Flanges: Clear, kiln-dried, turnings.

2.05 MISCELLANEOUS MATERIALS

- A. Fasteners for Interior Finish Carpentry: Nails, screws, and other anchoring devices of type, size, material, and finish required for application indicated to provide secure attachment, concealed where possible.
- B. Multipurpose Construction Adhesive: Formulation complying with ASTM D 3498 that is recommended for indicated use by adhesive manufacturer.

2.06 FABRICATION

- A. Back out or kerf backs of the following members except those with ends exposed in finished work:
 1. Interior standing and running trim except shoe and crown molds.
 2. Wood-board paneling.

- B. Ease edges of lumber less than 1 inch (25 mm) in nominal thickness to 1/16-inch (1.5-mm) radius and edges of lumber 1 inch (25 mm) or more in nominal thickness to 1/8-inch (3-mm) radius.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Examine substrates, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance.
- B. Examine finish carpentry materials before installation. Reject materials that are wet, moisture damaged, and mold damaged.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.02 PREPARATION

- A. Clean substrates of projections and substances detrimental to application.
- B. Before installing interior finish carpentry, condition materials to average prevailing humidity in installation areas for a minimum of 24 hours.

3.03 INSTALLATION, GENERAL

- A. Do not use materials that are unsound, warped, improperly treated or finished, inadequately seasoned, too small to fabricate with proper jointing arrangements, or with defective surfaces, sizes, or patterns.
- B. Install interior finish carpentry level, plumb, true, and aligned with adjacent materials. Use concealed shims where necessary for alignment.
 - 1. Scribe and cut interior finish carpentry to fit adjoining work. Refinish and seal cuts as recommended by manufacturer.
 - 2. Where face fastening is unavoidable, countersink fasteners, fill surface flush, and sand unless otherwise indicated.
 - 3. Install to tolerance of 1/8 inch in 96 inches (3 mm in 2438 mm) for level and plumb. Install adjoining interior finish carpentry with 1/32-inch (0.8-mm) maximum offset for flush installation and 1/16-inch (1.5-mm) maximum offset for reveal installation.
 - 4. Install stairs with no more than 3/16-inch (4.7-mm) variation between adjacent treads and risers and with no more than 3/8-inch (9.5-mm) variation between largest and smallest treads and risers within each flight.
 - 5. Coordinate interior finish carpentry with materials and systems in or adjacent to it. Provide cutouts for mechanical and electrical items that penetrate interior finish carpentry.

3.04 STANDING AND RUNNING TRIM INSTALLATION

- A. Install with minimum number of joints practical, using full-length pieces from maximum lengths of lumber available. Do not use pieces less than 24 inches (610 mm) long, except where necessary. Stagger joints in adjacent and related standing and running trim. At returns, miter at outside corners, and cope at inside corners to produce tight-fitting joints with full-surface contact throughout length of joint. Use scarf joints for end-to-end joints. Plane backs of casings to provide uniform thickness across joints where necessary for alignment.
 - 1. Match color and grain pattern of trim for transparent finish (stain or clear finish) across joints.
 - 2. Install trim after gypsum-board joint finishing operations are completed.
 - 3. Install without splitting; drill pilot holes before fastening where necessary to prevent splitting. Fasten to prevent movement or warping. Countersink fastener heads on exposed carpentry work and fill holes.

3.05 SHELVING AND CLOTHES ROD INSTALLATION

- A. Cut shelf cleats at ends of shelves about 1/2 inch (13 mm) less than width of shelves and sand exposed ends smooth.

- B. Install shelf cleats by fastening to framing or backing with finish nails or trim screws, set below face and filled. Space fasteners not more than 16 inches (400 mm) o.c.
 - 1. Apply a bead of multipurpose construction adhesive to back of shelf cleats before installing. Remove adhesive that is squeezed out after fastening shelf cleats in place.
- C. Install shelf brackets according to manufacturer's written instructions, spaced not more than o.c. Fasten to framing members, blocking, or metal backing, or use toggle bolts or hollow wall anchors.
- D. Install standards for adjustable shelf supports according to manufacturer's written instructions. Fasten to framing members, blocking, or metal backing, or use toggle bolts or hollow wall anchors. Space fasteners not more than 12 inches (300 mm) o.c.
- E. Install standards for adjustable shelf brackets according to manufacturer's written instructions, spaced not more than 36 inches (900 mm) o.c. and within 6 inches (150 mm) of end of shelves. Fasten to framing members, blocking, or metal backing, or use toggle bolts or hollow wall anchors.
- F. Cut shelves to neatly fit openings with only enough gap to allow shelves to be removed and reinstalled. Install shelves, fully seated on cleats, brackets, and supports.
 - 1. Fasten shelves to cleats with finish nails or trim screws, set flush.
 - 2. Fasten shelves to brackets to comply with bracket manufacturer's written instructions.
- G. Install rod flanges for rods as indicated. Fasten to shelf cleats, framing members, blocking, or metal backing, or use toggle bolts or hollow wall anchors. Install rods in rod flanges.

3.06 ADJUSTING

- A. Replace interior finish carpentry that is damaged or does not comply with requirements. Interior finish carpentry may be repaired or refinished if work complies with requirements and shows no evidence of repair or refinishing. Adjust joinery for uniform appearance.

3.07 CLEANING

- A. Clean interior finish carpentry on exposed and semiexposed surfaces. Restore damaged or soiled areas and touch up factory-applied finishes, if any.

3.08 PROTECTION

- A. Protect installed products from damage from weather and other causes during construction.
- B. Remove and replace finish carpentry materials that are wet, moisture damaged, and mold damaged.
 - 1. Indications that materials are wet or moisture damaged include, but are not limited to, discoloration, sagging, or irregular shape.
 - 2. Indications that materials are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.

END OF SECTION 06 2023

**SECTION 06 4700
PLASTIC SHUTTERS AND ACCESSORIES**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Exterior shutters.
- B. Exterior shutter hardware.
- C. Arch tops.
- D. Transom tops.

1.02 RELATED SECTIONS

- A. Section 099000 - Painting and Coating.

1.03 SUBMITTALS

- A. Shop Drawings: Show materials, layout, dimensions, profiles, fasteners and anchors, hardware, finishes, and interface with adjacent construction.
- B. Product Data: Manufacturer's data sheets on each product to be used, including:
 - 1. Preparation instructions and recommendations.
 - 2. Storage and handling requirements and recommendations.
 - 3. Installation methods.
- C. Selection Samples: For each finish product specified, two complete sets of color chips representing manufacturer's full range of available colors and patterns.
- D. Verification Samples: For each finish product specified, two samples, minimum size 6 inches (150 mm) square, representing actual product, color, and patterns.

1.04 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials to site in manufacturer's original, unopened packaging, with labels clearly identifying product name and manufacturer.
- B. Store products in manufacturer's unopened packaging until ready for installation.
- C. Store materials in a clean, dry area in accordance with manufacturer's instructions.
- D. Protect materials during handling and installation to prevent damage.

1.05 PROJECT CONDITIONS

- A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

1.06 WARRANTY

- A. Provide with a Limited Lifetime warranty against cracking, splitting or fading.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Acceptable Manufacturer: Mid-America Siding Components - The Tapco Group, which is located at: 29797 Beck Rd.; Wixom, MI 48393-2834; Toll Free Tel: 800-521-8486; Fax: 888-459-3647; Email: wayne_Sanderson@tapcoint.com; Web: www.thetapcogroup.com/brands/mid-america/shutters/shutters
- B. Substitutions: Permitted.
- C. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.

2.02 SHUTTERS

- A. Standard Open Louver Shutters: Mid-America Cathedral Open Louver Shutters fabricated of maintenance-free, UV-stabilized polypropylene copolymer with molded-through color
 - 1. Width:
 - 2. Length:
 - 3. Colors:

2.03 SHUTTER ACCESSORIES

- A. Fasteners:
 - 1. Shutter-Lok fasteners, 3 inches (76 mm) long, color coordinated to match adjacent shutter. Suitable for any surface.
 - 2. Painted Screws, 3 inches (76 mm) long, color coordinate to match adjacent shutter.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Do not begin installation until substrates have been properly prepared.
- B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.
- C. Commencement of work will imply acceptance of substrate.

3.02 PREPARATION

- A. Clean surfaces thoroughly prior to installation.
- B. Prepare surface using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.03 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Paint in accordance with manufacturer's recommended instructions. Contact manufacturer for recommended paint and shutter surface preparation.

3.04 PROTECTION

- A. Protect installed products from damage by weather and other work until Date of Substantial Completion.
- B. Touch-up and repair damaged products before Date of Substantial Completion.

END OF SECTION 06 4700

**SECTION 06 6100
CAST POLYMER FABRICATIONS**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Cast plastic washroom vanities with integral sink.

1.02 SUBMITTALS

- A. Shop Drawings: Indicate dimensions, thicknesses, required clearances, tolerances, materials, colors, finishes, fabrication details, field jointing, adjacent construction, methods of support, integration of plumbing components, and anchorages.
- B. Product Data: Provide data on specified component products, electrical characteristics and connection requirements.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Cast Polymer Vanities with integral sinks:
 - 1. Color: White on White Swirl
 - 2. Substitutions: See Section 01 6000 - Product Requirements.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that joint preparation and affected dimensions are acceptable.

3.02 PREPARATION

- A. Provide anchoring devices for installation and embedding.

3.03 INSTALLATION

- A. Install components in accordance with approved shop drawings and manufacturer's instructions.
- B. Align work plumb and level.
- C. Rigidly anchor to substrate to prevent misalignment.

3.04 CLEANING

- A. Clean and polish surfaces in accordance with manufacturer's instructions.

END OF SECTION 06 6100

**SECTION 07 0150.19
PREPARATION FOR RE-ROOFING**

PART 2 PRODUCTS

1.01 COMPONENTS

A. See the following sections for additional information on components relating to this work:

1.02 MATERIALS

END OF SECTION 07 0150.19

**SECTION 07 2100
THERMAL INSULATION**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Board insulation at cavity wall construction, perimeter foundation wall, underside of floor slabs, over roof deck, and over roof sheathing.
- B. Batt insulation in exterior wall, ceiling, and roof construction.
- C. Batt insulation for filling perimeter window and door shim spaces and crevices in exterior wall and roof.

1.02 RELATED REQUIREMENTS

- A. Section 06 1000 - Rough Carpentry: Installation requirements for board insulation over steep slope roof sheathing or roof structure.

1.03 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide data on product characteristics, performance criteria, and product limitations.

PART 2 PRODUCTS

2.01 FOAM BOARD INSULATION MATERIALS

2.02 BATT INSULATION MATERIALS

PART 3 EXECUTION

- A. Install boards horizontally on foundation perimeter.
- B. Cut and fit insulation tightly to protrusions or interruptions to the insulation plane.
- C. Install boards to fit snugly between wall ties.
- D. Install boards horizontally on walls.
- E. Cut and fit insulation tightly to protrusions or interruptions to the insulation plane.
- F. Place insulation under slabs on grade after base for slab has been compacted.
- G. Cut and fit insulation tightly to protrusions or interruptions to the insulation plane.
- H. Prevent insulation from being displaced or damaged while placing vapor retarder and placing slab.
- I. Installation of board insulation over steep slope roof structure or roof sheathing is specified in Section 06 1000.

3.02 BATT INSTALLATION

- A. Install insulation in accordance with manufacturer's instructions.
- B. Install in exterior wall and roof spaces without gaps or voids. Do not compress insulation.
- C. Trim insulation neatly to fit spaces. Insulate miscellaneous gaps and voids.
- D. Fit insulation tightly in cavities and tightly to exterior side of mechanical and electrical services within the plane of the insulation.

3.03 PROTECTION

- A. Do not permit installed insulation to be damaged prior to its concealment.

END OF SECTION 07 2100

**SECTION 07 2126
BLOWN INSULATION**

PART 2 PRODUCTS

1.01 MATERIALS

- A. Applications: Provide blown insulation in attic, exterior walls, and ceiling as indicated on drawings.

END OF SECTION 07 2126

SECTION 07 2500 WEATHER BARRIERS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Air Barriers: Materials that form a system to stop passage of air through exterior walls, joints between exterior walls and roof, and joints around frames of openings in exterior walls.

1.02 SUBMITTALS

- A. Product Data: Provide data on material characteristics.

PART 2 PRODUCTS

2.01 WEATHER BARRIER ASSEMBLIES

- A. Air Barrier:
 - 1. On outside surface of sheathing of exterior walls use air barrier sheet, mechanically fastened type.

2.02 AIR BARRIER MATERIALS (WATER VAPOR PERMEABLE AND WATER-RESISTIVE)

- A. Air Barrier Sheet, Mechanically Fastened:
 - 1. Air Permeance: 0.004 cfm/sq ft, maximum, when tested in accordance with ASTM E2178.
 - 2. Water Vapor Permeance: 5 perms, minimum, when tested in accordance with ASTM E96/E96M Procedure A (Desiccant Method) at 73.4 degrees F.
 - 3. Ultraviolet (UV) and Weathering Resistance: Approved in writing by manufacturer for up to 180 days of weather exposure.
 - 4. Surface Burning Characteristics: Flame spread index of 25 or less, and smoke developed index of 50 or less, when tested in accordance with ASTM E84.
 - 5. Seam and Perimeter Tape: Polyethylene self adhering type, mesh reinforced, 2 inches wide, compatible with sheet material; unless otherwise specified.
 - 6. Manufacturers:
 - a. DuPont de Nemours, Inc; Tyvek Commercial Wrap D with Tyvek Fluid Applied Flashing - Brush Formulation, Tyvek Fluid Applied Flashing and Joint Compound, FlexWrap NF, StraightFlash, StraightFlash VF, Tyvek Wrap Caps, and Tyvek Tape: www.dupont.com/#sle.
 - b. Substitutions: See Section 01 6000 - Product Requirements.

2.03 ACCESSORIES

- A. Sealants, Tapes, and Accessories for Sealing Weather Barrier and Sealing Weather Barrier to Adjacent Substrates: As specified or as recommended by weather barrier manufacturer.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install materials in accordance with manufacturer's instructions.
- B. Air Barriers: Install continuous air tight barrier over surfaces indicated, with sealed seams and with sealed joints to adjacent surfaces.
- C. Mechanically Fastened Sheets - On Exterior:
 - 1. Install sheets shingle-fashion to shed water, with seams generally horizontal.
 - 2. Overlap seams as recommended by manufacturer but at least 6 inches.
 - 3. Overlap at outside and inside corners as recommended by manufacturer but at least 12 inches.
 - 4. For applications specified to be air tight, seal seams, laps, penetrations, tears, and cuts with self-adhesive tape; use only large-headed, gasketed fasteners recommended by the manufacturer.
 - 5. Install air barrier and vapor retarder underneath the jamb flashings.
 - 6. Install head flashings under weather barrier.

7. At openings to be filled with frames having nailing flanges, wrap excess sheet into opening; at head, seal sheet over flange and flashing.
- D. Openings and Penetrations in Exterior Weather Barriers:
 1. Install flashing over sills, covering entire sill frame member, extending at least 5 inches onto weather barrier and at least 6 inches up jambs; mechanically fasten stretched edges.
 2. At openings to be filled with frames having nailing flanges, seal head and jamb flanges using a continuous bead of sealant compressed by flange and cover flanges with sealing tape at least 4 inches wide; do not seal sill flange.
 3. At openings to be filled with non-flanged frames, seal weather barrier to each side of opening framing, using flashing at least 9 inches wide, covering entire depth of framing.
 4. At head of openings, install flashing under weather barrier extending at least 2 inches beyond face of jambs; seal weather barrier to flashing.
 5. At interior face of openings, seal gap between window/door frame and rough framing, using joint sealant over backer rod.
 6. Service and Other Penetrations: Form flashing around penetrating item and seal to weather barrier surface.

3.02 PROTECTION

- A. Do not leave materials exposed to weather longer than recommended by manufacturer.

END OF SECTION 07 2500

**SECTION 07 3113
ASPHALT SHINGLES**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Asphalt shingle roofing.
- B. Flexible sheet membranes for eave protection, underlayment, and valley protection.

1.02 SUBMITTALS

- A. Product Data: Provide data indicating material characteristics.
- B. Samples: Submit two samples of each shingle color indicating color range and finish texture/pattern.
- C. Warranty Documentation: Submit manufacturer warranty and ensure that forms have been completed in Owner's name and registered with manufacturer.

1.03 WARRANTY

- A. Correct defective Work within a five year period after Date of Substantial Completion.
- B. Provide _____ year manufacturer's warranty for coverage against black streaks caused by algae.
- C. Provide five year manufacturer's warranty for wind damage.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Asphalt Shingles:
 - 1. GAF; Timberline HD Reflector Series: www.gaf.com/#sle.

2.02 SHEET MATERIALS

- A. Eave Protection Membrane:
 - 1. Eave Protection Membrane: Self-adhering polymer-modified asphalt sheet complying with ASTM D1970/D1970M; 40 mil total thickness; with strippable treated release paper and polyethylene sheet top surface.
- B. Underlayment: Synthetic non-asphaltic sheet, intended by manufacturer for mechanically fastened roofing underlayment without sealed seams.
 - 1. Fasteners: As recommended by manufacturer or building code qualification report or approval.

2.03 ACCESSORIES

- A. Roofing Nails: Standard round wire shingle type, galvanized steel, stainless steel, aluminum roofing nails, or copper roofing nails, minimum 3/8 inch head diameter, 12 gage, 0.109 inch nail shank diameter, 1-1/2 inch long and complying with ASTM F1667.
- B. Plastic Ridge Vents: Extruded plastic with vent openings that do not permit direct water or weather entry; flanged to receive shingles.

PART 3 EXECUTION

3.01 INSTALLATION - EAVE PROTECTION MEMBRANE

- A. Install eave protection membrane from eave edge to minimum 4 ft up-slope beyond interior face of exterior wall.

3.02 INSTALLATION - UNDERLAYMENT

- A. Underlayment At Roof Slopes Greater Than 4:12: Install underlayment perpendicular to slope of roof, with ends and edges weather lapped minimum 4 inches, stagger end laps of each consecutive layer, nail in place, and weather lap minimum 4 inches over eave protection.

- B. Weather lap and seal watertight with plastic cement any items projecting through or mounted on roof.

3.03 INSTALLATION - SHINGLES

- A. Install shingles in accordance with manufacturer's instructions manufacturer's instructions and NRCA (RM) applicable requirements.
 - 1. Fasten individual shingles using two nails per shingle, or as required by manufacturer and local building code, whichever is greater.
 - 2. Fasten strip shingles using four nails per strip, or as required by manufacturer and local building code, whichever is greater.
- B. Place shingles in straight coursing pattern with 5 inch weather exposure to produce double thickness over full roof area, and provide double course of shingles at eaves.
- C. Project first course of shingles 3/4 inch beyond fascia boards.
- D. Extend shingles 1/2 inch beyond face of gable edge fascia boards.
- E. Complete installation to provide weather tight service.

END OF SECTION 07 3113

**SECTION 07 6200
SHEET METAL FLASHING AND TRIM**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Fabricated sheet metal items, including flashings, counterflashings, gutters, downspouts, and exterior penetrations.
- B. Sealants for joints within sheet metal fabrications.
- C. Precast concrete splash pads.

1.02 SUBMITTALS

- A. Shop Drawings: Indicate material profile, jointing pattern, jointing details, fastening methods, flashings, terminations, and installation details.

PART 2 PRODUCTS

2.01 SHEET MATERIALS

- A. Aluminum: ASTM B209 (ASTM B209M); 20 gauge, 0.032 inch thick; mill finish.
- B. Pre-Finished Aluminum: ASTM B209 (ASTM B209M); 20 gauge, 0.032 inch thick; plain finish shop pre-coated with modified silicone coating.
 - 1. Modified Silicone Polyester Coating: Pigmented Organic Coating System, AAMA 2603; baked enamel finish system.
 - 2. Color: As selected by Architect from manufacturer's standard colors.

2.02 FABRICATION

- A. Form sections true to shape, accurate in size, square, and free from distortion or defects.
- B. Form pieces in longest possible lengths.
- C. Hem exposed edges on underside 1/2 inch; miter and seam corners.
- D. Form material with flat lock seams, except where otherwise indicated; at moving joints, use sealed lapped, bayonet-type or interlocking hooked seams.
- E. Fabricate corners from one piece with minimum 18 inch long legs; seam for rigidity, seal with sealant.
- F. Fabricate flashings to allow toe to extend 2 inches over roofing gravel. Return and brake edges.

2.03 GUTTER AND DOWNSPOUT FABRICATION

- A. Gutters: SMACNA (ASMM) Rectangular profile.
- B. Downspouts: Rectangular profile.
- C. Gutters and Downspouts: Size for rainfall intensity determined by a storm occurrence of 1 in 10 years in accordance with SMACNA (ASMM).
- D. Accessories: Profiled to suit gutters and downspouts.
 - 1. Anchorage Devices: In accordance with SMACNA (ASMM) requirements.
 - 2. Gutter Supports: Brackets.
 - 3. Downspout Supports: Brackets.
- E. Splash Pads: Precast concrete type, of size and profiles indicated; minimum 3000 psi at 28 days, with minimum 5 percent air entrainment.
- F. Downspout Extenders: Same material and finish as downspouts.
- G. Seal metal joints.

2.04 ACCESSORIES

- A. Fasteners: Galvanized steel, with soft neoprene washers.

- B. Primer: Zinc chromate type.
- C. Concealed Sealants: Non-curing butyl sealant.
- D. Exposed Sealants: ASTM C920; elastomeric sealant, with minimum movement capability as recommended by manufacturer for substrates to be sealed; color to match adjacent material.
- E. Plastic Cement: ASTM D4586/D4586M, Type I.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Secure flashings in place using concealed fasteners, and use exposed fasteners only where permitted..
- B. Apply plastic cement compound between metal flashings and felt flashings.
- C. Fit flashings tight in place; make corners square, surfaces true and straight in planes, and lines accurate to profiles.
- D. Secure gutters and downspouts in place with concealed fasteners.
- E. Slope gutters 1/4 inch per 10 feet, minimum.
- F. Set splash pads under downspouts.

END OF SECTION 07 6200

**SECTION 07 7123
MANUFACTURED GUTTERS AND DOWNSPOUTS**

PART 2 PRODUCTS

1.01 MATERIALS

END OF SECTION 07 7123

**SECTION 07 7200
ROOF ACCESSORIES**

PART 2 PRODUCTS

SECTION 07 8400 FIRESTOPPING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Firestopping of joints and penetrations in fire resistance rated and smoke resistant assemblies, whether indicated on drawings or not, and other openings indicated.

1.02 SUBMITTALS

- A. Product Data: Provide data on product characteristics, performance ratings, and limitations.

1.03 QUALITY ASSURANCE

- A. Fire Testing: Provide firestopping assemblies of designs that provide the scheduled fire ratings when tested in accordance with methods indicated.
 - 1. Listing in UL (FRD), FM (AG), or ITS (DIR) will be considered as constituting an acceptable test report.

1.04 FIELD CONDITIONS

- A. Comply with firestopping manufacturer's recommendations for temperature and conditions during and after installation; maintain minimum temperature before, during, and for three days after installation of materials.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Firestopping Materials: Any materials meeting requirements.
- B. Primers, Sleeves, Forms, Insulation, Packing, Stuffing, and Accessories: Provide type of materials required for tested firestopping assembly.

2.02 FIRESTOPPING ASSEMBLY REQUIREMENTS

- A. Perimeter Fire Containment Firestopping: Use system that has been tested according to ASTM E2307 to have fire resistance F Rating equal to required fire rating of floor assembly.
- B. Head-of-Wall Joint System Firestopping at Joints Between Fire-Rated Wall Assemblies and Non-Rated Horizontal Assemblies: Use system that has been tested according to ASTM E2837 to have fire resistance F Rating equal to required fire rating of floor or wall, whichever is greater.
- C. Floor-to-Floor, Wall-to-Wall, and Wall-to-Floor Joints, Except Perimeter, Where Both Are Fire-Rated: Use system that has been tested according to ASTM E1966 or UL 2079 to have fire resistance F Rating equal to required fire rating of the assembly in which the joint occurs.
- D. Through Penetration Firestopping: Use system that has been tested according to ASTM E814 to have fire resistance F Rating equal to required fire rating of penetrated assembly.

2.03 FIRESTOPPING SYSTEMS

- A. Firestopping: Any material meeting requirements.
 - 1. Fire Ratings: Use system that is listed by FM (AG), ITS (DIR), or UL (FRD) and tested in accordance with ASTM E814, ASTM E119, or UL 1479 with F Rating equal to fire rating of penetrated assembly and minimum T Rating Equal to F Rating and in compliance with other specified requirements.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify openings are ready to receive the work of this section.

3.02 PREPARATION

- A. Clean substrate surfaces of dirt, dust, grease, oil, loose material, or other materials that could adversely affect bond of firestopping material.

- B. Remove incompatible materials that could adversely affect bond.
- C. Install backing materials to prevent liquid material from leakage.

3.03 INSTALLATION

- A. Install materials in manner described in fire test report and in accordance with manufacturer's instructions, completely closing openings.
- B. Do not cover installed firestopping until inspected by authorities having jurisdiction.
- C. Install labeling required by code.

3.04 CLEANING

- A. Clean adjacent surfaces of firestopping materials.

3.05 PROTECTION

- A. Protect adjacent surfaces from damage by material installation.

END OF SECTION 07 8400

SECTION 07 9200 JOINT SEALANTS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Nonsag gunnable joint sealants.
- B. Joint backings and accessories.

1.02 SUBMITTALS

- A. Product Data for Sealants: Submit manufacturer's technical data sheets for each product to be used, that includes the following.
 - 1. Physical characteristics, including movement capability, VOC content, hardness, cure time, and color availability.
 - 2. List of backing materials approved for use with the specific product.
 - 3. Substrates that product is known to satisfactorily adhere to and with which it is compatible.
 - 4. Substrates the product should not be used on.
- B. Color Cards for Selection: Where sealant color is not specified, submit manufacturer's color cards showing standard colors available for selection.

PART 2 PRODUCTS

2.01 JOINT SEALANT APPLICATIONS

- A. Scope:
 - 1. Exterior Joints: Seal open joints, whether or not the joint is indicated on drawings, unless specifically indicated not to be sealed. Exterior joints to be sealed include, but are not limited to, the following items.
 - a. Wall expansion and control joints.
 - b. Joints between door, window, and other frames and adjacent construction.
 - c. Joints between different exposed materials.
 - d. Openings below ledge angles in masonry.
 - 2. Interior Joints: Do not seal interior joints unless specifically indicated to be sealed. Interior joints to be sealed include, but are not limited to, the following items.
 - a. Joints between door, window, and other frames and adjacent construction.
 - b. In sound-rated wall and ceiling assemblies, gaps at electrical outlets, wiring devices, piping, and other openings; between wall/ceiling and other construction; and other flanking sound paths.
 - 3. Do not seal the following types of joints.
 - a. Intentional weepholes in masonry.
 - b. Joints indicated to be treated with manufactured expansion joint cover or some other type of sealing device.
 - c. Joints where sealant is specified to be provided by manufacturer of product to be sealed.
 - d. Joints where installation of sealant is specified in another section.
 - e. Joints between suspended panel ceilings/grid and walls.
- B. Exterior Joints: Use non-sag non-staining silicone sealant, unless otherwise indicated.
 - 1. Lap Joints in Sheet Metal Fabrications: Butyl rubber, non-curing.
- C. Interior Joints: Use non-sag polyurethane sealant, unless otherwise indicated.
 - 1. In Sound-Rated Assemblies: Acrylic emulsion latex sealant.
- D. Interior Wet Areas: Bathrooms and kitchens; fixtures in wet areas include plumbing fixtures, countertops, cabinets, and other similar items.
- E. Sound-Rated Assemblies: Walls and ceilings identified as "STC-rated", "sound-rated", or "acoustical".

2.02 NONSAG JOINT SEALANTS

- A. Non-Staining Silicone Sealant: ASTM C920, Grade NS, Uses M and A; not expected to withstand continuous water immersion or traffic.
 - 1. Non-Staining To Porous Stone: Non-staining to light-colored natural stone when tested in accordance with ASTM C1248.
 - 2. Dirt Pick-Up: Reduced dirt pick-up compared to other silicone sealants.
 - 3. Color: To be selected by Architect from manufacturer's standard range.
- B. Polyurethane Sealant: ASTM C920, Grade NS, Uses M and A; single or multi-component; not expected to withstand continuous water immersion or traffic.
 - 1. Movement Capability: Plus and minus ____ percent, minimum.
 - 2. Color: To be selected by Architect from manufacturer's standard range.
- C. Acrylic Emulsion Latex: Water-based; ASTM C834, single component, non-staining, non-bleeding, non-sagging; not intended for exterior use.
 - 1. Color: To be selected by Architect from manufacturer's standard range.
- D. Non-Curing Butyl Sealant: Solvent-based; ASTM C1311; single component, non-sag, non-skinning, non-hardening, non-bleeding; vapor-impermeable; intended for fully concealed applications.

2.03 ACCESSORIES

- A. Backer Rod: Cylindrical cellular foam rod with surface that sealant will not adhere to, compatible with specific sealant used, and recommended by backing and sealant manufacturers for specific application.
- B. Backing Tape: Self-adhesive polyethylene tape with surface that sealant will not adhere to and recommended by tape and sealant manufacturers for specific application.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that joints are ready to receive work.
- B. Verify that backing materials are compatible with sealants.
- C. Verify that backer rods are of the correct size.

3.02 PREPARATION

- A. Remove loose materials and foreign matter that could impair adhesion of sealant.
- B. Clean joints, and prime as necessary, in accordance with manufacturer's instructions.
- C. Perform preparation in accordance with manufacturer's instructions and ASTM C1193.
- D. Mask elements and surfaces adjacent to joints from damage and disfigurement due to sealant work; be aware that sealant drips and smears may not be completely removable.

3.03 INSTALLATION

- A. Perform work in accordance with sealant manufacturer's requirements for preparation of surfaces and material installation instructions.
- B. Perform installation in accordance with ASTM C1193.
- C. Perform acoustical sealant application work in accordance with ASTM C919.
- D. Install bond breaker backing tape where backer rod cannot be used.
- E. Install sealant free of air pockets, foreign embedded matter, ridges, and sags, and without getting sealant on adjacent surfaces.
- F. Do not install sealant when ambient temperature is outside manufacturer's recommended temperature range, or will be outside that range during the entire curing period, unless manufacturer's approval is obtained and instructions are followed.

- G. Nonsag Sealants: Tool surface concave, unless otherwise indicated; remove masking tape immediately after tooling sealant surface.

END OF SECTION 07 9200

**SECTION 08 1113
HOLLOW METAL DOORS AND FRAMES**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Non-fire-rated hollow metal doors and frames.
- B. Fire-rated hollow metal doors and frames.
- C. Thermally insulated hollow metal doors with frames.

1.02 SUBMITTALS

- A. Product Data: Materials and details of design and construction, hardware locations, reinforcement type and locations, anchorage and fastening methods, and finishes.
- B. Shop Drawings: Details of each opening, showing elevations, glazing, frame profiles, and any indicated finish requirements.

1.03 DELIVERY, STORAGE, AND HANDLING

- A. Comply with NAAMM HMMA 840 or ANSI/SDI A250.8 (SDI-100) in accordance with specified requirements.
- B. Protect with resilient packaging; avoid humidity build-up under coverings; prevent corrosion and adverse effects on factory applied painted finish.

PART 2 PRODUCTS

2.01 PERFORMANCE REQUIREMENTS

- A. Requirements for Hollow Metal Doors and Frames:
 - 1. Steel Sheet: Comply with one or more of the following requirements; galvanized steel complying with ASTM A653/A653M, cold-rolled steel complying with ASTM A1008/A1008M, or hot-rolled pickled and oiled (HRPO) steel complying with ASTM A1011/A1011M, commercial steel (CS) Type B, for each.
 - 2. Accessibility: Comply with ICC A117.1 and ADA Standards.
- B. Combined Requirements: If a particular door and frame unit is indicated to comply with more than one type of requirement, comply with the specified requirements for each type; for instance, an exterior door that is also indicated as being sound-rated must comply with the requirements specified for exterior doors and for sound-rated doors; where two requirements conflict, comply with the most stringent.

2.02 HOLLOW METAL DOORS

- A. Door Finish: Factory primed and field finished.
- B. Exterior Doors: Thermally insulated.
 - a. Level 1 - Standard-duty.
 - b. Physical Performance Level C, 250,000 cycles; in accordance with ANSI/SDI A250.4.
 - c. Model 1 - Full Flush.
 - d. Door Face Metal Thickness: 20 gage, 0.032 inch, minimum.
- 2. Door Thickness: 1-3/4 inches, nominal.
- C. Interior Doors, Non-Fire-Rated:
 - a. Level 1 - Standard-duty.
 - b. Physical Performance Level C, 250,000 cycles; in accordance with ANSI/SDI A250.4.
 - c. Model 1 - Full Flush.
 - d. Door Face Metal Thickness: 20 gage, 0.032 inch, minimum.
- 2. Door Thickness: 1-3/4 inches, nominal.
- D. Fire-Rated Doors:
 - a. Level 1 - Standard-duty.
 - b. Physical Performance Level C, 250,000 cycles; in accordance with ANSI/SDI A250.4.

- c. Model 1 - Full Flush.
 - d. Door Face Metal Thickness: 20 gage, 0.032 inch, minimum.
- 2. Fire Rating: As indicated on Door Schedule, tested in accordance with UL 10C and NFPA 252 ("positive pressure fire tests").
- 3. Provide units listed and labeled by UL (DIR) or ITS (DIR).
 - a. Attach fire rating label to each fire rated unit.
- 4. Door Thickness: 1-3/4 inches, nominal.

2.03 HOLLOW METAL FRAMES

- A. Comply with standards and/or custom guidelines as indicated for corresponding door in accordance with applicable door frame requirements.
- B. Exterior Door Frames: Knock-down type.
 - 1. Weatherstripping: Separate, see Section 08 7100.
- C. Interior Door Frames, Non-Fire Rated: Full profile/continuously welded type.
- D. Door Frames, Fire-Rated: Knock-down type.
 - 1. Fire Rating: Same as door, labeled.

2.04 FINISHES

- A. Primer: Rust-inhibiting, complying with ANSI/SDI A250.10, door manufacturer's standard.

2.05 ACCESSORIES

- A. Silencers: Resilient rubber, fitted into drilled hole; provide three on strike side of single door, three on center mullion of pairs, and two on head of pairs without center mullions.
- B. Temporary Frame Spreaders: Provide for factory- or shop-assembled frames.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify existing conditions before starting work.
- B. Verify that opening sizes and tolerances are acceptable.
- C. Verify that finished walls are in plane to ensure proper door alignment.

3.02 INSTALLATION

- A. Install doors and frames in accordance with manufacturer's instructions and related requirements of specified door and frame standards or custom guidelines indicated.
- B. Install fire rated units in accordance with NFPA 80.
- C. Coordinate frame anchor placement with wall construction.
- D. Install door hardware as specified in Section 08 7100.
 - 1. Comply with recommended practice for hardware placement of doors and frames in accordance with ANSI/SDI A250.6 or NAAMM HMMA 861.

3.03 TOLERANCES

- A. Maximum Diagonal Distortion: 1/16 inch measured with straight edge, corner to corner.

3.04 ADJUSTING

- A. Adjust for smooth and balanced door movement.

END OF SECTION 08 1113

**SECTION 08 1116
ALUMINUM DOORS AND FRAMES**

PART 2 PRODUCTS

1.01 DOORS AND FRAMES

- A. Dimensions and Shapes: As indicated on drawings; dimensions indicated are nominal.
 - 1. Provide the following clearances:
 - a. Hinge and Lock Stiles: 1/8 inch.
 - b. Between Meeting Stiles: 1/4 inch.
 - c. At Top Rail and Bottom Rail: 1/8 inch.

1.02 COMPONENTS

END OF SECTION 08 1116

**SECTION 08 1416
FLUSH WOOD DOORS**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Flush wood doors; flush and flush glazed configuration; fire-rated and non-rated.

1.02 REFERENCE STANDARDS

- A. NFPA 80 - Standard for Fire Doors and Other Opening Protectives; 2019.

1.03 SUBMITTALS

- A. Product Data: Indicate door core materials and construction; veneer species, type and characteristics.
- B. Shop Drawings: Show doors and frames, elevations, sizes, types, swings, undercuts, beveling, blocking for hardware, factory machining, factory finishing, cutouts for glazing and other details.

1.04 DELIVERY, STORAGE, AND HANDLING

- A. Package, deliver and store doors in accordance with specified quality standard.
- B. Accept doors on site in manufacturer's packaging, and inspect for damage.
- C. Protect doors with resilient packaging sealed with heat shrunk plastic; do not store in damp or wet areas or areas where sunlight might bleach veneer; seal top and bottom edges with tinted sealer if stored more than one week, and break seal on site to permit ventilation.

PART 2 PRODUCTS

2.01 DOORS AND PANELS

- A. Doors: See drawings for locations and additional requirements.

2.02 DOOR AND PANEL CORES

2.03 DOOR FACINGS

2.04 DOOR CONSTRUCTION

- A. Cores Constructed with stiles and rails:
- B. Factory machine doors for hardware other than surface-mounted hardware, in accordance with hardware requirements and dimensions.
- C. Factory fit doors for frame opening dimensions identified on shop drawings, with edge clearances in accordance with specified quality standard.
- D. Provide edge clearances in accordance with the quality standard specified.

2.05 FINISHES - WOOD VENEER DOORS

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install doors in accordance with manufacturer's instructions and specified quality standard.
 - 1. Install fire-rated doors in accordance with NFPA 80 requirements.
- B. Factory-Finished Doors: Do not field cut or trim; if fit or clearance is not correct, replace door.
- C. Use machine tools to cut or drill for hardware.
- D. Coordinate installation of doors with installation of frames and hardware.

3.02 ADJUSTING

- A. Adjust doors for smooth and balanced door movement.
- B. Adjust closers for full closure.

END OF SECTION 08 1416

**SECTION 08 1433
STILE AND RAIL WOOD DOORS**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Wood doors, stile and rail design; fire rated and non-fire rated.

1.02 SUBMITTALS

- A. Product Data: Indicate stile and rail core materials and construction; veneer species, type and characteristics.
- B. Shop Drawings: Illustrate door opening criteria, elevations, sizes, types, swings, undercuts required, special beveling, special blocking for hardware, factory machining criteria.

1.03 DELIVERY, STORAGE, AND HANDLING

- A. Package, deliver, and store doors in accordance with quality standard specified.
- B. Accept doors on site in manufacturer's packaging, and inspect for damage.
- C. Protect doors with resilient packaging sealed with heat shrunk plastic; do not store in damp or wet areas or areas where sunlight might bleach veneer; seal top and bottom edges with tinted sealer if stored more than one week, and break seal on site to permit ventilation.

PART 2 PRODUCTS

2.01 DOORS

- A. Quality Standard: Premium Grade, Heavy Duty performance, in accordance with AWI/AWMAC/WI (AWS) or AWMAC/WI (NAAWS), unless otherwise indicated.
- B. Interior Doors: 1-3/8 inches thick unless otherwise indicated; solid lumber construction; mortise and tenon joints. Opaque finish.
- C. Wood veneer facing for field opaque finish.
- D. Design Style/Pattern: Manufacturer's standard 6 panel.

2.02 DOOR AND PANEL FACINGS

- A. Materials for Opaque Finishes: Hardboard faces.
- B. Adhesive: Type I - Waterproof.

2.03 DOOR CONSTRUCTION

- A. Factory machine doors for finish hardware in accordance with hardware requirements and dimensions. Do not machine for surface hardware.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install doors in accordance with manufacturer's instructions and specified quality standards.
 - 1. Install fire-rated doors in accordance with NFPA 80 requirements.
- B. Field-Finished Doors: Trimming to fit is acceptable.
 - 1. Adjust width of non-rated doors by cutting equally on both jamb edges.
 - 2. Trim door height by cutting bottom edges to a maximum of 3/4 inch.
 - 3. Trim fire-rated doors in strict compliance with fire rating limitations.
- C. Machine cut for hardware.
- D. Coordinate installation of doors with installation of frames and hardware.

3.02 ADJUSTING

- A. Adjust doors for smooth and balanced door movement.
- B. Adjust closers for full closure.

END OF SECTION 08 1433

**SECTION 08 8000
GLAZING**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Insulating glass units.
- B. Glazing units.
- C. Glazing compounds and accessories.

1.02 REFERENCE STANDARDS

- A. 16 CFR 1201 - Safety Standard for Architectural Glazing Materials; Current Edition.
- B. ANSI Z97.1 - American National Standard for Safety Glazing Materials Used in Buildings - Safety Performance Specifications and Methods of Test; 2015.
- C. ASTM C864 - Standard Specification for Dense Elastomeric Compression Seal Gaskets, Setting Blocks, and Spacers; 2005 (Reapproved 2019).
- D. ASTM C1036 - Standard Specification for Flat Glass; 2016.
- E. ASTM C1048 - Standard Specification for Heat-Strengthened and Fully Tempered Flat Glass; 2018.
- F. ASTM C1193 - Standard Guide for Use of Joint Sealants; 2016.
- G. ASTM C1376 - Standard Specification for Pyrolytic and Vacuum Deposition Coatings on Flat Glass; 2021.
- H. ASTM E1300 - Standard Practice for Determining Load Resistance of Glass in Buildings; 2016.
- I. ASTM E2190 - Standard Specification for Insulating Glass Unit Performance and Evaluation; 2010.
- J. GANA (SM) - GANA Sealant Manual; 2008.
- K. NFRC 100 - Procedure for Determining Fenestration Product U-factors; 2017.
- L. NFRC 200 - Procedure for Determining Fenestration Product Solar Heat Gain Coefficient and Visible Transmittance at Normal Incidence; 2014, with Errata (2017).
- M. NFRC 300 - Test Method for Determining the Solar Optical Properties of Glazing Materials and Systems; 2017.

1.03 SUBMITTALS

- A. Product Data on Insulating Glass Unit and Glazing Unit Glazing Types: Provide structural, physical and environmental characteristics, size limitations, special handling and installation requirements.
- B. Product Data on Glazing Compounds and Accessories: Provide chemical, functional, and environmental characteristics, limitations, special application requirements, and identify available colors.

PART 2 PRODUCTS

2.01 PERFORMANCE REQUIREMENTS - EXTERIOR GLAZING ASSEMBLIES

- A. Provide type and thickness of exterior glazing assemblies to support assembly dead loads, and to withstand live loads caused by positive and negative wind pressure acting normal to plane of glass.
 - 1. Comply with ASTM E1300 for design load resistance of glass type, thickness, dimensions, and maximum lateral deflection of supported glass.
 - 2. Provide glass edge support system sufficiently stiff to limit the lateral deflection of supported glass edges to less than 1/175 of their lengths under specified design load.
 - 3. Glass thicknesses listed are minimum.

- B. Vapor Retarder and Air Barrier Seals: Provide completed assemblies that maintain continuity of building enclosure vapor retarder and air barrier.
 - 1. In conjunction with vapor retarder and joint sealer materials described in other sections.
- C. Thermal and Optical Performance: Provide exterior glazing products with performance properties as indicated. Performance properties are in accordance with manufacturer's published data as determined with the following procedures and/or test methods:
 - 1. Center of Glass U-Value: Comply with NFRC 100 using Lawrence Berkeley National Laboratory (LBNL) WINDOW 6.3 computer program.
 - 2. Center of Glass Solar Heat Gain Coefficient (SHGC): Comply with NFRC 200 using Lawrence Berkeley National Laboratory (LBNL) WINDOW 6.3 computer program.
 - 3. Solar Optical Properties: Comply with NFRC 300 test method.

2.02 GLASS MATERIALS

- A. Float Glass: Provide float glass based glazing unless otherwise indicated.
 - 1. Annealed Type: ASTM C1036, Type I - Transparent Flat, Class 1 - Clear, Quality - Q3.
 - 2. Kind FT - Fully Tempered Type: Complies with ASTM C1048.
 - 3. Fully Tempered Safety Glass: Complies with ANSI Z97.1 or 16 CFR 1201 criteria for safety glazing used in hazardous locations.

2.03 INSULATING GLASS UNITS

- A. Insulating Glass Units: Types as indicated.
 - 1. Durability: Certified by an independent testing agency to comply with ASTM E2190.
 - 2. Coated Glass: Comply with requirements of ASTM C1376 for pyrolytic (hard-coat) or magnetic sputter vapor deposition (soft-coat) type coatings on flat glass; coated vision glass, Kind CV; coated overhead glass, Kind CO; or coated spandrel glass, Kind CS.
 - 3. Metal Edge Spacers: Aluminum, bent and soldered corners.
 - 4. Spacer Color: Black.
 - 5. Edge Seal:
 - a. Dual-Sealed System: Provide polyisobutylene sealant as primary seal applied between spacer and glass panes, and silicone, polysulfide, or polyurethane sealant as secondary seal applied around perimeter.
 - b. Color: Black.
 - 6. Purge interpane space with dry air, hermetically sealed.
- B. Type IG-1 - Insulating Glass Units: Vision glass, double glazed.
 - 1. Applications: Exterior glazing unless otherwise indicated.
 - 2. Space between lites filled with argon.
 - 3. Outboard Lite: Annealed float glass, 1/4 inch thick, minimum.
 - a. Tint: Clear.
 - 4. Inboard Lite: Annealed float glass, 1/4 inch thick, minimum.
 - a. Tint: Clear.
 - 5. Total Thickness: 1 inch.
 - 6. Thermal Transmittance (U-Value), Summer - Center of Glass: _____, nominal.

2.04 GLAZING UNITS

- A. Monolithic Interior Vision Glazing:
 - 1. Applications: Interior glazing unless otherwise indicated.
 - 2. Glass Type: Fully tempered float glass.
 - 3. Tint: Clear.
 - 4. Thickness: 1/4 inch, nominal.

2.05 ACCESSORIES

- A. Setting Blocks: Silicone, with 80 to 90 Shore A durometer hardness; ASTM C864 Option II. Length of 0.1 inch for each square foot of glazing or minimum 4 inch by width of glazing rabbet space minus 1/16 inch by height to suit glazing method and pane weight and area.

- B. Glazing Splines: Resilient silicone extruded shape to suit glazing channel retaining slot; ASTM C864 Option II; color black.

PART 3 EXECUTION

3.01 INSTALLATION, GENERAL

- A. Install glazing sealants in accordance with ASTM C1193, GANA (SM), and manufacturer's instructions.

3.02 INSTALLATION - DRY GLAZING METHOD (GASKET GLAZING)

- A. Application - Exterior and/or Interior Glazed: Set glazing infills from either the exterior or the interior of the building.
- B. Place setting blocks at 1/4 points with edge block no more than 6 inch from corners.
- C. Rest glazing on setting blocks and push against fixed stop with sufficient pressure on gasket to attain full contact.
- D. Install removable stops without displacing glazing gasket; exert pressure for full continuous contact.

END OF SECTION 08 8000

**SECTION 08 8300
MIRRORS**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Glass mirrors.
 - 1. Annealed float glass.

1.02 SUBMITTALS

- A. Product Data on Mirror Types: Submit structural, physical and environmental characteristics, size limitations, special handling and installation requirements.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Mirror Design Criteria: Select materials and/or provide supports as required to limit mirror material deflection to 1/200, or to the flexure limit of glass, with full recovery of glazing materials, whichever is less.
- B. Mirror Glass: Clear, annealed float glass; ASTM C1036, with copper and silver coatings, and protective overcoating.
 - 1. Thickness: 1/4 inch.
 - 2. Edges: Bevelled.

2.02 ACCESSORIES

- A. Mirror Attachment Accessories: Stainless steel clips.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install mirrors in accordance with manufacturer's recommendations.
- B. Set mirrors plumb and level, and free of optical distortion.
- C. Set mirrors with edge clearance free of surrounding construction including countertops or backsplashes.

3.02 CLEANING

- A. Remove wet glazing materials from finish surfaces.
- B. Remove labels after work is complete.
- C. Clean mirrors and adjacent surfaces.

END OF SECTION 08 8300

**SECTION 08 9100
LOUVERS**

PART 2 PRODUCTS

1.01 LOUVERS

- A. Louvers: Factory fabricated and assembled, complete with frame, mullions, and accessories; AMCA Certified in accordance with AMCA 511.

END OF SECTION 08 9100

**SECTION 09 2116
GYPSUM BOARD ASSEMBLIES**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Metal stud wall framing.
- B. Acoustic insulation.
- C. Cementitious backing board.
- D. Gypsum wallboard.
- E. Joint treatment and accessories.
- F. Water-resistive barrier over exterior wall sheathing.

1.02 RELATED REQUIREMENTS

- A. Section 06 1000 - Rough Carpentry: Wood blocking product and execution requirements.

1.03 SUBMITTALS

- A. Product Data: Provide data on gypsum board, accessories, and joint finishing system.

PART 2 PRODUCTS

2.01 GYPSUM BOARD ASSEMBLIES

- A. Provide completed assemblies complying with ASTM C840 and GA-216.

2.02 BOARD MATERIALS

- A. Gypsum Wallboard: Paper-faced gypsum panels as defined in ASTM C1396/C1396M; sizes to minimize joints in place; ends square cut.
 - 1. Application: Use for vertical surfaces and ceilings, unless otherwise indicated.
 - 2. At Assemblies Indicated with Fire-Resistance Rating: Use type required by indicated tested assembly; if no tested assembly is indicated, use Type X board, UL or WH listed.
 - 3. Thickness:
 - a. Vertical Surfaces: 5/8 inch.
 - b. Ceilings: 5/8 inch.
 - c. Multi-Layer Assemblies: Thicknesses as indicated on drawings.
- B. Backing Board For Wet Areas: One of the following products:
 - 1. Application: Surfaces behind tile in wet areas including tub and shower surrounds.
 - 2. ANSI Cement-Based Board: Non-gypsum-based; aggregated Portland cement panels with glass fiber mesh embedded in front and back surfaces complying with ANSI A118.9 or ASTM C1325.
 - a. Thickness: 5/8 inch.
- C. Ceiling Board: Special sag resistant gypsum ceiling board as defined in ASTM C1396/C1396M; sizes to minimize joints in place; ends square cut.
 - 1. Application: Ceilings, unless otherwise indicated.
 - 2. Thickness: 5/8 inch.
 - 3. Edges: Tapered.

2.03 GYPSUM WALLBOARD ACCESSORIES

- A. Acoustic Insulation: ASTM C665; preformed glass fiber, friction fit type, unfaced. Thickness: 2 inch.
- B. Acoustic Sealant: Acrylic emulsion latex or water-based elastomeric sealant; do not use solvent-based non-curing butyl sealant.
- C. Beads, Joint Accessories, and Other Trim: ASTM C1047, rigid plastic, galvanized steel, or rolled zinc, unless noted otherwise.
 - 1. Corner Beads: Low profile, for 90 degree outside corners.

- D. Joint Materials: ASTM C475/C475M and as recommended by gypsum board manufacturer for project conditions.
 - 1. Joint Compound: Drying type, vinyl-based, ready-mixed.
- E. Screws for Fastening of Gypsum Panel Products to Cold-Formed Steel Studs Less than 0.033 inches in Thickness and Wood Members: ASTM C1002; self-piercing tapping screws, corrosion-resistant.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that project conditions are appropriate for work of this section to commence.

3.02 FRAMING INSTALLATION

- A. Studs: Space studs at 16 inches on center.
 - 1. Extend partition framing to structure where indicated and to ceiling in other locations.
- B. Openings: Reinforce openings for weight of doors or operable panels, using not less than double studs at jambs.
- C. Acoustic Furring: Install resilient channels at maximum 24 inches on center. Locate joints over framing members.
- D. Furring for Fire Ratings: Install for fire resistance ratings indicated.
- E. Blocking: Install wood blocking for support of:
 - 1. Framed openings.
 - 2. Wall-mounted cabinets.
 - 3. Plumbing fixtures.
 - 4. Toilet accessories.
 - 5. Wall-mounted door hardware.
 - 6. Handrails

3.03 ACOUSTIC ACCESSORIES INSTALLATION

- A. Acoustic Insulation: Place tightly within spaces, around cut openings, behind and around electrical and mechanical items within partitions, and tight to items passing through partitions.
- B. Acoustic Sealant: Install in accordance with manufacturer's instructions.
 - 1. Place one bead continuously on substrate before installation of perimeter framing members.
 - 2. Place continuous bead at perimeter of each layer of gypsum board.
 - 3. Seal around all penetrations by conduit, pipe, ducts, and rough-in boxes, except where firestopping is provided.

3.04 BOARD INSTALLATION

- A. Comply with ASTM C840, GA-216, and manufacturer's instructions. Install to minimize butt end joints, especially in highly visible locations.
- B. Single-Layer Nonrated: Install gypsum board in most economical direction, with ends and edges occurring over firm bearing.
- C. Double-Layer Non-Rated: Use gypsum board for first layer, placed parallel to framing or furring members, with ends and edges occurring over firm bearing. Place second layer perpendicular to framing or furring members. Offset joints of second layer from joints of first layer.
- D. Fire-Resistance-Rated Construction: Install gypsum board in strict compliance with requirements of assembly listing.
- E. Cementitious Backing Board: Install over steel framing members and plywood substrate where indicated, in accordance with ANSI A108.11 and manufacturer's instructions.
- F. Installation on Wood Framing: For rated assemblies, comply with requirements of listing authority. For nonrated assemblies, install as follows:
 - 1. Single-Layer Applications: Screw attachment.

2. Double-Layer Application: Install base layer using screws. Install face layer using screws.

3.05 JOINT TREATMENT

- A. Paper Faced Gypsum Board: Use paper joint tape, embed with drying type joint compound and finish with drying type joint compound.
- B. Finish gypsum board in accordance with levels defined in ASTM C840, as follows:
 1. Level 4: Walls and ceilings to receive paint finish or wall coverings, unless otherwise indicated.
 2. Level 2: In utility areas, behind cabinetry, and on backing board to receive tile finish.
 3. Level 1: Fire-resistance-rated wall areas above finished ceilings, whether or not accessible in the completed construction.
- C. Tape, fill, and sand exposed joints, edges, and corners to produce smooth surface ready to receive finishes.
 1. Feather coats of joint compound so that camber is maximum 1/32 inch.

END OF SECTION 09 2116

**SECTION 09 6513
RESILIENT BASE AND ACCESSORIES**

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Resilient base.
 - 2. Resilient molding accessories.

1.02 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Samples: For each exposed product and for each color and texture specified, not less than 12 inches long.
- C. Samples for Verification: For each type of product indicated and for each color, texture, and pattern required in manufacturer's standard-size Samples, but not less than 12 inches long.

1.03 DELIVERY, STORAGE, AND HANDLING

- A. Store resilient products and installation materials in dry spaces protected from the weather, with ambient temperatures maintained within range recommended by manufacturer, but not less than 50 deg F or more than 90 deg F.

1.04 FIELD CONDITIONS

- A. Maintain ambient temperatures within range recommended by manufacturer, but not less than 70 deg F or more than 95 deg F, in spaces to receive resilient products during the following time periods:
 - 1. 48 hours before installation.
 - 2. During installation.
 - 3. 48 hours after installation.
- B. After installation and until Substantial Completion, maintain ambient temperatures within range recommended by manufacturer, but not less than 55 deg F or more than 95 deg F.
- C. Install resilient products after other finishing operations, including painting, have been completed.

PART 2 PRODUCTS

2.01 PERFORMANCE REQUIREMENTS

- A. FloorScore Compliance: Resilient base shall comply with requirements of FloorScore certification.

2.02 RESILIENT BASE AND ACCESSORIES

- A. Products: As indicated in the Interior Finish Schedule/Legend. No substitutions

2.03 INSTALLATION MATERIALS

- A. Trowelable Leveling and Patching Compounds: Latex-modified, portland cement based or blended hydraulic-cement-based formulation provided or approved by resilient-product manufacturer for applications indicated.
- B. Adhesives: Water-resistant type recommended by resilient-product manufacturer for resilient products and substrate conditions indicated.
 - 1. Adhesives shall have a VOC content of 50 g/L or less.
- C. Metal Edge Strips: Extruded aluminum with mill finish of width shown, of height required to protect exposed edges of flooring, and in maximum available lengths to minimize running joints.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Examine substrates, with Installer present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the Work.
 - 1. Verify that finishes of substrates comply with tolerances and other requirements specified in other Sections and that substrates are free of cracks, ridges, depressions, scale, and foreign deposits that might interfere with adhesion of resilient products.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.
 - 1. Installation of resilient products indicates acceptance of surfaces and conditions.

3.02 PREPARATION

- A. Prepare substrates according to manufacturer's written instructions to ensure adhesion of resilient products.
- B. Concrete Substrates for Resilient Stair Accessories: Prepare horizontal surfaces according to ASTM F 710.
 - 1. Verify that substrates are dry and free of curing compounds, sealers, and hardeners.
 - 2. Remove substrate coatings and other substances that are incompatible with adhesives and that contain soap, wax, oil, or silicone, using mechanical methods recommended by manufacturer. Do not use solvents.
 - 3. Alkalinity and Adhesion Testing: Perform tests recommended by manufacturer. Proceed with installation only after substrate alkalinity falls within range on pH scale recommended by manufacturer in writing, but not less than 5 or more than 9 pH.
 - 4. Moisture Testing: Proceed with installation only after substrates pass testing according to manufacturer's written recommendations, but not less stringent than the following:
 - a. Perform anhydrous calcium chloride test according to ASTM F 1869. Proceed with installation only after substrates have maximum moisture-vapor-emission rate of 3 lb of water/1000 sq. ft. in 24 hours.
 - b. Perform relative humidity test using in situ probes according to ASTM F 2170. Proceed with installation only after substrates have maximum 75 percent relative humidity level.
- C. Fill cracks, holes, and depressions in substrates with trowelable leveling and patching compound; remove bumps and ridges to produce a uniform and smooth substrate.
- D. Do not install resilient products until they are the same temperature as the space where they are to be installed.
 - 1. At least 48 hours in advance of installation, move resilient products and installation materials into spaces where they will be installed.
- E. Immediately before installation, sweep and vacuum clean substrates to be covered by resilient products.

3.03 RESILIENT BASE INSTALLATION

- A. Comply with manufacturer's written instructions for installing resilient base.
- B. Apply resilient base to walls, columns, pilasters, casework and cabinets in toe spaces, and other permanent fixtures in rooms and areas where base is required.
- C. Install resilient base in lengths as long as practical without gaps at seams and with tops of adjacent pieces aligned.
- D. Tightly adhere resilient base to substrate throughout length of each piece, with base in continuous contact with horizontal and vertical substrates.
- E. Do not stretch resilient base during installation.
- F. On masonry surfaces or other similar irregular substrates, fill voids along top edge of resilient base with manufacturer's recommended adhesive filler material.
- G. Job-Formed Corners:

1. Outside Corners: Use straight pieces of maximum lengths possible and form with returns not less than 3 inches in length.
 - a. Form without producing discoloration (whitening) at bends.
2. Inside Corners: Use straight pieces of maximum lengths possible and form with returns not less than 3 inches in length.
 - a. Miter or cope corners to minimize open joints.

3.04 RESILIENT ACCESSORY INSTALLATION

- A. Comply with manufacturer's written instructions for installing resilient accessories.
- B. Resilient Molding Accessories: Butt to adjacent materials and tightly adhere to substrates throughout length of each piece. Install reducer strips at edges of floor covering that would otherwise be exposed.

3.05 CLEANING AND PROTECTION

- A. Comply with manufacturer's written instructions for cleaning and protecting resilient products.
- B. Perform the following operations immediately after completing resilient-product installation:
 1. Remove adhesive and other blemishes from exposed surfaces.
 2. Sweep and vacuum horizontal surfaces thoroughly.
 3. Damp-mop horizontal surfaces to remove marks and soil.
- C. Protect resilient products from mars, marks, indentations, and other damage from construction operations and placement of equipment and fixtures during remainder of construction period.
- D. Cover resilient products subject to wear and foot traffic until Substantial Completion.

END OF SECTION 09 6513

**SECTION 09 6519
RESILIENT TILE FLOORING**

SUMMARY

1.01 SECTION INCLUDES:

- A. Vinyl composition floor tile.

1.02 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Shop Drawings: For each type of floor tile. Include floor tile layouts, edges, columns, doorways, enclosing partitions, built-in furniture, cabinets, and cutouts.
 - 1. Show details of special patterns.
- C. Samples for Verification: Full-size units of each color and pattern of floor tile required.

1.03 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For each type of floor tile to include in maintenance manuals.

1.04 QUALITY ASSURANCE

- A. Installer Qualifications: A qualified installer who employs workers for this Project who are competent in techniques required by manufacturer for floor tile installation and seaming method indicated.
 - 1. Engage an installer who employs workers for this Project who are trained or certified by floor tile manufacturer for installation techniques required.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Store floor tile and installation materials in dry spaces protected from the weather, with ambient temperatures maintained within range recommended by manufacturer, but not less than 50 deg F or more than 90 deg F. Store floor tiles on flat surfaces.

1.06 FIELD CONDITIONS

- A. Maintain ambient temperatures within range recommended by manufacturer, but not less than 70 deg F or more than 95 deg F, in spaces to receive floor tile during the following time periods:
 - 1. 48 hours before installation.
 - 2. During installation.
 - 3. 48 hours after installation.
- B. After installation and until Substantial Completion, maintain ambient temperatures within range recommended by manufacturer, but not less than 55 deg F or more than 95 deg F.
- C. Close spaces to traffic during floor tile installation.
- D. Close spaces to traffic for 48 hours after floor tile installation.
- E. Install floor tile after other finishing operations, including painting, have been completed.

PART 2 PRODUCTS

2.01 PERFORMANCE REQUIREMENTS

- A. Fire-Test-Response Characteristics: For resilient tile flooring, as determined by testing identical products according to ASTM E 648 or NFPA 253 by a qualified testing agency.
 - 1. Critical Radiant Flux Classification: Class I, not less than 0.45 W/sq. cm.
- B. FloorScore Compliance: Resilient tile flooring shall comply with requirements of FloorScore certification.

2.02 VINYL COMPOSITION FLOOR TILE

- A. Products: As indicated in the Finish Schedule/Legend. No substitutions.

2.03 INSTALLATION MATERIALS

- A. Trowelable Leveling and Patching Compounds: Latex-modified, portland cement based or blended hydraulic-cement-based formulation provided or approved by floor tile manufacturer for applications indicated.
- B. Adhesives: Water-resistant type recommended by floor tile and adhesive manufacturers to suit floor tile and substrate conditions indicated.
 - 1. Adhesives shall comply with the following limits for VOC content:
 - a. Vinyl Composition Tile Adhesives: 50 g/L or less.
- C. Floor Polish: Provide protective, liquid floor-polish products recommended by floor tile manufacturer.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Examine substrates, with Installer present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the Work.
 - 1. Verify that finishes of substrates comply with tolerances and other requirements specified in other Sections and that substrates are free of cracks, ridges, depressions, scale, and foreign deposits that might interfere with adhesion of floor tile.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.02 PREPARATION

- A. Prepare substrates according to floor tile manufacturer's written instructions to ensure adhesion of resilient products.
- B. Concrete Substrates: Prepare according to ASTM F 710.
 - 1. Verify that substrates are dry and free of curing compounds, sealers, and hardeners.
 - 2. Remove substrate coatings and other substances that are incompatible with adhesives and that contain soap, wax, oil, or silicone, using mechanical methods recommended by manufacturer. Do not use solvents.
 - 3. Alkalinity and Adhesion Testing: Perform tests recommended by manufacturer. Proceed with installation only after substrate alkalinity falls within range on pH scale recommended by manufacturer in writing, but not less than 5 or more than 9 pH.
 - 4. Moisture Testing: Proceed with installation only after substrates pass testing according to manufacturer's written recommendations, but not less stringent than the following:
 - a. Perform anhydrous calcium chloride test according to ASTM F 1869. Proceed with installation only after substrates have maximum moisture-vapor-emission rate of 3 lb of water/1000 sq. ft. in 24 hours.
 - b. Perform relative humidity test using in situ probes according to ASTM F 2170. Proceed with installation only after substrates have maximum 75 percent relative humidity level.
- C. Fill cracks, holes, and depressions in substrates with trowelable leveling and patching compound; remove bumps and ridges to produce a uniform and smooth substrate.
- D. Do not install floor tiles until they are the same temperature as the space where they are to be installed.
 - 1. At least 48 hours in advance of installation, move resilient floor tile and installation materials into spaces where they will be installed.
- E. Immediately before installation, sweep and vacuum clean substrates to be covered by resilient floor tile.

3.03 FLOOR TILE INSTALLATION

- A. Comply with manufacturer's written instructions for installing floor tile.

- B. Lay out floor tiles from center marks established with principal walls, discounting minor offsets, so tiles at opposite edges of room are of equal width. Adjust as necessary to avoid using cut widths that equal less than one-half tile at perimeter.
 - 1. Lay tiles square with room axis.
- C. Match floor tiles for color and pattern by selecting tiles from cartons in the same sequence as manufactured and packaged, if so numbered. Discard broken, cracked, chipped, or deformed tiles.
 - 1. Lay tiles with grain running in one direction.
- D. Scribe, cut, and fit floor tiles to butt neatly and tightly to vertical surfaces and permanent fixtures including built-in furniture, cabinets, pipes, outlets, and door frames.
- E. Extend floor tiles into toe spaces, door reveals, closets, and similar openings. Extend floor tiles to center of door openings.
- F. Maintain reference markers, holes, and openings that are in place or marked for future cutting by repeating on floor tiles as marked on substrates. Use chalk or other nonpermanent marking device.
- G. Install floor tiles on covers for telephone and electrical ducts, building expansion-joint covers, and similar items in finished floor areas. Maintain overall continuity of color and pattern between pieces of tile installed on covers and adjoining tiles. Tightly adhere tile edges to substrates that abut covers and to cover perimeters.
- H. Adhere floor tiles to flooring substrates using a full spread of adhesive applied to substrate to produce a completed installation without open cracks, voids, raising and puckering at joints, telegraphing of adhesive spreader marks, and other surface imperfections.

3.04 CLEANING AND PROTECTION

- A. Comply with manufacturer's written instructions for cleaning and protecting floor tile.
- B. Perform the following operations immediately after completing floor tile installation:
 - 1. Remove adhesive and other blemishes from exposed surfaces.
 - 2. Sweep and vacuum surfaces thoroughly.
 - 3. Damp-mop surfaces to remove marks and soil.
- C. Protect floor tile from marks, marks, indentations, and other damage from construction operations and placement of equipment and fixtures during remainder of construction period.
- D. Cover floor tile until Substantial Completion.

END OF SECTION 09 6519

**SECTION 09 9113
EXTERIOR PAINTING**

PART 1 GENERAL

1.01 SUMMARY

- A. Section includes surface preparation and the application of paint systems on the following exterior substrates:
 - 1. Steel.
 - 2. Galvanized metal.
 - 3. Aluminum (not anodized or otherwise coated).
 - 4. Wood.
 - 5. Plastic trim fabrications.

1.02 ACTION SUBMITTALS

- A. Product Data: For each type of product. Include preparation requirements and application instructions.
- B. Samples for Verification: For each type of paint system and each color and gloss of topcoat.
 - 1. Submit Samples on rigid backing, 8 inches square.
 - 2. Step coats on Samples to show each coat required for system.
 - 3. Label each coat of each Sample.
 - 4. Label each Sample for location and application area.

1.03 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. Architect will select one surface to represent surfaces and conditions for application of each paint system specified in Part 3.
 - a. Vertical and Horizontal Surfaces: Provide samples of at least 100 sq. ft..
 - b. Other Items: Architect will designate items or areas required.
 - 2. 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.
 - 3. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
 - 4. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1.04 DELIVERY, STORAGE, AND HANDLING

- A. 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.

1.05 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 in snow, rain, fog, or mist; 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

2.01 PAINT, GENERAL

- A. MPI Standards: Provide products that comply with MPI standards indicated and that are listed in its "MPI Approved Products List."
- B. 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.
- C. VOC Content: Provide materials that comply with VOC limits of authorities having jurisdiction.
- D. Colors: As selected by Architect from manufacturer's full range.

PART 3 EXECUTION

3.01 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. Maximum Moisture Content of Substrates: When measured with an electronic moisture meter as follows:
 - 1. Concrete: 12 percent.
 - 2. Masonry (Clay and CMU): 12 percent.
 - 3. Wood: 15 percent.
 - 4. Portland Cement Plaster: 12 percent.
 - 5. Gypsum Board: 12 percent.
- C. Portland Cement Plaster Substrates: Verify that plaster is fully cured.
- D. Exterior Gypsum Board Substrates: Verify that finishing compound is sanded smooth.
- E. Verify suitability of substrates, including surface conditions and compatibility with existing finishes and primers.
- F. Proceed with coating application only after unsatisfactory conditions have been corrected.
 - 1. Application of coating indicates acceptance of surfaces and conditions.

3.02 PREPARATION

- A. Comply with manufacturer's written instructions and recommendations in "MPI Manual" applicable to substrates and paint systems 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.
- 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 to produce paint systems indicated.
- D. Steel Substrates: Remove rust, loose mill scale, and shop primer if any. Clean using methods recommended in writing by paint manufacturer.
- E. 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.

- F. Galvanized-Metal Substrates: Remove grease and oil residue from galvanized sheet metal by mechanical methods to produce clean, lightly etched surfaces that promote adhesion of subsequently applied paints.
- G. Aluminum Substrates: Remove loose surface oxidation.
- H. Wood Substrates:
 - 1. Scrape and clean knots. Before applying primer, apply coat of knot sealer recommended in writing by topcoat manufacturer for exterior use in paint system indicated.
 - 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.
- I. Plastic Trim Fabrication Substrates: Remove dust, dirt, and other foreign material that might impair bond of paints to substrates.

3.03 APPLICATION

- A. Apply paints according to manufacturer's written instructions and recommendations in "MPI Manual."
 - 1. Use applicators and techniques suited for paint and substrate indicated.
 - 2. Paint surfaces behind movable items same as similar exposed surfaces. Before final installation, paint surfaces behind permanently fixed items with prime coat only.
 - 3. Paint both sides and edges of exterior doors and entire exposed surface of exterior door frames.
 - 4. Paint entire exposed surface of window frames and sashes.
 - 5. Do not paint over labels of independent testing agencies or equipment name, identification, performance rating, or nomenclature plates.
 - 6. Primers specified in painting schedules may be omitted on items that are factory primed or factory finished if acceptable to topcoat manufacturers.
- B. Tint undercoats same color as topcoat, but tint each undercoat a lighter shade to facilitate identification of each coat if multiple coats of same material are to be applied. Provide sufficient difference in shade of undercoats to distinguish each separate coat.
- C. If undercoats or other conditions show through topcoat, apply additional coats until cured film has a uniform paint finish, color, and appearance.
- D. 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.

3.04 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.

3.05 EXTERIOR PAINTING SCHEDULE

- A. All Basis-of-Design products indicated are by Sherwin Williams Company.
- B. Metal Non-Ferrous Substrates (Galvanized & Aluminum):
 - 1. Semi-Gloss Finish

- a. Prime Coat: Primer, S-W Pro Industrial Pro-Cryl Primer, B66-310 Series (2-4 mils dry).
 - b. Intermediate Coat, S-W Sher-Cryl HPA Acrylic, B66-350 SSeries(2.5-4.0 mils dry).
 - c. Topcoat, S-W Sher-Cryl HPA Acrylic, B66-350 SSeries(2.5-4.0 mils dry).
- C. Metal Substrates (Ferrous, Structural Iron & Steel):
 - 1. Semi-Gloss Finish
 - a. Prime Coat: Primer, S-W Pro Industrial Pro-Cryl Primer, B66-310 Series (2-4 mils dry).
 - b. Intermediate Coat, S-W Sher-Cryl HPA Acrylic, B66-350 SSeries(2.5-4.0 mils dry).
 - c. Topcoat, S-W Sher-Cryl HPA Acrylic, B66-350 SSeries(2.5-4.0 mils dry).
- D. Wood Substrates:
 - 1. Satin Finish (Trim, Hardboard-Bare/Primed):
 - a. Prime Coat: S-W A-100 Exterior Latex Wood Pimer, B42W41 (4 mils wet, 1.4 mils dry).
 - b. Intermediate Coat: S-W Exterior Latex Satin, A82 Series(4 mils wet, 1.4 mils dry).
 - c. Topcoat: S-W Exterior Latex Satin, A82 Series(4 mils wet, 1.4 mils dry).
- E. Architectural PVC, Plastic, Fiberglass (due to the variety of substrate, check for compatibility):
 - 1. Satin Finish:
 - a. Prime Coat: S-W Prep Rite Pro Block Latex Primer, B51 Series (4 mils wet, 1.4 mils dry).
 - b. Intermediate Coat: S-W A-100 Exterior Latex Satin, A82 (4 mils wet, 1.4 mils dry).
 - c. Topcoat: S-W A-100 Exterior Latex Satin, A82 (4 mils wet, 1.4 mils).

END OF SECTION 09 9113

**SECTION 09 9123
INTERIOR PAINTING**

PART 1 GENERAL

1.01 SUMMARY

- A. Section includes surface preparation and the application of paint systems on the following interior substrates:
 - 1. Steel.
 - 2. Wood.
 - 3. Gypsum board.

1.02 ACTION SUBMITTALS

- A. Product Data: For each type of product. Include preparation requirements and application instructions.
- B. Samples for Verification: For each type of paint system and in each color and gloss of topcoat.
 - 1. Submit Samples on rigid backing, 8 inches square.
 - 2. Step coats on Samples to show each coat required for system.
 - 3. Label each coat of each Sample.
 - 4. Label each Sample for location and application area.

1.03 DELIVERY, STORAGE, AND HANDLING

- A. 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.

1.04 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

2.01 PAINT, GENERAL

- A. MPI Standards: Provide products that comply with MPI standards indicated and that are listed in its "MPI Approved Products List."
- B. 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.
- C. 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.

8. Floor Coatings: 100 g/L.
9. Shellacs, Clear: 730 g/L.
10. Shellacs, Pigmented: 550 g/L.

D. Colors: As selected by Architect from manufacturer's full range.

PART 3 EXECUTION

3.01 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. Maximum Moisture Content of Substrates: When measured with an electronic moisture meter as follows:
 1. Wood: 15 percent.
 2. Gypsum Board: 12 percent.
- C. Gypsum Board Substrates: Verify that finishing compound is sanded smooth.
- D. Verify suitability of substrates, including surface conditions and compatibility with existing finishes and primers.
- E. Proceed with coating application only after unsatisfactory conditions have been corrected.
 1. Application of coating indicates acceptance of surfaces and conditions.

3.02 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 to produce paint systems indicated.
- D. Steel Substrates: Remove rust, loose mill scale, and shop primer, if any. Clean using methods recommended in writing by paint manufacturer.
- E. 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.
- F. Galvanized-Metal Substrates: Remove grease and oil residue from galvanized sheet metal fabricated from coil stock by mechanical methods to produce clean, lightly etched surfaces that promote adhesion of subsequently applied paints.
- G. 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.

3.03 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. Tint each undercoat a lighter shade to facilitate identification of each coat if multiple coats of same material are to be applied. Tint undercoats to match color of topcoat, but provide sufficient difference in shade of undercoats to distinguish each separate coat.
- C. If undercoats or other conditions show through topcoat, apply additional coats until cured film has a uniform paint finish, color, and appearance.
- D. 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.
- E. Painting Fire Suppression, Plumbing, HVAC, Electrical, Communication, and Electronic Safety and Security Work:
1. Paint portions of internal surfaces of metal ducts, without liner, behind air inlets and outlets that are visible from occupied spaces.

3.04 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.

3.05 INTERIOR PAINTING SCHEDULE (CONFIRM WITH INTERIORS)

- A. All Basis-of-Design products indicated are by Sherwin Williams Company.
- B. Steel Substrates – Doors and Frames:
1. Semi-Gloss Finish
 - a. Prime Coat: Primer, S-W Pro Industrial Pro-Cryl Primer, B66-310 Series (2-4 mils dry).
 - b. Intermediate Coat, S-W ProClassic Waterborne Acrylic Semi-Gloss Enamel, B31 Series (4 mils wet, 1.3 mils dry).
 - c. Topcoat, S-W ProClassic Waterborne Acrylic Semi-Gloss Enamel, B31 Series (4 mils wet, 1.3 mils dry).
- C. Wood Substrates:
1. Semi-Gloss Finish:
 - a. Prime Coat: S-W Prerite Classic Primer, B28W101 (4 mils wet, 1.6 mils dry).
 - b. Intermediate Coat: S-W ProClassic Waterborne Acrylic Semi-Gloss Enamel, B31 Series (4 mils wet, 1.3 mils dry).
 - c. Topcoat: S-W ProClassic Waterborne Acrylic Semi-Gloss Enamel, B31 Series (4 mils wet, 1.3 mils dry).
- D. Gypsum Board Substrates:
1. Eg-shel/Satin Finish:

- a. Prime Coat: S-W Promar 200 Latex Primer, B28W200 (4 mils wet, 1.2 mils dry).
 - b. Intermediate Coat: S-W ProMar 200 Latex Eg-Shel, B20W2200 Series (4 mils wet, 1.6 mils dry).
 - c. Topcoat: S-W ProMar 200 Latex Eg-Shel, B20W2200 Series (4 mils wet, 1.6 mils dry).
2. Semi-Gloss Finish (Kitchens & Bathrooms):
- a. Prime Coat: S-W Promar 200 Semi- Gloss, B28W200 (4 mils wet, 1.2 mils dry).
 - b. Intermediate Coat: S-W ProMar 200 Latex Semi-Gloss, B20W2200 Series (4 mils wet, 1.6 mils dry).
 - c. Topcoat: S-W ProMar 200 Latex Semi-Gloss, B20W2200 Series (4 mils wet, 1.6 mils dry).

END OF SECTION 09 9123

**SECTION 09 9300
STAINING AND TRANSPARENT FINISHING**

PART 1 GENERAL

1.01 SUMMARY

- A. This Section specifies an applied stain and sealer for vertical existing cast-in-place concrete surfaces..

1.02 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated. Include preparation requirements and application instructions.
- B. Samples for Initial Selection: For each type of product indicated.
- C. Samples for Verification: For each type of finish system and in each color and gloss of finish indicated.
 - 1. Submit Samples on representative samples of actual wood substrates, 8 inches (200 mm) square or 8 inches (200 mm) long.
 - 2. Label each Sample for location and application area.

1.03 QUALITY ASSURANCE

- A. Mockups: Apply mockups of each finish system indicated and each color selected to verify preliminary selections made under sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.
 - 1. Architect will select one surface to represent surfaces and conditions for application of each type of finish system and substrate.
 - a. Vertical and Horizontal Surfaces: Provide samples of at least 100 sq. ft. (9 sq. m).
 - b. Other Items: Architect will designate items or areas required.
 - 2. Final approval of stain color selections will be based on mockups.
 - a. If preliminary stain color selections are not approved, apply additional mockups of additional stain colors selected by Architect at no added cost to Owner.
 - 3. Manufacturer: Minimum 10 years experience producing concrete coatings.
 - 4. Installer: Licensed installers, experienced and trained in the use of these products.
 - 5. Suitability of Substrate: Do not apply to concrete surfaces which may have insufficient chemical reaction.
 - 6. Regulatory Requirements: Comply with requirements of authorities having jurisdiction and applicable codes at the location of the project.

1.04 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials and products in unopened factory labeled packages. Protect from damage.
- B. Deliver materials and products in unopened factory labeled packages. Protect from damage.
- C. Store in a safe place, out of direct sunlight. Keep containers tightly sealed. Do not allow product to freeze. Use within manufacturer's recommended shelf life, approximately 12 months.
- D. Maintain containers in clean condition, free of foreign materials and residue.
 - 1. Remove rags and waste from storage areas daily.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. ACCEPTABLE MANUFACTURERS
 - 1. Sika Corporation (Basis of design)
 - 2. Concrete Coatings, Inc
 - 3. Approved Equivalent

2.02 MATERIALS

- A. Reactive Chemical Concrete Stain: Reactive, water-based solution of metallic salts which react with calcium hydroxide in cured concrete substrates to produce permanent variegated or translucent color effects. Zero VOC content.
 - 1. Product: "LITHOCHROME Chemstain Classic", Sika Corporation. (Basis of Design)
 - 2. Vivid Acid Stain by Concrete Coatings Inc.
 - 3. Approved Equivalent
- B. Stain Colors: As selected by Architect from manufacturer's full range.
- C. Material Compatibility:
 - 1. Provide materials for use within each finish 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 finish system, provide products recommended in writing by manufacturers of sealant for use in finish system and on substrate indicated.
- D. VOC Content: Products shall comply with VOC limits of authorities having jurisdiction and, for interior stains and finishes 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).

PART 3 EXECUTION

3.01 EXAMINATION

- A. Examine areas and conditions under which the concrete stain work will be performed and identify conditions detrimental to the proper and timely completion of the work. Do not proceed until unsatisfactory conditions have been corrected.
- B. Verify suitability of substrates, including surface conditions and compatibility with existing finishes and primers.

3.02 PREPARATION

- A. Immediately prior to chemically staining, thoroughly clean concrete to remove any contaminants deleterious to subsequent chemical stain application. Sweep surfaces, then pressure wash or scrub using a rotary floor machine with a Mal-Grit Brush from the Malish Corporation. Use suitable, non-acidic, high quality commercial detergents to facilitate cleaning. Rinse surfaces after cleaning until rinse water is completely clean. Allow floor to dry completely prior to application of concrete stain.
 - 1. Pressure Washing: Use a pressure washer equipped with a fan tip and rated for a minimum pressure capability of 4000 psi.
- B. Remove hardware, covers, plates, and similar items already in place that are removable. If removal is impractical or impossible because of size or weight of item, provide surface-applied protection before surface preparation and finishing.
 - 1. After completing finishing operations, use workers skilled in the trades involved to reinstall items that were removed. Remove surface-applied protection if any.
- C. Surface Preparation for New or Existing Concrete:
 - 1. Concrete surfaces should be completely penetrable before applying the initial application of chemical stain. The surface of the concrete should be lightly mechanically abraded to remove weak cement paste and contaminants. The final surface preparation should approximate a Concrete Surface Profile of 1, (CSP1 as designated by the International Concrete Repair Institute, Alexandria, Virginia). Methods for mechanical abrasion include:
 - a. Pressure Washing: Use a pressure washer equipped with a fan tip and rated for a minimum pressure capability of 4000 psi.
 - b. Light sanding of the surface.
 - 2. Surfaces should be tested to receive stain by spotting with water. Water should immediately darken the substrate and be readily absorbed. If water beads and does not penetrate or only penetrates in some areas, perform additional surface preparation and

testing. On denser concrete, sand lightly to open up surfaces. Retest and continue surface preparation until water spots immediately darken and uniformly penetrate concrete surfaces.

3. Rinse concrete substrates until rinse water is completely clean.

3.03 CHEMICAL STAIN APPLICATION

- A. General: Comply with chemical stain manufacturer's printed instructions and current recommendations.
 1. Use applicators and techniques suited for finish and substrate indicated.
 2. Finish surfaces behind movable equipment and furniture same as similar exposed surfaces.
 3. Do not apply finishes over labels of independent testing agencies or equipment name, identification, performance rating, or nomenclature plates.
 4. Do not mix the specified chemical stain with highly alkaline materials. Doing so will result in a dangerous chemical reaction.
- B. Protect surrounding areas, landscaping, and adjacent surfaces from overspray, runoff, and tracking. Divide surfaces into small work sections using walls, joint lines, or other stationary breaks as natural stopping points.
- C. Apply chemical stains at the coverage rate recommended by the manufacturer and use application equipment according to the chemical stain manufacturer's printed instructions. Note the color of the liquid chemical stain will not be the final color produced on the concrete substrate.

3.04 SEALING APPLICATION

- A. Concrete substrate must be completely dry. Test surface for proper pH prior to applying sealer. A pH value of 7 or higher indicates all acid has been neutralized. If the tested pH value is less than 7, repeat neutralization step until the required pH value is achieved.
- B. Conduct a moisture vapor emission test prior to applying any sealer. Refer to the specific sealer's Technical-Data Bulletin for acceptable MVER.
- C. Apply sealer according the sealer manufacturer's printed instructions at a rate of 300 to 500 square feet per gallon per coat. Maintain a wet edge at all times.
- D. Allow sealer to completely dry before applying additional coats.
- E. Apply second coat of sealer at 90 degrees to the direction of the first coat using the same application method and rates.

3.05 CLEANING AND PROTECTION

- A. At end of each workday, remove rubbish, empty cans, rags, and other discarded materials from Project site.
- B. After completing finish application, clean spattered surfaces. Remove spattered materials by washing, scraping, or other methods. Do not scratch or damage adjacent finished surfaces.
- C. Protect work of other trades against damage from finish application. Correct damage 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 finished surfaces.

END OF SECTION 09 9300

**SECTION 10 2800
TOILET, BATH, AND LAUNDRY ACCESSORIES**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Commercial toilet accessories.
- B. Residential toilet, shower, and bath accessories.
- C. Under-lavatory pipe supply covers.
- D. Utility room accessories.

1.02 SUBMITTALS

- A. Product Data: Submit data on accessories describing size, finish, details of function, and attachment methods.

PART 2 PRODUCTS

2.01 MANUFACTURERS

2.02 MATERIALS

- A. Accessories - General: Shop assembled, free of dents and scratches and packaged complete with anchors and fittings, steel anchor plates, adapters, and anchor components for installation.
- B. Mirror Glass: Annealed float glass, ASTM C1036 Type I, Class 1, Quality Q2, with silvering, protective and physical characteristics complying with ASTM C1503.

2.03 FINISHES

- A. Stainless Steel: Satin finish, unless otherwise noted.
- B. Chrome/Nickel Plating: ASTM B456, SC 2, satin finish, unless otherwise noted.

2.04 COMMERCIAL TOILET ACCESSORIES

- A. Toilet Paper Dispenser: Single roll, surface mounted bracket type, stainless steel, spindleless type for tension spring delivery designed to prevent theft of tissue roll.
- B. Paper Towel Dispenser: Folded paper type, stainless steel, semi-recessed, with viewing slots on sides as refill indicator and tumbler lock.
 - 1. Capacity: 300 C-fold minimum.
- C. Mirrors: Stainless steel framed, 1/4 inch thick annealed float glass; ASTM C1036.
- D. Grab Bars: Aluminum, smooth surface.
 - 1. Dimensions: 1-1/4 inch outside diameter, minimum 0.080 inch wall thickness, bracket, 1-1/2 inch clearance between wall and inside of grab bar.

2.05 RESIDENTIAL UNIT TOILET, SHOWER, AND BATH ACCESSORIES

- A. Decorative Aluminum Grab Bars: Smooth surface.
 - 1. Push/Pull Point Load: 250 pound-force, minimum.
 - 2. Dimensions: 1.6 inch outside diameter, minimum 0.080 inch wall thickness, bracket, 1-1/2 inch clearance between wall and inside of grab bar.
- B. Medicine Cabinet: One-piece construction of heavy-gage steel with factory-applied, gloss white, baked enamel finish, fully recessed, satin finish stainless steel mirror frame, reversible type.
 - 1. Shelves: Adjustable, aluminum or glass; provide not less than 3 shelves.
 - 2. Door: Fitted with continuous piano-type hinge, shock-absorbing spring-and-rod door stop, magnetized catch, right-hand swing.
- C. Toilet Paper Holder: Surface mounted, single roll, concealed attachment.
 - 1. Material: Stainless steel; satin finish.
 - 2. Type: Spring-loaded spindle with brackets.

- D. Towel Bar : Square tubular bar; rectangular mounting posts, concealed attachment.
 - 1. Mounting Post Material: Stainless steel; satin finish.
 - 2. Bar Material: Stainless steel; satin finish.
- E. Towel Ring: Post with hanging ring, concealed attachment.
 - 1. Post Material: Stainless steel; satin finish.
 - 2. Ring Material: To match post material.
- F. Shower Curtain Rod: Straight tube, 1 inch diameter, with mounting flanges for concealed attachment.
 - 1. Material: Stainless steel; satin finish.

2.06 UNDER-LAVATORY PIPE AND SUPPLY COVERS

- A. Under-Lavatory Pipe and Supply Covers:
 - 1. Insulate exposed drainage piping, including hot, cold, and tempered water supplies under lavatories or sinks to comply with ADA Standards.
 - 2. Exterior Surfaces: Smooth non-absorbent, non-abrasive surfaces.
 - 3. Construction: 1/8 inch flexible PVC.
 - a. Surface Burning Characteristics: Flame spread index of 25 or less and smoke developed index of 450 or less, when tested in accordance with ASTM E84.
 - b. Microbial and Fungal Resistance: Comply with ASTM G21.
 - 4. Color: White.
 - 5. Fasteners: Reusable, snap-locking fasteners with no sharp or abrasive external surfaces.

2.07 UTILITY ROOM ACCESSORIES

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install accessories in accordance with manufacturers' instructions in locations indicated on drawings.
- B. Install plumb and level, securely and rigidly anchored to substrate.
- C. Mounting Heights: As required by accessibility regulations, unless otherwise indicated.

3.02 PROTECTION

- A. Protect installed accessories from damage due to subsequent construction operations.

END OF SECTION 10 2800

**SECTION 10 4400
FIRE PROTECTION SPECIALTIES**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Fire extinguishers.
- B. Fire extinguisher cabinets.
- C. Accessories.

1.02 SUBMITTALS

- A. Product Data: Provide extinguisher operational features, extinguisher ratings and classifications, and color and finish.

PART 2 PRODUCTS

2.01 FIRE EXTINGUISHERS

- A. Fire Extinguishers - General: Comply with product requirements of NFPA 10 and applicable codes, whichever is more stringent.
- B. Multipurpose Dry Chemical Type Fire Extinguishers: Carbon steel tank, with pressure gauge.
 - 1. Class: A:B:C type.
 - 2. Size: 5 pound.
 - 3. Temperature range: Minus 40 degrees F to ____ degrees F.

2.02 FIRE EXTINGUISHER CABINETS

- A. Fire Rating: Listed and labeled in accordance with ASTM E814 requirements for fire resistance rating of walls where being installed.
- B. Cabinet Construction: Non-fire rated.
 - 1. Formed primed steel sheet; 0.036 inch thick base metal.
- C. Fire Rated Cabinet Construction: One-hour fire rated.
 - 1. Steel; double wall or outer and inner boxes with 5/8 inch thick fire barrier material.
- D. Cabinet Configuration: Semi-recessed type.
 - 1. Size to accommodate accessories.
 - 2. Provide cabinet enclosure with right angle inside corners and seams, and with formed perimeter trim and door stiles.
- E. Finish of Cabinet Interior: White colored enamel.

2.03 ACCESSORIES

- A. Extinguisher Brackets: Formed steel, chrome-plated.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install in accordance with manufacturer's instructions.

END OF SECTION 10 4400

**SECTION 10 5723
CLOSET AND UTILITY SHELVING**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Wall mounted wire closet shelving.
- B. Accessories.

1.02 SUBMITTALS

- A. Product Data: Manufacturer's data sheets on each product to be used, with installation instructions.

1.03 DELIVERY, STORAGE, AND HANDLING

- A. Store products in manufacturer's unopened packaging until ready for installation.
- B. Store products under cover and elevated above grade.
- C. Store flat to prevent warpage and bending.

PART 2 PRODUCTS

2.01 WIRE STORAGE SHELVING SYSTEMS

- A. Applications:
 - 1. Shelf Depth: 12 inches, unless otherwise indicated.
- B. Wire Shelving: Factory-assembled coated wire mesh shelf assemblies for wall-mounting, with components and connections required to produce a rigid structure that is free of buckling and warping.
 - 1. Construction: Cold-drawn steel wire with average tensile strength of 100,000 psi resistance welded into uniform mesh units, square, rigid, flat, and free of dents or other distortions, with wires trimmed smooth.
 - 2. Coating: PVC or epoxy, applied after fabrication, covering surfaces.
 - 3. PVC Coating: 9 to 11 mils thick.
 - 4. Epoxy Coating: Nontoxic epoxy-polyester powder coating baked-on finish, 3 to 5 mils thick.
 - 5. Standard Mesh Shelves: Cross deck wires spaced at 1 inch.
 - 6. Free-Sliding Hanging Rod: Integral hanging rod that permits uninterrupted sliding of hangers the full width of the shelf.
- C. Mounting Hardware for Wire Shelving: Provide manufacturer's standard mounting hardware; include support braces, wall brackets, back clips, end clips, poles, and other accessories for complete and secure installation; factory finished to match shelving.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Inspect areas to receive shelving or storage system, to verify that spaces are properly prepared to receive shelf units, and are of dimensions indicated on shop drawings.
- B. Verify appropriate fastening hardware.
- C. Do not begin installation until substrates have been properly prepared.
- D. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.02 INSTALLATION

- A. Install wire shelving in accordance with manufacturer's instructions, with shelf surfaces level.
- B. Cap exposed ends of cut wire shelving.
- C. Install wire shelving back clips, end clips at side walls, and support braces at open ends. Install intermediate support braces as recommended by manufacturer.

3.03 PROTECTION

- A. Protect installed work from damage.
- B. Touch-up, repair, or replace damaged products before Substantial Completion in a manner that eliminates evidence of replacement.

END OF SECTION 10 5723

**SECTION 11 3013
RESIDENTIAL APPLIANCES**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Kitchen appliances.

1.02 SUBMITTALS

- A. Product Data: Manufacturer's data indicating dimensions, capacity, and operating features of each piece of residential equipment specified.

1.03 QUALITY ASSURANCE

- A. Electric Appliances: Listed and labeled by UL (DIR) and complying with NEMA Standards (National Electrical Manufacturers Association).

PART 2 PRODUCTS

2.01 KITCHEN APPLIANCES - TYPE "A" UNITS

- A. Provide Equipment Eligible for Energy Star Rating: Energy Star Rated.
- B. Refrigerator: Free-standing, top-mounted freezer, and frost-free.
 - 1. Exterior Finish: Stainless steel.
 - 2. Manufacturers:
 - a. GE Appliances; GTE17GTN/GSN : www.geappliances.com/#sle.
 - b. Whirlpool Corp; WRT318FZDM : www.whirlpool.com/#sle.
 - c. Frigidaire Home Products; FFHT1621TS: www.frigidaire.com/
 - d. Substitutions: See Section 01 6000 - Product Requirements.
- C. Range: Electric, free-standing, with standard burners and removable drip pans.
 - 1. Exterior Finish: Stainless steel.
 - 2. Manufacturers:
 - a. GE Appliances; GRS500PVSS: www.geappliances.com/#sle.
 - b. Whirlpool Corp; WEE515SALS: www.whirlpool.com/#sle.
 - c. Frigidaire Home Products; FCFE3062AS: www.frigidaire.com/#sle.
 - d. Substitutions: See Section 01 6000 - Product Requirements.
- D. Cooking Exhaust: Range hood.
 - 1. Exterior Finish: Stainless steel.
 - 2. Manufacturers:
 - a. Broan-NuTone, LLC; 40000 Series, 41000 Series : www.broan-nutone.com/#sle.
 - b. Substitutions: See Section 01 6000 - Product Requirements.
- E. Dishwasher: Undercounter.
 - 1. Controls: Solid state electronic.
 - 2. Wash Levels: Three (3).
 - 3. Cycles: Six (6), including normal, rinse and hold, short, and pot and pan.
 - 4. Features: Include rinse aid dispenser.
 - 5. Finish: Stainless steel .
 - 6. Manufacturers:
 - a. GE Appliances; GDT225SSLSS: www.geappliances.com/#sle.
 - b. Whirlpool Corp; WDT550SAPZ: www.whirlpool.com/#sle.
 - c. Frigidaire Home Products; FCRE3083AS: www.frigidaire.com/#sle.
 - d. Substitutions: See Section 01 6000 - Product Requirements.

2.02 KITCHEN APPLIANCES - TYPE "B" UNITS

- A. Provide Equipment Eligible for Energy Star Rating: Energy Star Rated.
- B. Refrigerator: Free-standing, top-mounted freezer, and frost-free.

1. Capacity: Total minimum storage of 18 cubic ft; minimum 15 percent freezer capacity.
2. Exterior Finish: Stainless steel, color Black.
3. Manufacturers:
 - a. GE Appliances;GTE17GTN/GSN : www.geappliances.com/#sle.
 - b. Whirlpool Corp; WRT318FZDM : www.whirlpool.com/#sle.
 - c. Frigidaire Home Products; FFHT1621TS: www.frigidaire.com/
 - d. Substitutions: See Section 01 6000 - Product Requirements.
- C. Range: Electric, free-standing, with plug-in heating elements and removable drip pans.
 1. Size: 24 inch, 30 inches wide.
 2. Exterior Finish: Stainless steel.
 3. Manufacturers:
 - a. GE Appliances; JAS640RMSS (24 inch), JB480DMSS (30 inch): www.geappliances.com/#sle.
 - b. Whirlpool Corp; WFE500M4HS (24 inch) WEE510SAG (30 inch): www.whirlpool.com/#sle.
 - c. Frigidaire Home Products; FFEH2422US (24 inch), FCRE3062AS (30 inch): www.frigidaire.com/#sle.
 - d. Substitutions: See Section 01 6000 - Product Requirements.
- D. Cooking Exhaust, Type ____: Range hood.
 1. Size: 24 inch, 30 inches wide.
 2. Fan: Two-speed, 500 cfm
 3. Exhaust: Rectangular, vented to exterior.
 4. Features: Include cooktop light, night light, backdraft damper, removable grease filter, retractable visor, and ____.
 5. Exterior Finish: Stainless steel.
 6. Manufacturers:
 - a. Broan-NuTone, LLC 40000 Series, 41000 Series: www.broan-nutone.com/#sle.
 - b. Substitutions: See Section 01 6000 - Product Requirements.
- E. Dishwasher: Undercounter.
 1. Controls: Solid state electronic.
 2. Wash Levels: Three (3).
 3. Cycles: Six (6), including normal, rinse and hold, short, china/crystal, and pot and pan.
 4. Features: Include rinse aid dispenser.
 5. Finish: Stainless steel .
 6. Manufacturers:
 - a. Frigidaire Home Product; FDPC4221AS: www.frigidaire.com/#sle.
 - b. GE Appliances GSD3301: www.geappliances.com/#sle.
 - c. Whirlpool Corp WDF330PAH: www.whirlpool.com/#sle.
 - d. _____.
 - e. Substitutions: See Section 01 6000 - Product Requirements.

PART 3 EXECUTION

4.01 INSTALLATION

- A. Install in accordance with manufacturer's instructions.

4.02 ADJUSTING

- A. Adjust equipment to provide efficient operation.

4.03 CLEANING

- A. Remove packing materials from equipment and properly discard.

B. Wash and clean equipment.

END OF SECTION 11 3013

**SECTION 12 2113
HORIZONTAL LOUVER BLINDS**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Horizontal slat louver blinds.
- B. Operating hardware.

1.02 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide data indicating physical and dimensional characteristics.
- C. Shop Drawings: Indicate opening sizes, tolerances required, method of attachment, clearances, and operation.
- D. Manufacturer's Installation Instructions: Indicate special procedures.
- E. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
 - 1. See Section 01 6000 - Product Requirements, for additional provisions.
 - 2. Extra Blind Assemblies: One of each size.
 - 3. Extra Slats: 20 of each type and size.
 - 4. Extra Lift Cords, Control Cords, and Wands: One of each type.

1.03 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years documented experience.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Horizontal Louver Blinds:
 - 1. Lotus & Windoware, Inc; Faux Wood Blinds: <https://www.lotusblind.com/product-catalog/faux-wood/fcx>
- B. Source Limitations: Furnish blinds and associated controls produced by a single manufacturer and obtained from a single supplier.

2.02 FABRICATION

- A. Determine sizes by field measurement.
- B. Fabricate blinds to fit within openings with uniform edge clearance of 1/4 inch.
- C. Fabricate blinds to cover window frames completely.
- D. At openings requiring multiple blind units, provide separate blind assemblies with space of 1/2 inch between blinds, located at window mullion centers.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install blinds in accordance with manufacturer's instructions.
- B. Secure in place with flush countersunk fasteners.

3.02 TOLERANCES

- A. Maximum Variation of Gap at Window Opening Perimeter: 1/4 inch.
- B. Maximum Offset From Level: 1/8 inch.

3.03 ADJUSTING

- A. Adjust blinds for smooth operation.

3.04 CLEANING

- A. Clean blind surfaces just prior to occupancy.

END OF SECTION 12 2113

**SECTION 12 3530
RESIDENTIAL CASEWORK**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Kitchen cabinets.
- B. Kitchen countertops.
- C. Vanity cabinets.
- D. Vanity countertops.

1.02 SUBMITTALS

- A. Product Data: Provide component dimensions, configurations, and construction details.
- B. Shop Drawings: Indicate casework locations, large scale plans, elevations, clearances required, rough-in and anchor placement dimensions and tolerances.
- C. Cabinet Finish Sample: Submit two samples of each type of finish, 2 inches by 3 inches in size, illustrating color, texture, gloss, and wood species.

1.03 QUALITY ASSURANCE

1.04 WARRANTY

- A. See Section 01 7800 - Closeout Submittals, for additional warranty requirements.
- B. Correct defective Work within a five year period after Date of Substantial Completion.

PART 2 PRODUCTS

2.01 CABINETS

- A. Manufacturers:
 - 1. MFS Supply; Summit Pro: www.mfssupply.com/
 - 2. Master Woodcraft; Roma Collection: www.mwccabinetry.com/
 - 3. Amberleaf; TFL WF100 Matte White: <https://www.amberleafhome.us/>
- B. Kitchen and Vanity Cabinets: Premanufactured and factory-finished, complying with construction and testing requirements in KCMA A161.1.
- C. Cabinet Box: Manufacturer's standard materials and construction as determined by selected product line. MFS
- D. Cabinet Box: Framed construction.
 - 1. Side Panels: Grade A Plywood.
 - a. Exposed Side Panel Finish: Wood veneer, coordinate with cabinet door and drawer color/finish.
 - 2. Back Panel: Grade A Plywood.
 - 3. Bottom (and Top) Panel: Grade A Plywood.
 - 4. Face Frame: Solid wood.
 - 5. Interior Cabinet Finish: Thermally fused laminate.
 - a. Color: Manufacturer's Standard Colors.
 - 6. Exposed Panel Edges: Finish with manufacturer's standard edge banding, color coordinated with other exposed finishes.
 - 7. Base must be pressure-treated.
- E. Cabinet Door/Drawer Configuration: Partial overlay.
- F. Cabinet Doors:
 - 1. Solid wood, stained finish.
 - 2. Stain Color: Amaretto Harvest.
 - 3. Paint Color: Manufacturer's Standard Colors.
- G. Drawers:

1. Solid wood sides with dovetail joints, plywood bottom panel.
 2. Drawer Front: To match cabinet doors in style, material, and finish.
 3. Interior Finish: Manufacturer's standard.
- H. Shelves: Manufacturer's standard adjustable shelves and shelf supports.
- I. Cabinet Hardware: As selected from manufacturer's standard types, styles and finishes.
1. Hinges: Manufacturer's standard soft-closing concealed hinges.
 2. Drawer Slides: Manufacturer's standard soft-closing drawer slides.
- J. Kitchen Countertop: Solid surface stone, back splash material to match.
1. Side Splash: Solid surface stone, square internal intersections to back splash and top surface, contoured to suit counter top profile.
- K. Vanity Countertop: Solid surface stone, back splash material to match.
1. Side Splash: Plastic laminate over particle board, square internal intersections to back splash and top surface, contoured to suit counter top profile.

2.02 HARDWARE

- A. Hardware: Manufacturer's standard unless noted otherwise.

2.03 FABRICATION

- A. Shop assemble casework for delivery to site in units easily handled and to permit passage through building openings.
- B. Fabricate corners and joints without gaps.
- C. Fabricate each unit to be rigid and not dependent on adjacent units for rigidity.
- D. Cut and fit on site, provide materials with ample allowance for cutting. Provide trim for scribing and site cutting.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install casework, components and accessories in accordance with manufacturer's instructions.
- B. Use anchoring devices to suit conditions and substrate materials encountered.
- C. Set casework items plumb and square, securely anchored to building structure.
- D. Carefully scribe casework abutting other components, with maximum gaps of _____ inch.

3.02 ADJUSTING

- A. Adjust doors, drawers, hardware, and other moving or operating parts to function smoothly.

3.03 CLEANING

- A. Clean casework, countertops, shelves, and hardware.

3.04 PROTECTION

- A. Do not permit finished casework to be exposed to continued construction activity.

END OF SECTION 12 3530

BEAR CREEK APARTMENTS

1109 Elleta BLVD, Columbia, MO 65202

PRINTS ISSUED
11/07/25 100% BID SET
REVISIONS:



ARCHITECTURE
INTERIOR DESIGN
ENGINEERING
PLANNING

168 N. Meramec Avenue, Ste 200
Clayton, MO 63105
p: 314.678.1448
w: www.rosemann.com
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DENVER ▲ KANSAS CITY ▲ ST. LOUIS ▲ ATLANTA

BEAR CREEK APARTMENTS

1109 ELLETA BLVD.
COLUMBIA, MO 65202

SHEET TITLE
TITLE SHEET

PROJECT NUMBER: 24127.PR

SHEET NUMBER:

G-001

PROJECT CERTIFICATION

I, **Jarrett Cooper**, hereby specify pursuant to the governing requirements of the state, that the documents intended to be authenticated by my seal are limited to:

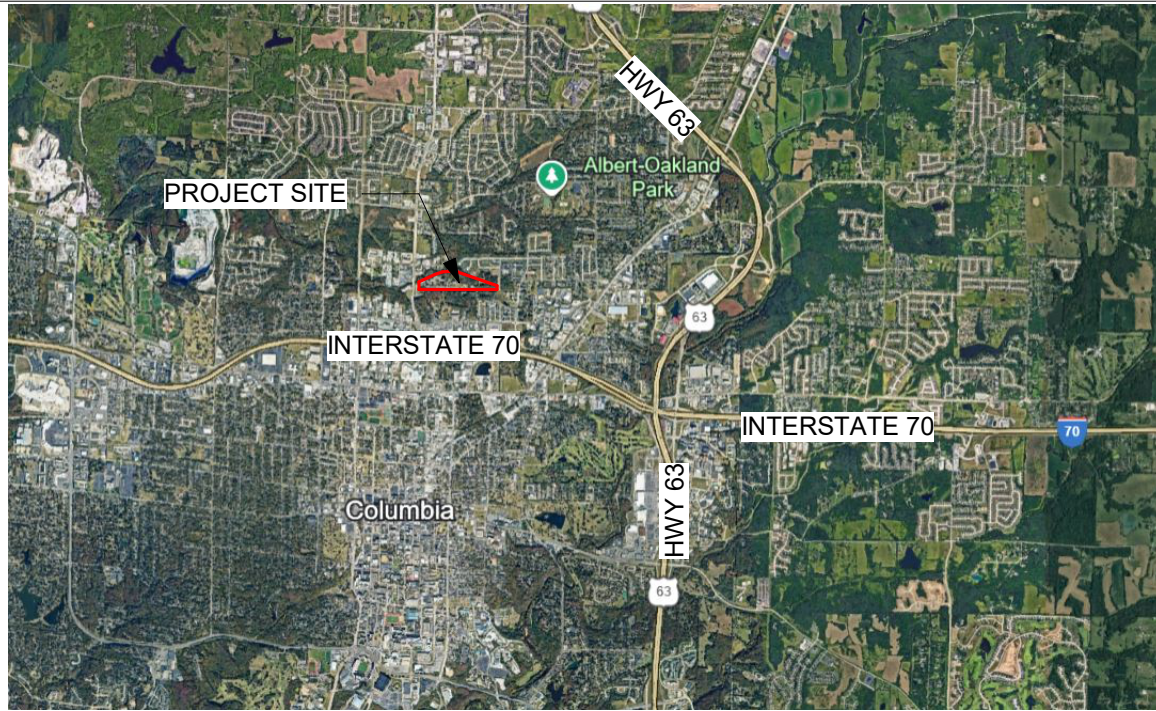
G-001	AS-100	A-501
G-002	A-101	
G-003	A-102	
G-006	A-103	
G-007	A-104	
G-100	A-105	
G-101	A-201	
G-200	A-202	
G-300	A-203	
G-301	A-204	
G-302	A-500	

and I hereby disclaim any responsibility for all other plans, specifications, reports or other documents or instruments relating to or intended to be used for any part or parts of the architectural or engineering project or survey.

SEAL

Jarrett R. Cooper, AIA

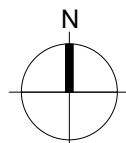
REGIONAL MAP



VICINITY MAP



BEAR CREEK APARTMENTS
1109 ELLETA BLVD.
COLUMBIA, MO 65202



SHEET INDEX

GENERAL				
Sheet Issue Date	Sheet Number	Sheet Name	Rev.	Current Revision Date
11/07/25	G-001	TITLE SHEET		
11/07/25	G-002	GENERAL INFORMATION		
11/07/25	G-003	PLAN GENERAL NOTES		
11/07/25	G-006	GENERAL INFORMATION		
11/07/25	G-007	GENERAL INFORMATION		
11/07/25	G-100	CODE ANALYSIS		
11/07/25	G-101	PARTITION ASSEMBLIES - WOOD, CMU, CONCRETE		
11/07/25	G-200	UL ASSEMBLIES		
11/07/25	G-300	ACCESSIBILITY STANDARDS		
11/07/25	G-301	ACCESSIBILITY STANDARDS		
11/07/25	G-302	ACCESSIBILITY STANDARDS		

ARCHITECTURAL				
Sheet Issue Date	Sheet Number	Sheet Name	Rev.	Current Revision Date
11/07/25	AS-100	AMENITIES PLAN		
11/07/25	A-101	BUILDING 32 - FLOOR PLANS		
11/07/25	A-102	BUILDING 32 - REFLECTED CEILING PLAN		
11/07/25	A-103	BUILDING 32A - 3 BEDROOM UNIT PLAN		
11/07/25	A-104	BUILDING 32B - 3 BEDROOM UNIT PLAN		
11/07/25	A-105	BUILDING 32 - EXTERIOR ELEVATIONS		
11/07/25	A-201	BUILDING 43 - FLOOR PLANS		
11/07/25	A-202	BUILDING 43 - REFLECTED CEILING PLAN		
11/07/25	A-203	BUILDING 43 - ENLARGED FLOOR PLAN		
11/07/25	A-204	BUILDING 43 - EXTERIOR ELEVATIONS		
11/07/25	A-500	DETAILS		
11/07/25	A-501	DETAILS		

MECHANICAL				
Sheet Issue Date	Sheet Number	Sheet Name	Rev.	Current Revision Date
11/04/25	M-101	MECHANICAL DEMOLITION & NEW WORK PLAN - BUILDING 32		
11/04/25	M-102	MECHANICAL DEMOLITION & NEW WORK PLAN - BUILDING 43		

PLUMBING				
Sheet Issue Date	Sheet Number	Sheet Name	Rev.	Current Revision Date
11/04/25	P-101	PLUMBING DEMOLITION & NEW WORK PLAN - BUILDING 32		
11/04/25	P-102	PLUMBING DEMOLITION & NEW WORK PLAN - BUILDING 43		

ELECTRICAL				
Sheet Issue Date	Sheet Number	Sheet Name	Rev.	Current Revision Date
11/04/25	E-001	ELECTRICAL SYMBOLS, NOTES, AND ABBREVIATIONS		
11/04/25	E-002	ELECTRICAL SPECIFICATIONS		
11/04/25	E-003	ELECTRICAL ONE-LINE DIAGRAM		
11/04/25	E-101	ELECTRICAL SITE PLAN		
11/04/25	E-601	ELECTRICAL EQUIPMENT SCHEDULES		
11/04/25	E-602	ELECTRICAL PANELBOARD SCHEDULES		
11/04/25	ED101	ELECTRICAL DEMOLITION PLAN - POWER - BUILDING 32		
11/04/25	ED102	ELECTRICAL DEMOLITION PLAN - POWER - BUILDING 43		
11/04/25	ED103	ELECTRICAL DEMOLITION PLAN - LIGHTING - BUILDING 32		
11/04/25	ED104	ELECTRICAL DEMOLITION PLAN - LIGHTING - BUILDING 43		
11/04/25	EL101	ELECTRICAL LIGHTING PLAN - BUILDING 32		
11/04/25	EL102	ELECTRICAL LIGHTING PLAN - BUILDING 43		
11/04/25	EP101	ELECTRICAL POWER PLAN - BUILDING 32		
11/04/25	EP102	ELECTRICAL POWER PLAN - BUILDING 43		
11/04/25	ES101	ELECTRICAL SYSTEMS PLAN - FIRST FLOOR		

PROJECT DATA

PROJECT DESIGN INFORMATION

EXISTING CONSTRUCTION:
BUILDING 43 - ALTERATION LEVEL 2
BUILDING 32 - CHANGE OF OCCUPANCY

ZONING: R - MF

CODE:
2018 INTERNATIONAL BUILDING CODE
2018 INTERNATIONAL EXISTING BUILDING CODE
2018 INTERNATIONAL RESIDENTIAL CODE FOR ONE & TWO FAMILY DWELLINGS
2018 INTERNATIONAL FIRE CODE
2018 INTERNATIONAL PLUMBING CODE
2018 INTERNATIONAL ENERGY CONSERVATION CODE
2018 INTERNATIONAL MECHANICAL CODE
2018 INTERNATIONAL FUEL GAS CODE
2018 INTERNATIONAL PROPERTY MAINTENANCE CODE
2017 NATIONAL ELECTRIC CODE
ICC / ANSI A117.1 2009 ACCESSIBLE & USABLE BUILDING AND FACILITIES

OCCUPANCY GROUP: R-2
TYPE OF CONSTRUCTION: TYPE VB (OBSERVED)

BUILDING SUMMARY:

NUMBER (2) TOTAL BUILDINGS
HEIGHT: 1 STORY

SQUARE FOOTAGES: **GROSS** **NET**

BUILDING 32 FIRST FLOOR	1,958 S.F.	1,832 S.F.
----------------------------	------------	------------

BUILDING 43 FIRST FLOOR	1,771 S.F.	1,599 S.F.
----------------------------	------------	------------

ENERGY CONSERVATION: R-30 ATTIC , R-21 WALLS

UNIT SUMMARY: OVERALL UNIT TOTAL (BUILDING 32 + BUILDING 43) = 2

BUILDING 32		
TYPE "A" UNITS (5% OF TOTAL)	(0) UNITS	
HIVI UNITS (2% OF TOTAL)	(0) UNITS	
STANDARD UNITS	(2) UNITS - THREE BEDROOM	
TOTAL UNITS	(2) UNITS	

SQUARE FOOTAGE:	GROSS	NET
TYPE "B" - 3 BEDROOM	980 S.F.	916 S.F.

BUILDING 43		
STANDARD UNITS	(0) UNITS	
TOTAL UNITS	(0) UNITS	
SQUARE FOOTAGE:	GROSS	NET
TYPE "B" - 3 BEDROOM	0 S.F.	0 S.F.

NOTE: SQUARE FOOTAGE
-GROSS - COMMON SPACE CALCULATION: OUTSIDE PERIMETER OF STUD (ENTIRE BUILDING) LESS THE TOTAL OF THE GROSS UNIT SQUARE FOOTAGE PER FLOOR

-GROSS - UNIT CALCULATION: CENTERLINE OF PARTY WALL TO OUTSIDE OF EXTERIOR STUD WALL AND/OR OUTSIDE OF CORRIDOR STUD WALL.

-NET - PAINT-TO-PAINT AT PERIMETER, TAKEN FROM INSIDE OF DEMISING, EXTERIOR, AND CORRIDOR WALLS.

SIGNATURE BLOCK

OWNER:
HOUSING AUTHORITY OF THE CITY OF COLUMBIA, MISSOURI
201 SWITZLER STREET
COLUMBIA, MISSOURI 65203

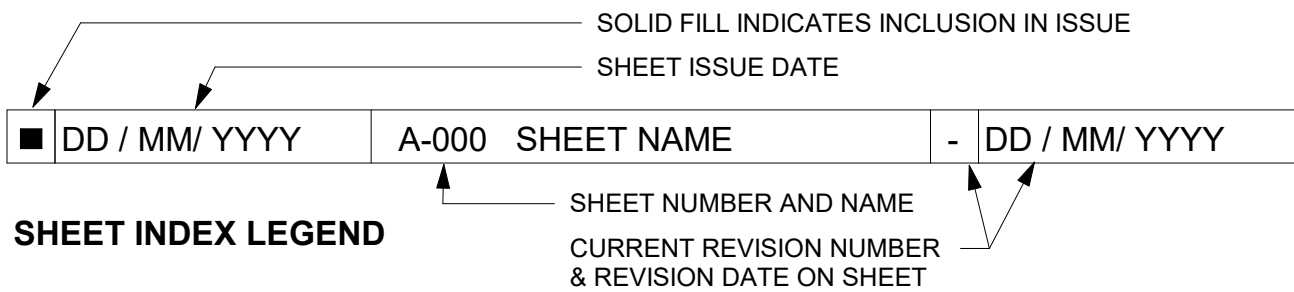
BY: _____ **DATE:** _____
NAME
CONTRACTOR:
CONTRACTOR NAME
ADDRESS
CITY, ST ZIP

BY: _____ **DATE:** _____
NAME
ARCHITECT:
ROSEMANN & ASSOCIATES, P.C.
168 N. MERAMEC AVE, SUITE 200
CLAYTON, MO 63105-3738

BY: _____ **DATE:** _____
Jarrett R. Cooper

BONDING COMPANY:
OWNER NAME
ADDRESS
CITY, ST ZIP

BY: _____ **DATE:** _____
NAME



ABBREVIATIONS

A	ABV	ABOVE	D	DBL	DOUBLE	I	IBC	INTERNATIONAL BUILDING CODE	R	R	RADIUS	V	VCT	VINYL COMPOSITE TILE																																							
	ACC	ACCESSIBLE		DEMO	DEMOLITION / DEMOLISH		ID	INTERIOR DESIGNER		RA	RETURN AIR		VENT	VENTILATE / VENTILATION																																							
	ACT	ACOUSTICAL CEILING TILE		DIA	DIAMETER		IDG	INSIDE DIAMETER		RC	RESILIENT CHANNEL		VER	VERIFY																																							
	AD	AREA DRAIN		DIAG	DIAGONAL		IDF	INDIVIDUAL DISTRIBUTION FRAME		RCP	REFLECTED CEILING PLAN / REINFORCED CONCRETE PIPE(ING)		VIF	VERIFY IN FIELD																																							
	ADA	AMERICANS WITH DISABILITIES ACT		DIM	DIMENSION		IL	INDEPENDENT LIVING		RD	ROOF DRAIN		VP	VISION PANEL																																							
	ADAAG	ADA ACCESSIBILITY GUIDELINES		DIMS	DIMENSIONS		IN	INCHES		RE / REF	REFER TO		VTR	VENT THRU ROOF																																							
	ADF	ACCESSIBLE DRINKING FOUNTAIN		DN	DOWN		INDIV	INDIVIDUAL		RECPT	RECEPTACLE		W																																								
	ADH	ADHESIVE		DP	DEEP		INSUL	INSULATION / INSULATED		RECS	RECOMMENDATION(S)																																										
	ADJ	ADJUSTABLE/ADJACENT		DR	DOOR		INT	INTERIOR		REF	REFRIGERATOR / REFER TO																																										
	AEWC	ACCESSIBLE ELECTRIC WATER COOLER		DS	DOWNSPOUT		INV	INVERT		REINF	REINFORCING																																										
	AFF	ABOVE FINISH FLOOR		DTL	DETAIL		J			REQD	REQUIRED																																										
	AHJ	AUTHORITY HAVING JURISDICTION		DWG	DRAWING					E					REV	REVISION																																					
	AHU	AIR HANDLING UNIT		E	EAST										K			RFG	ROOFING																																		
	AL	ASSISTED LIVING		EA	EACH													L			RO	ROUGH OPENING																															
	ALAV	ACCESSIBLE LAVATORY		EF	EACH FACE																LA			RR	RESTROOM																												
ALT	ALTERNATE	EJ	EXPANSION JOINT	LAM																				RTU	ROOF TOP UNIT																												
ALUM	ALUMINUM	EL	ELEVATION																					LAV			S																										
AMI	ACCESSIBLE MIRROR	ELEC	ELECTRIC(AL)										LF																																								
ANN	FIRE ANNUNCIATOR PANEL	ELEV	ELEVATOR																										LG																								
ANO	ANNODIZED	ENLG	ENLARGED																													LGTG																					
APPD	APPROVED	EPDM	ETHYLENE PROPYLENE DIENE TERPOLYMER																																LSC																		
APPROX	APPROXIMATE(LY)	EQ	EQUAL																																			LT															
ASD	ACCESSIBLE SOAP DISPENSER	ES	EACH SIDE																																						MAS												
ASH	ACCESSIBLE SHOWER HEAD	EW	EACH WAY																																									MATL									
ATTEN	ATTENUATION	EWC	ELECTRIC WATER COOLER																																												MAX						
ATTN	ATTENTION	EXH	EXHAUST																																															MB			
AU	ACCESSIBLE URINAL	EXIST	EXISTING																																																		MDF
		EXP	EXPANSION	MECH																																																	
		EXT	EXTERIOR				MFR																																														
				MIN																																																	
							MO																																														
				MTD																																																	
							MTG HT																																														
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KEYNOTE LEGEND (FULL PROJECT)

- 02.01 REMOVE EXISTING PARTITION, OR PORTION THEREOF, AS INDICATED. DEMOLITION CONTRACTOR TO COORDINATE WITH REMODEL PLANS. DEMOLITION CONTRACTOR TO COORDINATE DEMOLITION OF UTILITIES WITH MEP DRAWINGS.
- 02.02 REMOVE PORTION OF EXISTING PARTITION AS INDICATED. DEMOLITION CONTRACTOR TO COORDINATE WITH REMODEL PLANS.
- 02.03 REMOVE PORTION OF EXISTING PARTITION TO ACCOMMODATE INSTALLATION OF NEW DOOR AND FRAME. DEMOLITION CONTRACTOR TO COORDINATE WITH REMODEL PLANS. DEMOLITION CONTRACTOR TO COORDINATE DEMOLITION OF UTILITIES WITH MEP DRAWINGS.
- 02.04 REMOVE EXISTING DOOR, FRAME AND ASSOCIATED HARDWARE. SAVE FOR REUSED. PREP AREA FOR INSTALLATION OF NEW WALL INFILL.
- 02.05 REMOVE EXISTING DOOR, FRAME AND ASSOCIATED HARDWARE. DEMOLITION CONTRACTOR TO COORDINATE WITH REMODEL PLANS.
- 02.06 REMOVE EXISTING BATHROOMS TO INCLUDE TOILETS & ASSOCIATED EQUIPMENT, TOILET ACCESSORIES, SINKS, FINISHES, FLOORING, AND PARTITIONS AS REQUIRED FOR NEW INSTALLATION. DEMOLITION CONTRACTOR TO COORDINATE WITH REMODEL PLANS.
- 02.07 REMOVE EXISTING PARTITION AS INDICATED AND PREP FOR NEW WALL INFILL FOR NEW DOOR. DEMOLITION CONTRACTOR TO COORDINATE WITH REMODEL PLANS.
- 02.08 REMOVE EXISTING CEILING MOUNTED LIGHTING FIXTURES ANY ASSOCIATED HARDWARE. SAVE FOR REUSE. DEMOLITION CONTRACTOR TO COORDINATE WITH MEP DRAWINGS. TYP.
- 02.09 REMOVE EXISTING VENT IN ITS ENTIRETY. DEMOLITION CONTRACTOR TO COORDINATE WITH REMODEL PLANS ON MEP DRAWINGS. DEMOLITION CONTRACTOR TO COORDINATE DEMOLITION OF UTILITIES WITH MEP DRAWINGS. TYP.
- 02.10 REMOVE EXISTING SOFFIT IN ITS ENTIRETY. DEMOLITION CONTRACTOR TO COORDINATE WITH REMODEL PLANS.
- 02.11 REMOVE EXISTING EMERGENCY LIGHT IN ITS ENTIRETY.
- 02.12 REMOVE EXISTING KITCHEN ITEMS INDICATED TO INCLUDE FIXTURES, APPLIANCES, CABINETS, COUNTERTOPS, ETC. PREP AREA FOR INSTALLATION OF NEW KITCHEN ITEMS PER REMODEL PLANS.
- 02.14 REMOVE EXISTING WOOD SHELVING AND ASSOCIATED HARDWARE.
- 02.23 REMOVE EXISTING VENDING MACHINE AND RELOCATE TO NEW LOCATION ADJACENT TO DRYERS.
- 02.24 OWNER TO RELOCATE EXISTING DRYERS PRIOR TO CONSTRUCTION.
- 02.25 OWNER TO RELOCATE EXISTING WASHERS PRIOR TO CONSTRUCTION.
- 02.26 REMOVE EXISTING WASHERS AND RELOCATE APPROXIMATELY 8" AWAY FROM PARTIAL HEIGHT WALL TO ALLOW ROOM FOR NEW FULL HEIGHT WALL.
- 02.27 EXISTING HARD CEILING TO BE SCRAPPED, REPAIRED, AND PREPARED FOR PAINT.
- 02.28 REMOVE EXISTING SIGNAGE. PATCH AND REPAIR SIDING AS NEEDED BEFORE REPAINTING.
- 02.29 REMOVE EXISTING MAILBOX ATTACHED TO BUILDING. REPAIR SIDING AS NEEDED BEFORE REPAINTING AND INSTALL NEW MAILBOX.
- 02.30 REMOVE EXISTING HVAC EQUIPMENT IN ITS ENTIRETY.
- 02.31 REMOVE EXISTING ADDRESS SIGN AND LIGHT PRIOR TO PAINTING. REPAIR SIDING AS NEEDED BEFORE REPAINTING.
- 02.32 REMOVE EXISTING CEILING MOUNTED HEAT DETECTOR AND ANY ASSOCIATED HARDWARE. DEMOLITION CONTRACTOR TO COORDINATE WITH MEP DRAWINGS.
- 02.33 REMOVE EXISTING SOFFIT CEILING. DEMOLITION CONTRACTOR TO COORDINATE WITH REMODEL DRAWINGS.
- 02.34 REMOVE EXISTING SOFFIT WALL. DEMOLITION CONTRACTOR TO COORDINATE WITH REMODEL DRAWINGS.
- 07.02 EXISTING PREFINISHED GUTTER & DOWNSPOUT.
- 08.01 EXISTING VINYL WINDOWS TO REMAIN - SEE WINDOW SCHEDULE.
- 08.02 EXISTING ATTIC ACCESS PANEL.
- 08.07 EXISTING DOOR TO REMAIN. REFER TO DOOR SCHEDULE.
- 08.08 NEW DOOR AND FRAME. REFER TO DOOR SCHEDULE.
- 08.19 EXISTING STOREFRONT WINDOW SYSTEM TO REMAIN.
- 09.13 REPAINT EXISTING EXTERIOR FINISH MATERIAL USING PPG1040-7 - GOBLIN
- 09.15 REPAINT EXISTING BOLLARDS USING SW 6261 PER PAINT MANUFACTURER INSTRUCTIONS.
- 09.16 EXISTING TRIM TO BE PAINTED WHITE TO MATCH EXISTING WINDOWS.
- 09.17 EXISTING CEILING TO REMAIN.
- 09.18 PARTIAL HEIGHT EXISTING WALL TO REMAIN. CONTRACTOR TO VERIFY MEP UTILITIES WITHIN THE WALL.
- 09.19 EXISTING SOFFIT BEAM TO REMAIN. PAINT TO MATCH WALLS AND CEILING.
- 10.01 (2) ROWS (12") DEEP VENTILATED WIRE SHELVING IN CLOSET. REF. 1/G300 FOR DETAILS AND TYPICAL MOUNTING HEIGHTS.
- 10.07 EXISTING BATHROOM TOILET & ASSOCIATED EQUIPMENT, TOILET ACCESSORIES, SINK, FINISHES, AND FLOORING TO REMAIN.
- 10.09 PROPOSED LOCATION FOR FUTURE WASHER AND DRYER
- 10.10 RELOCATED VENDING MACHINE.
- 10.11 EXISTING INDUSTRIAL SIZE DRYER TO REMAIN
- 10.12 EXISTING COMMERCIAL DRYER TO REMAIN.
- 10.13 EXISTING COMMERCIAL WASHERS TO REMAIN. WASHERS TO BE MOVED FORWARD +/- 8" TO ACCOMMODATE THE NEW WALL.
- 10.14 NEW BATHROOM TOILET & ASSOCIATED EQUIPMENT, TOILET ACCESSORIES, AND SINK.
- 11.04 NEW REFRIGERATOR, RANGE, AND MICROWAVE WITH HOOD. SEE INTERIOR ELEVATIONS FOR MORE INFORMATION.
- 11.05 NEW TUB/SHOWER SURROUND.
- 12.02 PROVIDE (1") VINYL, HORIZONTAL WINDOW BLINDS AT ALL WINDOWS PER SPECIFICATIONS.
- 12.05 NEW PLASTIC LAMINATE COUNTERTOP. SEE INTERIOR ELEVATIONS FOR MORE INFORMATION.
- 12.06 NEW UPPER AND BASE CABINETS. SEE INTERIOR ELEVATIONS FOR MORE INFORMATION
- 12.08 NEW SINK VANITY CABINET.
- 22.06 EXISTING FLOOR DRAIN TO REMAIN.
- 22.07 EXISTING PLUMBING FIXTURES TO REMAIN
- 22.08 NEW KITCHEN SINK. SEE INTERIOR ELEVATIONS FOR MORE INFORMATION.
- 22.09 EXISTING WASHER / DRYER HOOKUPS TO REMAIN
- 23.01 EXISTING VENT TO REMAIN.
- 23.02 EXISTING HVAC EQUIPMENT TO REMAIN.
- 26.01 CEILING MOUNTED FIXTURE.
- 26.02 NEW ELECTRICAL PANEL AT EXISTING PANEL LOCATION. REFER TO ELECTRICAL PLANS. FINISH TO BE BAKED ENAMEL IN COLOR WHITE OR TO MATCH ADJACENT WALL COLOR PER OWNER FINAL SELECTION.
- 26.05 EXISTING LIGHTING FIXTURES TO REMAIN. TYP.
- 26.06 EXISTING ELECTRICAL DEVICES INCLUDING EMERGENCY LIGHTING, SECURITY CAMERAS, HEAT DETECTOR, MOTION SENSOR, LENNOX, SMOKE DETECTOR, AND WALL OCCUPY SENSOR TO REMAIN.
- 26.07 EXISTING EXTERIOR LIGHT FIXTURE TO REMAIN.
- 26.08 EXISTING EXTERIOR ELECTRICAL EQUIPMENT TO REMAIN.
- 28.02 PROPOSED POLE MOUNTED CAMERA
- 32.05 POWERWASH AND RESTRIPE PARKING LOT
- 32.06 WASH BRICK VENEER.
- 32.08 EXISTING HANDRAIL AND STAIR TO REMAIN.

ENVIRONMENTAL GENERAL NOTES

1. CONTRACTOR IS RESPONSIBLE FOR INSPECTING THE EXISTING BUILDING(S) FOR ANY ENVIRONMENTAL HAZARDS, WHICH INCLUDE ASBESTOS-CONTAINING MATERIALS (ACM), LEAD-BASED PAINT (LBP) AND ABOVE GROUND STORAGE TANK(S) AS IDENTIFIED AND INDICATED IN THE PHASE I ENVIRONMENTAL REPORT PREPARED FOR THE OWNER AND FOUND IN THE PROJECT SPECIFICATIONS.
2. CONTRACTOR IS RESPONSIBLE FOR PROPER NOTIFICATION AS MAY BE REQUIRED FOR LOCAL, STATE, OR FEDERAL ABATEMENT PROCEDURES AND PAYMENT OF ALL FEES TO THE REQUIRED JURISDICTION.
3. CONTRACTOR SHALL PROPERLY NOTIFY AND INFORM ALL SUB-CONTRACTORS AND ALL WORKERS/EMPLOYEES EITHER ENTERING OR WORKING ON SITE OF THE PRESENCE OF ANY AND ALL HAZARDOUS MATERIALS IDENTIFIED.
4. CONTRACTOR SHALL COORDINATE ALL ABATEMENT PROCEDURES, NOTIFICATION AND WORK WITH OWNER RETAINED THIRD PARTY ENVIRONMENTAL ENGINEER/CONSULTANTS IN IDENTIFICATION, ABATEMENT AND REMEDIATION OF ANY HAZARDOUS MATERIAL.
5. IF SUSPECT ACM'S ARE ENCOUNTERED DURING THE RENOVATION OF THE PROJECT WHICH HAVE NOT BEEN PREVIOUSLY SAMPLED OR IDENTIFIED, THEY SHALL BE SAMPLED BY AN APPROPRIATELY LICENSED ASBESTOS INSPECTOR PRIOR TO IMPACTION AND TREATED ACCORDINGLY AS ACM'S. IDENTIFIED ACM'S WHICH ARE TO BE IMPACTED BY RENOVATION ACTIVITIES SHALL BE REMOVED BY A LICENSED ASBESTOS ABATEMENT CONTRACTOR IN ACCORDANCE WITH APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS.
6. ANY REMAINING ACM'S AND NOB MATERIALS SHALL BE MANAGED UNDER A SITE-SPECIFIC OPERATIONS AND MAINTENANCE (O&M) PROGRAM. CONTRACTOR SHALL COORDINATE AND PROVIDE AN OPERATIONS AND MAINTENANCE (O&M) PROGRAM FOR EACH AND EVERY HAZARDOUS MATERIAL AFFECTED BY THIS PROJECT AS REQUIRED TO SATISFY REQUIREMENTS OF LENDER, HUD, OWNER AND LOCAL, STATE AND FEDERAL REGULATIONS.
7. THIS PROJECT REQUIRE FULL ABATEMENT OF LEAD-BASE PAINT (LBP). CLEANING OF THE ENTIRE INTERIOR OF THE PROJECT FOR LEAD DUSTS POST-REHABILITATION ACTIVITIES IS REQUIRED FOLLOWED BY CLEARANCE A LICENSED RISK ASSESSOR/CONSULTANT. ALL RENOVATION AND MAINTENANCE WORKERS ARE REQUIRED TO HAVE A ONE DAY EPA RENOVATOR CLASS WHEN WORKING IN FACILITIES CONSTRUCTED PRIOR TO 1978 THAT CONTAIN LBP AND ANY IMPACTS TO LBP MUST BE CONDUCTED IN ACCORDANCE WITH APPLICABLE EPA AND STATE REGULATIONS. ANY REMAINING LBP SHALL BE MANAGED UNDER A SITE SPECIFIC O&M PROGRAM. FOR ANY IDENTIFIED OR PRESUMED LBP WHICH IS TO BE IMPACTED DURING ANY FUTURE RENOVATION OR DEMOLITION ACTIVITIES, CONTRACTOR MUST ADHERE TO THE OSHA LEAD IN CONSTRUCTION STANDARD (29 CFR 1926.62) AND ALL GENERATED DEBRIS CONTAINING LEAD-BASE PAINT IS TO BE APPROPRIATELY CHARACTERIZED AND CEIPOSED OF IN ACCORDANCE WITH APPLICABLE EPA RCRA REQUIREMENTS.
8. ALL HAZARDOUS MATERIALS SHALL BE SAMPLED BY A LICENSED ABATEMENT ENVIRONMENTAL ENGINEER/CONSULTANT AND REMOVED BY A LICENSED CONTRACTOR IN ACCORDANCE WITH APPLICABLE LOCAL, STATE AND FEDERAL LAWS AND REGULATIONS. CONTRACTOR SHALL NOTIFY OWNER AND ENVIRONMENTAL ENGINEER/CONSULTANT IMMEDIATELY UPON DISCOVERY OF ANY HAZARDOUS MATERIAL WHICH MAY BE CONCEALED AT TIME OF THE ORIGINAL PHASE I ENVIRONMENTAL REPORT AND MAY NOT HAVE BEEN PREVIOUSLY IDENTIFIED OR LOCATED.
9. CONTRACTOR SHALL PROVIDE CLEARANCE LETTER(S) FOR ALL WORK PERFORMED AND ALL REQUIRED LOCAL, STATE OR FEDERAL CLOSURE LETTER(S), REPORTS, AND DOCUMENTATION TO BOTH OWNER AND LENDER.

ROOF PLAN GENERAL NOTES

1. ALL NEW WORK TO MEET ALL APPLICABLE BUILDING, PLUMBING, MECHANICAL, HANDICAP, AND LIFE SAFETY CODES AND REQUIREMENTS.
2. THE MINIMUM NET FREE VENTILATING AREA SHALL BE 1/150 OF THE AREA OF THE SPACE VENTILATED. THE OPENINGS SHALL BE COVERED WITH CORROSION-RESISTANT MESH OR OTHER APPROVED MATERIALS WITH OPENINGS NOT MORE THAN 1/2" IN ANY DIRECTION.
3. WHERE RIDGE OR GABLE VENTS ARE UTILIZED, ADDITIONAL PROTECTION AGAINST SNOW INFILTRATION SHALL BE PROVIDED BY BALANCING THE AREA OF THE VENTS IN THE RIDGES AND THE EAVES SUCH THAT AT LEAST 1/2 OF THE VENTILATION AREA SHALL BE PROVIDED BY SOFFIT OR EAVE VENTS, WITH THE BALANCE OF THE VENTILATION OPENINGS PROVIDED BY THE GABLE OR RIDGE VENTS. REFERENCE IBC 2018 SECTION 1202.
4. ALL FLOOR JOIST BEARING HEIGHTS ARE 8'-1 1/8". ALL ROOF TRUSS BEARING HEIGHTS ARE 8' - 1 1/8". REFERENCE WALL SECTIONS ON A300 SHEETS.
5. 1'-0" ROOF SOFFIT, UNLESS NOTED OTHERWISE, REF: ROOF PLAN.
6. CONTRACTOR TO INSTALL GUTTERS, DOWNSPOUTS AND ALL FLASHING PER APPLICABLE SMACNA GUIDELINES. IF ADDITIONAL DOWNSPOUTS ARE REQUIRED, CONTRACTOR SHALL CONFIRM LOCATIONS WITH OWNER PRIOR TO INSTALLATION.
7. COLORS T.B.D., COORDINATE WITH OWNER.

ELEVATION GENERAL NOTES

1. PHOTOS ARE SHOWN FOR REFERENCE ONLY. IMAGES MAYBE OUT OF DATE OR MISSING INFORMATION. GENERAL INTENT IS TO BE TAKEN FROM ANNOTATIONS.
2. REFER TO EXISTING PLANS FOR MORE INFORMATION ON EXISTING ELEMENTS.
3. REFER TO NEW FLOOR PLANS FOR INTERIORS AND GENERAL PROJECT NOTES.
4. ROOF MEMBRANE AND ACCESSORIES TO BE REPLACED.
5. GC TO PROVIDE CUSTOM FABRICATED ROOF AND WALL FLASHING AND ROOF DRAINAGE SYSTEM, INCLUDING ALL SCUPPERS AND DOWNSPOUTS TO ENSURE PROPER ROOF DRAINAGE. TYPICAL.
6. CONTRACTOR SHALL REMOVE ALL MISCELLANEOUS METAL FASTENERS, ABANDONED UTILITIES AND WIRING SYSTEMS, SIGNAGE BRACKETS, PIPE FITTINGS AND ELECTRICAL FIXTURES AND CONDUIT, TYPICAL ALL ELEVATIONS. GC TO PROTECT HISTORIC MATERIALS DURING REMOVAL.
7. PROTECT SURROUNDING MATERIALS DURING MINOR CORING AND CUTTING FOR MECHANICAL, ELECTRICAL, OR PLUMBING PENETRATIONS.

PLAN GENERAL NOTES

- 01 - GENERAL
- A. ALL NEW WORK TO MEET ALL APPLICABLE BUILDING, PLUMBING, MECHANICAL, ELECTRICAL, HANDICAP, AND LIFE SAFETY CODES AND REQUIREMENTS.
- B. ALL WALL DIMENSIONS ARE TO FACE OF STUD, UNLESS NOTED OTHERWISE.
- C. DO NOT SCALE DRAWINGS.
- D. NOTIFY ARCHITECT OF ANY DISCREPANCIES BETWEEN PROJECT DOCUMENTS AND EXISTING CONDITIONS. ANY MODIFICATIONS DUE TO DIMENSIONAL CHANGES SHOULD BE PART OF THE PROJECT COLLECTED FROM A ROOF, AWINGS, CANOY OR MARQUEE AND CONDENSATE FROM MECHANICAL EQUIPMENT SHALL NOT FLOW OVER A PUBLIC WALKING SURFACE
- E. GENERAL CONTRACTOR AND ALL SUBCONTRACTORS SHALL THOROUGHLY FAMILIARIZE THEMSELVES TO ALL SITE SPECIFIC REQUIREMENTS AND EXTENTS OF THE NEW WORK PRIOR TO BIDDING. NO CHANGES IN THE CONTRACT WILL BE CONSIDERED FOR INFORMATION DISCREPANCIES FROM THE EXISTING CONDITIONS OR THE PROJECT DOCUMENTS.
- F. CONTRACTORS SHALL BE FAMILIAR AND INCORPORATE ALL PROVISIONS AND REQUIREMENTS ESTABLISHED BY CODES APPLICABLE TO THE PROJECT
- G. REPORT ALL EXISTING CONDITIONS THAT ARE DAMAGED OR MARRED TO THE ARCHITECT PRIOR TO COMMENCEMENT OF THE NEW WORK.
- H. ALL PENETRATIONS INTO FIRE-RATED ASSEMBLIES ARE TO BE FIRESTOPPED WITH UL APPROVED FIRESTOPPING ASSEMBLIES. UL INFORMATION SHALL BE PROVIDED BY TRADE RESPONSIBLE FOR PENETRATION. REFERENCE THE C200 SERIES.
- I. THROUGH PENETRATIONS NOT LOCATED WITHIN WALL CAVITY OR FLOOR/CEILING/ROOF ASSEMBLY SHALL BE REQUIRED TO HAVE FIRE RESISTIVE PENETRATION WITH A T-RATING EQUAL TO OR EXCEEDING THE ASSEMBLY THAT IS PENETRATED.
- J. PROTECT FIRE BLOCKING AND DRAFTSTOPPING AS REQUIRED AND IN ACCORDANCE WITH 2018 IBC, SECTION 718.0.
- K. CONTRACTOR TO PROVIDE FIRE BLOCKING AT FIRE SEPARATION PARTITION AT 10' ON CENTER VERTICALLY. TYPICAL.
- L. CONTRACTOR TO PROVIDE FIRE BLOCKING AT FIRE SEPARATION PARTITION AT ALL BACK-TO-BACK ELECTRICAL OUTLETS.
- M. ALL INTERIOR WALLS ARE TYPE P1, UNLESS NOTED OTHERWISE. ALL EXTERIOR WALLS ARE TYPE P30, UNLESS NOTED OTHERWISE. SEE SHEET G-101 FOR PARTITION SCHEDULE.
- 05 - METALS
- A. STAIR HANDRAILS, RAMP HANDRAILS TO BE PRE-FINISHED OR PAINTED STEEL.
- B. ALL DOWNSPOUTS TO BE CONNECTED TO UNDERDRAINS, SLOPED AWAY FROM BUILDING.
- C. ALL EXTERIOR METAL TO BE PRE-FINISHED OR PRIMED/PAINTED. COLOR PER ARCH.
- 06 - WOOD, PLASTICS AND COMPOSITES
- A. ALL COMMON SPACE AND UNIT TOILET ROOMS / BATHROOMS TO HAVE BLOCKING FOR FUTURE INSULATION OF GRAB BARS AT GRAB BAR LOCATIONS SHOWN ON G-300 SERIES. BLOCKING TO BE PROVIDED SEATING AS REQUIRED BY MANUFACTURER AND G-300 SERIES.
- B. CONTRACTOR TO COORDINATE BLOCKING AT ALL ADJACENT POCKET DOORS, MEDICINE CABINETS, AND OTHER ELEMENTS.
- C. AT ALL IDF, MDF & ELEG ROOMS; INTERIOR FINISH TO BE FIRE-TREATED PLYWOOD PAINTED WHITE ON ALL WALLS
- D. ALL EXPOSED CABINET ENDS TO HAVE FINISHED PANELS, INCLUDING BUT NOT LIMITED TO END OF CABINET RUN, ADJACENT TO REFRIGERATOR, LOCATIONS OF VERTICAL OFFSETS.
- 07 - THERMAL AND MOISTURE PROTECTION
- A. CAULK ALL JOINTS BETWEEN DISSIMILAR MATERIALS FOR WEATHER TIGHT, WATERTIGHT, AIRTIGHT, ETC. PERFORMANCE.
- B. ALL EXTERIOR WRB TO BE APPLIED, TAPERED AND SEALED PER INSTRUCTIONS
- C. PROVIDE SOUND ATTENUATION INSULATION OVER ALL BATHROOM CEILINGS AND IN BATHROOM WALLS, TYPICAL ALL BATHROOMS
- D. AT EXTERIOR WALLS, CAULK CONTROL JOINTS IN FLOOR SLAB 12" INTO BUILDING TO PREVENT AGAINST WATER INFILTRATION.
- 08 - OPENINGS
- A. DOORS- ELECTRICIAN IS REQUIRED TO COORDINATE WITH DOOR HARDWARE SCHEDULE FOR ALL ELECTRICAL PENETRATIONS IN REQUIREMENTS FOR DOORS, INCLUDING AUTO OPERATORS, MAG HOLD OPENS, ELECTRONIC STRIKES, KEYPADS AND MAG LOCKS.
- B. ALL DOOR HARDWARE SHALL BE COORDINATED W/ OWNER BY DESIGN BUILD CONTRACTOR.
- 09 - FINISHES
- A. PRIME, PAINT AND SEAL ALL WALLS, COLUMNS AND CEILINGS AS REQUIRED PRIOR TO INSTALLATION OF ME/P/TELEPHONE/SECURITY INSTALLATION.
- B. CONTRACTOR TO COORDINATE ALL WET WALLS WITH ADJACENT RATINGS AND TO ACCOMMODATE PLUMBING FIXTURES. WALLS TO BE ALIGNED.
- C. ALL WALLS TO BE ALIGNED AS INDICATED ON DRAWINGS - IF WALL IS MISALIGNED MID-WALL AND WILL AFFECT VISUAL APPEARANCE IN ROOM (I.E. 'JOG' WILL APPEAR) GC TO BRING TO ARCH ATTENTION PRIOR TO FINISHING
- D. FLOOR TRANSITION SHALL OCCUR AT MIDDLE OF WALL WHERE OCCURS IN DOORWAY. PROVIDE VINYL REDUCER STRIP.
- 10 - SPECIALTIES
- A. ALL PUBLIC SOAP DISPENSERS TO BE INSTALLED IN SIDE WALL OF SINK OVER COUNTER.
- B. PROVIDE VENTILATED WIRE SHELVING AT ALL CLOSETS AND PANTRY UND. REFERENCE KEYED ENLARGED FLOOR PLAN NOTES ON UNIT SHEETS FOR LOCATIONS. DEPTH TO BE COORDINATED WITH ANY LIGHT FIXTURES TO NOT ENCROACH ON IFC CLEARANCES.
- C. TOILET PAPER DISPENSER TO BE INSTALLED PER G-300 SERIES AND 2018 ICC ANSI 117.1.
- D. SEE G-300 SERIES SHEETS FOR SIGNAGE REQUIREMENTS.
- E. NUMBERING OF UNITS AND ROOMS SHALL BE UPDATED TO MEET AHJ AND OWNER REQUIREMENTS PRIOR TO SIGNAGE PRODUCTION.
- 21 - FIRE SUPPRESSION
- A. ALL UNITS TO HAVE APPROPRIATE NUMBER OF SMOKE DETECTORS INSTALLED INTERCONNECTED AND HARD-WIRED WITH BATTERY BACKUP PER CODE, INCLUDING ONE (1) IN EACH BEDROOM. ALL UNITS TO BE ABLE TO COMMUNICATE WITH NURSE CALL SYSTEM. GENERAL CONTRACTOR TO COORDINATE. FIRE EXTINGUISHERS SHALL BE LOCATED SO THAT THE MAXIMUM TRAVEL DISTANCE SHALL NOT EXCEED 75 FEET. GENERAL CONTRACTOR TO PROVIDE SEMI-RECESSED TYPE THROUGHOUT WITH RATED CABINET. PROVIDE (1) TYPE "CLASS K" WITHIN 30 FEET OF COMMERCIAL COOKING EQUIPMENT. PROVIDE COOKING RESIDENTIAL TYPE ANSUL SYSTEM AT ALL RESIDENTIAL RANGES AS REQUIRED BY FIRE DEPARTMENT HEIGHT TO MEET ANSI.

PLAN GENERAL NOTES - (CONT.)

- 22 - PLUMBING
- A. PLUMBING VENT STACKS, FLUES, FRESH AIR INTAKES, ETC. NOT SHOWN FOR CLARITY. SEE MEP DRAWINGS FOR HVAC/ELECTRICAL/PLUMBING REQUIREMENTS/EQUIPMENT/LOCATIONS. GC TO VERIFY LOCATIONS OF ALL SIDEWALL VENTS PRIOR TO INSTALL.
- B. PROVIDE FLOOR DRAINS AS INDICATED ON PLUMBING DRAWINGS AND PER APPLICABLE PLUMBING CODE.
- C. DRAINAGE SHALL BE PER 2018 IBC 3201.4 - DRAINAGE WATER COLLECTED FROM A ROOF, AWINGS, CANOY OR MARQUEE AND CONDENSATE FROM MECHANICAL EQUIPMENT SHALL NOT FLOW OVER A PUBLIC WALKING SURFACE
- D. CONTRACTOR TO COORDINATE MECHANICAL DUCT, SPRINKLER, PLUMBING, AND ELECTRICAL SUCH THAT CEILING HEIGHTS AND LOCATIONS ARE MAINTAINED PER REFLECTED CEILING PLANS.
- E. ALL DOWNSPOUTS INTO COURTYARDS AND AT HARDSCAPE TO BE HARDIPOPED TO STORM SEWER. GUTTERS/DOWNSPOUTS SHALL NOT FLOW OVER SIDEWALKS OR OTHER HARDSCAPE.
- 23 - HVAC
- A. GC TO COORDINATE MECHANICAL PADS FOR GROUND MOUNTED UNITS IF REQUIRED BY MECHANICAL PLANS.
- 26 - ELECTRICAL
- A. SEE ELECTRICAL PLANS FOR ELECTRIC DEVICE LAYOUTS.
- B. SEE G-300 SERIES FOR ELECTRICAL MOUNTING HEIGHT REQUIREMENTS.
- C. PROVIDE EXIT SIGNS AT LOCATIONS AND PER 1011.3, IBC. - A TACTILE SIGN STATING 'EXIT' AND COMPLYING WITH ICC A117.1 SHALL BE PROVIDED ADJACENT TO EACH DOOR TO AN AREA OF REFUGE, AN EXTERIOR AREA FOR ASSISTED RESCUE, AN EXIT STAIRWAY, AN EXIT RAMP, AN EXIT PASSAGEWAY AND THE EXIT DISCHARGE
- D. PROVIDE DIMMER CAPABILITY FOR ALL COMMON AREA DECORATIVE AND DOWNLIGHTS/SPOTS (CAN LIGHTS).
- E. TIMECLOCK AND PHOTOCELL FOR EXTERIOR LIGHTS. MULTIPLE ZONES MAY BE NECESSARY. INSTALL PER MANUFACTURERS RECOMMENDATIONS.
- F. ALL ELECTRICAL AND IDF/MDF ROOMS TO HAVE SOLID BLOCKING TO ACCOMMODATE PANEL ATTACHMENT. BLOCKING TO BE PAINTED TO MATCH WALLS. WALLS TO REMAIN RATED AS INDICATED PER PLAN.
- G. FIRE FULL STATIONS TO BE PROVIDED PER 2009 IFC AND A.H.J.
- H. ALL LIGHTING, T-STATS AND OTHER SWITCHES TO BE INSTALLED PER ANSI 117.1, 2010 ADAAG, AND THE FAIR HOUSING ACT. LOCATIONS AND GROUPINGS OF SWITCHES TO BE ACCEPTED BY ARCH PRIOR TO INSTALL.
- REFLECTED CEILING PLAN GENERAL NOTES
1. SEE MEP SET FOR LOCATIONS OF ALL LIGHT FIXTURES AND MECHANICAL DIFFUSERS.
2. COORDINATE ANY DISCREPANCIES WITH MEP AND ARCHITECT PRIOR TO INSTALLATION.
3. REFERENCE ALL INTERIORS DRAWINGS FOR COORDINATION
4. ALL CEILINGS TO CONFORM TO 2018 IBC TABLE 803.13
5. ALL ACT TILES TO BE WHOLE DIMENSIONS AND ARE NOT TO BE FIELD CUT, ALL ACT TO BE FIELD CENTERED IN SPACE, U.N.O. OR DIMENSIONED
6. SEE ENLARGED UNIT PLANS (A-103 & A-104) FOR ALL UNIT RCP PLANS EXCEPT WHERE HEIGHTS ARE LISTED ON RCP PLANS IN A-102 AND A-202 SERIES.
7. ALL UNITS TO HAVE A LEVEL FOUR FINISH AT CEILINGS.
8. ALL MECH DUCTS WHICH FEED TO PLENUM SPACE VIA MECH SHAFTS SHALL BE ENCLOSED ON THE BOTTOM ACCORDING TO PROGRESSIVE ENGINEERING REPORT AER-09-038.
9. ACCESS TO EQUIPMENT SHALL BE THROUGH ACT WHERE AVAILABLE. WHERE NECESSARY, ACCESS THROUGH GWB CEILING TO USE ACCESS HATCHES. GC TO PROVIDE HATCHES AND HATCH LOCATION DIAGRAM PRIOR TO INSTALL.
10. ALL DIMENSIONS FOR CEILING TYPE ARE TO FINISHED FACE. ALL DIMENSIONS TO WALLS ARE TO F.O. STUD.
11. ALL DROPPED SOFFIT FRAMING IN COMMON AREAS SHALL BE OUT OF METAL STUDS. ONE (1) HOUR RATED CEILING THROUGHOUT BUILDING AT UNDERSIDE OF ROOF TRUSSES AND ARE PART OF THE FIRE RATED FLOOR-CEILING ASSEMBLY
12. ALL GYPSUM BOARD CEILINGS TO BE PAINTED PT-2 (U.O.N.).
13. MISCELLANEOUS SYMBOLS INDICATED ON REFLECTED CEILING PLAN ARE MECHANICAL IN NATURE. REFER TO MEP DRAWING SHEETS FOR FURTHER CLARIFICATION FOR ITEM IDENTIFICATION AND LOCATIONS.

DEMOLITION GENERAL NOTES

1. DEMOLITION CONTRACTOR (DC) TO TOUR ALL AREAS SLATED FOR DEMOLITION AND FIELD VERIFY EXISTING CONDITIONS PRIOR TO START OF DEMOLITION. DC TO REPORT TO ARCHITECT ANY DISCREPANCIES BETWEEN DEMOLITION DRAWINGS AND FIELD CONDITIONS.
2. DC EXPLORATORY DEMOLITION SHALL INCLUDE DEMOLITION AT THE REQUEST OF STRUCTURAL ENGINEER TO VERIFY CONDITION OF HIDDEN STRUCTURAL ELEMENTS.
3. DC SHALL ENCLOSE AREAS, PROVIDE CHUTES AND ANY RELATED CONSTRUCTION AS REQUIRED TO MINIMIZE THE IMPACT OF DUST AND DEBRIS AS A RESULT OF DEMOLITION WORK.
4. DC IS RESPONSIBLE FOR INSPECTING THE EXISTING BUILDING FOR ANY HAZARDS THAT WOULD REQUIRE ENVIRONMENTAL REMEDIATION. DC SHALL NOTIFY OWNER IMMEDIATELY UPON DISCOVERY OF ANY HAZARDOUS MATERIAL.
5. DC TO ENSURE THAT ALL ELEMENTS AND FINISHES THAT ARE CALLED OUT TO REMAIN IN BUILDING ARE TO BE PROTECTED DURING DEMOLITION.
6. REMOVE ALL MISCELLANEOUS NON-STRUCTURAL METAL STRAPS, PLATES, PIPES, BRACKETS AND ANCHORS FROM EXTERIOR AND INTERIOR FACADE, WALLS AND CEILING.
7. DC IS RESPONSIBLE FOR OBTAINING AND PAYING FOR ANY NECESSARY PERMITS REQUIRED FOR DEMOLITION WORK.
8. BOARD-UP OF FIRST FLOOR STOREFRONTS NOT INCLUDED IN DEMO CONTRACT.
9. DC TO ERECT BARRICADES THAT COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AROUND ALL NEW AND EXISTING FLOOR PENETRATIONS.
10. DC TO IDENTIFY AREAS IN NEED OF STRUCTURAL REPAIR OR AREAS OF SLAB AND STRUCTURE THAT SHOW DETERIORATION. CONSULT WITH STRUCTURAL ENGINEER PRIOR TO REMOVING DAMAGED STEEL OR CONCRETE. NOTIFY ARCHITECT AND ENGINEER IF ANY NEW DAMAGE IS IDENTIFIED.
11. EXISTING CEILINGS: REMOVE ALL MISC. WIRES, LIGHTING, AND CEILING SYSTEMS. CLEAN AND REPAIR AS REQUIRED. PREP FOR NEW WORK AS INDICATED IN PLANS.
12. DC TO REMOVE ALL MISCELLANEOUS DEBRIS LOCATED THROUGHOUT EXISTING TENANT SPACE OR OTHER AREAS OF THE BUILDING.
13. DC TO SHUTOFF/TERMINATE ALL WATER, ELECTRICAL AND GAS SERVICES PRIOR TO BEGINNING DEMOLITION.
14. ALL EXISTING FIRE PROTECTION RISERS, PUMPS, AND CONTROLS TO REMAIN. DC TO IDENTIFY AND MAINTAIN ALL EXISTING FIRE PROTECTION RISERS, PUMPS, AND CONTROLS ON ALL FLOORS THROUGHOUT DEMOLITION.
15. ALL EXISTING ROOF DRAINS/LINES TO REMAIN. DC TO IDENTIFY AND MAINTAIN ALL EXISTING ROOF DRAINS/LINES ON ALL FLOORS THROUGHOUT DEMOLITION.
16. PROVIDE TEMPORARY ENCLOSURES AT ALL EXTERIOR WALL AND CEILING DEMOLITION LOCATIONS.
17. SHORING/SUPPORTS TO BE PROVIDED AT ALL DEMOLITION LOCATIONS AS REQUIRED BY THE STRUCTURAL ENGINEER. SEE STRUCTURAL SHEETS.
18. ALL STRUCTURAL COLUMNS, BEAMS, FLOOR/CEILING SLAB TO REMAIN EXCEPT WHERE INDICATED BY STRUCTURAL ENGINEER. SEE STRUCTURAL SHEETS.

EXISTING PLAN GENERAL NOTES

- EXISTING DOORS & FRAMES: ALL OPENINGS TO BE FIELD VERIFIED FOR LOCATION AND DOOR/FRAME COUNT.
- EXISTING WINDOWS: WOOD FRAMES AND SILL; WOOD SASH (RAILS, STILES AND MUNTINGS); EXISTING GLAZING (BROKEN IN SOME CASES) AND HARDWARE. OVERALL CONDITION OF THE WINDOWS TO HAVE PHYSICAL EVALUATION PERFORMED.
- EXISTING STOREFRONT: THE EXISTING STOREFRONT IS NON-HISTORIC.
- EXISTING FLOORS: 4"+/- REINFORCED CONCRETE SLAB.
- EXISTING STAIR: TO REMAIN. TO UTILIZE AS MEANS OF EGRESS FOR BUILDING 42.
- EXISTING STAIR: TO REMAIN. CLEAN AND REPAIR. PREPARE TO RECEIVE CODE COMPLIANCE UPGRADES FOR USE AS A MEANS OF EGRESS FOR BUILDING 42.

BEAR CREEK APARTMENTS

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PRINTS ISSUED

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REVISIONS:

SHEET TITLE

PLAN GENERAL NOTES

PROJECT NUMBER: 24127.PR

SHEET NUMBER:

G-003

SHEET TITLE
GENERAL INFORMATION

PROJECT NUMBER: 24127.PR

SHEET NUMBER:

G-006

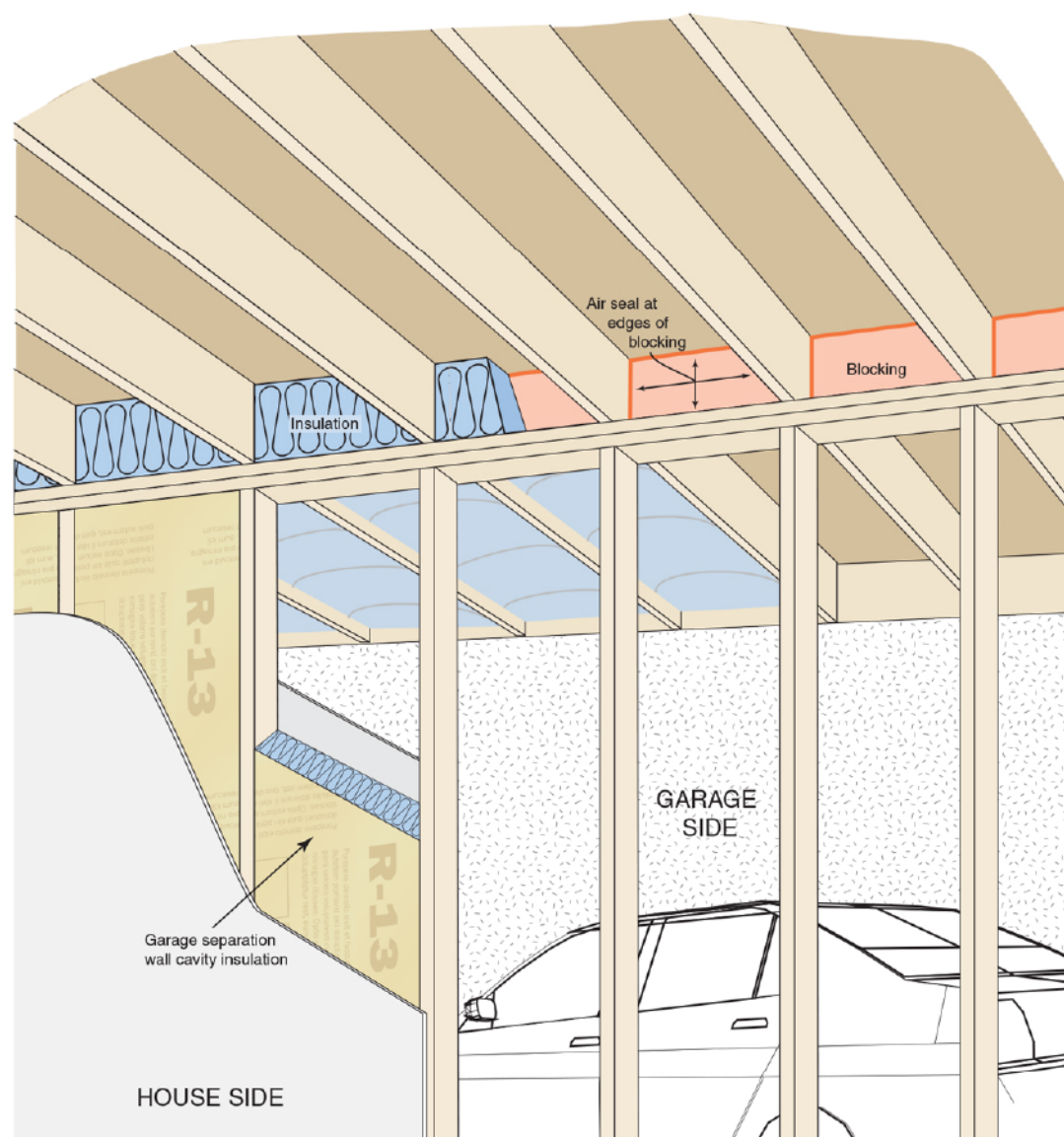
1. General Requirements
2. Ceiling/attic
3. Walls
4. Windows, skylights and doors
5. Rim joists
6. Floors (including above garage and cantilevered floors)
7. Crawl Space walls
8. Shafts, penetrations
9. Narrow cavities
10. Garage separation
11. Recessed lighting
12. Plumbing and wiring
13. Shower/tub on exterior wall
14. Electrical/phone bo on exterior walls
15. HVAC register boots
16. Concealed sprinklers
17. Blocking between framing
(e.g. beneath knee walls,
cantilevered floors, garage separation
walls)
18. Common walls
19. Fireplaces



Poster prepared for inclusion in Georgia Energy Code
Prepared by Southface Energy Institute
www.southface.org

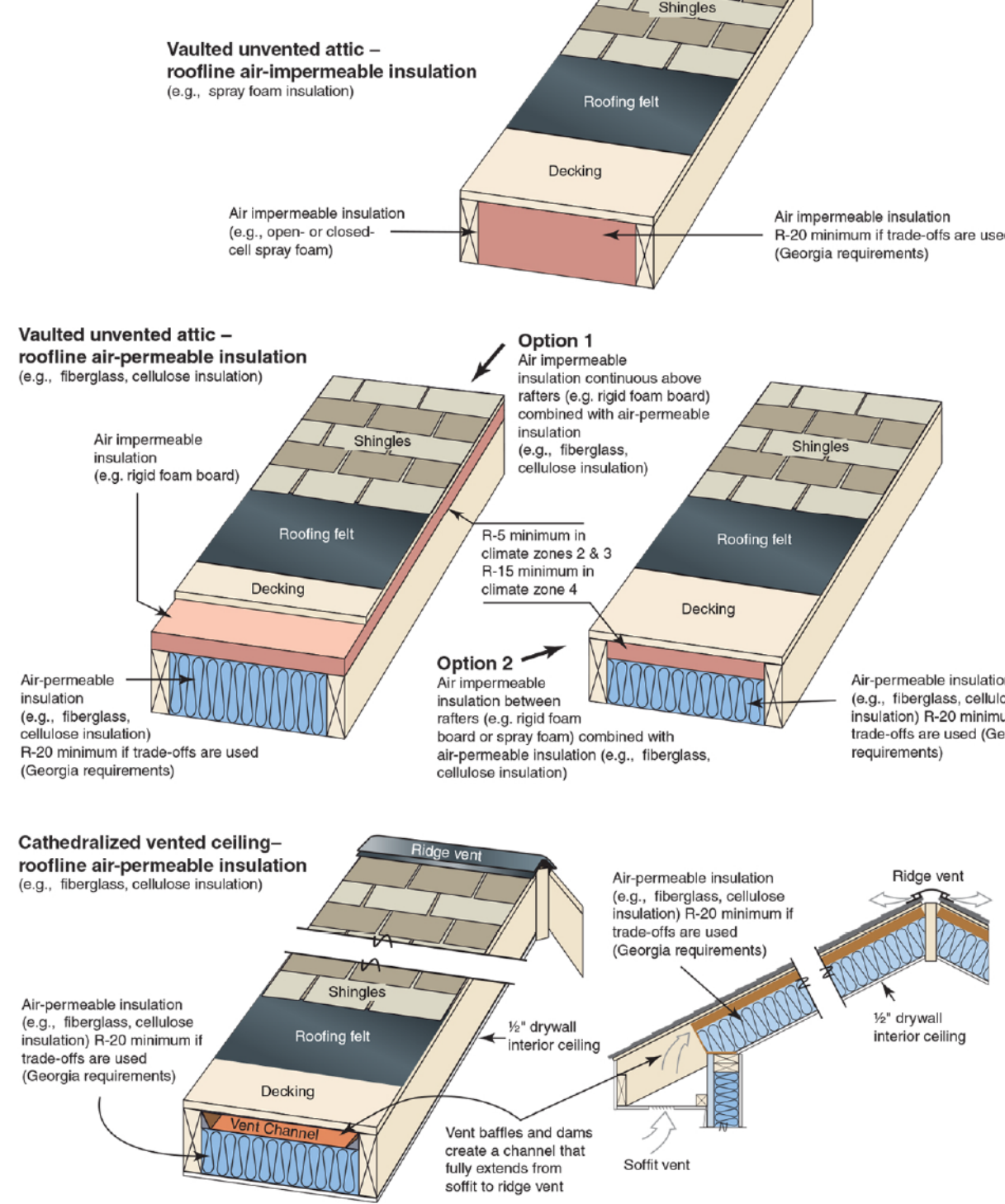
Garage blocking and sealing key points

Blocking, air sealing and insulation required above garage separation wall



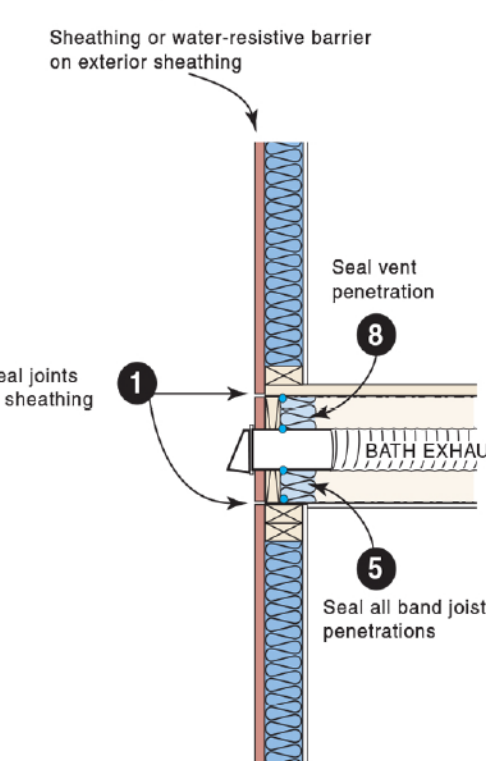
Roofline Installed Insulation Options

Reference Table 402.1.1 and 402.1.6 in the Georgia Energy Code amendments to the 2015 IECC and Section 806.5 "unvented attic assemblies" in the Georgia Amendments to the 2012 IRC



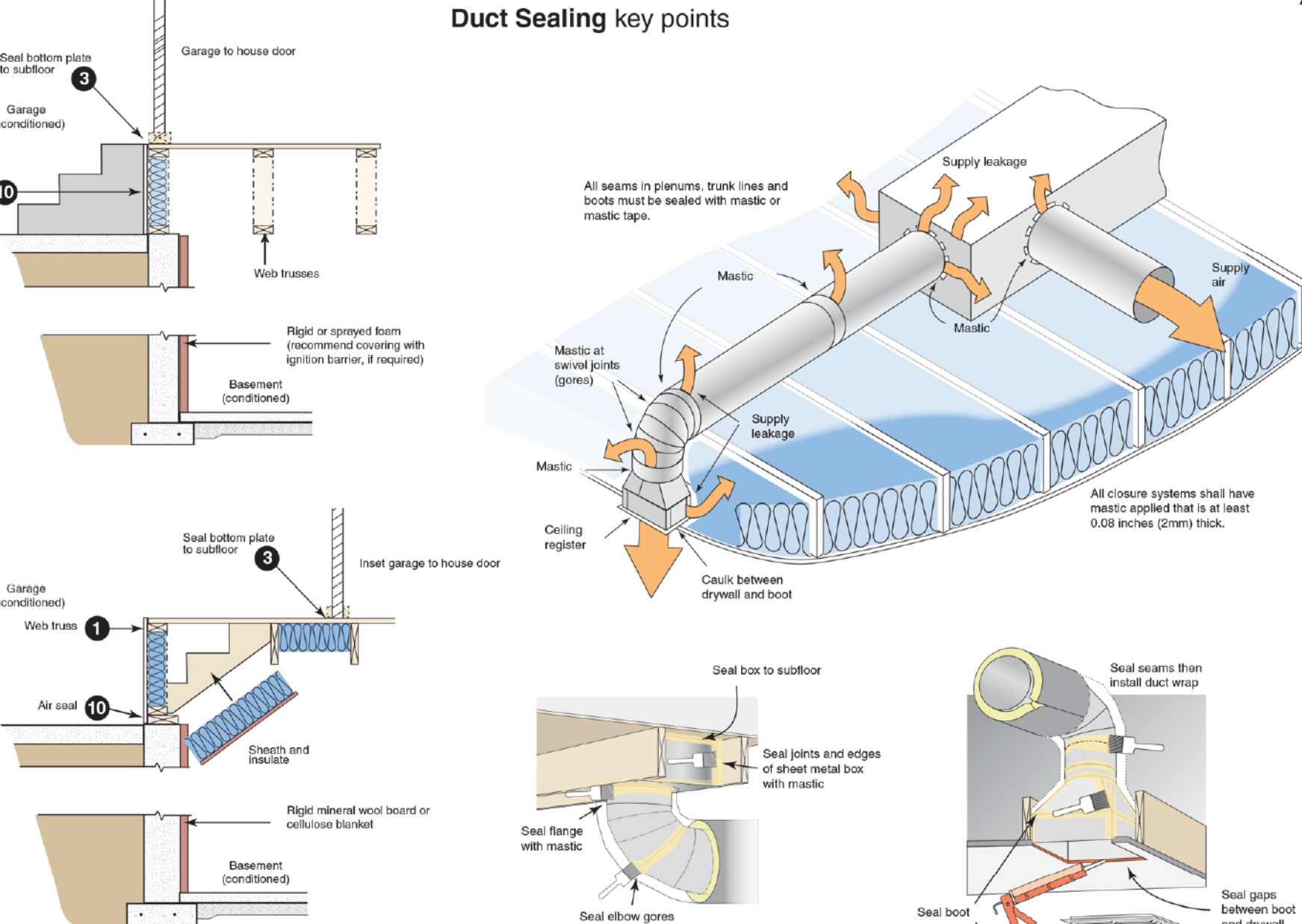
Air sealing key points continued

Multifamily



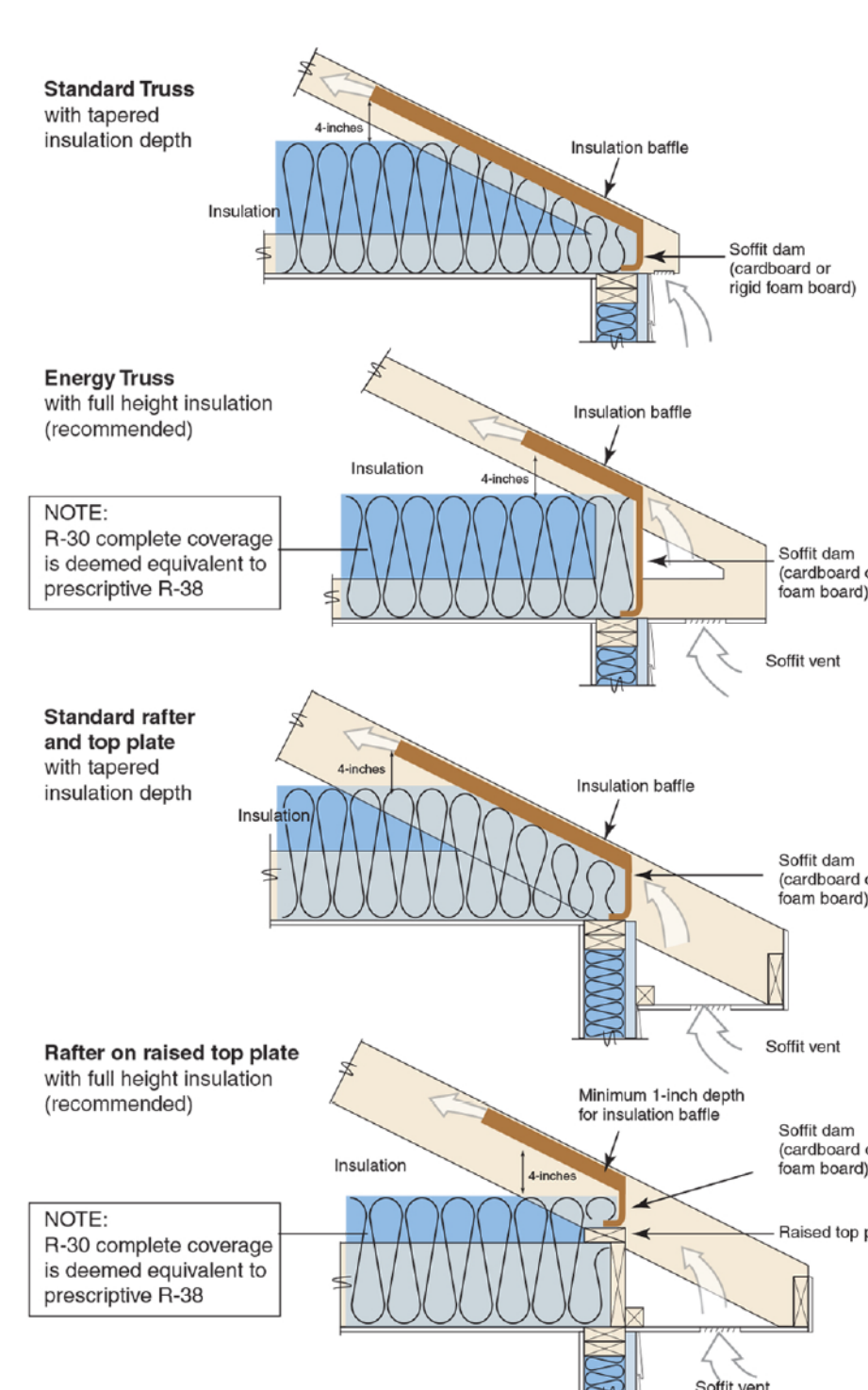
- Multifamily Air-sealing Details**
- Cap and seal all chases including chases for grouped utility lines and radon vents
 - Seal penetrations in mechanical closet including penetrations for the:
 - supply plenum
 - outside air ventilation
 - refrigerant line
 - plumbing
 - electrical
 - gas fuel
 - Seal band area at exterior sheathing side and all penetrations through band
 - UL-compliant air sealing at drywall finishing for any wall adjacent to stairwell or elevator. Air seal this gap at every change in floor level
 - Seal miscellaneous clustered penetrations through building envelope (e.g. refrigerant lines)

Duct Sealing key points



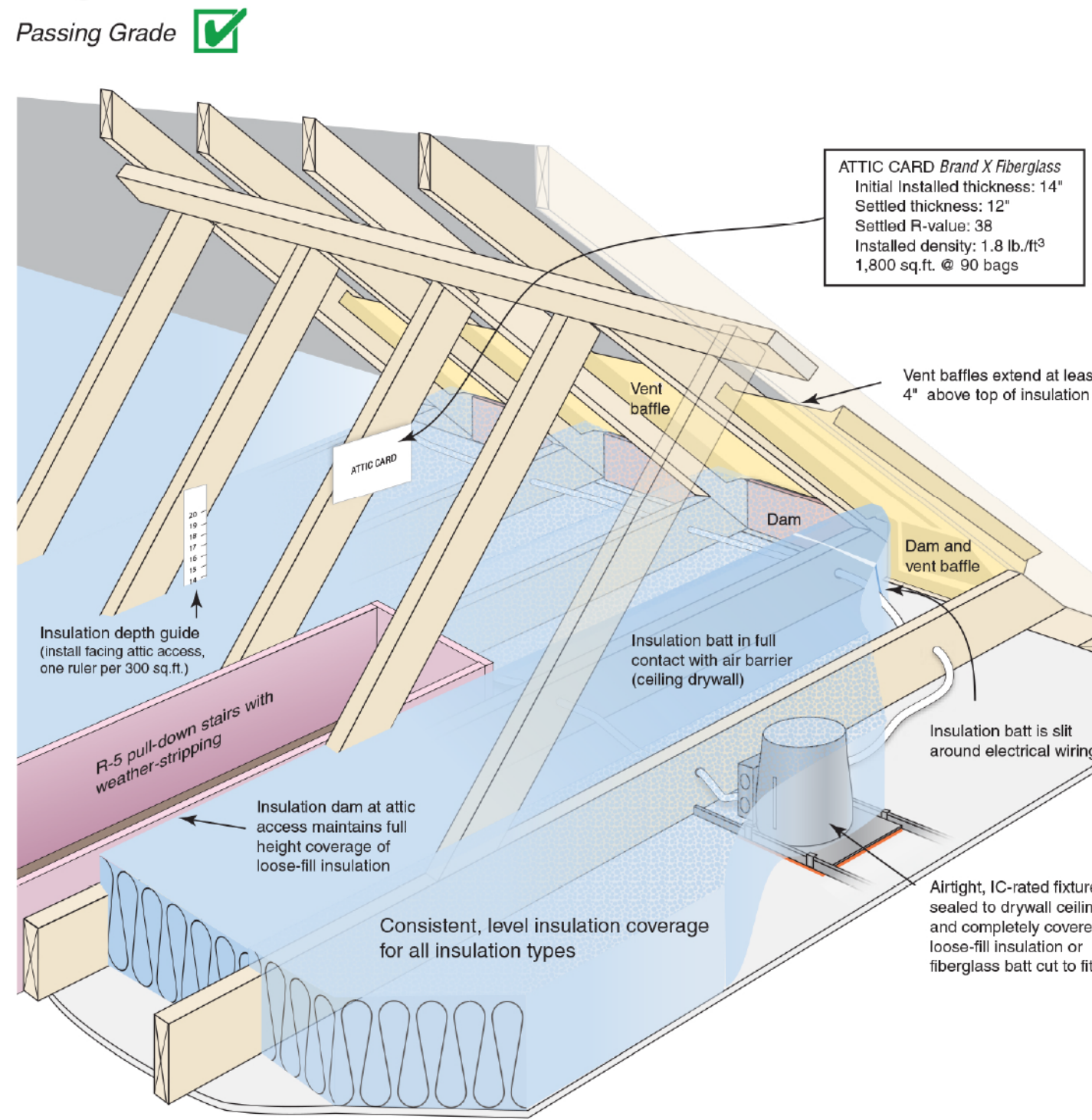
Insulation Details for Ceilings with Attic spaces

Rafter and Truss



Ceiling Insulation key points

Passing Grade



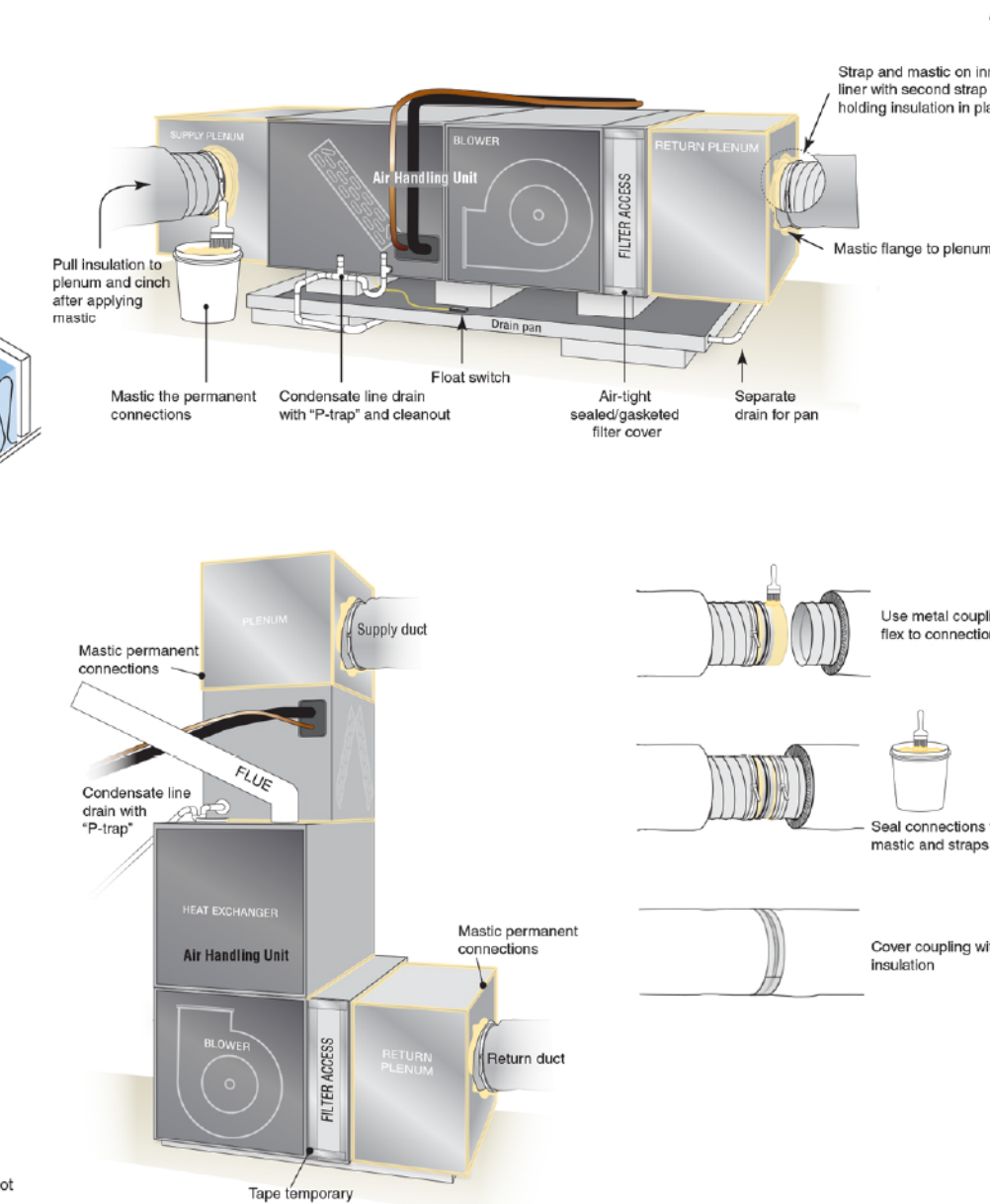
Georgia Insulation Installation – Passing Grade Details

Wall and ceiling insulation that makes up portions of the building thermal envelope shall be installed to Passing Grade quality. Two criteria affect installed insulation grading: **voids/gaps** (in which no insulation is present in a portion of the overall insulated surface) and **compression/incomplete fill** (in which the insulation does not fully fill out or extend to the desired depth).

- Voids/Gaps**
- Voids or gaps in the insulation are minimal for Passing Grade (< 2% of overall component surface area)
- Compression/Incomplete Fill**
- Compression/Incomplete Fill for both *air permeable insulation* (e.g., fiberglass, cellulose) and *air impermeable insulation* (e.g., spray polyurethane foam) must be less than 1 inch in depth or less than 30% of the intended depth, whichever is more stringent. The allowable area of compression/incomplete fill must be less than 2% of the overall insulated surface to achieve a Passing Grade.
 - Any compression/incomplete fill with a **depth** greater than the above specifications (up to 1" or 30% of the intended depth, whichever is more stringent) shall not achieve a Passing Grade.

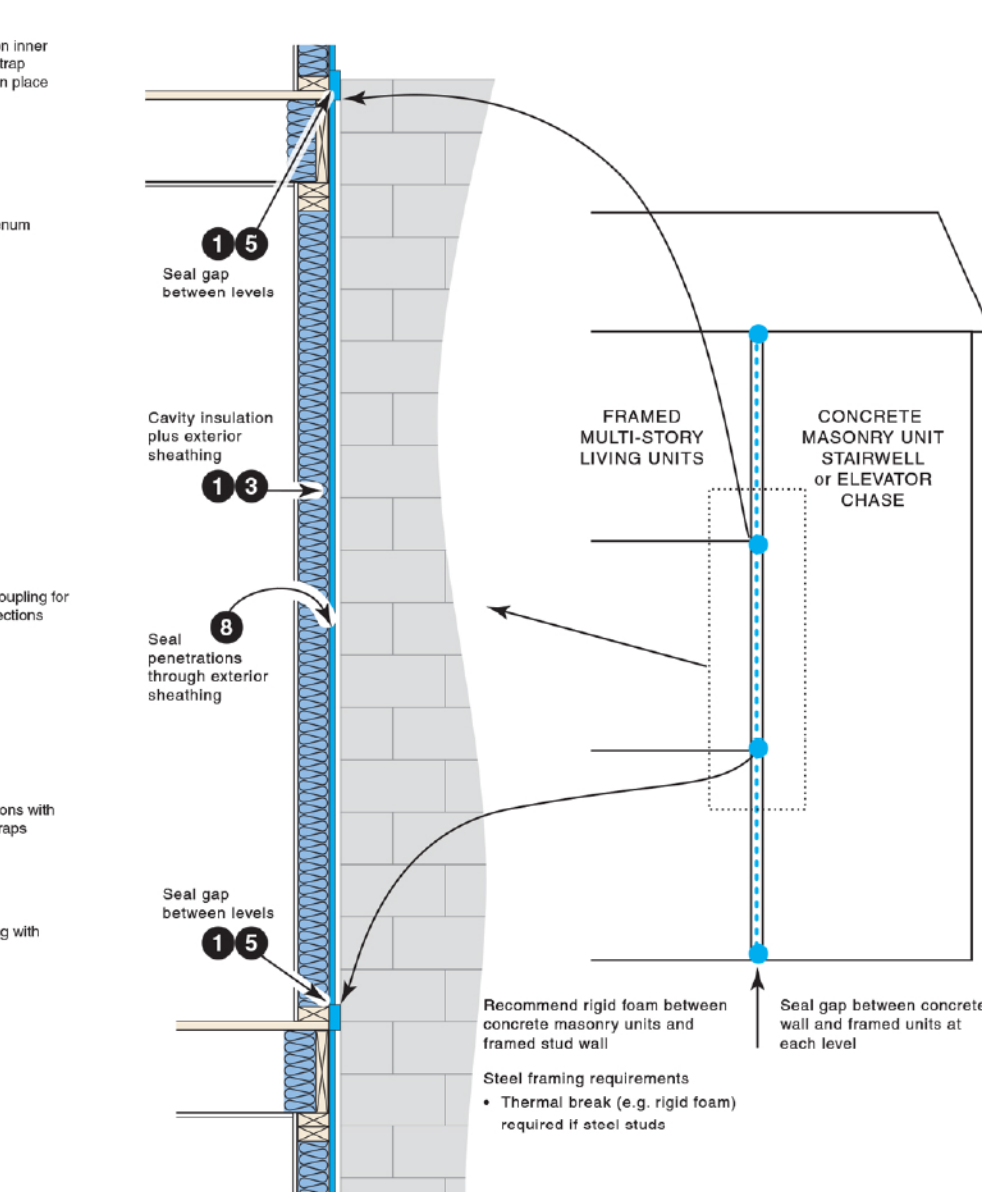
- Additional Wall Insulation Requirements**
- All vertical air permeable insulation shall be installed in substantial contact with an air barrier on all six (6) sides. **Exception:** Unfinished basements, rimbond joist cavity insulation and fireplaces (insulation shall be restrained to stay in place).
 - For unfinished basements, air permeable insulation and associated framing in a framed cavity wall shall be installed less than 1/4" from the basement wall surface.
 - Attic knee wall details – Attic knee walls shall be insulated to a total R-value of at least R-18 through any combination of cavity and continuous insulation. Air permeable insulation shall be installed with a fully sealed attic-side air barrier (e.g., OSB with seams caulked, rigid insulation with joints taped, etc.). Attic knee walls with air impermeable insulation shall not require an additional attic-side air barrier.

Air Handler Sealing key points



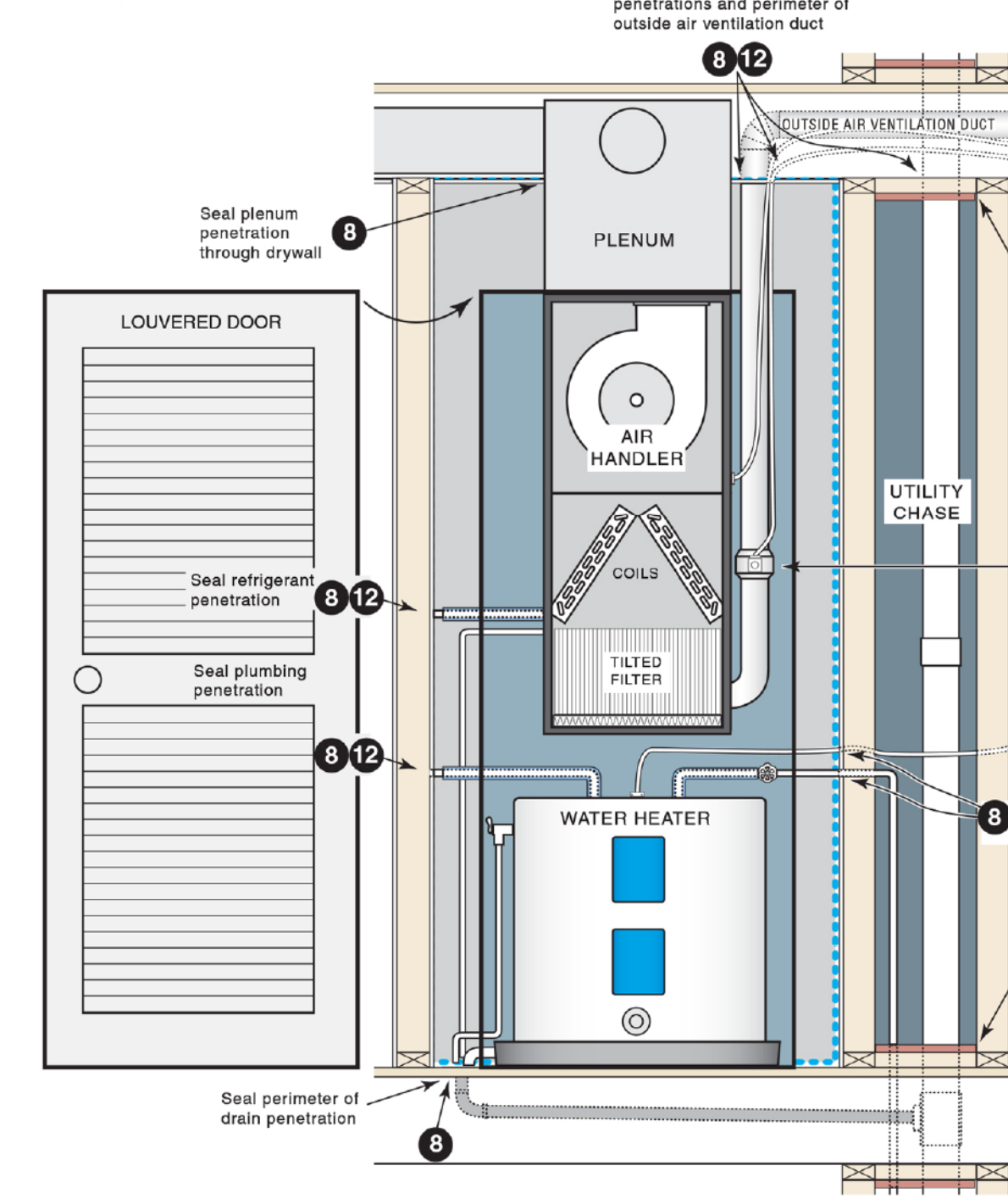
Air sealing key points continued

Multifamily



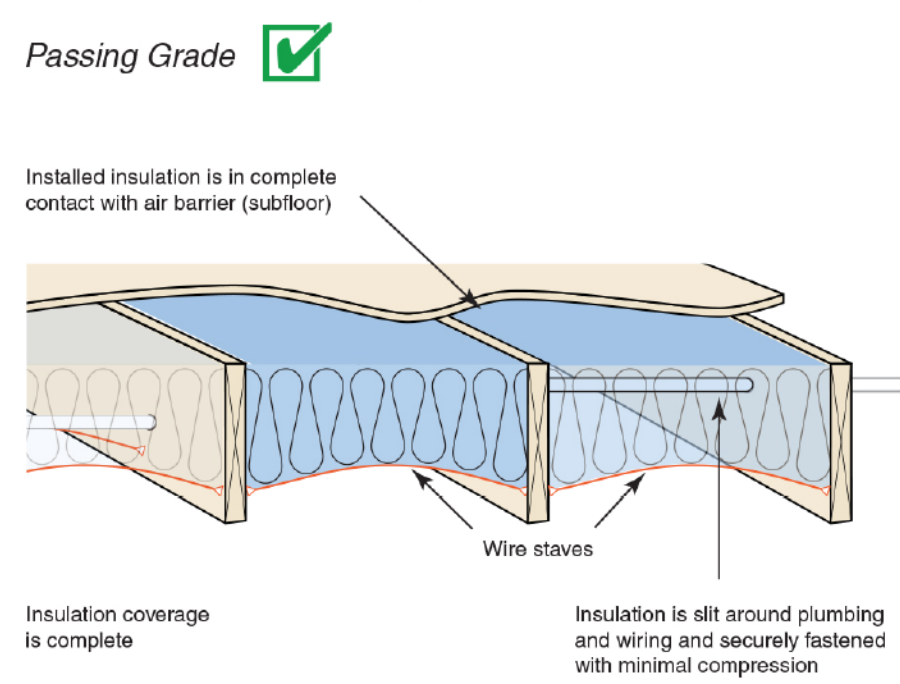
Air sealing key points continued

Multifamily Mechanical Closet



Floor Insulation key points

Passing Grade



Poster prepared for inclusion in Georgia Energy Code
Prepared by Southface Energy Institute
www.southface.org

Disclaimer:
This document was created by Southface and is intended solely to help graphically demonstrate the air leakage and insulation provisions of the 2015 IECC (2019 Georgia Energy Code). It does not cover all air sealing locations, materials or techniques. Other code provisions may be applicable as well.

CODE PLAN GENERAL NOTES:

1. FIRE EXTINGUISHERS SHALL BE LOCATED SO THAT THE MAXIMUM TRAVEL DISTANCE SHALL NOT EXCEED 75 FEET. GENERAL CONTRACTOR TO PROVIDE SEMI-RECESSED FIRE EXTINGUISHER CABINETS WITH FIRE EXTINGUISHERS THROUGHOUT AT ACCESSIBLE HEIGHT.
2. SIGNS IDENTIFYING FIRE PROTECTION EQUIPMENT, CONTROLS FOR AIR CONDITIONING SYSTEMS, SPRINKLER RISERS AND VALVES, OR OTHER FIRE DETECTION, SUPPRESSION OR CONTROL ELEMENTS SHALL BE IDENTIFIED FOR THE USE OF THE FIRE DEPARTMENT PER 2012 IBC. SIGNAGE SHALL ALSO MEET 2012 IFC REQUIREMENTS FOR HEIGHT AND LETTERING. GC TO COORDINATE WITH AUTHORITY HAVING JURISDICTION ON ALL SIGNAGE.
3. KNOX BOX QUANTITY AND LOCATION TO BE COORDINATED BY THE GENERAL CONTRACTOR WITH AUTHORITY HAVING JURISDICTION.
4. ANNUNCIATOR PANEL AND FACP QUANTITY AND LOCATION TO BE COORDINATED BY THE GENERAL CONTRACTOR WITH AUTHORITY HAVING JURISDICTION PRIOR TO INSTALL.
5. ALL DIMENSIONS ARE APPROXIMATE ON CODE PLAN. ACTUAL ARCHITECTURAL DIMENSIONS PER ARCHITECTURAL AND STRUCTURAL PLAN.
6. PROJECT COMPLIES WITH 2018 INTERNATIONAL ENERGY CONSERVATION CODE (IECC) - COMCHECK REPORT INCLUDED IN THE SPECIFICATIONS.

PRINTS ISSUED

11/07/25 100% BID SET

REVISIONS:

rosemann
& ASSOCIATES P.C.

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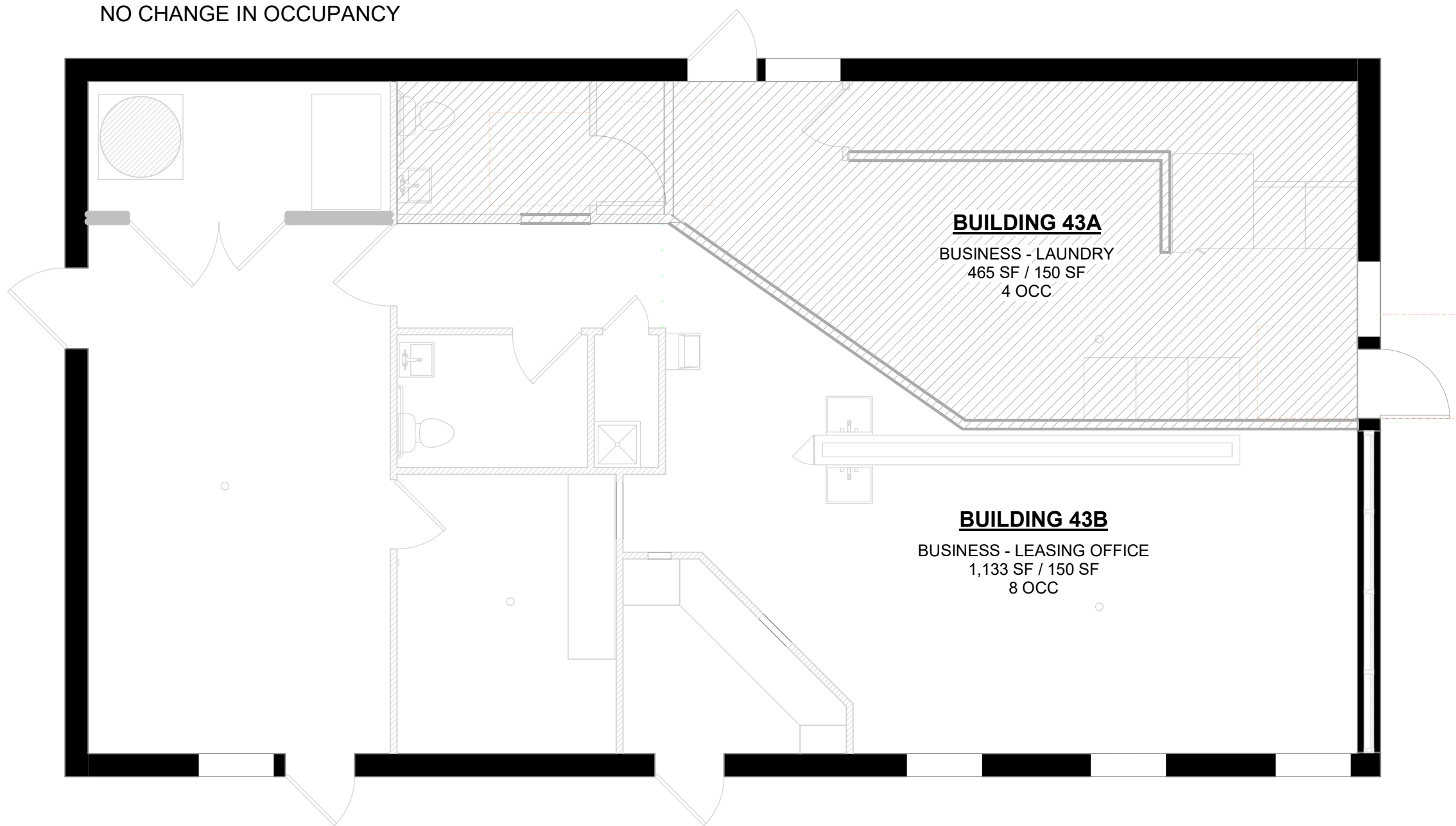
ARCHITECTURE
INTERIOR DESIGN

ENGINEERING
PLANNING

DENVER ▲ KANSAS CITY ▲ ST. LOUIS ▲ ATLANTA

BUILDING 43

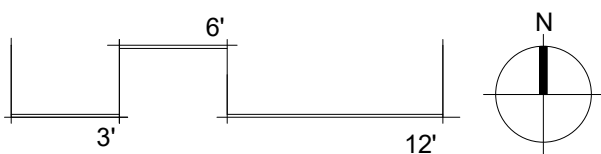
ALTERATION LEVEL 2
BUILDING SF: 1,599 SF
WORK AREA SF : 465 SF
WORK AREA <50% OF BUILDING SF
NO CHANGE IN OCCUPANCY



2

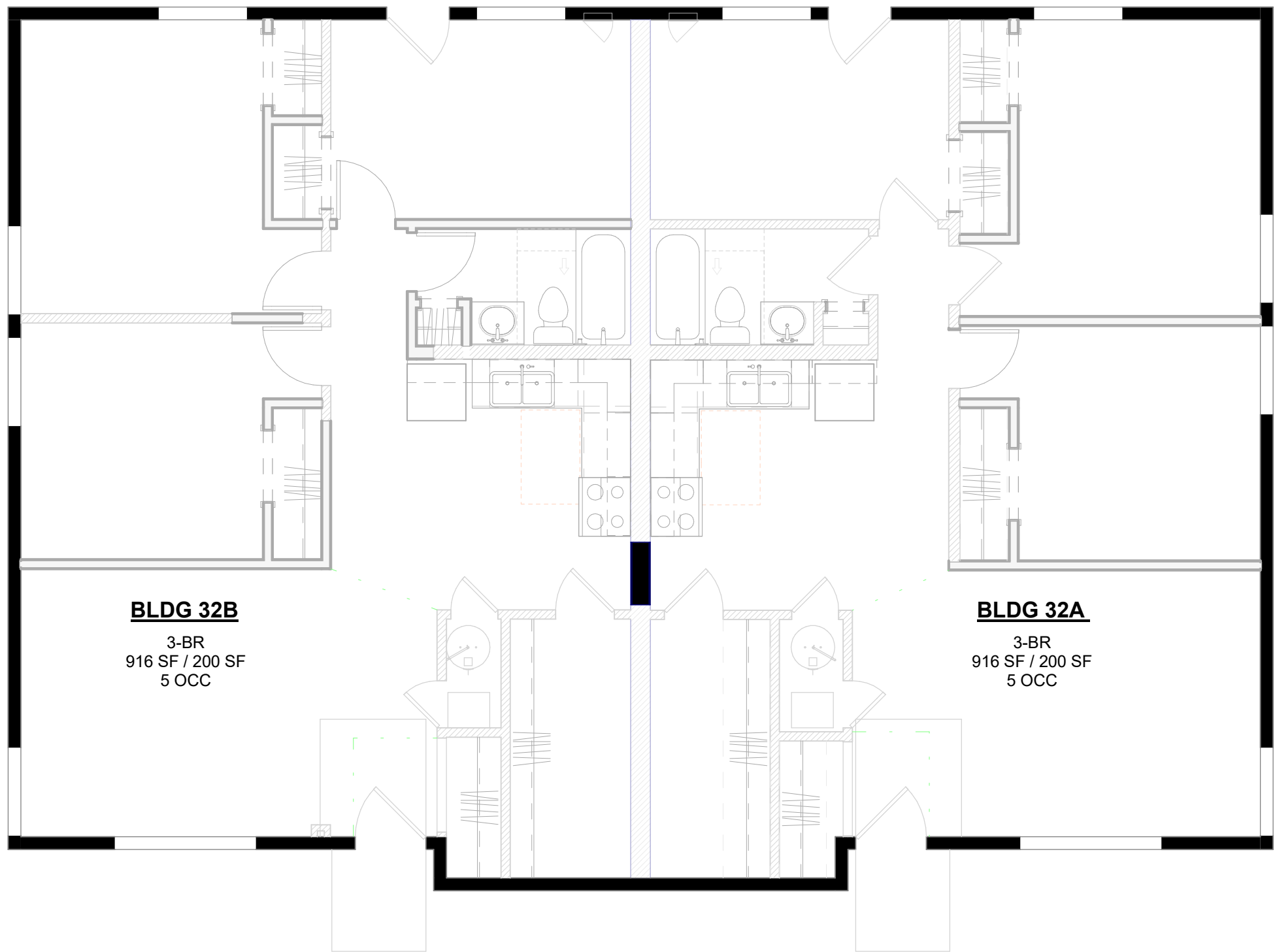
BUILDING 43 - CODE PLAN

3/16" = 1'-0"



BUILDING 32

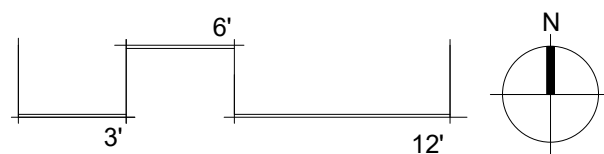
CHANGE OF OCCUPANCY



1

BUILDING 32 - CODE PLAN

3/16" = 1'-0"



BEAR CREEK APARTMENTS

1109 ELLETA BLVD.
COLUMBIA, MO 65202

SHEET TITLE
CODE ANALYSIS

PROJECT NUMBER: 24127.PR

SHEET NUMBER:

G-100

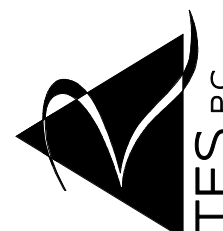
INTERIOR PARTITION ASSEMBLIES - WOOD - NON RATED		
	P1	WOOD 2x4 STUD - NON-RATED PARTITION - INTERIOR • (1) LAYER 5/8" TYPE 'X' GYPSUM BOARD • 2x4 WOOD STUDS SPACED 16" O.C. • (1) LAYER 5/8" TYPE 'X' GYPSUM BOARD NOTES: a. ATTACH GYPSUM WITH 1-1/4" TYPE 'W' STEEL SCREWS @ 12" O.C.
	P2	WOOD 2x6 STUD - NON-RATED PARTITION - INTERIOR • (1) LAYER 5/8" TYPE 'X' GYPSUM BOARD • 2x6 WOOD STUDS SPACED 16" O.C. • (1) LAYER 5/8" TYPE 'X' GYPSUM BOARD NOTES: a. ATTACH GYPSUM WITH 1-1/4" TYPE 'W' STEEL SCREWS @ 12" O.C.
INTERIOR SPECIALTY ASSEMBLIES - WOOD - RATING VARIES		
	P27	WOOD 2x8 STUD - 1HR PARTITION - INTERIOR • (1) LAYER 5/8" TYPE 'X' GYPSUM BOARD • 2x8 WOOD STUDS SPACED 16" O.C. MAX, OR PER STRUCT. DWGS. • 7-1/4" FRICTION FIT UNFACED BATT INSULATION IN STUD CAVITY • (1) LAYER 5/8" TYPE 'X' GYPSUM BOARD NOTES: a. ASSEMBLY TO COMPLY WITH UL DESIGN U305 (JAN 14, 2020) b. REFER TO UL FOR SCREW PATTERN AND OTHER REQUIREMENTS

- PARTITION GENERAL NOTES:**
1. MOISTURE- AND MOLD-RESISTANT DRYWALL SHALL BE USED AT ALL WET WALLS FOR THE FULL EXTENT OF THE WALL (FLOOR TO CEILING). CEMENTITIOUS BACKER BOARD SHALL BE USED IF TILE IS TO BE INSTALLED.
 2. REFER TO G-200 SHEETS FOR SPECIFIC UL DESIGN REQUIREMENTS.
 3. ALL FIRE-RATED PARTITIONS SHALL USE TYPE-'X' OR TYPE 'C'/FIRE-RATED GYPSUM BOARD OR DENSGLASS FIREGUARD IN THICKNESS INDICATED OR NECESSARY TO ACHIEVE REQUIRED RATING INDICATED BY UL ASSEMBLIES.
 4. PUTTY PADS SHALL BE INSTALLED AT THE FOLLOWING LOCATIONS: UNIT/CORRIDOR SEPARATION PARTITIONS; ALL UNIT DEMISING PARTITIONS WHERE MULTIPLE BOXES ARE INSTALLED IN THE SAME STUD CAVITY, INCLUDING BACK-TO-BACK BOXES.
 5. ANY PARTITION, BARRIER, OR WALL REQUIRING A PROTECTED OPENING OR PENETRATION SHALL HAVE PERMANENT IDENTIFICATION WITH SIGNS OR STENCILING PER **IBC CHAPTER 7** REQUIREMENTS INSTALLED IN CONCEALED DROPPED CEILING LOCATIONS, AT INTERMITTANT LOCATIONS AS DIRECTED AS INSTRUCTED BY AHJ.
 6. ALL EXPOSED INTERIOR SURFACES SHALL BE PAINTED
 7. GC SHALL FOLLOW MOST STRINGENT CODE APPLICABLE, INCLUDING LOCAL CODE, LOCAL AMENDMENTS, AND COMMENTS OF AHJ.
 8. GC TO INSTALL ALL EXTERIOR MATERIALS PER MFR. INSTRUCTIONS AND PER SPECS.
 9. PROVIDE FIRE RATED PLYWOOD BACKING ON ALL ELEC & MDF ROOM WALLS, PTD WALL COLOR PER INTERIOR DESIGNER, WITH FIRE RATED STAMP ON EACH SHEET LEFT UN-PAINTED.
 10. WHERE PARTITION/BARRIER IS USED AS A DEMISING WALL AND/OR FOR STRUCTURAL SHEAR, GC TO COORDINATE ADDITIONAL LAYERS OF STRUCTURAL MATERIAL PER STRUCTURAL DRAWINGS. THESE LAYERS TO BE ADDITIVE TO THE ASSEMBLY LISTED AND SHALL BE INCORPORATED PER **UL 263**. WHERE ONLY ONE LAYER IS ADDED FOR STRUCTURAL SHEAR, THIS SHALL BE PLACED ON SIDE OF WALL WHERE ONLY GYPSUM BOARD RESIDES, NOT ON RESILIENT CHANNEL SIDE.
 11. WHERE (2) OR MORE 1 HR HORIZONTAL ASSEMBLIES (INCLUDING FLOOR/CEILING ASSEMBLIES) OF DIFFERING DEPTHS MEET, MAINTAIN 1 HR RATING BY PROVIDING (2) LAYERS OF 5/8" TYPE 'X' GWB VERTICALLY FROM FACE OF FINISH TO FACE OF FINISH. **PER 2021 IBC TABLE 722.2.1.4(2)** ONE LAYER OF 5/8" TYPE 'X' GWB PROVIDES 40 MINUTES OF FIRE RATING. INSTALLATION OF GWB SHALL COMPLY WITH 2021 IBC 722.6.
 12. GC SHALL FOLLOW **2021 IBC SECTION 714 AND 715** AND LOCAL REQUIREMENTS FOR THROUGH AND MEMBRANE PENETRATIONS IN ASSEMBLIES AND FOR FIRE RESISTIVE JOINT SYSTEMS, RESPECTIVELY.
 13. GC TO REFER TO **UL 263** FOR GENERAL REQUIREMENTS/OPTIONS APPLICABLE TO ALL UL ASSEMBLIES.
 14. STC RATINGS BETWEEN DWELLING UNITS OR BETWEEN DWELLING UNIT AND PUBLIC AREAS, APPLICABLE TO FLOOR/CEILING ASSEMBLIES, WALLS, AND PARTITIONS, SHALL BE NO LESS THAN 50 AS TESTED BY ASTM E 90. IIC RATING BETWEEN DWELLING UNITS OR BETWEEN DWELLING UNIT AND PUBLIC AREAS, APPLICABLE TO FLOOR/CEILING ASSEMBLIES, SHALL BE NO LESS THAN 50 AS TESTED BY ASTM E 492.
 15. LVL, PSL, LSL FLOOR/CEILING, ROOF/CEILING FIRE RATING TO BE CALCULATED PER CHAPTER 16 OF THE ANSI/APA/AF&PANDS (CALCULATE FOR MEMBERS). IF 1 HR OR LESS RATING REQUIRED, GC TO REFER TO **IBC 721.1 (3) #21-1.1**

PRINTS ISSUED

11/07/25 100% BID SET

REVISIONS:

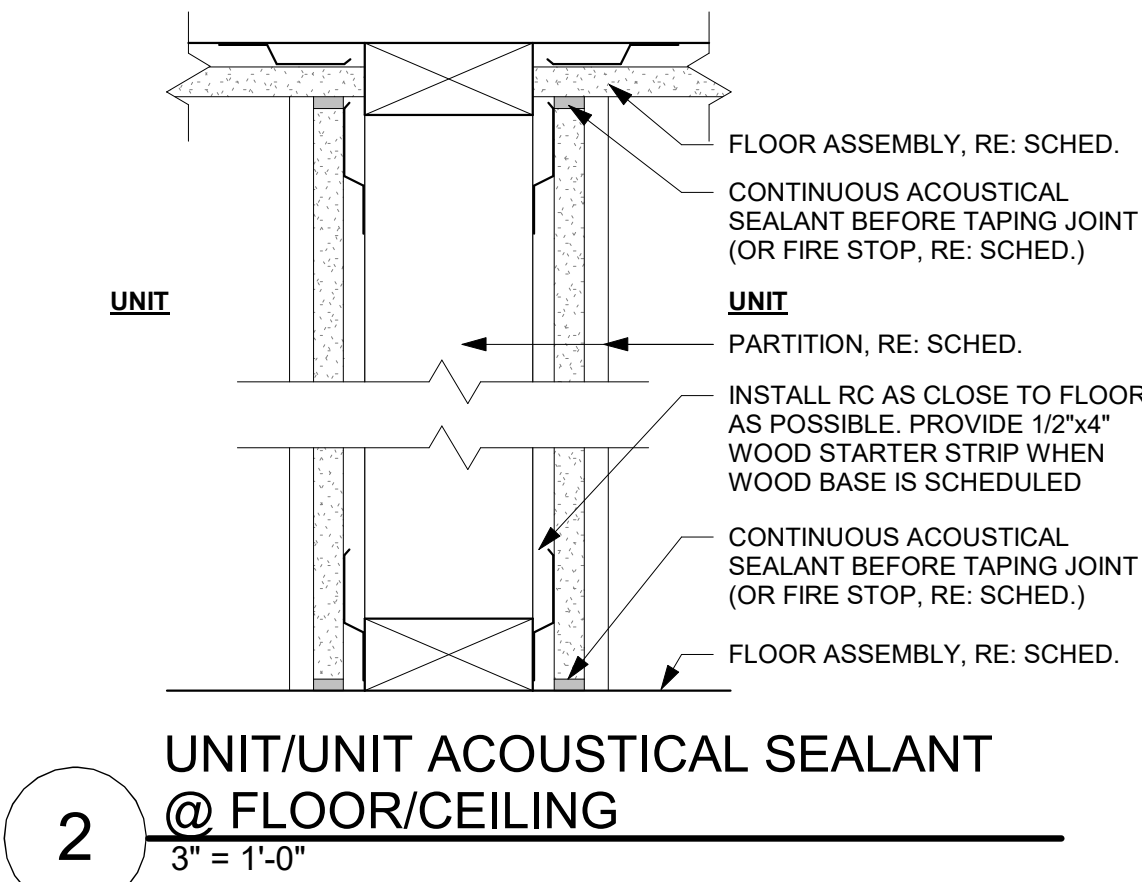
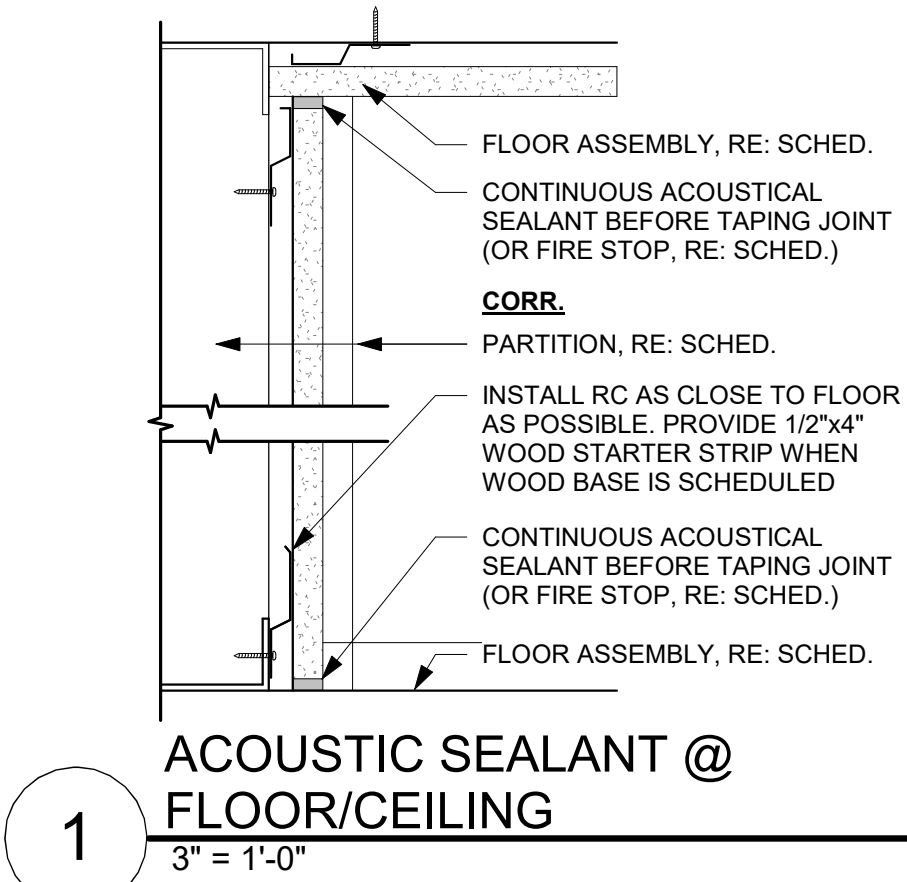


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DENVER ▲ KANSAS CITY ▲ ST. LOUIS ▲ ATLANTA



BEAR CREEK APARTMENTS

1109 ELLETA BLVD.
COLUMBIA, MO 65202

SHEET TITLE
PARTITION ASSEMBLIES - WOOD,
CMU, CONCRETE

PROJECT NUMBER: 24127.PR

SHEET NUMBER:

G-101

11/6/2025 3:40:28 PM
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UL Product IQ[®] BXUV.U305 - Fire-resistance Ratings - ANSI/UL 263 Design/System/Construction/Assembly Usage Disclaimer • Authorities Having Jurisdiction should be consulted in all cases as to the particular requirements covering the installation and use of UL Certified products, equipment, system, devices, and materials. • Authorities Having Jurisdiction should be consulted before construction. • Fire resistance assemblies and products are developed by the design submitter and have been investigated by UL for compliance with applicable requirements. The published information cannot always address every construction nuance encountered in the field. • When field issues arise, it is recommended the first contact for assistance be the technical service staff provided by the product manufacturer noted for the design. Users of fire resistance assemblies are advised to consult the general Guide Information for each product category and each group of assemblies. The Guide Information includes specifics concerning alternate materials and alternate methods of construction. • Only products which bear UL's Mark are considered Certified. Fire-resistance Ratings - ANSI/UL 263 BXUV - Fire Resistance Ratings - ANSI/UL 263 Certified for United States BXUV7 - Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada See General Information for Fire-resistance Ratings - ANSI/UL 263 Certified for United States Design Criteria and Allowable Variations See General Information for Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada Design Criteria and Allowable Variations Design No. U305 May 27, 2022 Bearing Wall Rating — 1 Hr Finish Rating — See Items 3, 3A, 3D, 3E, 3F, 3G, 3H, 3J and 3L STC Rating - 56 (See Item 3) This design was evaluated using a load design method other than the Limit States Design Method (e.g., Working Stress Design Method). For jurisdictions employing the Limit States Design Method, such as Canada, a load restriction factor shall be used — See Guide BXUV or BXUV7 * Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.	CERTAINTEE GYPSUM INC — Type C, Type X-1 (finish rating 26 min); Type EGRG or GlasRoc (finish rating 23 min), GlasRoc-2, Type Habito (finish rating 26 min), Type LWTX (finish rating 18 min), Type LGFC6A (finish rating 34 min), Type LGFC2A, Type LGFC-C/A, Type LGFC-WD, Type LGLLX (finish rating 21 min), Type CLXX (finish rating 24 min) CGC INC — Type AR (finish rating 24 min), Type C (finish rating 24 min), Type IP-AR (finish rating 24 min), Type IPC-AR (finish rating 24 min), Type IP-X1 (finish rating 24 min), Type IP-X2 (finish rating 24 min), Type SCX (finish rating 24 min), Type SHX (finish rating 24 min), Type WRC (finish rating 22 min), Type WRC (finish rating 24 min), Type WRX (finish rating 24 min), Type ULX (finish rating 20 min) GEORGIA-PACIFIC GYPSUM L L C — Type 5 (finish rating 26 min), Type 6 (finish rating 23 min), Type 9 (finish rating 26 min), Type C (finish rating 26 min), Type DGG (finish rating 20 min), Type GPFS1 (finish rating 20 min), Type GPFS2 (finish rating 20 min), Type GPFS6 (finish rating 26 min), Type DS, Type DAP, Type DD (finish rating 20 min), Type DA, Type DAPC, Type LS (finish rating 20 min), Type X, Veneer Plaster Base - Type X, Water Rated - Type X, Sheathing - Type X, Soffit - Type X, Type LWX (finish rating 22 min), Veneer Plaster Base-Type LWX (finish rating 22 min), Water Rated-Type LWX (finish rating 22 min), Sheathing-Type LWX (finish rating 22 min), Soffit-Type LWX (finish rating 22 min), Type DGLW (finish rating 22 min), Water Rated-Type DGLW (finish rating 22 min), Sheathing-Type DGLW (finish rating 22 min), Soffit-Type DGLW (finish rating 22 min), Type LWX (finish rating 22 min), Type LW2X (finish rating 22 min), Veneer Plaster Base - Type LW2X (finish rating 22 min), Water Rated - Type LW2X (finish rating 22 min), Sheathing - Type LW2X (finish rating 22 min), Soffit - Type LW2X (finish rating 22 min), Type DGLZW (finish rating 22 min), Water Rated - Type DGLZW (finish rating 22 min), Sheathing - Type DGLZW (finish rating 22 min) NATIONAL GYPSUM CO — Type FSX (finish rating 20 min), Type FSK-G (finish rating 20 min), Type FSW (finish rating 20 min), Type FSW-2 (finish rating 24 min), Type FSW-3 (finish rating 20 min), Type FSW-5 (finish rating 22 min), Type FSW-G (finish rating 20 min), Type FSK-C (finish rating 20 min), Type FSW-C (finish rating 20 min), Type FSMR-C, Type FSW-6 (finish rating 20 min), Type FSL (finish rating 24 min), Type FSW-8, Type FSLX (finish rating 21 min), Type RSX (finish rating 26 min) NATIONAL GYPSUM CO — Riyadh, Saudi Arabia — Type FR, or WR. PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type C, PG-2 (finish rating 20 min), PG-3 (finish rating 20 min), Types PG-3W, PG-5W (finish rating 20 min), Type PG-4 (finish rating 20 min), Type PG-6 (finish rating 23 min), Types PG-3WS, PG-5WS, PGS-PWS (finish rating 20 min), Types PG-5, PG-9 (finish rating 26 min), PG-11 PG-13 (Nails increased to 2 in), Type PG-C or PGI (finish rating 26 min) PANEL REY S A — Type ARX, GREX, GRIX, PRX, PRC, PRC2; Types RHX, Guard Rey, MDX, ETX (finish rating 22 min), PRX2 (finish rating 21 min) SIAM GYPSUM INDUSTRY (SARABURI) CO LTD — Type EX-1 (finish rating 26 min) THAI GYPSUM PRODUCTS PCL — Type C, Type X (finish rating 26 min) UNITED STATES GYPSUM CO — Type AR (finish rating 24 min), Type C (finish rating 24 min), Type FRX-G (finish rating 29 min), Type IP-AR (finish rating 24 min), Type IP-AR (finish rating 24 min), Type IP-X1 (finish rating 24 min), Type IP-X2 (finish rating 24 min), Type SHX (finish rating 24 min), Type SCX (finish rating 24 min), Type ULX (finish rating 24 min), Type WRX (finish rating 24 min), Type WRC (finish rating 24 min), Type ULX (finish rating 20 min) USG BORAL DRYWALL SFZ LLC — Type SGX (finish rating 24 min). USG MEXICO S A DE C V — Type AR (finish rating 24 min), Type C (finish rating 24 min), Type WRX (finish rating 24 min), Type WRC (finish rating 24 min), Type IP-X1 (finish rating 24 min), Type IP-X2 (finish rating 24 min), Type SHX (finish rating 24 min), SCX (finish rating 24 min), Type IP-AR (finish rating 24 min), Type IPC-AR (finish rating 24 min), Type ULX (finish rating 22 min) 3A. Gypsum Board* — (As an alternate to Item 3) — 5/8 in. thick gypsum panels, with beveled, square, or tapered edges, applied either horizontally or vertically. Gypsum panels fastened to framing with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced a max 8 in. OC, with last screw 1 in. from edge of board. When used in widths of other than 48 in., gypsum boards are to be installed horizontally. AMERICAN GYPSUM CO — Types AGX-1 (finish rating 25 min.), M-Glass (finish rating 25 min.), AG-C (finish rating 25 min.), LightRoc (finish rating 25 min.)	in. long, 0.0915 in. shank diam and 15/64 in. diam heads. When used in widths of other than 48 in., gypsum boards are to be installed horizontally. GEORGIA-PACIFIC GYPSUM L L C — Type DGG (finish rating 20 min), GreenGlass Type X (finish rating 23 min) 3F. Gypsum Board* — (As an alternate to Items 3, 3A, 3B, 3C, 3D, and 3E) — 5/8 in. glass-mat faced with square edges, applied either horizontally or vertically. Gypsum panels nailed 7 in. OC around the perimeter and in the field with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 15/64 in. diam heads. Nails shall be placed 1 inch and 3 inch from horizontal joints and 7 inch OC thereafter. CGC INC — Type USGX (finish rating 22 min) UNITED STATES GYPSUM CO — Type USGX (finish rating 22 min.) USG BORAL DRYWALL SFZ LLC — Type USGX (finish rating 22 min.) USG MEXICO S A DE C V — Type USGX (finish rating 22 min.) 3G. Gypsum Board* — (As an alternate to Items 3 through 3F) — 5/8 in. thick paper surfaced applied vertically. Gypsum panels nailed 7 in. OC with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 15/64 in. diam heads. GEORGIA-PACIFIC GYPSUM L L C — Type X ComfortGuard Sound Deadening Gypsum Board (finish rating 27 min) 3H. Gypsum Board* — (As an alternate to Items 3) — Not to be used with Items 6, 7, 5/8 in. thick paper surfaced applied vertically only. Gypsum panels nailed 7 in. OC with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 15/64 in. diam heads. NATIONAL GYPSUM CO — Type SSWB 3I. Gypsum Board* — (As an alternate to Items 3 through 3H, Not Shown) — Nominal 5/8 in. thick, 4 ft wide panels, applied vertically. Panels nailed 7 in. OC with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 15/64 in. diam heads. Panel joints covered with paper tape and two layers of joint compound. Nailheads covered with two layers of joint compound. PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type QuietRock ES (finish rating 20 min) 3J. Gypsum Board* — (As an alternate to Item 3) — 5/8 in. thick paper surfaced applied vertically or horizontally. Gypsum panels secured with 1-1/4 in. Type W coarse thread gypsum panel steel screws spaced a maximum of 12 in. OC. CERTAINTEE GYPSUM INC — Type SilentFX 3K. Gypsum Board* — (As an alternate to Item 3) — 5/8 in. thick gypsum panels, with beveled, square, or tapered edges, applied either horizontally or vertically. Gypsum panels fastened to framing with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced a maximum 8 in. OC with the last screw 1 in. from the edge of the board. When used in widths other than 48 in., gypsum panels are to be installed horizontally. NATIONAL GYPSUM CO — Type FSK (finish rating 20 min), Type FSK-G (finish rating 20 min), Type FSW (finish rating 20 min), Type FSW-2 (finish rating 24 min), Type FSW-3 (finish rating 20 min), Type FSW-5 (finish rating 22 min), Type FSW-G (finish rating 20 min), Type FSK-C (finish rating 20 min), Type FSW-C (finish rating 20 min), Type FSMR-C, Type FSW-6 (finish rating 20 min), Type FSL (finish rating 24 min). 3L. Gypsum Board* — (As an alternate to Item 3) — For Direct Application to Studs Only — Nom 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-5/8 in. long Type W coarse thread gypsum panel steel screws spaced 8 in. OC at perimeter and in the field. Lead batten strips required behind vertical joints of lead backed gypsum wallboard and optional at remaining stud locations. Lead batten strips, min 2 in. wide, max 10 ft long with a max thickness of 0.140 in., placed on the face of studs and attached to the stud with two 1 in. long Type S-8 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead discs, max 5/16 in. diam by max 0.140 in. thick, compression fitted or adhered over the screw heads. Lead batten strips to have a purity of 99.5% meeting the Federal specification QQ-L-201f, Grades "B, C or D". MAVCO INDUSTRIES INC — "X-Ray Shielded Gypsum" 3M. Gypsum Board* — (As an alternate to Items 3) — For Direct Application to Studs Only — For use as the base layer or as the face layer. Nom 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-5/8 in. long Type W coarse thread gypsum panel steel screws spaced 8 in. OC at perimeter and in the field when applied as the base layer. When applied as the	CGC INC — Type SCX PANEL REY S A — Type ARX, PRX SIAM GYPSUM INDUSTRY (SARABURI) CO LTD — Type EX-1 THAI GYPSUM PRODUCTS PCL — Type X UNITED STATES GYPSUM CO — Types SCX and SGX USG BORAL DRYWALL SFZ LLC — Types SCX and SGX USG MEXICO S A DE C V — Type SCX 3V. Gypsum Board* — (As an alternate to Item 3. For use with Item 5G) — Any 5/8 in. thick, 4 ft. wide, Gypsum Board listed in Item 3 above. Applied vertically with vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Gypsum panels secured to studs with 1-5/8 in. long Type W coarse thread gypsum panel steel screws spaced 8 in. OC at perimeter and in the field. 4. Steel Corner Fasteners — (Optional) — For use at wall corners. Channel shaped, 2 in. long by 1 in. high on the back side with two 1/8 in. wide cleats protruding into the 5/8 in. wide channel, fabricated from 24 gauge galv steel. Fasteners applied only to the end or cut edge (not along tapered edges) of the gypsum board, no greater than 2 in. from corner of gypsum board, max spacing 16 in. OC. Nailed to adjacent stud through tab using one no. 6d cement coated nail per fastener. Corners of wall board shall be nailed to top and bottom plate using No. 6d cement coated nails. 5. Batts and Blankets* — (Optional) — Required when Item 6A is used (RC-1) — Glass fiber or mineral wool insulation. Placed to completely or partially fill the stud cavities. When Item 6A is used, glass fiber or mineral wool insulation shall be friction-fitted to completely fill the stud cavities. CERTAINTEE CORP JOHNS MANVILLE KNAUF INSULATION LLC MANSON INSULATION INC ROCKWOOL — Types Acoustical Fire Batts and Type AFB, min. density 1.69 pcf / 27.0 kg/m³ ROCKWOOL MALAYSIA SDN BHD — Type Acoustical Fire Batts ROCK WOOL MANUFACTURING CO — Delta Board THERMAFIBER INC — Type SAFB, SAFB FF 5A. Fiber, Sprayed* — (Not Shown — Not for use with Item 6) — As an alternate to Batts and Blankets (Item 5) — Spray applied cellulose material. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application instructions supplied with the product with a nominal dry density of 2.7 lb/ft³. Alternate Application Method: The fiber is applied without water or adhesive at a nominal dry density of 3.5 lb/ft³, in accordance with the application instructions supplied with the product. When Item 6B is used, Fiber, Sprayed shall be INS735, INS745, INS750LD, INS765LD, INS773LD or SANCTUARY. U S GREENFIBER L L C — INS735, INS745, INS750LD and SANCTUARY for use with wet or dry application. INS515LD, INS541LD, INS735, INS765LD, and INS773LD are to be used for dry application only
1. Wood Studs — Nom 2 by 4 in. spaced 16 in. OC max, effectively firestopped. 2. Joints and Nail-Heads — Joints covered with joint compound and paper tape. Joint compound and paper tape may be omitted when square edge boards are used. As an alternate, nom 3/32 in. thick gypsum veneer plaster may be applied to the entire surface of Classified veneer baseboard with the joints reinforced with paper tape. Nailheads exposed or covered with joint compound. 3. Gypsum Board* — 5/8 in. thick paper or vinyl surfaced, with beveled, square, or tapered edges, applied either horizontally or vertically. Gypsum panels nailed 7 in. OC with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 15/64 in. diam heads. When used in widths other than 48 in., gypsum panels are to be installed horizontally. For an alternate method of attachment of gypsum panels, refer to Items 6 through 6F. Steel Framing Members*. When Items 6, 6B, 6C, 6D, 6E, or 6F. Steel Framing Members* are used, gypsum panels attached to furring channels with 1 in. long Type S bugle-head steel screws spaced 12 in. OC. When Item 6A, Steel Framing Members*, is used, two layers of gypsum panels attached to furring channels. Base layer attached to furring channels with 1 in. long Type S bugle-head steel screws spaced 12 in. OC. Face layer attached to furring channels with 1-5/8 in. long Type S bugle-head steel screws spaced 12 in. OC. All joints in face layers staggered with joints in base layers. One layer of gypsum board attached to opposite side of wood stud without furring channels as described in Item 3. When Item 7, resilient channels are used, 5/8 in. thick, 4 ft gypsum panels applied vertically. Screw attached furring channels with 1 in. long self-drilling, self-tapping Type S or 5-12 steel screws spaced 8 in. OC, vertical joints located midway between studs. AMERICAN GYPSUM CO — Types AGX-1 (finish rating 23 min.), M-Glass (finish rating 23 min.), Type AGX-11 (finish rating 26 min), Type AGX-12 (finish rating 22 min), Type LightRoc (finish rating 23 min) or Type AG-C BEIJING NEW BUILDING MATERIALS PUBLIC LTD CO — Type DBX-1 (finish rating 24 min) CABOT MANUFACTURING ULC — Type X (finish rating 22 min), 5/8 Type X, Moisture Resistant Type X, Gypsum Sheathing Type X, Mold & Mildew Resistant Type X and Mold & Mildew Resistant AR Type X, Type Bluegluss Exterior Sheathing	CERTAINTEE GYPSUM INC — Type C, Type X-1 (finish rating 26 min), Type EGRG or GlasRoc. CGC INC — Type AR (finish rating 24 min), Type C (finish rating 24 min), Type IP-AR (finish rating 24 min), Type IPC-AR (finish rating 24 min), Type IP-X1 (finish rating 24 min), Type IP-X2 (finish rating 24 min), Type SCX (finish rating 24 min), Type SHX (finish rating 24 min), Type WRC (finish rating 24 min), Type WRX (finish rating 24 min) NATIONAL GYPSUM CO — Type FSW (finish rating 24 min) UNITED STATES GYPSUM CO — Type AR (finish rating 24 min), Type SCX (finish rating 24 min), Type SGX (finish rating 24 min), Type C (finish rating 24 min), Type WRX (finish rating 24 min), Type WRC (finish rating 24 min), Type IP-X1 (finish rating 24 min), Type IP-X2 (finish rating 24 min), Type SHX (finish rating 24 min), Type SCX (finish rating 24 min), Type ULX (finish rating 24 min), Type WRX (finish rating 24 min), Type WRC (finish rating 24 min), Type ULX (finish rating 20 min) USG BORAL DRYWALL SFZ LLC — Types C, SGX, SCX (finish rating 24 min). USG MEXICO S A DE C V — Type AR (finish rating 24 min), Type C (finish rating 24 min), Type WRX (finish rating 24 min), Type WRC (finish rating 24 min), Type IP-X1 (finish rating 24 min), Type IP-X2 (finish rating 24 min), Type SHX (finish rating 24 min), Type SCX, Type IP-AR (finish rating 24 min), Type IPC-AR (finish rating 24 min) 3B. Gypsum Board* — (As an alternate to Item 3) — Nom 3/4 in. thick, installed with 1-7/8 in. long cement coated nails as described in Item 3 or 1-3/8 in. long Type W coarse thread gypsum panel steel screws as described in Item 3A. CGC INC — Types AR, IP-AR UNITED STATES GYPSUM CO — Types AR, IP-AR USG MEXICO S A DE C V — Types AR, IP-AR 3C. Gypsum Board* — (As an alternate to Items 3, 3A and 3B) — 5/8 in. thick, 2 ft wide, tongue and groove edge, applied horizontally to one side of the assembly. Installed with 1-7/8 in. long cement coated nails as described in Item 3 or 1-1/4 in. long Type W coarse thread gypsum panel steel screws as described in Item 3A. Joint covering (Item 2) not required. CGC INC — Type SHX UNITED STATES GYPSUM CO — Type SHX USG MEXICO S A DE C V — Type SHX 3D. Gypsum Board* — (As an alternate to Items 3, 3A, 3B, or 3C — Not Shown) — For Direct Application to Studs Only- Nom 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-5/8 in. long Type W coarse thread gypsum panel steel screws spaced 8 in. OC at perimeter and in the field. Lead batten strips required behind vertical joints of lead backed gypsum wallboard and optional at remaining stud locations. Lead batten strips, min 1-1/2 in. wide, max 10 ft long with a max thickness of 0.125 in., placed on the face of studs and attached to the stud with two 1 in. long Type S-12 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead discs or tabs may be used in lieu of or in addition to the lead batten strips or optional at other locations. Max 3/4 in. diam by max 0.125 in. thick lead discs compression fitted or adhered over steel screw heads or max 1/2 in. by 1-1/4 in. by max 0.125 in. thick lead tabs placed on gypsum boards underneath screw locations prior to the installation of the screws. Lead batten strips to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". RAY-BAR ENGINEERING CORP — Type RB-LBG (finish rating 24 min) 3E. Gypsum Board* — (As an alternate to Items 3, 3A, 3B, 3C, and 3D) — 5/8 in. thick gypsum panels, with square edges, applied either horizontally or vertically. Gypsum panels fastened to framing with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced a max 8 in. OC, with last 2 screws 1 and 4 in. from edge of board or nailed 7 in. OC with 6d cement coated nails 1-7/8	face layer screw length to be increased to 2-1/2 in. Lead batten strips required behind vertical joints of lead backed gypsum wallboard and optional at remaining stud locations. Lead batten strips, min 2 in. wide, max 8 ft long with a max thickness of 0.14 in. placed on the face of studs and attached to the stud with construction adhesive and two 1 in. long Type S-12 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead discs, nominal 3/8 in. diam by max 0.085 in. thick. Compression fitted or adhered over the screw heads. Lead batten strips and discs to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". Fasteners for face layer gypsum panels (Items 4A, 4B or 4A) when installed over lead backed board to be min 2-1/2 in. Type S-12 bugle head steel screws spaced as described in Item 4. RADIATION PROTECTION PRODUCTS INC — Type RPP — Lead Lined Drywall 3N. Gypsum Board* — (As an alternate to Item 3) — 5/8 in. thick, 4 ft. wide, applied horizontally or vertically with vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Secured as described in Item 3 or 3A. CERTAINTEE GYPSUM INC — Easy-Lite Type X (finish rating 24 min), Easy-Lite Type X-2 (finish rating 24 min) 3O. Wall and Partition Facings and Accessories* — (As an alternate to Item 3, Not Shown) — Nominal 5/8 in. thick, 4 ft wide panels, applied vertically. Panels nailed 7 in. OC with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 15/64 in. diam heads. Panel joints covered with paper tape and two layers of joint compound. Nailheads covered with two layers of joint compound. PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type QuietRock S27 (finish rating 24 min) 3P. Gypsum Board* — (As an alternate to Item 3, Not Shown) — Two layers nom. 5/16 in. thick gypsum panels applied vertically or horizontally. Horizontal edge joints and horizontal butt joints on opposite sides of studs need not be staggered or backed by wood studs. Horizontal joints on the same side between face and base layers need not be staggered. Base layer gypsum panels fastened to studs with 1-1/4 in. long drywall nails spaced 8 in. OC. Face layer gypsum panels fastened to studs with 1-7/8 in. long drywall nails spaced 8 in. OC starting with a 4" stagger. NATIONAL GYPSUM CO — Type FSW (finish rating 25 min) 3Q. Gypsum Board* — (As an alternate to Item 3) — 5/8 in. thick gypsum panels, with beveled, square, or tapered edges, applied either horizontally or vertically. Gypsum panels fastened to framing with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced a maximum 10 in. OC with the last two screws 4 and 1 in. from the edges of the board. When used in widths other than 48 in., gypsum panels are to be installed horizontally. CERTAINTEE GYPSUM INC — Type LGFC6A (finish rating 21 min), Type LGFC2A, Type LGFC-C/A, Type LGFC-WD, Type LGLLX 3R. Gypsum Board* — (As an alternate to Item 3. For use with Item 5H) — Any 5/8 in. thick, 4 ft. wide, Gypsum Board listed in Item 3 above. Applied either horizontally or vertically, and screwed to panels with 1-5/8 in. long Type W coarse thread steel screws at 8 in. OC at perimeter and in the field with the last two screws 4 and 3/4 in. from the edges of the board when applied as the base layer. When used in widths other than 48 in., gypsum panels are to be installed horizontally. 3S. Gypsum Board* — 3/4 in. thick paper or vinyl surfaced, with beveled, square, or tapered edges, applied either horizontally or vertically. Gypsum panels secured as described in Item 3 with nail length increased to 2 in. PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type PG-13 3T. Wall and Partition Facings and Accessories* — (As an alternate to 5/8 in. thick board as outlined in Item 3) — Nominal 1-3/8 in. thick, 4 ft wide panels, applied vertically or horizontally. Fastened with #6 x 2 in. long drywall screws spaced 8 in. OC along the perimeter and 12 in. OC in the field. PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type QuietRock S45 3U. Gypsum Board* — (As an alternate to Item 3 - For use with Foamed Plastic products, Item 5J) — 5/8 in. thick, 4 ft. wide, applied vertically with vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Gypsum panels nailed 7 in. OC with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 15/64 in. diam heads. AMERICAN GYPSUM CO — Types AGX-1 BEIJING NEW BUILDING MATERIALS PUBLIC LTD CO — Type DBX-1 CABOT MANUFACTURING ULC — Type X CERTAINTEE GYPSUM INC — Type X	58. Fiber, Sprayed* — (Not Shown - Not for use with Item 6) — As an alternate to Batts and Blankets (Item 5) - Spray applied cellulose insulation material. The fiber is applied with water to interior surfaces in accordance with the application instructions supplied with the product. Applied to completely fill the enclosed cavity. Minimum dry density of 4.3 pounds per cubic ft. NU-WOOL CO INC — Cellulose Insulation 5C. Batts and Blankets* — Required for use with resilient channels, Item 7, 3 in. thick mineral wool batts, friction-fitted to fill interior of wall. THERMAFIBER INC — Type SAFB, SAFB FF 5D. Glass Fiber Insulation — (As an alternate to Item 5C) — 3 in. thick glass fiber batts bearing the UL Classification Marking as to Surface Burning and/or Fire Resistance, friction-fitted to fill the interior of the wall. See Batts and Blankets (BKNV or BZIZ) Categories for names of Classified companies. 5E. Batts and Blankets* — (Required for use with Wall and Partition Facings and Accessories, Item 3D) — Glass fiber insulation, nom 3-1/2 in. thick, min. density of 0.80 pcf, with a flame spread of 25 or less and a smoke developed of 50 or less, friction-fitted to completely fill the stud cavities. See Batts and Blankets Category (BKNV) for names of manufacturers. 5F. Fiber, Sprayed* — (Optional, Not Shown — Not for use with Items 6, 6A, 6B, 6C, or 6D) — As an alternate to Batts and Blankets (Item 5) and Item 5A - Spray applied granulated mineral fiber material. The fiber is applied with adhesive, at a minimum density of 4.0 pcf, to completely fill the enclosed cavity in accordance with the application instructions supplied with the product. See Fiber, Sprayed (CCA2). AMERICAN ROCKWOOL MANUFACTURING, LLC — Type Rockwool Premium Plus 5G. Fiber, Sprayed* — (Optional, Not Shown — Not for use with Items 6, 6A, 6B, 6C, or 6D) — As an alternate to Batts and Blankets (Item 5) and Item 5A - Brown Colored Spray applied cellulose fiber. The fiber is applied with water to completely fill the enclosed stud cavity in accordance with the application instructions supplied with the product. The minimum dry density shall be 4.30 lbs/ft³. INTERNATIONAL CELLULOSE CORP — Celbar-RL 5H. Foamed Plastic* — (Optional - For use with Item 3R) — Spray applied, foamed plastic insulation, at any thickness from partial fill to completely filling stud cavity. SES FOAM INC — Nexseal™ 2.0 or Nexseal™ 2.0 LE Spray Foam and Sucraseal Spray Foam. 5I. Fiber, Sprayed* — (Not Shown — Not for use with Item 6) — As an alternate to Batts and Blankets (Item 5) - Spray applied cellulose material. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application instructions supplied with the product. To facilitate the installation of the material, any thin, woven or non-woven netting may be attached by any means possible to the outer face the studs. The material shall reach equilibrium moisture content before the installation of materials on either face of the studs. The minimum dry density shall be 5.79 lbs/ft³. APPLIGATE HOLDINGS L L C — Appligate Advanced Stabilized Cellulose Insulation 5J. Foamed Plastic* — (Optional, Not Shown - For use with Item 3U) — Spray applied, foamed plastic insulation, at any thickness from partial fill to completely filling stud cavity. GACO WESTERN L L C — Types GacoEZSpray F4500, GacoProFill FR6500R, Gaco 052N, GacoOnePass F1850, GacoOnePass Low GWP F1880, and Gaco WallFoam 183M 5K. Foamed Plastic* — (Optional, Not Shown - For use with Item 3V) — Spray applied, foamed plastic insulation, at any thickness from partial fill to completely filling stud cavity. CARLISLE SPRAY FOAM INSULATION — Types SealTite Pro Closed Cell (CC), SealTite Pro Open Cell (OC), SealTite Pro OCK, SealTite Pro No Trim 21, SealTite Pro One Zero, Foamulate Closed Cell, Foamulate OCK, Foamulate 70, and Foamulate HFO. 6. Steel Framing Members* — (Optional, Not Shown) — Furring channels and Steel Framing Members as described below: a. Furring Channels — Formed of No. 25 MSG galv steel, 2-9/16 in. wide by 7/8 in. deep, spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item B. Ends of adjoining channels are overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping #6 framing screws, min. 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Gypsum board attached to furring channels as described in Item 3.

PRINTS ISSUED

11/07/25 100% BID SET

REVISIONS:

ARCHITECTURE
INTERIOR DESIGN
ENGINEERING
PLANNING

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BEAR CREEK APARTMENTS

1109 ELLETA BLVD.
COLUMBIA, MO 65202

SHEET TITLE
UL ASSEMBLIES

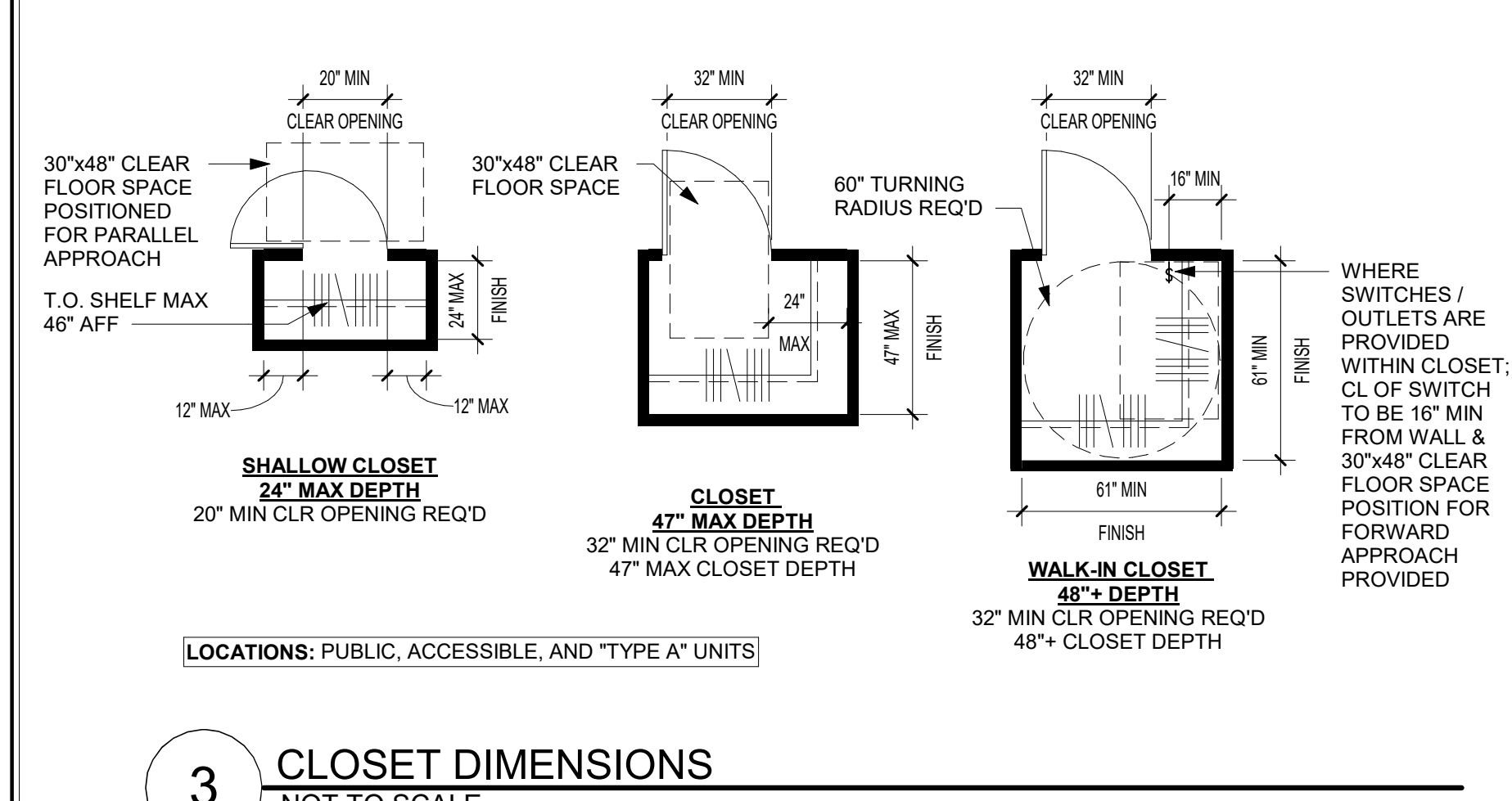
PROJECT NUMBER: 24127.PR

SHEET NUMBER:

G-200

CLEAR FLOOR SPACES	C2 CLEAR FLOOR SPACE NOT TO SCALE A2 WHEELCHAIR TURNING SPACE NOT TO SCALE	UNIVERSAL DESIGN REQ'S REQUIREMENTS FOR UNIVERSAL DESIGN HOUSING FOR THE ELDERLY AND SINGLE FAMILY DWELLINGS. - EQUITABLE USE - FLAT LANDING SURFACES LEADING TO DOORWAYS - LEVER ACTION DOOR HARDWARE - LEVER ACTION PLUMBING FIXTURE CONTROLS - NO THRESHOLDS AND/OR CHANGE OF WALKING SURFACE GREATER THAN 1/2 INCH - FLEXIBILITY IN USE - BLOCKING IN BATHROOM WALLS TO ACCEPT GRAB RAILS - BLOCKING IN OR BEHIND SHOWER/TUB ENCLOSURES TO ACCEPT GRAB RAILS - DOOR ASSEMBLIES AND CABINET DOOR ASSEMBLIES THAT WILL ACCEPT LEVER OR KNOB HARDWARE WITHOUT ALTERATION OR REPLACEMENT - SIMPLE AND INTUITIVE - BUTTONS ON CONTROL PANELS THAT CAN BE DISTINGUISHED BY TOUCH - PERCEPTIBLE INFORMATION - SIGNAGE WITH LARGE CONTRASTING PRINT IN ADDITION TO GENERALLY RECOGNIZED ICONS - CONTRASTING COLORS BETWEEN WIRING DEVICES (RECEPTACLES AND LIGHT SWITCHES) AND SURROUNDING SURFACES - CONTRASTING COLORS BETWEEN STEPS AND LANDINGS - CONTRASTING COLORS BETWEEN DIFFERENT FLOOR COVERINGS - CONTRASTING COLORS BETWEEN COUNTERTOPS AND FLOORING - CONTRASTING COLORS BETWEEN PLUMBING FIXTURES AND FLOORING/COUNTERTOPS - TOLERANCE FOR ERROR - LIGHT SWITCHES WITH LARGE FLAT PADS - NON-SLIP WALKING SURFACES - LOW PHYSICAL EFFORT - SELF CLOSING FIRE RATED DOORS MUST BE ON LOWEST SETTING WHILE COMPLYING WITH THE ENFORCED BUILDING CODE - NO INTERIOR RAMPS - SIZE AND SPACE FOR APPROACH AND USE 36 INCH WIDE DOORS - FLOOR SPACE TO ACCOMMODATE A 60 INCH DIAMETER CIRCLE FOR WHEEL CHAIR TURNING IN KITCHEN AND BATHROOM 42 INCH WIDE RESIDENTIAL UNIT AND COMMON HALLWAYS
DOORS	D3 DOOR CLEARANCES NOT TO SCALE A3 DOOR HARDWARE HEIGHTS NOT TO SCALE	GENERAL NOTES - THE PROJECT SHALL MEET ALL APPLICABLE CODES SPECIFIED BY LOCAL AND FEDERAL REQUIREMENTS, INCLUDING BUT NOT LIMITED TO THE INFORMATION PRESENTED ON THE FOLLOWING G-300 SHEETS. - LOCAL AND FEDERAL REQUIREMENTS SHALL SUPERCEDE ANY CONFLICTING INFORMATION - ALL DIMENSIONS PROVIDED ON THE FOLLOWING G-300 SHEETS REPRESENT CLEAR DIMENSIONS AND ARE TAKEN FROM FACE OF FINISH/COMPONENT OTHER HEIGHTS A4 WINDOW LATCH/LOCK REQ'S NOT TO SCALE D4 MOUNTING HEIGHTS NOT TO SCALE

CLOSETS



3 CLOSET DIMENSIONS

HEARING & VISION IMPAIRED



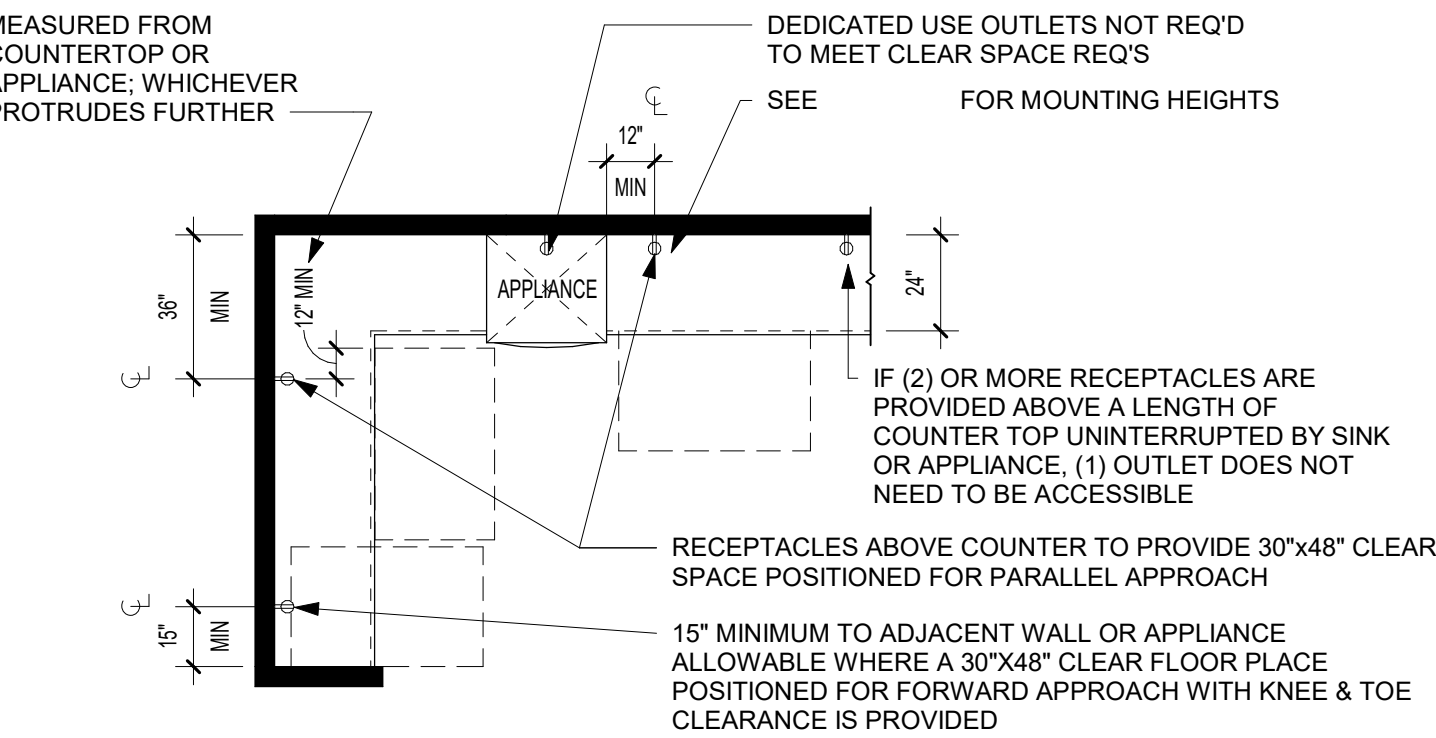
STAIRS AND RAILINGS



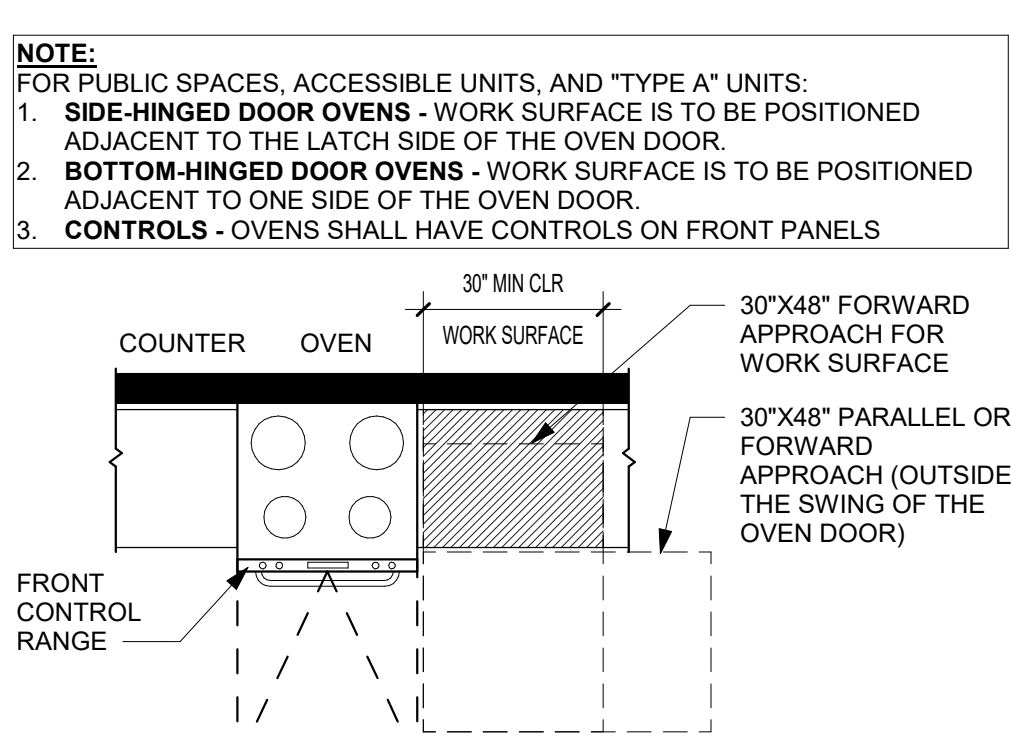
CARPET	MAX TILE HEIGHT SHALL BE 1/2 IN. EXPOSED EDGES OF CARPET SHALL BE FASTENED TO FLOOR SURFACES AND HAVE TRIM ALONG THE ENTIRE LENGTH OF THE EXPOSED EDGE. IF CARPET TILE IS USED ON AN ACCESSIBLE GROUND OF FLOOR SURFACE, IT SHALL HAVE A MAXIMUM COMBINED THICKNESS OF PLATE, CUSHION, AND BACKING HEIGHT OF 1/2 IN.						
	RAMPS	SLOPE	MAX RISE	MAX HORIZONTAL PROJECTION			
		1:12 TO <1:16	30 IN.	30 FT.			
		1:16 TO <1:20	30 IN.	40 FT.			
		1:12 TO 1:20 - REQUIRES A HANDRAIL					
INTERIOR SIGNAGE	CHARACTER PROPORTION AND COLOR CONTRAST						
	LETTERS AND NUMBERS ON SIGNS SHALL HAVE A WIDTH-TO-HEIGHT RATIO BETWEEN 3:5 AND 1:1 AND A STROKE WIDTH-TO-HEIGHT RATIO BETWEEN 1:5 AND 1:10. CHARACTERS AND SYMBOLS SHALL CONTRAST WITH THEIR BACKGROUND AND BE NON-GLARE. CHARACTERS SHALL BE UPPER CASE. CHARACTER HEIGHT MEASURED VERTICALLY FROM THE BASELINE OF THE CHARACTER, SHALL BE 5/8 IN. MINIMUM, AND 2 IN. MAXIMUM, BASED ON THE UPPER CASE LETTER "T".						
	RAISED OR INDENTED CHARACTERS OR SYMBOLS						
	LETTERS AND NUMBERS OR CHARACTERS SHALL BE RAISED OR INDICED 1/32 IN. MIN AND SHALL BE SANS SERIF CHARACTERS. RAISED CHARACTERS OR SYMBOLS SHALL BE AT LEAST 5/8 IN HIGH, BUT NO HIGHER THAN 2 IN. INDENTED CHARACTERS OR SYMBOLS SHALL HAVE A STROKE WIDTH OF AT LEAST 1/4 IN. SYMBOLS OR PICTOGRAPHS ON SIGNS SHALL BE RAISED OR INDENTED 1/32 IN MIN						
	MOUNTING LOCATION AND HEIGHT						
	INTERIOR SIGNAGE SHALL BE LOCATED ALONGSIDE THE DOOR ON THE LATCH SIDE AND SHALL BE MOUNTED AT A HEIGHT OF BETWEEN 54 IN. AND 66 IN. ABOVE THE FINISHED FLOOR PER 101.6 AND BETWEEN 48 IN. AND 60 IN. PER ANSI. REFER TO ICC(ANSI A117.1-2009, 703.2.8 FOR MORE REQUIREMENTS ON MOUNTING LOCATION.						



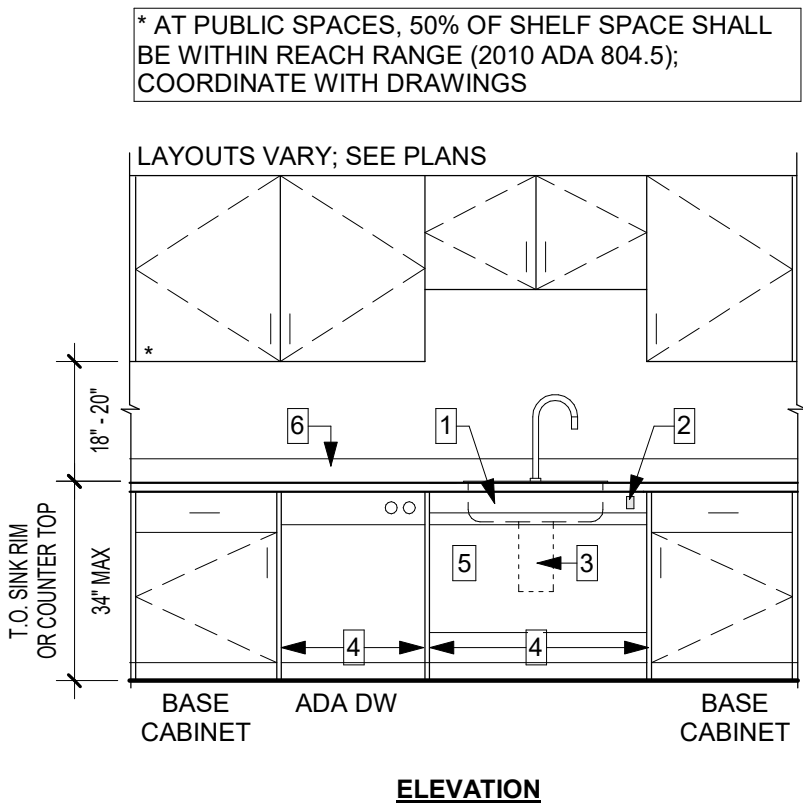
KITCHENS



1 ABOVE COUNTER RECEPTACLES
NOT TO SCALE



3 OVEN WITH WORK SPACE
NOT TO SCALE



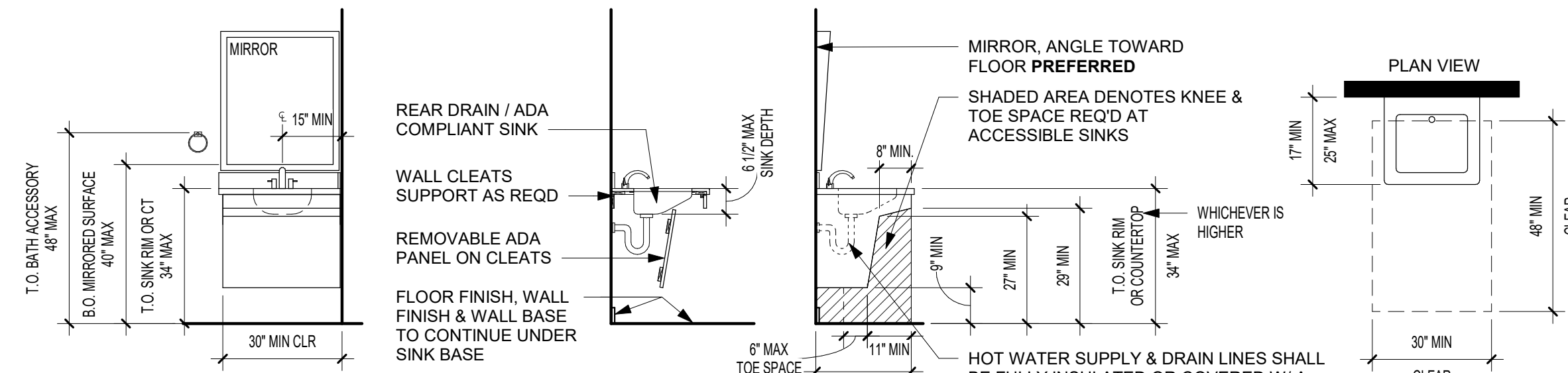
2 KITCHEN REQUIREMENTS
NOT TO SCALE

KITCHEN NOTES

KITCHEN DIAGRAMS AND NOTES APPLICABLE TO PUBLIC SPACES, ACCESSIBLE, AND "TYPE A" COMPLIANT KITCHENS
SEE UNIT PLANS AND/OR INTERIOR ELEVATIONS FOR "TYPE B" OR EXEMPT KITCHENS

- NOTES:**
1. SINK DEPTH MAX 6 1/2" AND HAVE REAR LOCATED DRAINS
 2. GARBAGE DISPOSAL SWITCH TO BE LOCATED WITHIN REACH RANGE; COORDINATE FINAL LOCATION WITH ARCHITECT
 3. INSULATE ALL PIPES AND DRAIN EXPOSED BELOW SINK
 4. PROVIDE FINISHED END PANELS EACH SIDE OF SINK PANEL AND DISHWASHER
A. WALL BASE, WALL FINISH & FLOOR FINISH TO CONTINUE TO UNDERSIDE OF SINK
 5. CABINETRY PERMITTED UNDER SINK AT "TYPE A" UNITS PROVIDED ALL THE FOLLOWING:
A. REMOVABLE CABINETRY WITHOUT REPLACING SINK
B. FLOORING, WALL FINISH, AND WALL BASE TO CONTINUE TO UNDERSIDE OF SINK
 6. BACKSPLASH VARIES; COORDINATE WITH DRAWINGS
 7. SEE INDIVIDUAL UNIT PLANS AND INTERIOR ELEVATIONS FOR SPECIFIC LAYOUTS

SINKS



- NOTES:**
1. 34" MAX AFF TO TOP OF WALL MOUNTED SINKS
 2. SEE PLANS & ELEV. FOR PROJ. SPECIFIC DETAILS
 3. SINKS SHALL BE 6 1/2" DEEP MAX
- FOR "TYPE B" UNITS:**
1. PARALLEL APPROACH CENTERED ON SINK PERMITTED WHEN CENTERLINE OF SINK IS 24" MIN FROM ADJACENT WALL
 2. IF FORWARD APPROACH IS PROVIDED, CABINETRY ALLOWED UNDER THE LAVATORY PROVIDED:
A. CABINETRY CAN BE REMOVED WITHOUT REPLACEMENT OF THE LAVATORY
B. FLOOR FINISH EXTENDS UNDER THE CABINETRY
C. WALLS BEHIND AND SURROUNDING THE CABINETRY ARE FINISHED

4 SINK KNEE & TOE CLEARANCES & HEIGHT REQUIREMENTS
NOT TO SCALE
LOCATIONS: PUBLIC AREAS, ACCESSIBLE UNITS, "TYPE A" UNITS

TOILET, BATH, LAUNDRY ACCESSORY SCHEDULE

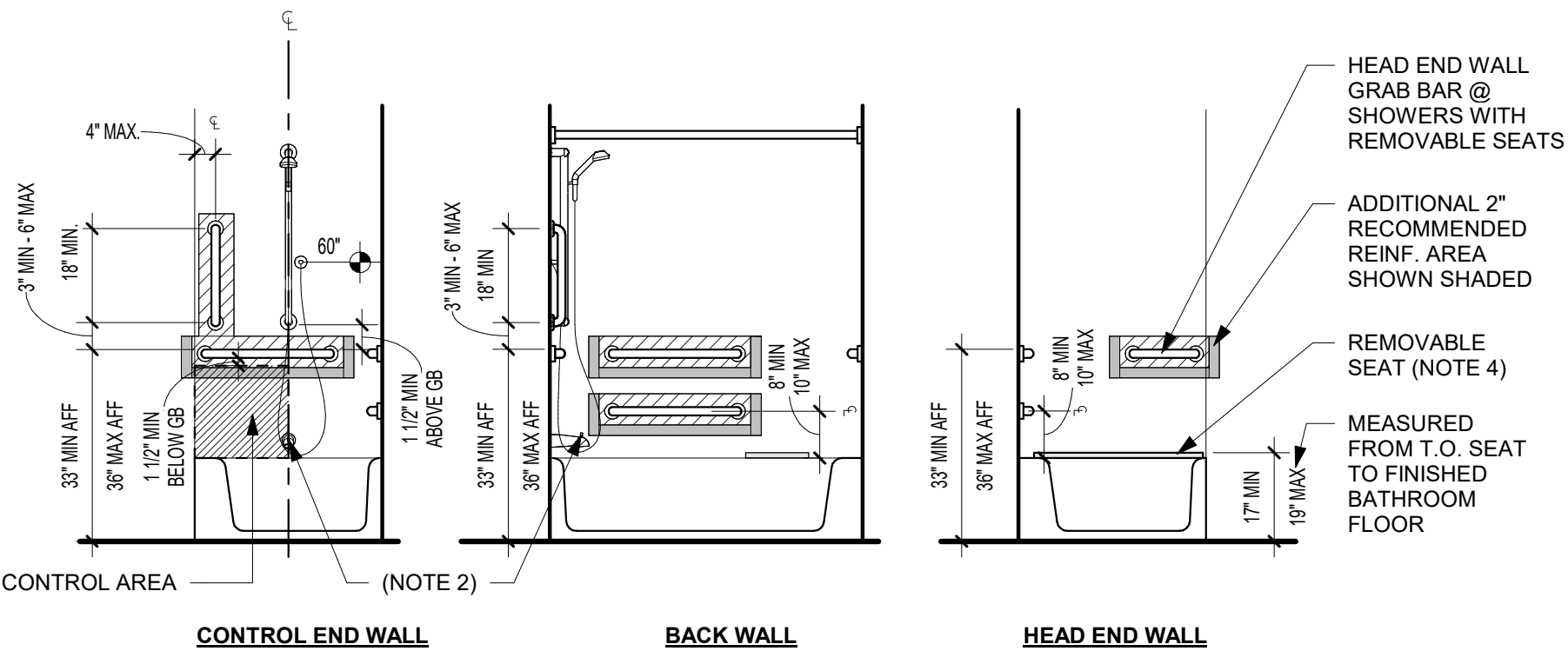
ACCESSORY	MOUNTING HEIGHT	LOCATION
MIRROR	SEE A1/G-303	PUBLIC & UNIT
PAPER TOWEL DISP/RECP	40" AFF MIN TO CONTROLS	PUBLIC
TOILET PAPER DISPENSER (TPD)	SEE D1/G-302	PUBLIC
TOILET PAPER HOLDER (TP)	SEE D1/G-302	UNIT
DIAPER CHANGING STATIONS	34" MAX TO CHANGING SURFACE	PUBLIC
GRAB BARS	SEE G-302	PUBLIC & UNIT
SANITARY NAPKIN RECEPTOR	18" MIN AFF & 24" MIN / 42" MAX FROM REAR WALL	PUBLIC
DRINKING FOUNTAIN	SEE C1/G303	PUBLIC
DRINKING FOUNTAIN - ACCESSIBLE	SEE C1/G-303	PUBLIC
WATER CLOSET (FLOOR-MOUNTED)	1'-4" AFF MIN TO RIM	PUBLIC & UNIT
WATER CLOSET - ACCESSIBLE (FLOOR-MOUNTED)	SEE D1/G-302	PUBLIC & UNIT
LAVATORY	SEE INTERIOR ELEVATIONS	PUBLIC & UNIT
LAVATORY - ACCESSIBLE	SEE A1/G-303	PUBLIC & UNIT
SOAP DISPENSER	40" AFF MIN TO CONTROLS	PUBLIC
MEDICINE CABINET	42" AFF MIN TO TOP OF BOTTOM SHELF	UNIT
MEDICINE CABINET - ACCESSIBLE	40" AFF MIN TO TOP OF BOTTOM SHELF	UNIT

REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION

GENERAL NOTES

1. GRAB BAR BLOCKING IS REQUIRED AT ALL TOILET, SHOWER AND BATHTUB GRAB BAR LOCATIONS; APPLICABLE AT ALL PUBLIC SPACES, ACCESSIBLE UNITS, "TYPE A" UNITS, AND "TYPE B" UNITS.
2. CONTRACTOR SHALL BE FAMILIAR AND INCORPORATE ALL PROVISIONS AND REQUIREMENTS ESTABLISHED BY CODES APPLICABLE TO THE PROJECT INCLUDING FAIR HOUSING, UFAS, ANSI, & ADAAG

TUB

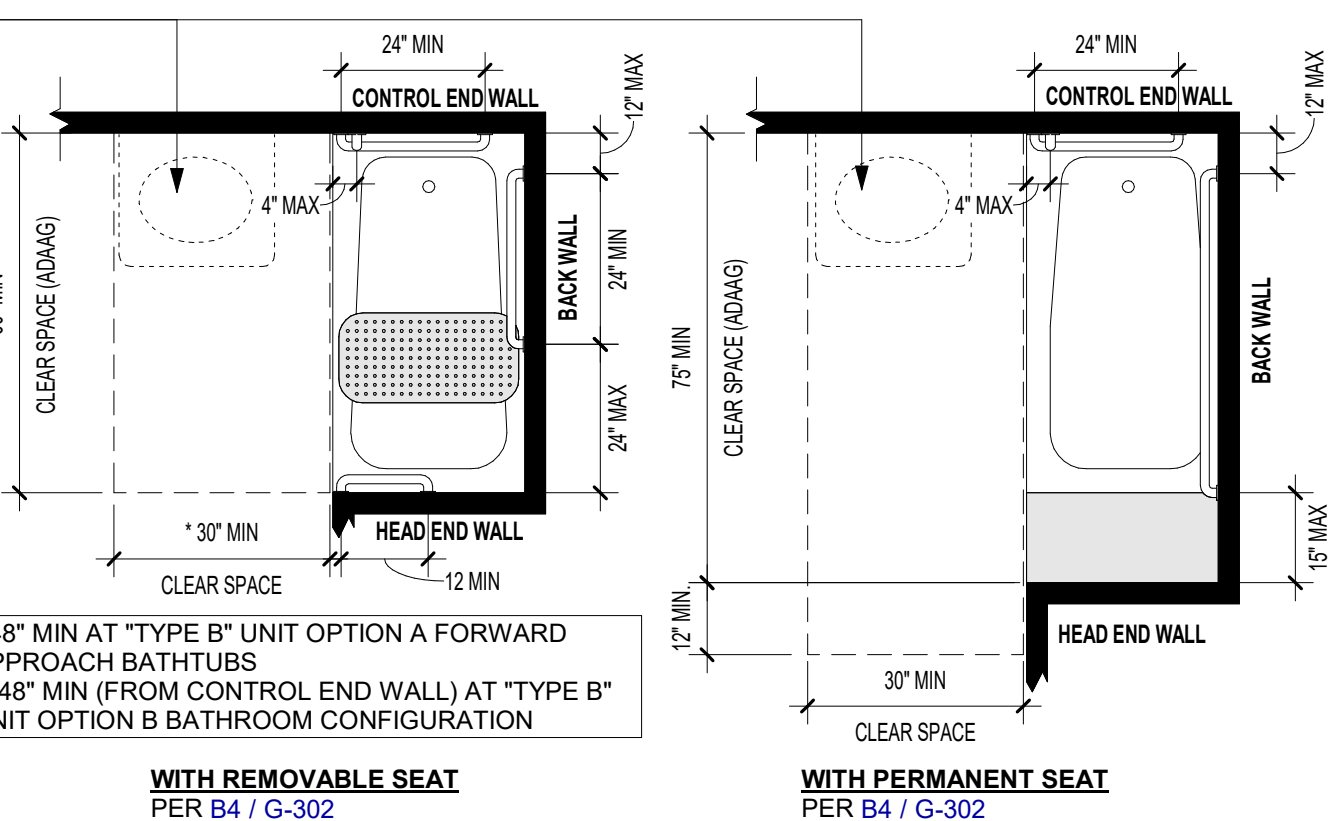


D2 BATHTUB HEIGHT REQ'S
NOT TO SCALE

ACCESSIBLE UNITS:
SINK OR CABINETRY NOT ALLOWED WITHIN CLEAR FLOOR SPACE

"TYPE A" UNITS:
COUNTER TOPS AND CABINETRY PERMITTED WITHIN CLEAR FLOOR SPACE PROVIDED ALL OF THE FOLLOWING:
A. REMOVABLE COUNTER TOP & CABINETRY
B. FLOOR AND WALL FINISHES EXTEND UNDER AND BEHIND THE REMOVABLE CABINETRY & COUNTER TOP.

"TYPE B" UNITS:
OPTION A - PARALLEL APPROACH TUB:
COUNTER TOPS AND CABINETRY PERMITTED WITHIN CLEAR FLOOR SPACE PROVIDED A 48"x30" CLEAR SPACE IS PROVIDED IN FRONT OF THE TUB
OPTION A - FORWARD APPROACH TUB:
WATER CLOSET AND LAVATORY PERMITTED WITHIN CLEAR FLOOR SPACE
OPTION B:
SINK OR CABINETRY NOT ALLOWED WITHIN 30"x48" CLEAR FLOOR SPACE



C2 BATHTUB CLEARANCES
NOT TO SCALE

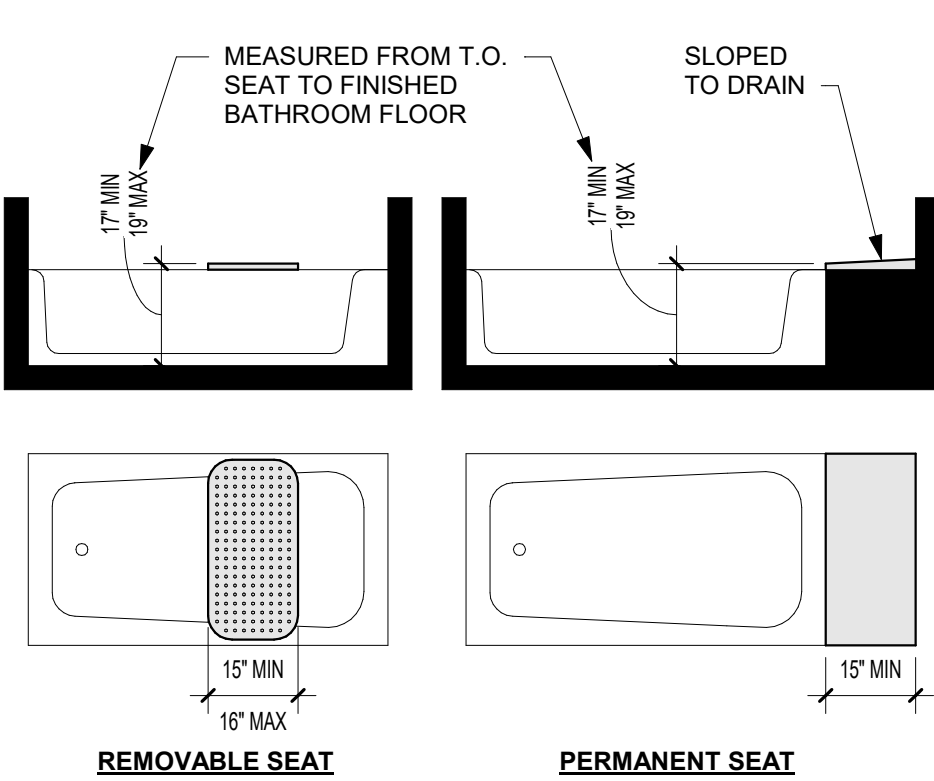
TUB NOTES

TUB DIAGRAMS & NOTES BELOW ARE APPLICABLE TO ACCESSIBLE, AND "TYPE A" COMPLIANT BATHROOMS.

SEE UNIT PLANS AND/OR PLUMBING SCHEDULE FOR "TYPE B" OR EXEMPT TUB REQUIREMENTS.

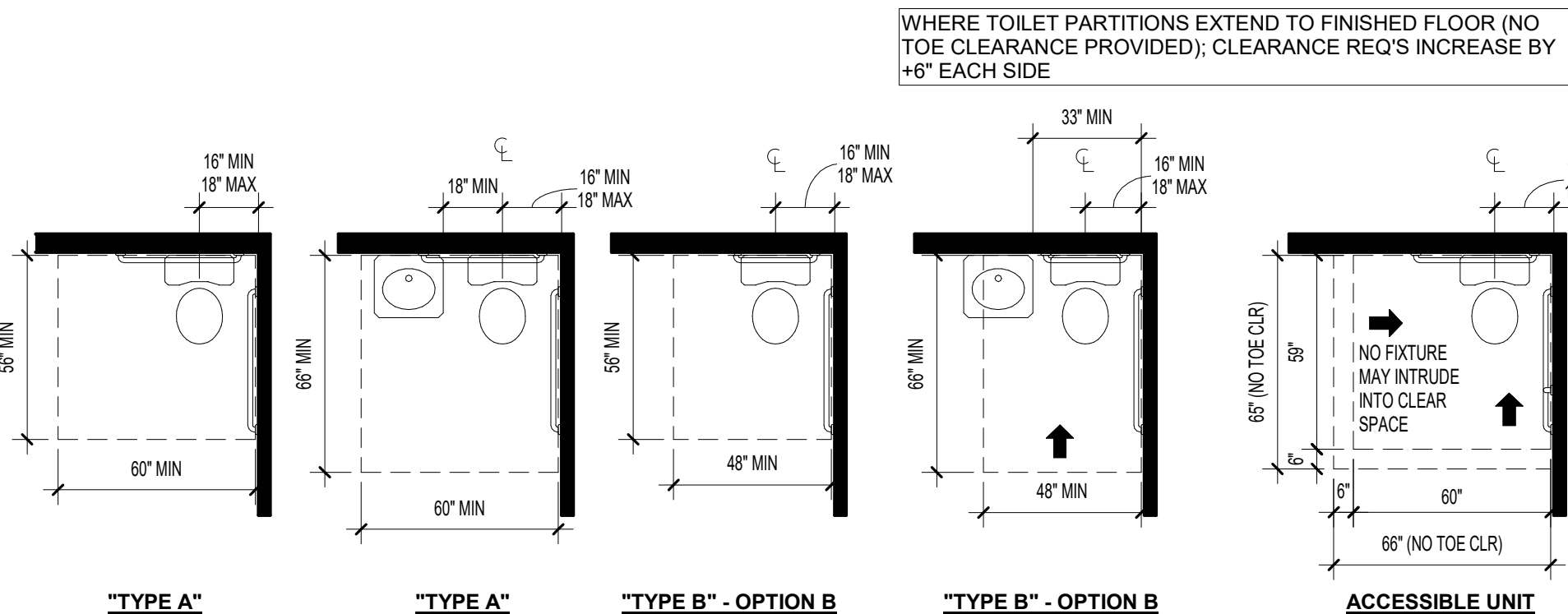
1. A HAND SHOWER WITH A HOSE OF 59" MINIMUM IN LENGTH TO BE PROVIDED.
A. HAND SHOWER SHALL HAVE A CONTROL WITH A NON-POSITIVE SHUT OFF FEATURE
2. NO PIN KNOB DIVERTERS IN ACCESSIBLE OR "TYPE A" UNITS AT TUB FAUCETS
3. ADDITIONAL 2" RECOMMENDED REINFORCED AREA AROUND GRAB BARS (SHOWN SHADED)
4. REMOVABLE SEAT NOT REQUIRED AT "TYPE A" UNITS.
5. SEE UNIT PLANS AND/OR INTERIOR ELEVATIONS FOR ADDITIONAL INFORMATION.

TUB SEAT

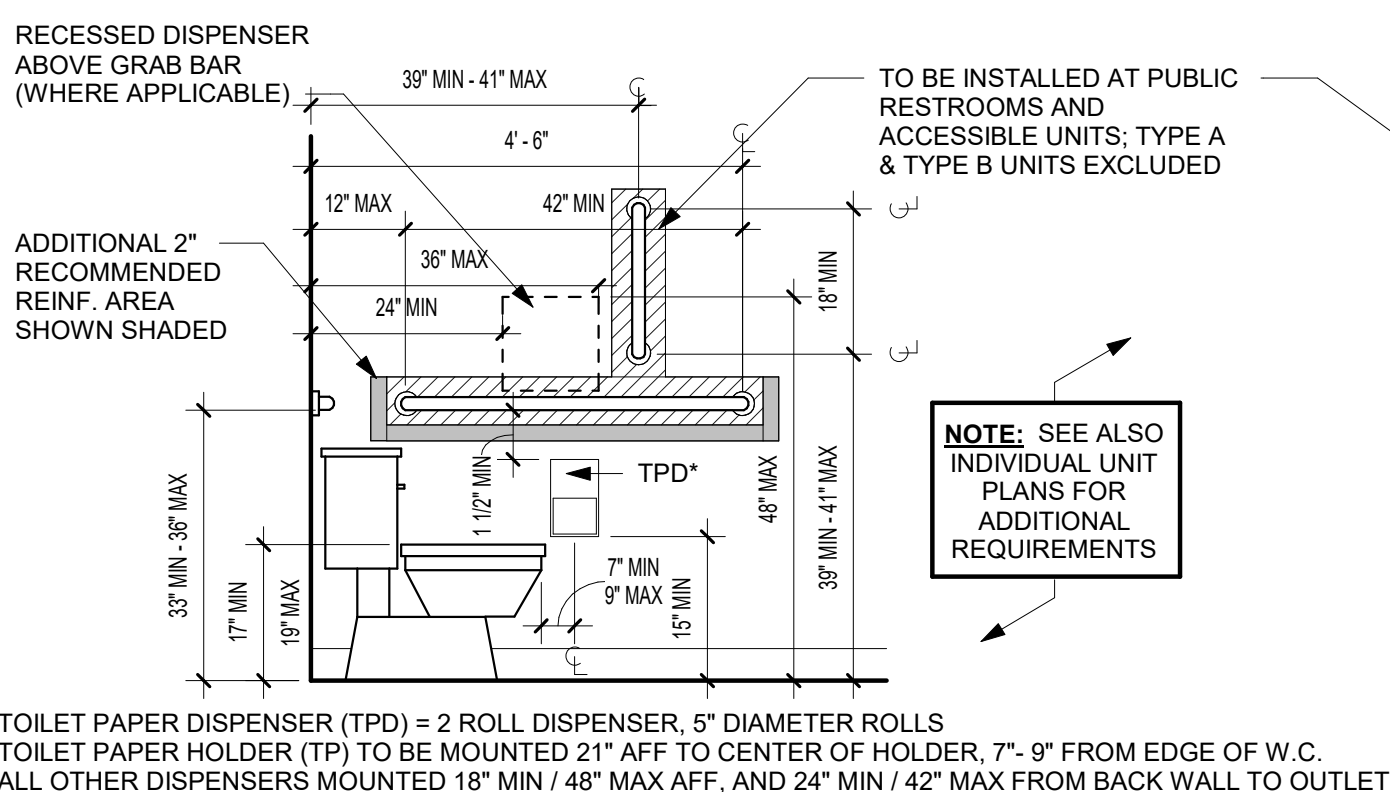


B4 BATHTUB SEAT
NOT TO SCALE

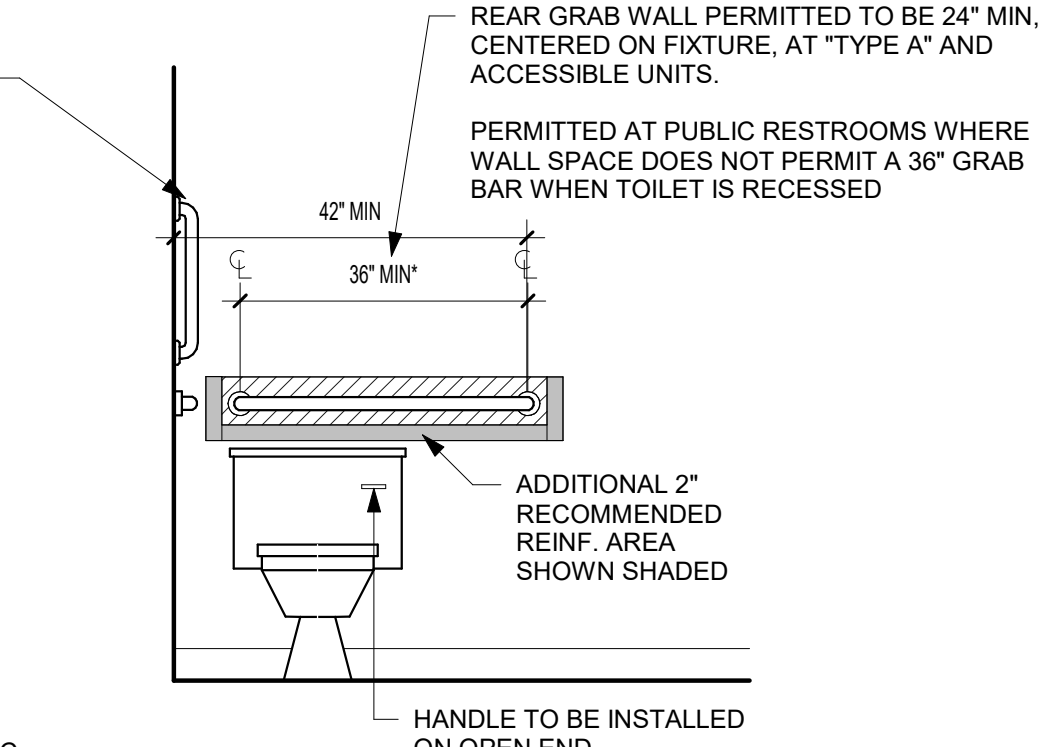
TOILET



C1 TOILET APPROACHES
NOT TO SCALE

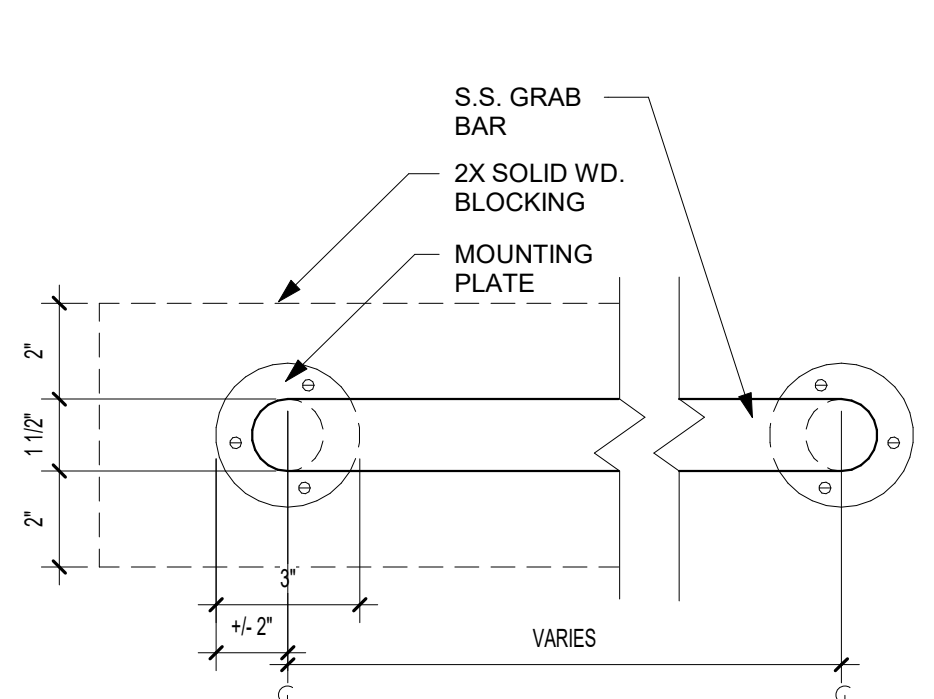


D1 TOILET STANDARDS
NOT TO SCALE



A2 GRAB BAR DETAIL
NOT TO SCALE

GRAB BAR



BEAR CREEK APARTMENTS

1109 ELLETA BLVD.
COLUMBIA, MO 65202

SHEET TITLE
ACCESSIBILITY STANDARDS

PROJECT NUMBER: 24127.PR

SHEET NUMBER:

G-302

KEYNOTE LEGEND

28.02 PROPOSED POLE MOUNTED CAMERA

ARCHITECTURAL SITE AMENITIES PLAN GENERAL NOTES

1. ARCHITECTURAL SITE PLAN IS FOR GENERAL INFORMATION AND LAYOUT ONLY. REFERENCE THE CIVIL DRAWINGS FOR ADDITIONAL INFORMATION, BUILDING PLACEMENT, GRADES, UTILITIES AND ACTUAL FLOOR ELEVATION FOR EACH BUILDING.
2. DO NOT SCALE DRAWINGS.
3. NOTIFY ARCHITECT OF ANY DISCREPANCIES BETWEEN PROJECT DOCUMENTS AND EXISTING CONDITIONS. ANY MODIFICATIONS DUE TO DIMENSIONAL CHANGES SHOULD BE PART OF THE PROJECT COST.
4. GENERAL CONTRACTOR AND ALL SUBCONTRACTORS SHALL THOROUGHLY FAMILIARIZE THEMSELVES TO ALL SITE SPECIFIC REQUIREMENTS AND EXTENTS OF THE NEW WORK PRIOR TO BIDDING. NO CHANGES IN THE CONTRACT WILL BE CONSIDERED FOR INFORMATION DISCERNABLE FROM THE EXISTING CONDITIONS OR THE PROJECT DOCUMENTS.
5. ALL UNIT ENTRIES ARE DESIGNED TO ACCOMMODATE ACCESSIBLE ROUTES TO ALL OTHER BUILDINGS ON THE PROJECT SITE. ACCESSIBLE ROUTES SHALL BE COORDINATED AND MAINTAINED AT TRANSITIONS FROM SIDEWALKS TO UNIT FRONT PORCHES, AND FROM UNIT PORCHES TO UNIT ENTRY.

- ROOF REPLACEMENT
BLDGS 32, 36, 37, 38, 39

COMMERICAL BUILDINGS

BLDGS 2,3,5,7,9,12,14,19,25,27
29,30,33,34,36,38,39,41
- BLDGS 1,4,6,8,15,17,18,28,37,40

BLDGS 10,11,13,16,23,24,26,31,35

BLDGS 21,22
- BLDG 1
1000 ELLETA BLVD

BLDG 2
1002 ELLETA BLVD
1004 ELLETA BLVD

BLDG 3
1006 ELLETA BLVD
1008 ELLETA BLVD

BLDG 4
1010 ELLETA BLVD

BLDG 5
1012 ELLETA BLVD
1014 ELLETA BLVD

BLDG 6
1016 ELLETA BLVD

BLDG 7
1102 ELLETA BLVD
1104 ELLETA BLVD

BLDG 8
1106 ELLETA BLVD

BLDG 9
1108 ELLETA BLVD
1110 ELLETA BLVD

BLDG 10
1112 ELLETA BLVD
1114 ELLETA BLVD

BLDG 11
1116 ELLETA BLVD
1118 ELLETA BLVD

BLDG 12
1200 ELLETA BLVD
1202 ELLETA BLVD

BLDG 13
1204 ELLETA BLVD
1206 ELLETA BLVD

BLDG 14
1208 ELLETA BLVD
1210 ELLETA BLVD

BLDG 15
1212 ELLETA BLVD

BLDG 16
1214 ELLETA BLVD
1216 ELLETA BLVD

BLDG 17
1218 ELLETA BLVD

BLDG 18
1300 ELLETA BLVD

BLDG 19
1302 ELLETA BLVD
1304 ELLETA BLVD

BLDG 20
1306 ELLETA BLVD
1308 ELLETA BLVD

BLDG 21
1217 ELLETA BLVD
1219 ELLETA BLVD
1221 ELLETA BLVD
1223 ELLETA BLVD
1225 ELLETA BLVD
1227 ELLETA BLVD

BLDG 22
1205 ELLETA BLVD
1207 ELLETA BLVD
1209 ELLETA BLVD
1211 ELLETA BLVD
1213 ELLETA BLVD
1215 ELLETA BLVD

BLDG 23
1201 ELLETA BLVD
1203 ELLETA BLVD

BLDG 24
1203A ELLETA BLVD
1203B ELLETA BLVD

BLDG 25
1201B ELLETA BLVD
1203B ELLETA BLVD

BLDG 26
1121B ELLETA BLVD
1123B ELLETA BLVD

BLDG 27
1119A ELLETA BLVD
1121A ELLETA BLVD

BLDG 28
1119 ELLETA BLVD
BLDG 28
1119 ELLETA BLVD

BLDG 29
1115 ELLETA BLVD
1117 ELLETA BLVD

BLDG 30
1111 ELLETA BLVD
1113 ELLETA BLVD

BLDG 31
1117B ELLETA BLVD
1119B ELLETA BLVD

BLDG 32
1109B ELLETA BLVD

BLDG 33
1107 ELLETA BLVD
1109 ELLETA BLVD

BLDG 34
1025 ELLETA BLVD
1027 ELLETA BLVD

BLDG 35
1021 ELLETA BLVD
1023 ELLETA BLVD

BLDG 36
1017 ELLETA BLVD
1019 ELLETA BLVD

BLDG 37
1015 ELLETA BLVD

BLDG 38
1011 ELLETA BLVD
1013 ELLETA BLVD

BLDG 39
1007 ELLETA BLVD
1009 ELLETA BLVD

BLDG 40
1005 ELLETA BLVD

BLDG 41
1001 ELLETA BLVD
1003 ELLETA BLVD

BLDG 42
1400 ELLETA BLVD

BLDG 43
LAUNDRYMAT NO ADDRESS

BLDG 44
STORAGE SHED NO ADDRESS
- BUILDING LEGEND
- SITE PLAN LEGEND
-
- 1 ARCHITECTURAL SITE PLAN
- 1" = 60'-0"
-
-
- BEAR CREEK APARTMENTS
- 1109 ELLETA BLVD.
COLUMBIA, MO 65202
- SHEET TITLE
AMENITIES PLAN
- PROJECT NUMBER: 24127.PR
- SHEET NUMBER:
- AS-100
- rosemann
& ASSOCIATES P.C.
- 168 N. Meramec Avenue, Ste 200
Clayton, MO 63105
P: 314.678.1448
W: www.rosemann.com
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- PRINTS ISSUED
- 11/07/25 100% BID SET
- REVISIONS:
- 11/6/2025 3:40:29 PM
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R:\A_Michael\24127.dwg

REFERENCE G-003 FOR GENERAL NOTES

WINDOW SCHEDULE			
Type Mark	Width	Height	Comments
A	3' - 9"	1' - 10"	EXISTING TO REMAIN
B	3' - 9"	3' - 9"	EXISTING TO REMAIN
C	6' - 0"	5' - 4"	EXISTING TO REMAIN

PLAN LEGEND

- NON-RATED PARTITION; SEE ASSEMBLIES
- 1 HR RATED PARTITION; SEE ASSEMBLIES
- EXISTING
- WINDOW TYPE; SEE WINDOW SCHEDULE
- DOOR TYPE; SEE DOOR SCHEDULE
- PARTITION TYPE; SEE ASSEMBLIES
- FRAMING DIMENSIONS
- LAYOUT LINE DIMENSION

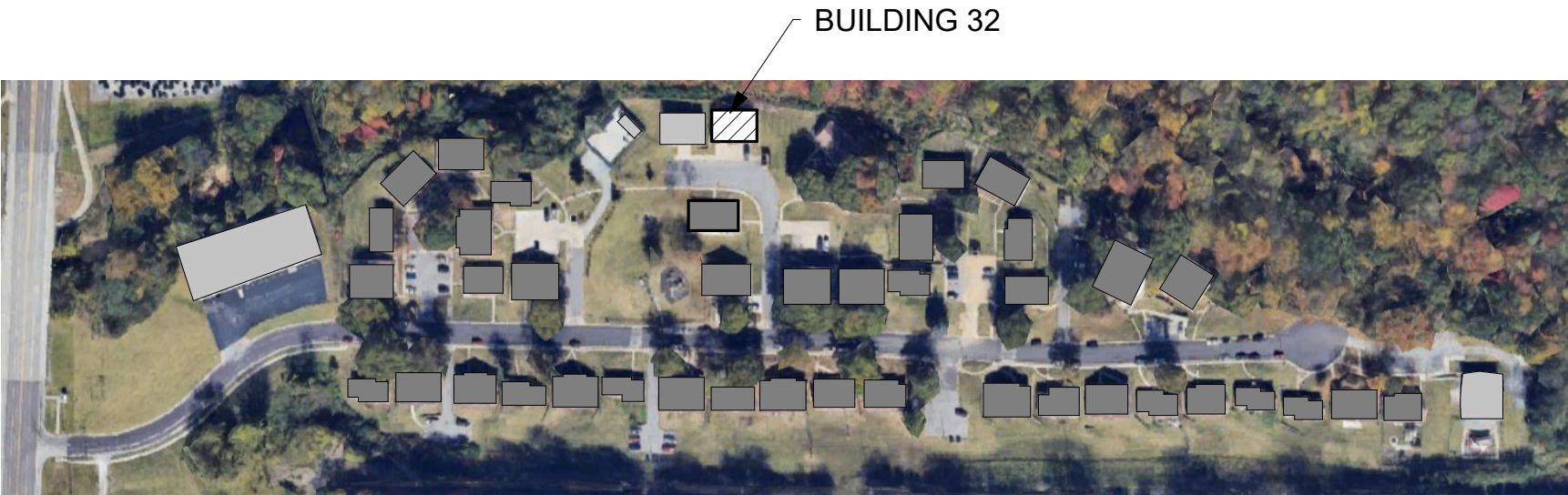
DEMOLITION PLAN LEGEND

- REMOVE PARTITION
- REMOVE ELEMENT
- REMOVE DOOR & FRAME

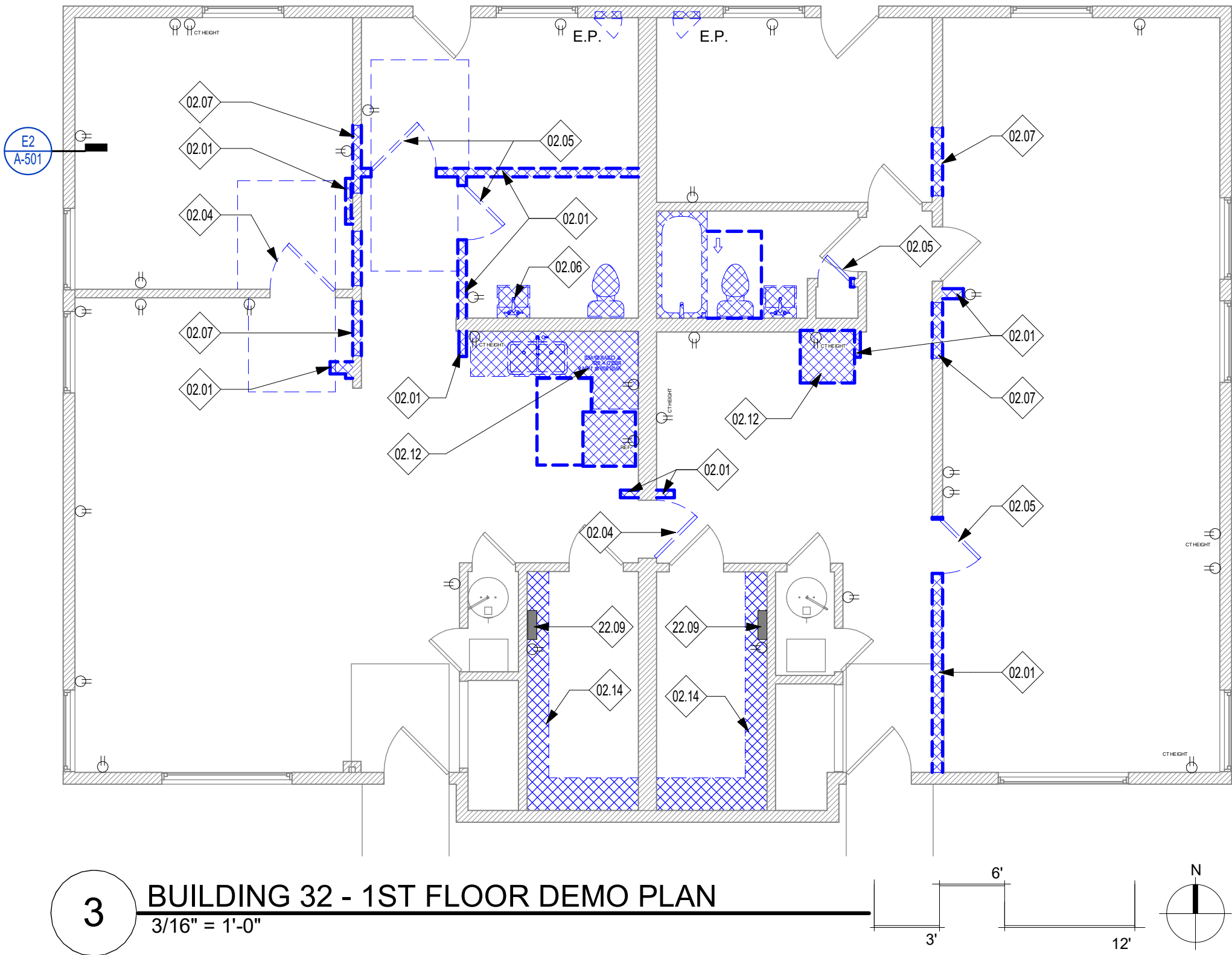
NOTE:
THE NOTES ON THE DEMOLITION PAGES SHOW THE INTENT OF DEMOLITION REQUIRED FOR THE BUILDING. THEY DO NOT ARTICULATE ALL ELEMENTS THAT ARE TO BE REMOVED. GENERAL AND DEMOLITION CONTRACTORS TO THOROUGHLY INSPECT THE PREMISES PRIOR TO COMMENCEMENT OF WORK AND IDENTIFY ANY LARGE, OR ITEMS OF POTENTIAL SIGNIFICANT COST, THAT HAVE NOT BEEN MARKED ON THESE DRAWINGS AND REPORT THEM TO THE ARCHITECT AND OWNER.

KEYNOTE LEGEND

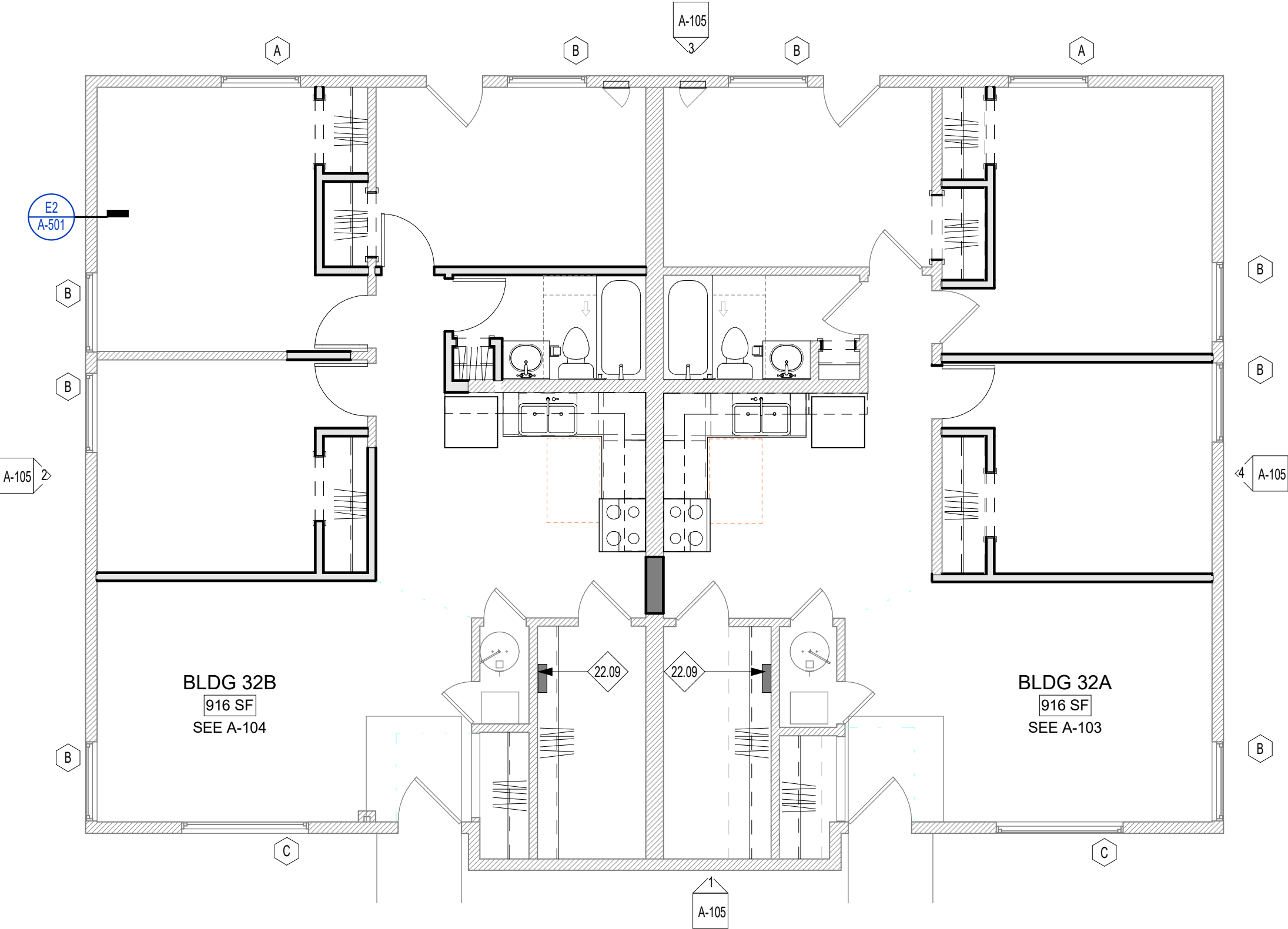
- 02.01 REMOVE EXISTING PARTITION, OR PORTION THEREOF, AS INDICATED. DEMOLITION CONTRACTOR TO COORDINATE WITH REMODEL PLANS. DEMOLITION CONTRACTOR TO COORDINATE DEMOLITION OF UTILITIES WITH MEP DRAWINGS.
- 02.04 REMOVE EXISTING DOOR, FRAME AND ASSOCIATED HARDWARE. SAVE FOR REUSED. PREP AREA FOR INSTALLATION OF NEW WALL INFILL.
- 02.05 REMOVE EXISTING DOOR, FRAME AND ASSOCIATED HARDWARE. DEMOLITION CONTRACTOR TO COORDINATE WITH REMODEL PLANS.
- 02.06 REMOVE EXISTING BATHROOMS TO INCLUDE TOILETS & ASSOCIATED EQUIPMENT, TOILET ACCESSORIES, SINKS, FINISHES, FLOORING, AND PARTITIONS AS REQUIRED FOR NEW INSTALLATION. DEMOLITION CONTRACTOR TO COORDINATE WITH REMODEL PLANS.
- 02.07 REMOVE EXISTING PARTITION AS INDICATED AND PREP FOR NEW WALL INFILL FOR NEW DOOR. DEMOLITION CONTRACTOR TO COORDINATE WITH REMODEL PLANS.
- 02.12 REMOVE EXISTING KITCHEN ITEMS INDICATED TO INCLUDE FIXTURES, APPLIANCES, CABINETS, COUNTERTOPS, ETC. PREP AREA FOR INSTALLATION OF NEW KITCHEN ITEMS PER REMODEL PLANS.
- 02.14 REMOVE EXISTING WOOD SHELVING AND ASSOCIATED HARDWARE.
- 22.09 EXISTING WASHER / DRYER HOOKUPS TO REMAIN



KEY PLAN



BUILDING 32 - 1ST FLOOR DEMO PLAN



BUILDING 32 - 1ST FLOOR PLAN

KEY PLAN

PRINTS ISSUED
11/07/25 100% BID SET

REVISIONS:

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BEAR CREEK APARTMENTS

1109 ELLETA BLVD.
COLUMBIA, MO 65202

SHEET TITLE
BUILDING 32 - FLOOR PLANS

PROJECT NUMBER: 24127.PR

SHEET NUMBER:

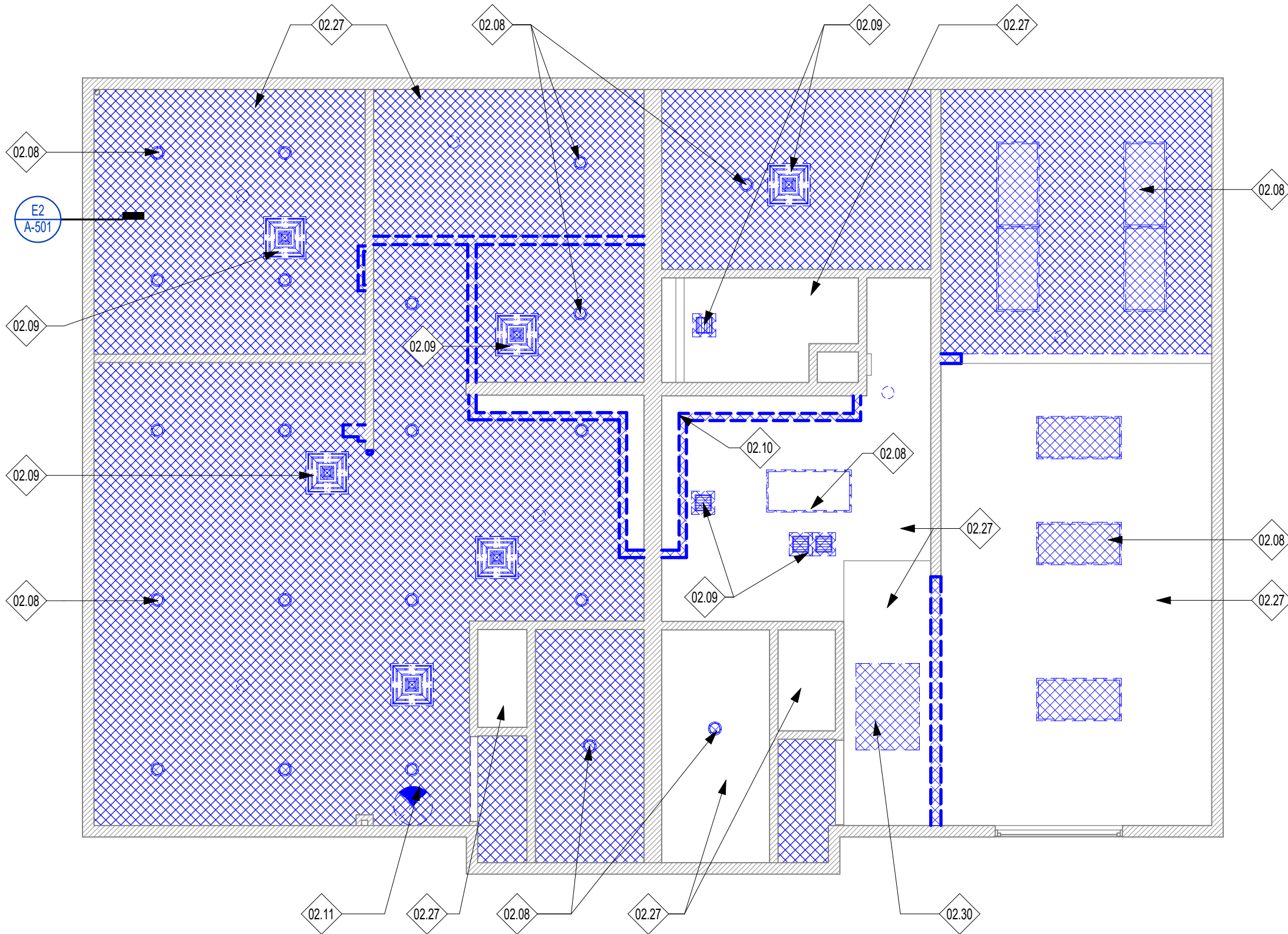
A-101

KEYNOTE LEGEND

- 02.08 REMOVE EXISTING CEILING MOUNTED LIGHTING FIXTURES ANY ASSOCIATED HARDWARE. SAVE FOR REUSE. DEMOLITION CONTRACTOR TO COORDINATE WITH MEP DRAWINGS. TYP.
- 02.09 REMOVE EXISTING VENT IN ITS ENTIRETY. DEMOLITION CONTRACTOR TO COORDINATE WITH REMODEL PLANS ON MEP DRAWINGS. DEMOLITION CONTRACTOR TO COORDINATE DEMOLITION OF UTILITIES WITH MEP DRAWINGS. TYP.
- 02.10 REMOVE EXISTING SOFFIT IN ITS ENTIRETY. DEMOLITION CONTRACTOR TO COORDINATE WITH REMODEL PLANS.
- 02.11 REMOVE EXISTING EMERGENCY LIGHT IN ITS ENTIRETY.
- 02.27 EXISTING HARD CEILING TO BE SCRAPPED, REPAIRED, AND PREPARED FOR PAINT.
- 02.30 REMOVE EXISTING HVAC EQUIPMENT IN ITS ENTIRETY.
- 09.19 EXISTING SOFFIT BEAM TO REMAIN. PAINT TO MATCH WALLS AND CEILING.

RCP LEGEND

- C1 - EXISTING 2' X 2' ACT SYSTEM
- C2 - EXISTING 2' X 4' ACT SYSTEM
- C3 - GWB ON METAL STUD
- 9'-0" INDICATES CEILING HEIGHT
- EXISTING SECURITY CAMERA
- EXISTING EXIT SIGN
- EXISTING HEAT DETECTOR
- EXISTING MOTION SENSOR
- EXISTING LENNOX
- EXISTING SMOKE DETECTOR
- EXISTING WALL OCCUPY SENSOR
- EXISTING VENT
- EXISTING VENT
- EXISTING VENT
- EXISTING SURFACE LIGHT FIXTURE
- NEW SURFACE LIGHT FIXTURE



2 BUILDING 32 - 1ST FLOOR DEMO
REFLECTED CEILING PLAN
3/16" = 1'-0"

NOTE:
1. SEE ELECTRICAL PLANS FOR LIGHTING FIXTURES THROUGHOUT THE BUILDING.



1 BUILDING 32 - 1ST FLOOR
REFLECTED CEILING PLAN
3/16" = 1'-0"

BEAR CREEK APARTMENTS

1109 ELLETA BLVD.
COLUMBIA, MO 65202

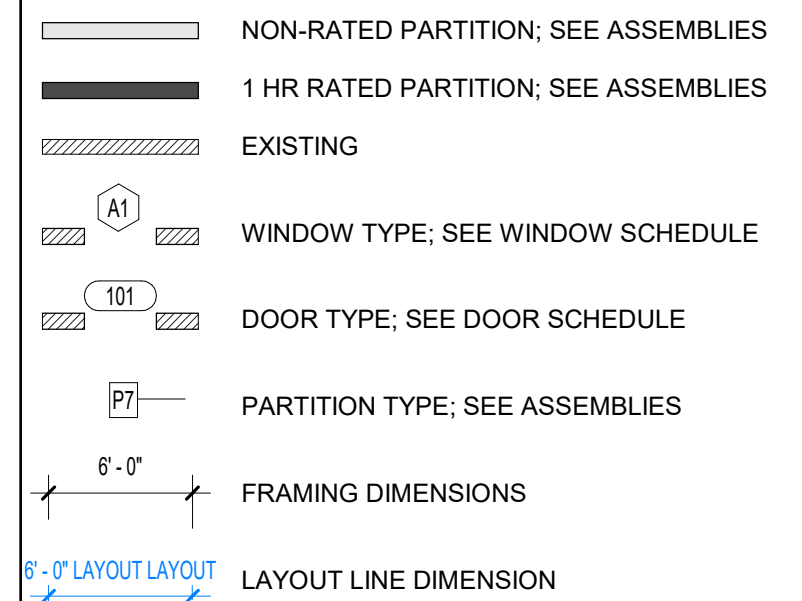
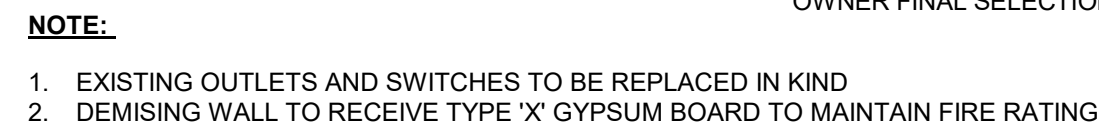
SHEET TITLE
BUILDING 32 - REFLECTED
CEILING PLAN

PROJECT NUMBER: 24127.PR
SHEET NUMBER:

A-102



NOTES
PT - 1 - PPG SAND DOLLAR
PT - 2 - PPG SAND DOLLAR
PT - 3 - PPG SAND DOLLAR
VB - 1 - 4" VINYL BASE
WITH TOE. COLOR
SELECTED BY OWNER.
LVT - 1 - COLOR SELECTED
BY OWNER



02.01 REMOVE EXISTING PARTITION, OR PORTION THEREOF, AS INDICATED. DEMOLITION CONTRACTOR TO COORDINATE WITH REMODEL PLANS. DEMOLITION CONTRACTOR TO COORDINATE DEMOLITION OF UTILITIES WITH MEP DRAWINGS.

02.02 REMOVE PORTION OF EXISTING PARTITION AS INDICATED. DEMOLITION CONTRACTOR TO COORDINATE WITH REMODEL PLANS.

02.04 REMOVE EXISTING DOOR, FRAME AND ASSOCIATED HARDWARE. SAVE FOR REUSED. PREP AREA FOR INSTALLATION OF NEW WALL INFILL.

02.05 REMOVE EXISTING DOOR, FRAME AND ASSOCIATED HARDWARE. DEMOLITION CONTRACTOR TO COORDINATE WITH REMODEL PLANS.

02.07 REMOVE EXISTING PARTITION AS INDICATED AND PREP FOR NEW WALL INFILL FOR NEW DOOR. DEMOLITION CONTRACTOR TO COORDINATE WITH REMODEL PLANS.

02.12 REMOVE EXISTING KITCHEN ITEMS INDICATED TO INCLUDE FIXTURES, APPLIANCES, CABINETS, COUNTERTOPS, ETC. PREP AREA FOR INSTALLATION OF NEW KITCHEN ITEMS PER REMODEL PLANS.

02.14 REMOVE EXISTING WOOD SHELVING AND ASSOCIATED HARDWARE.

02.26 REMOVE EXISTING WASHERS AND RELOCATE APPROXIMATELY 8" AWAY FROM PARTIAL HEIGHT WALL TO ALLOW ROOM FOR NEW FULL HEIGHT WALL.

08.01 EXISTING VINYL WINDOWS TO REMAIN - SEE WINDOW SCHEDULE.

10.01 (2) ROWS (12" DEEP) VENTILATED WIRE SHELVING IN CLOSET. REF. 1G300 FOR DETAILS AND TYPICAL MOUNTING HEIGHTS.

10.09 PROPOSED LOCATION FOR FUTURE WASHER AND DRYER

10.14 NEW BATHROOM TOILET & ASSOCIATED EQUIPMENT, TOILET ACCESSORIES, AND SINK.

11.04 NEW REFRIGERATOR, RANGE, AND MICROWAVE WITH HOOD. SEE INTERIOR ELEVATIONS FOR MORE INFORMATION.

11.05 NEW TUB/SHOWER SURROUND.

12.02 PROVIDE (1") VINYL, HORIZONTAL WINDOW BLINDS AT ALL WINDOWS PER SPECIFICATIONS.

12.06 NEW PLASTIC LAMINATE COUNTERTOP. SEE INTERIOR ELEVATIONS FOR MORE INFORMATION.

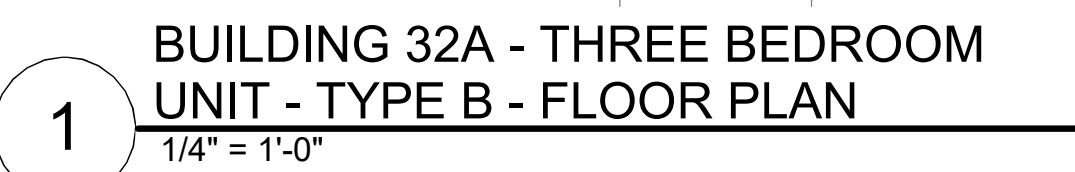
12.08 NEW UP/DOWN AND BASE CABINETS. SEE INTERIOR ELEVATIONS FOR MORE INFORMATION

12.08 NEW SINK VANITY CABINET.

12.08 NEW KITCHEN SINK. SEE INTERIOR ELEVATIONS FOR MORE INFORMATION.

23.02 EXISTING HVAC EQUIPMENT TO REMAIN.

26.02 NEW ELECTRICAL PANEL AT EXISTING PANEL LOCATION, REFER TO ELECTRICAL PLANS. FINISH TO BE BAKED ENAMEL IN COLOR WHITE OR TO MATCH ADJACENT WALL COLOR PER OWNER FINAL SELECTION.



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& ASSOCIATES** P.C.

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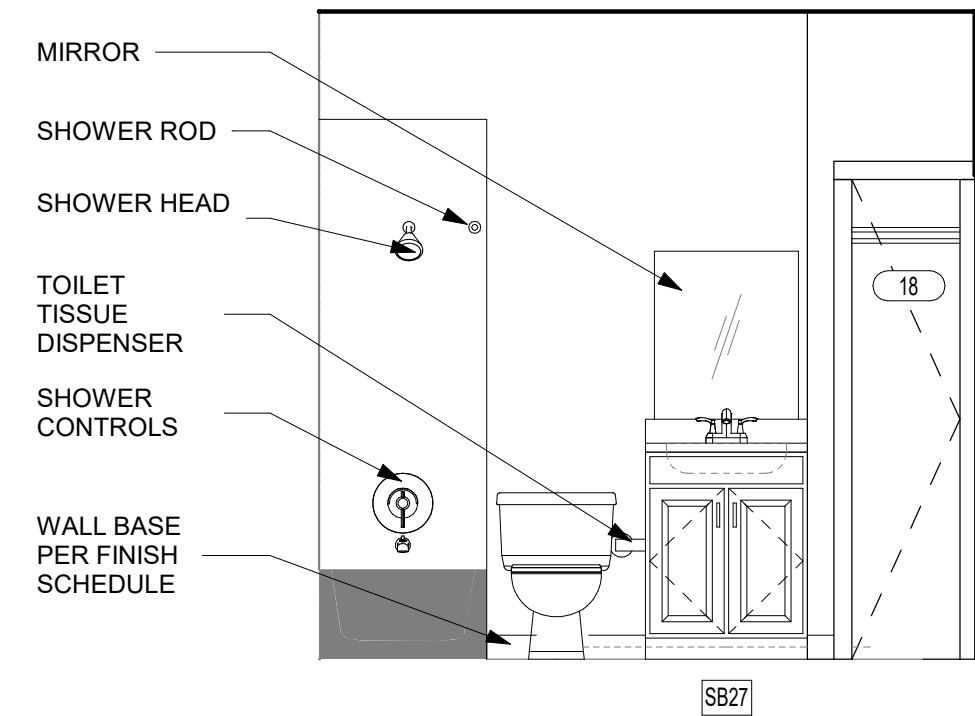
SHEET TITLE
BUILDING 32A - 3 BEDROOM UNIT
PLAN

PROJECT NUMBER: 24127.PR

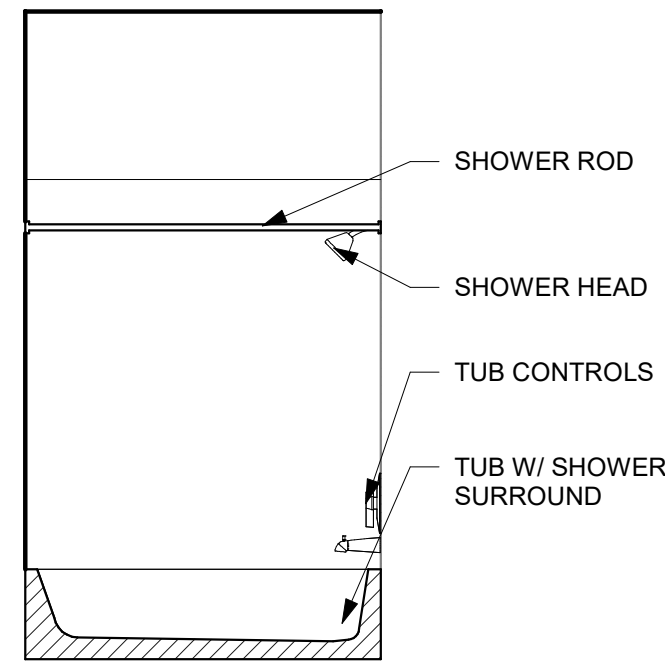
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A-103

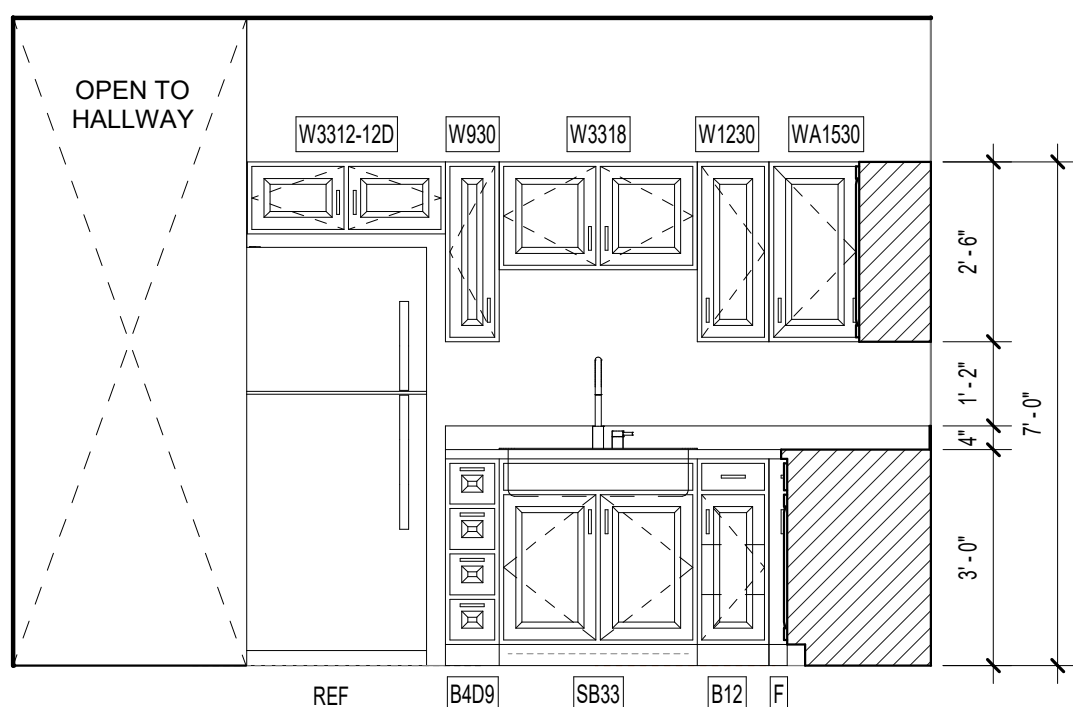
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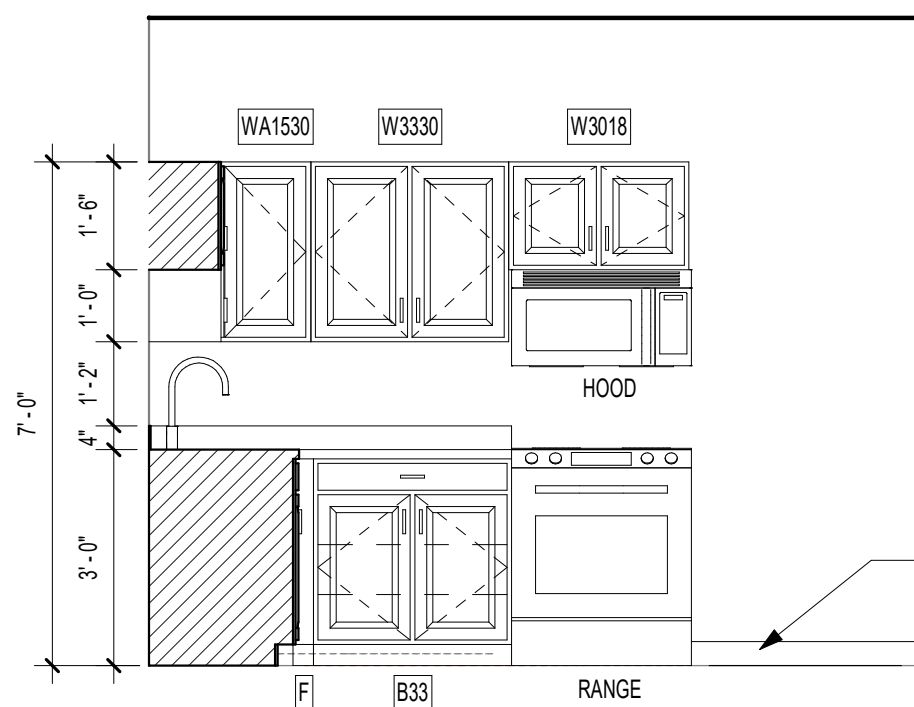
7 BATHROOM ELEVATION
3/8" = 1'-0"



6 BATHROOM ELEVATION
3/8" = 1'-0"



5 KITCHEN ELEVATION
3/8" = 1'-0"

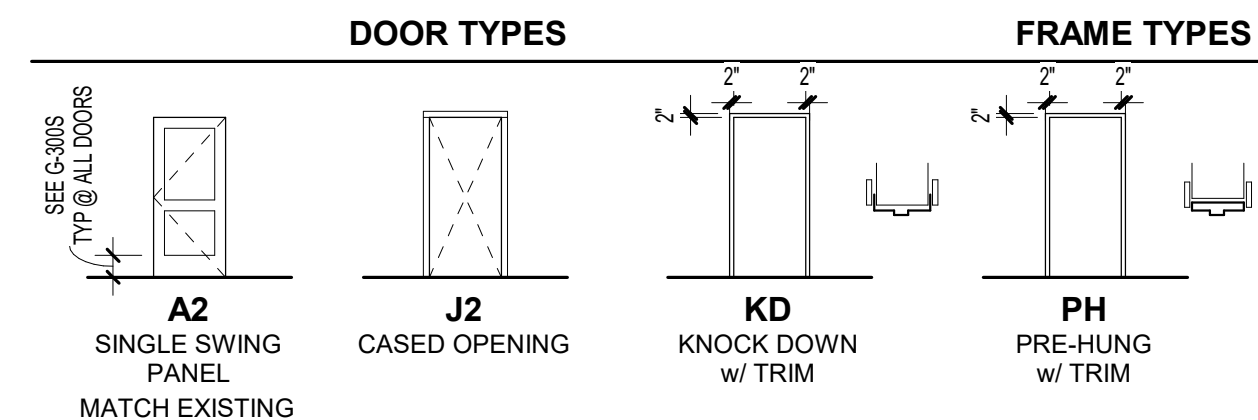


4 KITCHEN ELEVATION
3/8" = 1'-0"

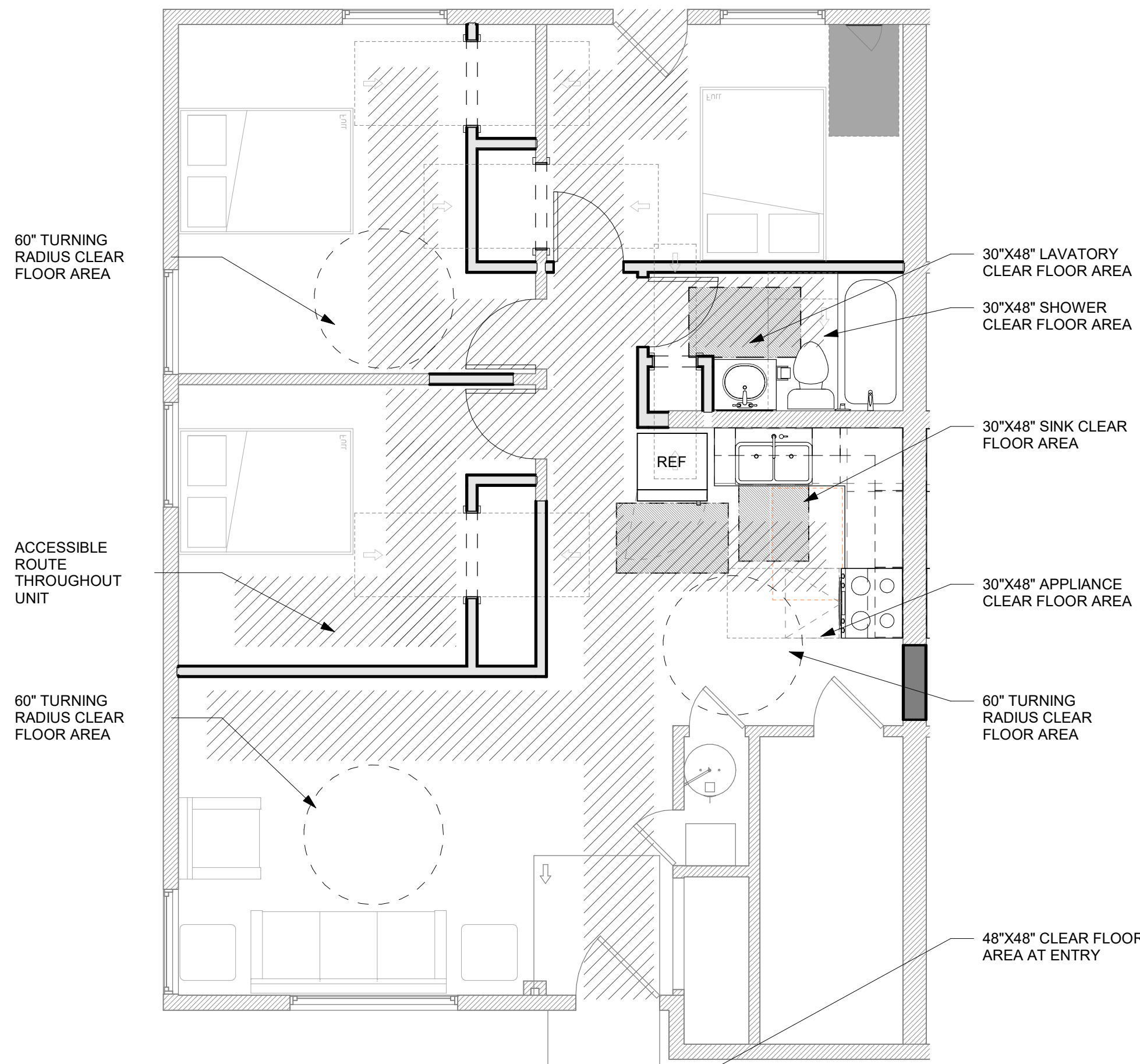
DOOR SCHEDULE - UNIT DOORS (BY UNIT TYPE)											
Mark	Width	Height	Thickness	Door Type	Door Material	Door Finish	Frame Type	Frame Material	Frame Finish	Fire Rating (Minutes)	Comments
01A	3'-0"	6'-8"	1 3/4"	A1	EXIST.	EXIST.	EXIST.	EXIST.	EXIST.		
01B	2'-8"	6'-8"	1 3/4"	EXIST.	EXIST.	EXIST.	EXIST.	EXIST.	EXIST.		
02	4'-0"	8'-0"	1 3/4"	EXIST.	EXIST.	EXIST.	EXIST.	EXIST.	EXIST.		
05A	2'-0"	6'-8"	1 3/4"	EXIST.	EXIST.	EXIST.	EXIST.	EXIST.	EXIST.		
05B	2'-0"	6'-8"	1 3/4"	EXIST.	EXIST.	EXIST.	EXIST.	EXIST.	EXIST.		
06	2'-6"	6'-8"	1 3/4"	EXIST.	EXIST.	EXIST.	EXIST.	EXIST.	EXIST.		
08B	2'-6"	6'-8"	1 3/4"	A2	WD	PT-1	PH	WD	PT-1		
09B	2'-6"	6'-8"	1 3/4"	A2	WD	PT-1	PH	WD	PT-1		
10	3'-0"	6'-8"	1 3/4"	J2	-	-	PH	WD	PT-1		
12B	2'-6"	6'-8"	1 3/4"	A2	WD	PT-1	PH	WD	PT-1		
13	3'-0"	6'-8"	1 3/4"	J2	-	-	PH	WD	PT-1		
15	2'-6"	6'-8"	1 3/4"	A2	WD	PT-1	PH	WD	PT-1		
16	3'-0"	6'-8"	1 3/4"	J2	-	-	PH	WD	PT-1		
18	1'-6"	6'-8"	1 3/4"	J2	-	-	PH	WD	PT-1		

ROOM FINISH SCHEDULE - UNITS					
Number	Name	Floor Finish	Base Finish	Wall Finish	Ceiling Finish
001	ENTRY	LVT-1	VB-1	PT-2	PT-3
002	COAT	LVT-1	VB-1	PT-2	PT-3
003	LIVING	LVT-1	VB-1	PT-2	PT-3
004	KITCHEN	LVT-1	VB-1	PT-2	PT-3
005	MECH	LVT-1	VB-1	PT-2	PT-3
006	LAUNDRY	LVT-1	VB-1	PT-2	PT-3
008	BATHROOM 1	LVT-1	VB-1	PT-2	PT-3
009	BEDROOM 1	LVT-1	VB-1	PT-2	PT-3
010	CLOS. 1	LVT-1	VB-1	PT-2	PT-3
012	BEDROOM 2	LVT-1	VB-1	PT-2	PT-3
013	CLOS. 2	LVT-1	VB-1	PT-2	PT-3
015	BEDROOM 3	LVT-1	VB-1	PT-2	PT-3
016	CLOS. 3	LVT-1	VB-1	PT-2	PT-3
018	LINEN	LVT-1	VB-1	PT-2	PT-3

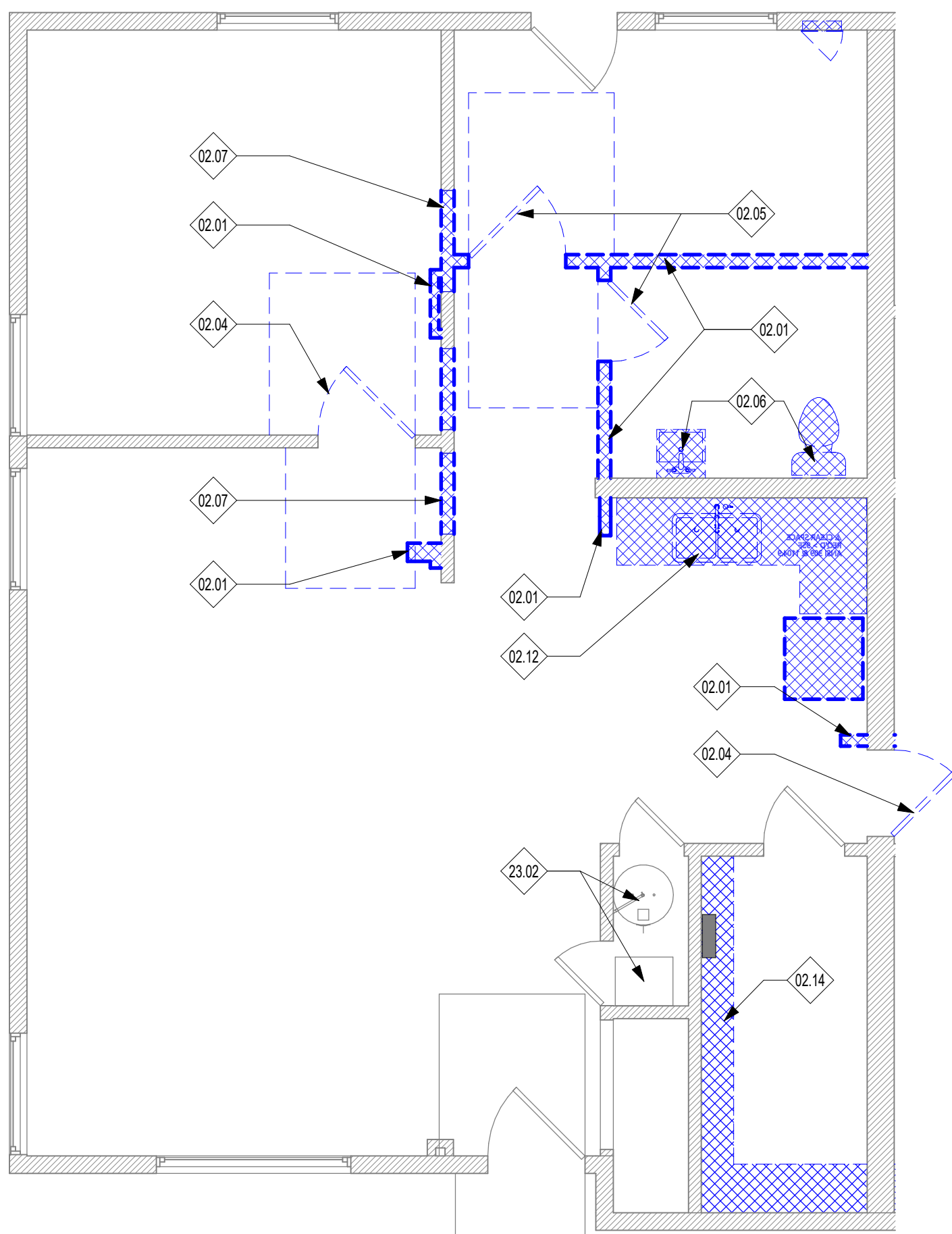
NOTES
PT-1 - PPG SAND DOLLAR
PT-2 - PPG SAND DOLLAR
PT-3 - PPG SAND DOLLAR
VB-1 - 4" VINYL BASE
WITH TOE. COLOR
SELECTED BY OWNER.
LVT-1 - COLOR SELECTED
BY OWNER



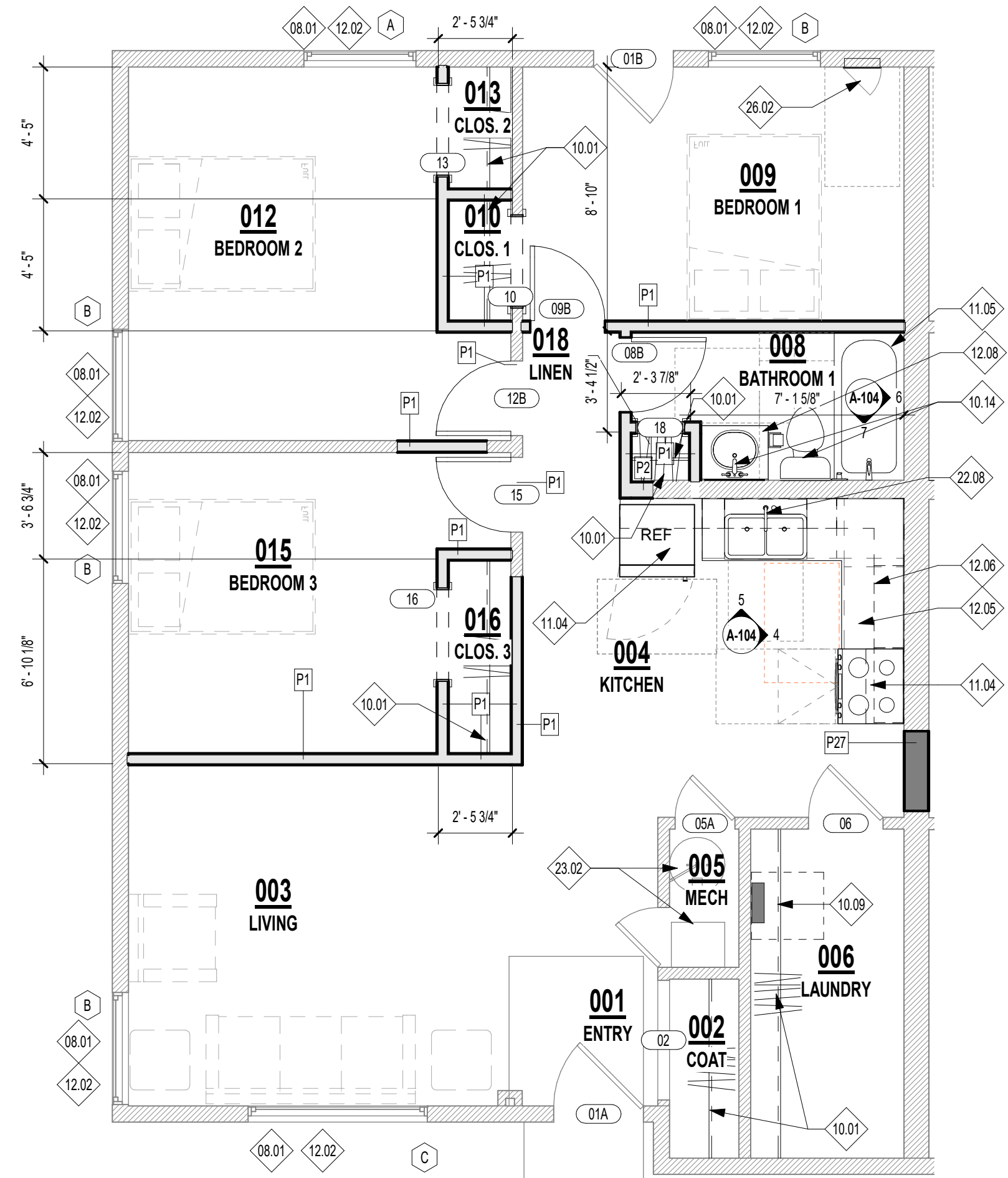
- NOTE:**
- EXISTING OUTLETS AND SWITCHES TO BE REPLACED IN KIND.
 - DEMISING WALL TO RECEIVE TYPE 'X' GYPSUM BOARD TO MAINTAIN FIRE RATING



3 BUILDING 32B - THREE BEDROOM UNIT - TYPE B - CLEAR SPACE PLAN
1/4" = 1'-0"



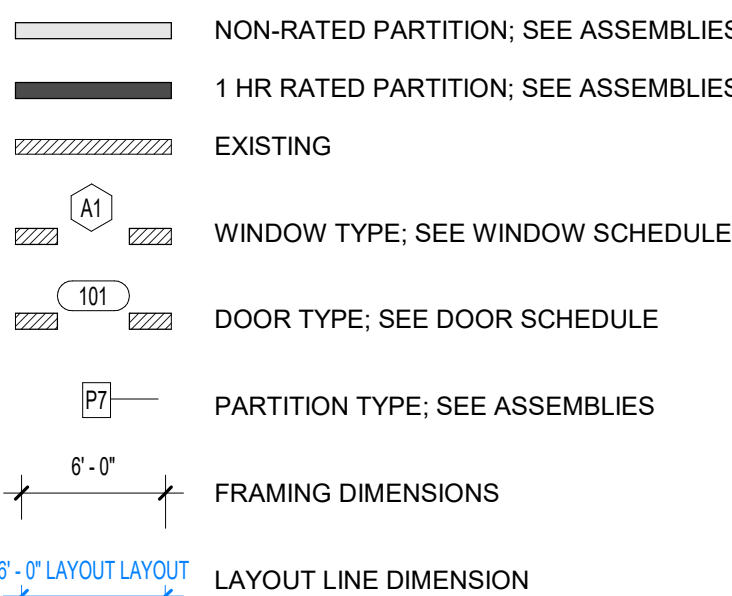
2 BLDG 32B - THREE BEDROOM UNIT - TYPE B - DEMO PLAN
1/4" = 1'-0"



1 BUILDING 32B - THREE BEDROOM UNIT - TYPE B - FLOOR PLAN
1/4" = 1'-0"

REFERENCE G-003 FOR GENERAL NOTES

PLAN LEGEND



KEYNOTE LEGEND

- REMOVE EXISTING PARTITION, OR PORTION THEREOF, AS INDICATED. DEMOLITION CONTRACTOR TO COORDINATE WITH REMODEL PLANS. DEMOLITION CONTRACTOR TO COORDINATE DEMOLITION OF UTILITIES WITH MEP DRAWINGS.
- REMOVE EXISTING DOOR, FRAME AND ASSOCIATED HARDWARE. SAVE FOR REUSED. PREP AREA FOR INSTALLATION OF NEW WALL INFILL.
- REMOVE EXISTING DOOR, FRAME AND ASSOCIATED HARDWARE. DEMOLITION CONTRACTOR TO COORDINATE WITH REMODEL PLANS.
- REMOVE EXISTING BATHROOMS TO INCLUDE TOILETS & ASSOCIATED EQUIPMENT, TOILET ACCESSORIES, SINKS, FINISHES, FLOORING, AND PARTITIONS AS REQUIRED FOR NEW INSTALLATION. DEMOLITION CONTRACTOR TO COORDINATE WITH REMODEL PLANS.
- REMOVE EXISTING PARTITION AS INDICATED AND PREP FOR NEW WALL INFILL FOR NEW DOOR. DEMOLITION CONTRACTOR TO COORDINATE WITH REMODEL PLANS.
- REMOVE EXISTING KITCHEN ITEMS INDICATED TO INCLUDE FIXTURES, APPLIANCES, CABINETS, COUNTERTOPS, ETC. PREP AREA FOR INSTALLATION OF NEW KITCHEN ITEMS PER REMODEL PLANS.
- REMOVE EXISTING WOOD SHELVING AND ASSOCIATED HARDWARE.
- EXISTING VINYL WINDOWS TO REMAIN - SEE WINDOW SCHEDULE.
- (2) ROWS (12") DEEP VENTILATED WIRE SHELVING IN CLOSET. REF. 1/6300 FOR DETAILS AND TYPICAL MOUNTING HEIGHTS.
- PROPOSED LOCATION FOR FUTURE WASHER AND DRYER
- NEW BATHROOM TOILET & ASSOCIATED EQUIPMENT, TOILET ACCESSORIES, AND SINK.
- NEW REFRIGERATOR, RANGE, AND MICROWAVE WITH HOOD. SEE INTERIOR ELEVATIONS FOR MORE INFORMATION.
- NEW TUB/SHOWER SURROUND.
- PROVIDE (1") VINYL, HORIZONTAL WINDOW BLINDS AT ALL WINDOWS PER SPECIFICATIONS.
- NEW PLASTIC LAMINATE COUNTERTOP. SEE INTERIOR ELEVATIONS FOR MORE INFORMATION.
- NEW UPPER AND BASE CABINETS. SEE INTERIOR ELEVATIONS FOR MORE INFORMATION.
- NEW SINK VANITY CABINET.
- NEW KITCHEN SINK. SEE INTERIOR ELEVATIONS FOR MORE INFORMATION.
- EXISTING HVAC EQUIPMENT TO REMAIN.
- NEW ELECTRICAL PANEL AT EXISTING PANEL LOCATION. REFER TO ELECTRICAL PLANS. FINISH TO BE BAKED ENAMEL IN COLOR WHITE OR TO MATCH ADJACENT WALL. COLOR PER OWNER FINAL SELECTION.

PRINTS ISSUED

11/07/25 100% BID SET

REVISIONS:

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BEAR CREEK APARTMENTS

1109 ELLETA BLVD.
COLUMBIA, MO 65202

SHEET TITLE
BUILDING 32B - 3 BEDROOM UNIT
PLAN

PROJECT NUMBER: 24127.PR

SHEET NUMBER:

A-104



4 BUILDING 32 - EAST ELEVATION
NOT TO SCALE



3 BUILDING 32 - SOUTH ELEVATION
NOT TO SCALE



2 BUILDING 32 - WEST ELEVATION
NOT TO SCALE



1 BUILDING 32 - NORTH ELEVATION
NOT TO SCALE

REFERENCE G-003 FOR GENERAL NOTES

MATERIAL LEGEND

- EXISTING PREFINISHED LAP SIDING. PAINT SW621.
- EXISTING FACE BRICK

KEYNOTE LEGEND

- 02.28 REMOVE EXISTING SIGNAGE. PATCH AND REPAIR SIDING AS NEEDED BEFORE REPAINTING.
- 02.29 REMOVE EXISTING MAILBOX ATTACHED TO BUILDING. REPAIR SIDING AS NEEDED BEFORE REPAINTING AND INSTALL NEW MAILBOX.
- 02.31 REMOVE EXISTING ADDRESS SIGN AND LIGHT PRIOR TO PAINTING. REPAIR SIDING AS NEEDED BEFORE REPAINTING.
- 08.01 EXISTING VINYL WINDOWS TO REMAIN - SEE WINDOW SCHEDULE.
- 08.07 EXISTING DOOR TO REMAIN. REFER TO DOOR SCHEDULE.
- 09.13 REPAINT EXISTING EXTERIOR FINISH MATERIAL USING PPG1040-7 - G0BLIN
- 09.15 REPAINT EXISTING BOLLARDS USING SW 6261 PER PAINT MANUFACTURER INSTRUCTIONS.
- 09.16 EXISTING TRIM TO BE PAINTED WHITE TO MATCH EXISTING WINDOWS.
- 23.02 EXISTING HVAC EQUIPMENT TO REMAIN.
- 26.07 EXISTING EXTERIOR LIGHT FIXTURE TO REMAIN.
- 26.08 EXISTING EXTERIOR ELECTRICAL EQUIPMENT TO REMAIN.
- 32.05 POWERWASH AND RESTRIPE PARKING LOT

PRINTS ISSUED
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BEAR CREEK APARTMENTS

1109 ELLETA BLVD.
COLUMBIA, MO 65202

SHEET TITLE
BUILDING 32 - EXTERIOR
ELEVATIONS

PROJECT NUMBER: 24127.PR

SHEET NUMBER:

A-105

WINDOW SCHEDULE			
Type Mark	Width	Height	Comments
D	3' - 3"	2' - 8"	EXISTING TO REMAIN
E	2' - 5"	3' - 7"	EXISTING TO REMAIN
G	1' - 0"	1' - 0"	EXISTING TO REMAIN
H	1' - 8"	3' - 0"	EXISTING TO REMAIN

KEYNOTE LEGEND

- 02.01 REMOVE EXISTING PARTITION, OR PORTION THEREOF, AS INDICATED. DEMOLITION CONTRACTOR TO COORDINATE WITH REMODEL PLANS. DEMOLITION CONTRACTOR TO COORDINATE DEMOLITION OF UTILITIES WITH MEP DRAWINGS.
- 02.03 REMOVE PORTION OF EXISTING PARTITION TO ACCOMMODATE INSTALLATION OF NEW DOOR AND FRAME. DEMOLITION CONTRACTOR TO COORDINATE WITH REMODEL PLANS. DEMOLITION CONTRACTOR TO COORDINATE DEMOLITION OF UTILITIES WITH MEP DRAWINGS.
- 02.04 REMOVE EXISTING DOOR, FRAME AND ASSOCIATED HARDWARE. SAVE FOR REUSED. PREP AREA FOR INSTALLATION OF NEW WALL INFILL.
- 02.23 REMOVE EXISTING VENDING MACHINE AND RELOCATE TO NEW LOCATION ADJACENT TO DRYERS.
- 02.24 OWNER TO RELOCATE EXISTING DRYERS PRIOR TO CONSTRUCTION.
- 02.25 OWNER TO RELOCATE EXISTING WASHERS PRIOR TO CONSTRUCTION.
- 02.26 REMOVE EXISTING WASHERS AND RELOCATE APPROXIMATELY 8' AWAY FROM PARTIAL HEIGHT WALL TO ALLOW ROOM FOR NEW FULL HEIGHT WALL.
- 09.18 PARTIAL HEIGHT EXISTING WALL TO REMAIN. CONTRACTOR TO VERIFY MEP UTILITIES WITHIN THE WALL.

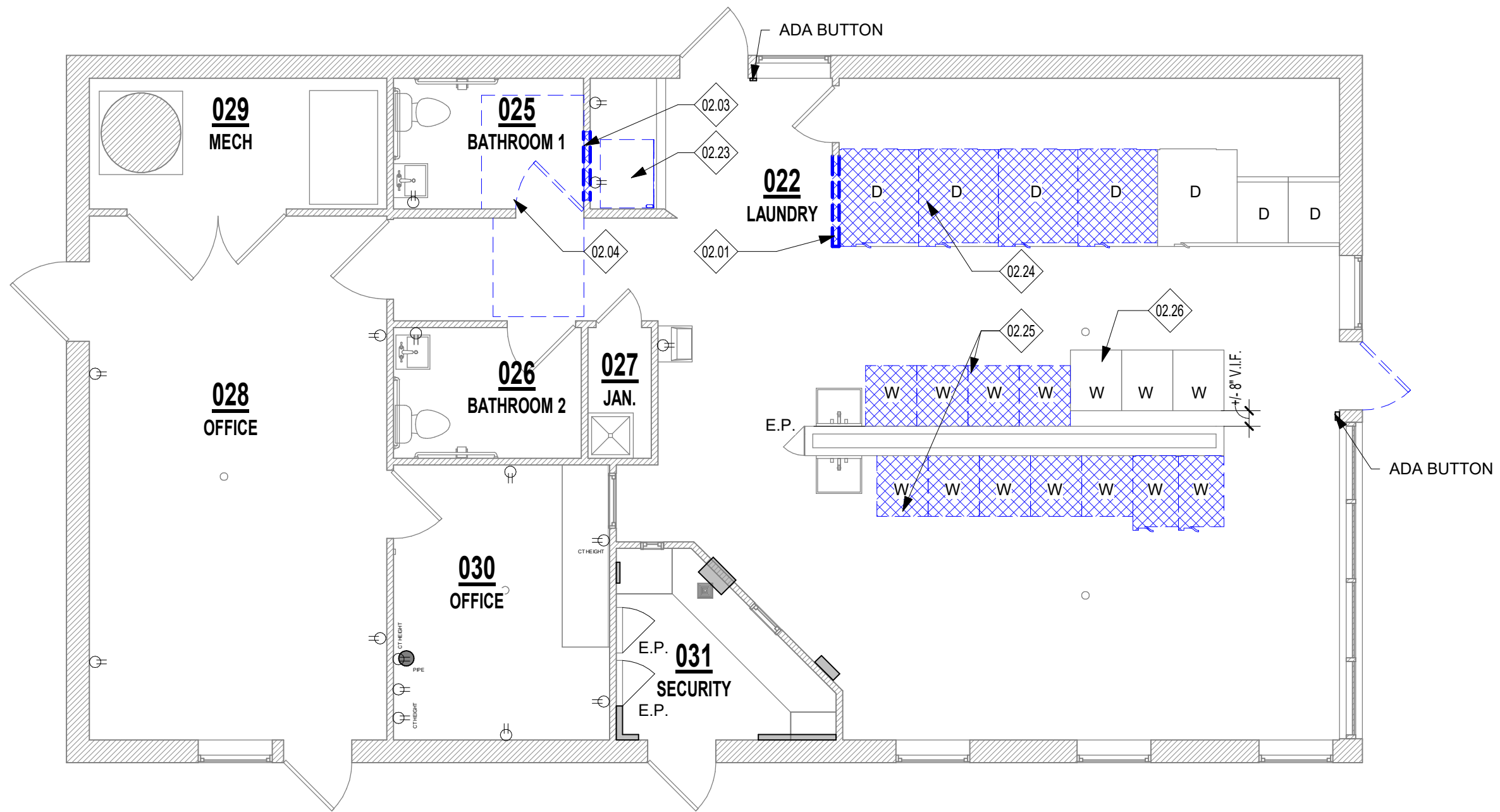
DEMOLITION PLAN
LEGEND

- REMOVE PARTITION
- REMOVE ELEMENT
- REMOVE DOOR & FRAME

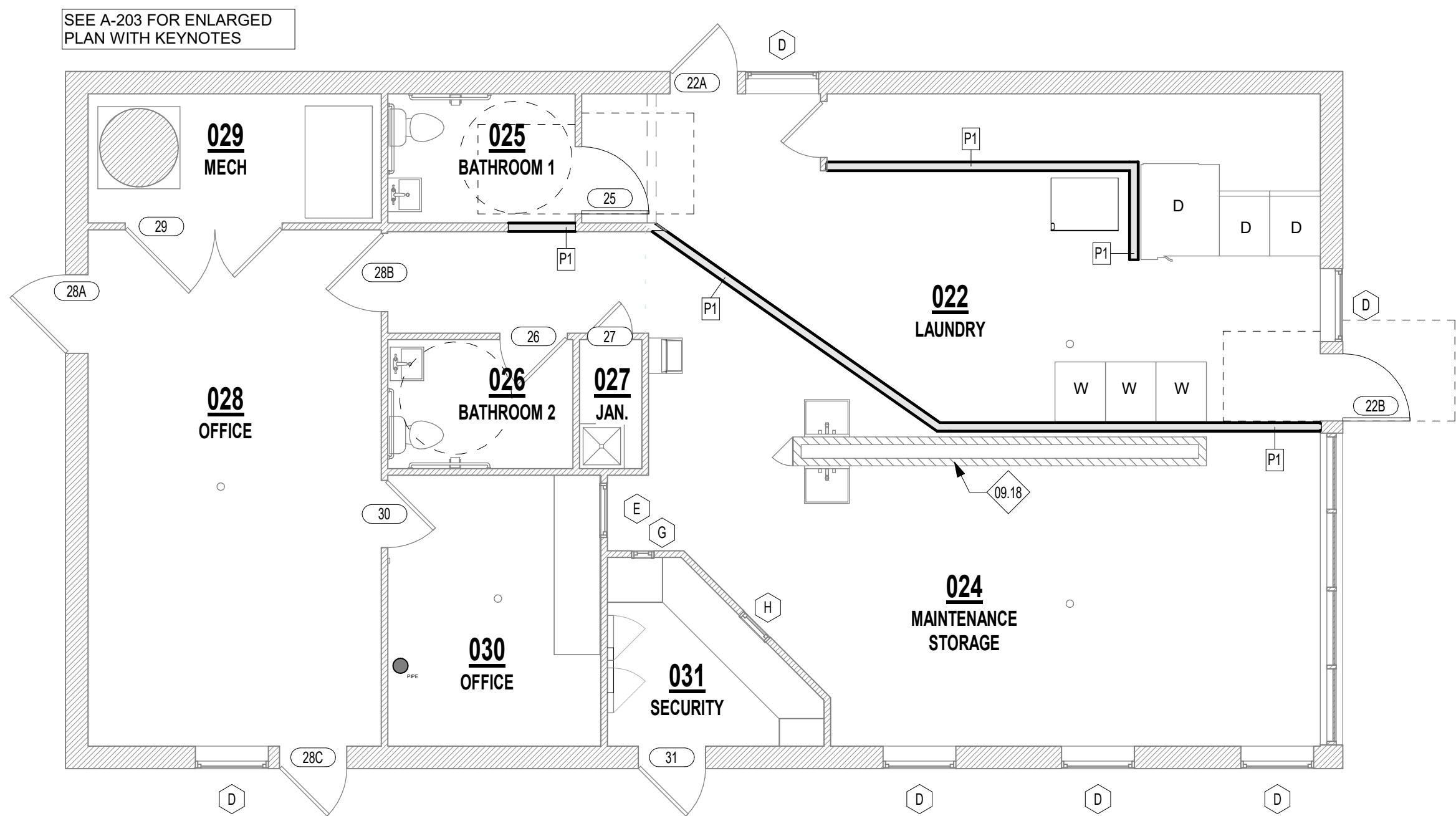
NOTE:
THE NOTES ON THE DEMOLITION PAGES SHOW THE INTENT OF DEMOLITION REQUIRED FOR THE BUILDING. THEY DO NOT ARTICULATE ALL ELEMENTS THAT ARE TO BE REMOVED. GENERAL AND DEMOLITION CONTRACTORS TO THOROUGHLY INSPECT THE PREMISES PRIOR TO COMMENCEMENT OF WORK AND IDENTIFY ANY LARGE, OR ITEMS OF POTENTIAL SIGNIFICANT COST, THAT HAVE NOT BEEN MARKED ON THESE DRAWINGS AND REPORT THEM TO THE ARCHITECT AND OWNER.

PLAN LEGEND

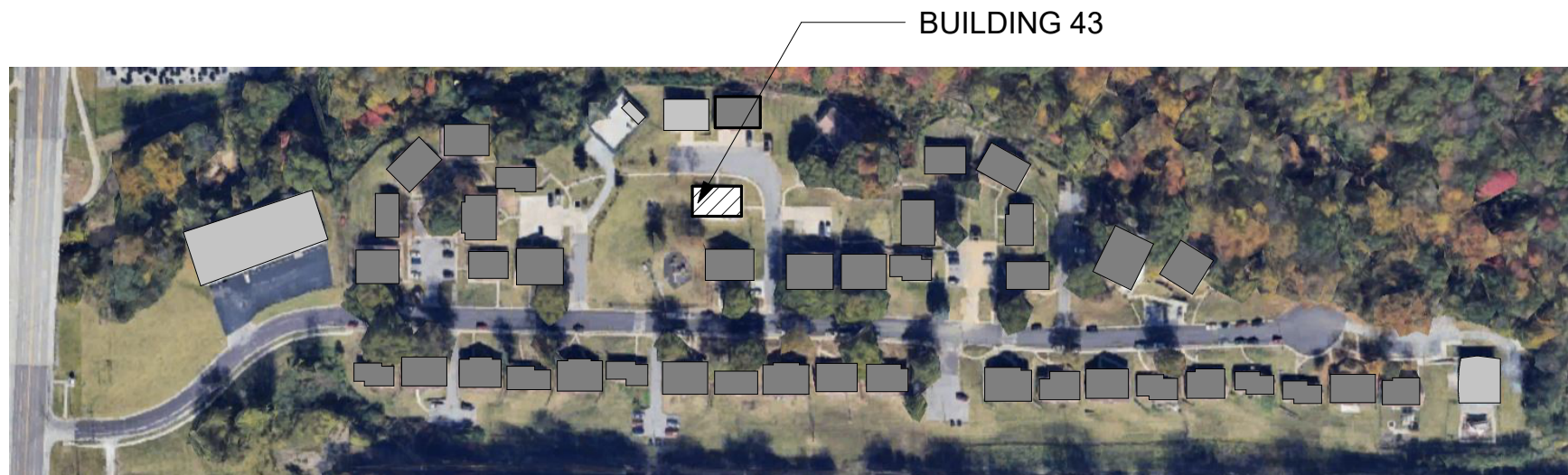
- NON-RATED PARTITION; SEE ASSEMBLIES
- 1 HR RATED PARTITION; SEE ASSEMBLIES
- EXISTING
- WINDOW TYPE; SEE WINDOW SCHEDULE
- DOOR TYPE; SEE DOOR SCHEDULE
- PARTITION TYPE; SEE ASSEMBLIES
- FRAMING DIMENSIONS
- LAYOUT LINE DIMENSION



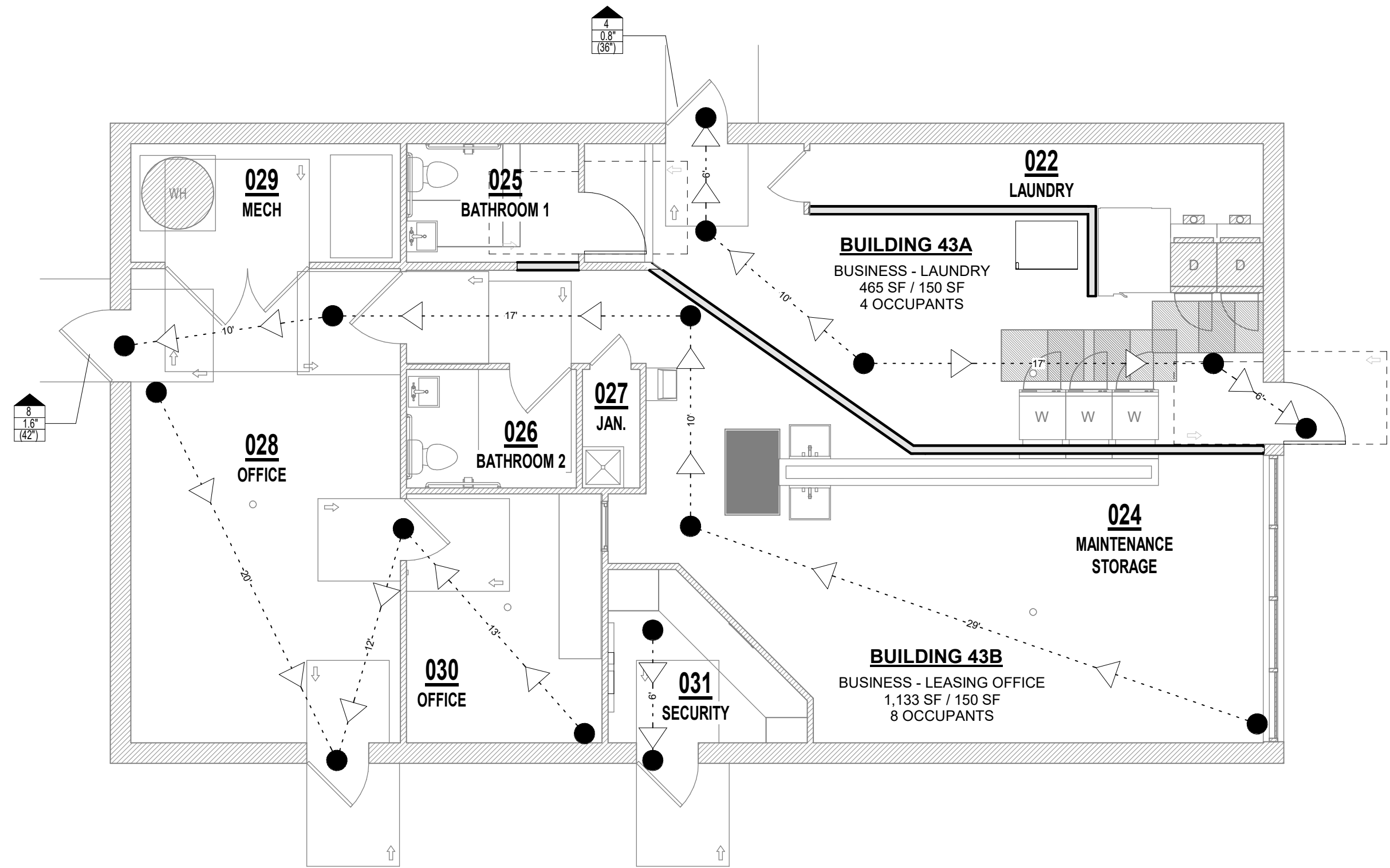
3 BUILDING 43 - 1ST FLOOR DEMO PLAN
3/16" = 1'-0"



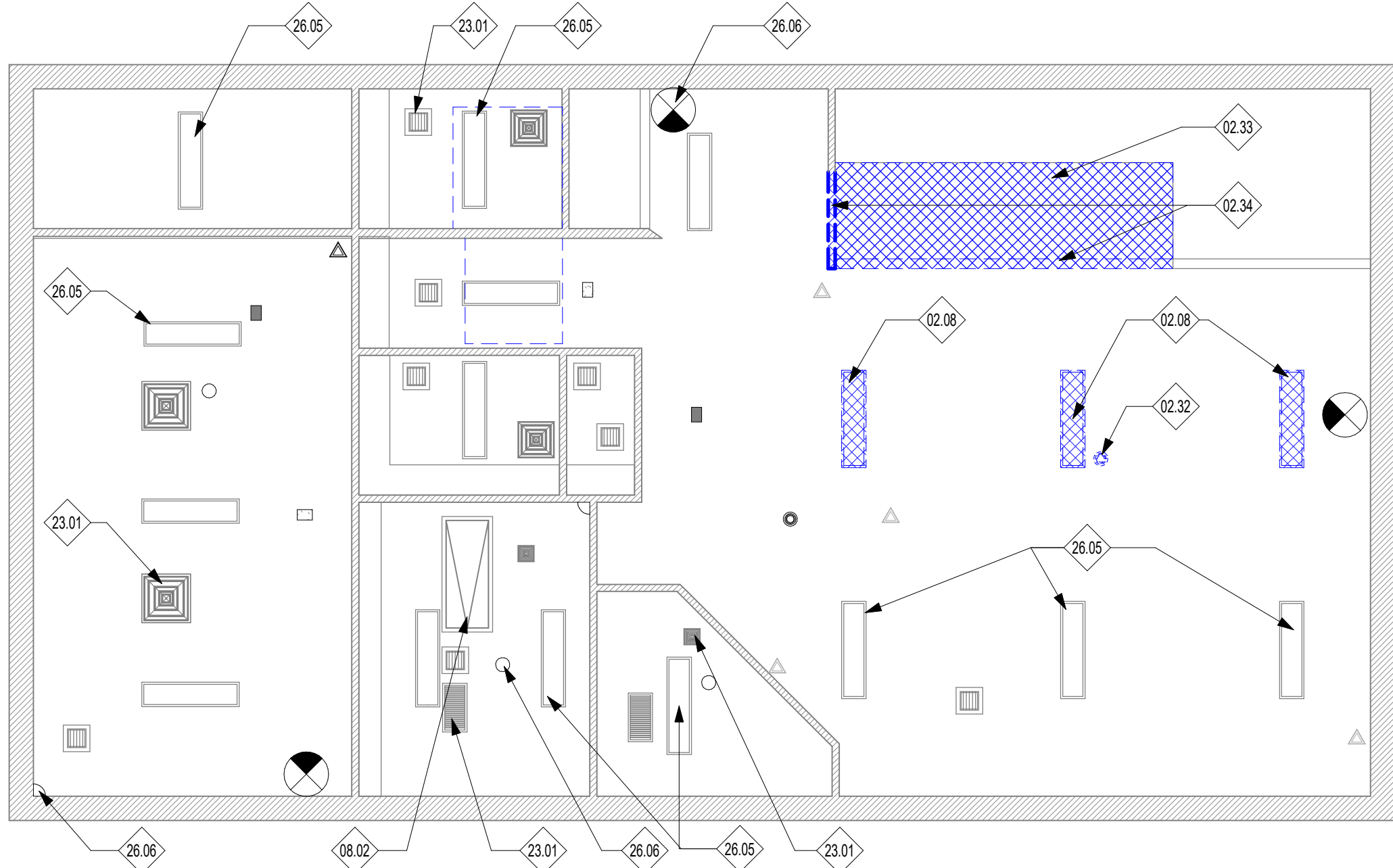
2 BUILDING 43 - 1ST FLOOR PLAN
3/16" = 1'-0"



1 KEY PLAN
1" = 200'-0"

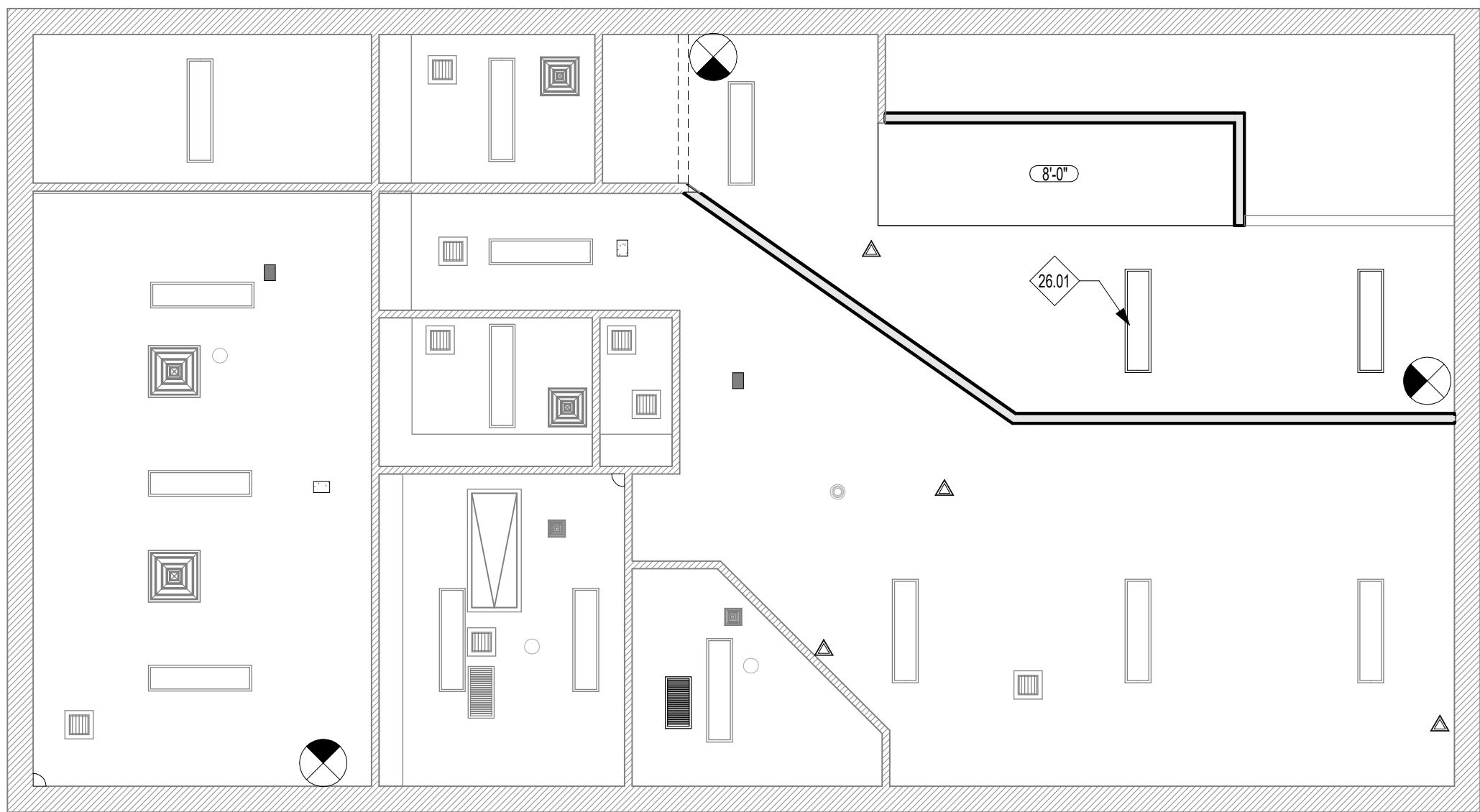


3 BUILDING 43 - EGRESS PLAN
3/16" = 1'-0"



2 BUILDING 43 - 1ST FLOOR DEMO REFLECTED CEILING PLAN
3/16" = 1'-0"

NOTE:
SEE ELECTRICAL PLANS FOR LIGHTING LOCATION AND SCHEDULE



1 BUILDING 43 - 1ST FLOOR REFLECTED CEILING PLAN
3/16" = 1'-0"

CODE PLAN LEGEND	
	NUMBER OF OCCUPANTS EXITING
	REQUIRED EXIT WIDTH
	EXIT WIDTH PROVIDED BY DESIGN
	EXT. - RATED PARTITION (IBC CH. 6)
	NON - RATED PARTITION
	1 HR RATED PARTITION (IBC 708)
	1 HR RATED BARRIER (IBC 707)
	1 HR RATED SHAFT ENCLOSURE (IBC 713)
	2 HR RATED PARTITION (IBC 708)
	2 HR RATED FIRE OR SMOKE BARRIER (IBC 709)
	2 HR RATED SHAFT ENCLOSURE (IBC 713)
	2 HR RATED FIRE WALL (IBC 706)
	3 HR RATED BARRIER (IBC 707)
	ROOM NUMBER
	FIRE EXTINGUISHER CABINET OR SURFACE MTD. AT CONC.
	FIRE DEPARTMENT KNOX BOX (DEFER SUBMITTAL FOR LOC.)
	FIRE DEPARTMENT CONENCTION
	DOOR RATING
	DOOR WITH PANIC HARDWARE (SEE DOOR SCHEDULE)
	EXIT SIGNAGE; SEE ELECTRICAL
	EGRESS STARTING POINT
	EGRESS DISTANCE OF TRAVEL
	EGRESS DIRECTION OF TRAVEL

RCP LEGEND	
	C1 - EXISTING 2' X 2' ACT SYSTEM
	C2 - EXISTING 2' X 4' ACT SYSTEM
	C3 - GWB ON METAL STUD
	INDICATES CEILING HEIGHT
	EXISTING SECURITY CAMERA
	EXISTING EXIT SIGN
	EXISTING HEAT DETECTOR
	EXISTING MOTION SENSOR
	EXISTING LENNOX
	EXISTING SMOKE DETECTOR
	EXISTING WALL OCCUPY SENSOR
	EXISTING VENT
	EXISTING VENT
	EXISTING VENT
	EXISTING SURFACE LIGHT FIXTURE
	NEW SURFACE LIGHT FIXTURE

KEYNOTE LEGEND	
02.08	REMOVE EXISTING CEILING MOUNTED LIGHTING FIXTURES ANY ASSOCIATED HARDWARE. SAVE FOR REUSE. DEMOLITION CONTRACTOR TO COORDINATE WITH MEP DRAWINGS. TYP.
02.32	REMOVE EXISTING CEILING MOUNTED HEAT DETECTOR AND ANY ASSOCIATED HARDWARE. DEMOLITION CONTRACTOR TO COORDINATE WITH MEP DRAWINGS.
02.33	REMOVE EXISTING SOFFIT CEILING. DEMOLITION CONTRACTOR TO COORDINATE WITH REMODEL DRAWINGS.
02.34	REMOVE EXISTING SOFFIT WALL. DEMOLITION CONTRACTOR TO COORDINATE WITH REMODEL DRAWINGS.
08.02	EXISTING ATTIC ACCESS PANEL.
23.01	EXISTING VENT TO REMAIN.
26.01	CEILING MOUNTED FIXTURE.
26.05	EXISTING LIGHTING FIXTURES TO REMAIN. TYP.
26.06	EXISTING ELECTRICAL DEVICES INCLUDING EMERGENCY LIGHTING, SECURITY CAMERAS, HEAT DETECTOR, MOTION SENSOR, LENNOX, SMOKE DETECTOR, AND WALL OCCUPY SENSOR TO REMAIN.

DOOR SCHEDULE - COMMON AREA DOORS									
Mark	Width	Height	Thickness	Door		Frame		Fire Rating (Minutes)	Comments
				Door Type	Door Material	Door Finish	Frame Type	Frame Finish	
22A	3'-0"	6'-8"	1 3/4"	EXIST.	EXIST.	EXIST.	EXIST.	EXIST.	
22B	3'-0"	6'-8"	1 3/4"	A1	WD	PT-1	KD	PT-1	
22C	2'-6"	6'-8"	1 3/4"	EXIST.	EXIST.	EXIST.	EXIST.	EXIST.	
25	3'-0"	6'-8"	1 3/4"	A1	WD	PT-1	PH	PT-1	
26	3'-0"	6'-8"	1 3/4"	EXIST.	EXIST.	EXIST.	EXIST.	EXIST.	
27	2'-0"	6'-8"	1 3/4"	EXIST.	EXIST.	EXIST.	EXIST.	EXIST.	
28A	3'-6"	6'-8"	1 3/4"	EXIST.	EXIST.	EXIST.	EXIST.	EXIST.	
28B	3'-6"	6'-8"	1 3/4"	EXIST.	EXIST.	EXIST.	EXIST.	EXIST.	
28C	3'-0"	6'-8"	1 3/4"	EXIST.	EXIST.	EXIST.	EXIST.	EXIST.	
29	7'-0"	6'-8"	1 3/4"	EXIST.	EXIST.	EXIST.	EXIST.	EXIST.	
30	3'-0"	6'-8"	1 3/4"	EXIST.	EXIST.	EXIST.	EXIST.	EXIST.	
31	3'-0"	6'-8"	1 3/4"	EXIST.	EXIST.	EXIST.	EXIST.	EXIST.	

ROOM FINISH SCHEDULE						
Number	Name	Floor Finish	Base Finish	Wall Finish	Ceiling Finish	Comments
022	LAUNDRY	EXISTING	EXISTING	PT-1	EXISTING	
024	MAINTENANCE STORAGE	EXISTING	EXISTING	PT-1	EXISTING	
025	BATHROOM 1	EXISTING	EXISTING	PT-1	EXISTING	
026	BATHROOM 2	EXISTING	EXISTING	PT-1	EXISTING	
027	JAN.	EXISTING	EXISTING	PT-1	EXISTING	
028	OFFICE	EXISTING	EXISTING	PT-1	EXISTING	
029	MECH	EXISTING	EXISTING	PT-1	EXISTING	
030	OFFICE	EXISTING	EXISTING	PT-1	EXISTING	
031	SECURITY	EXISTING	EXISTING	PT-1	EXISTING	

PUBLIC ROOM FINISH COMMENTS:

- PAINT BULKHEADS
-

GENERAL NOTES:

- BASE FINISH
A. RB-1 = VINYL TOED/TOELESS - STANDARD COLOR
-

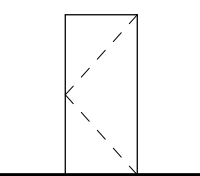
DOOR SCHEDULE ABBREVIATIONS:

ALUM	ALUMINUM	FGL / FBG	FIBERGLASS	N/A	NOT APPLICABLE	STL	STEEL
ANO	ANODIZED	HC WOOD / HCWD	HOLLOW CORE WOOD	PER MFR	PER MANUFACTURER	WD CLAD	WOOD CLAD
BLK	BLACK	HM	HOLLOW METAL	PRE-FIN	PRE-FINISHED		
BRZ	BRONZE	INSUL MTL	INSULATED METAL	PT / PTD	PAINTED		
CLR	CLEAR	MTL	METAL	SC WOOD / SCWD	SOLID CORE WOOD		

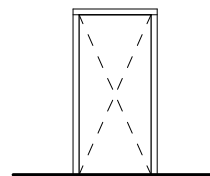
DOOR COMMENTS:

- BOTTOM RAIL TO BE MINIMUM 10" TO ALLOW FOR A 10" KICK PLATE, TYPICALL ALL DOORS. SEE: XX / XX
- SEE SPECIFICATIONS FOR DOOR HARDWARE SCHEDULE; FINAL HARDWARE SCHEDULE AND FINAL GROUPS TO BE DETERMINED BY DOOR SUB-CONTRACTOR. VERIFY FINAL HARDWARE INSTALLATION WITH CLIENT AND ARCHITECT.
- DOOR HARDWARE SHALL NOT REQUIRE TIGHT GRASPING, TIGHT PINCHING, OR TWISTING OF THE WRIST TO OPERATE.
- SEE XX / XX FOR DOOR EXTERIOR AND INTERIOR TRIM.
- DOOR FRAMES TO BE FINISHED PER SCHEDULE.
- VERIFY KEYING SCHEDULE WITH OWNER. ALL KEYS TO BE GIVEN TO OWNER AT SUBSTANTIAL COMPLETION.
- ALL DOOR HARDWARE TO BE LEVER TYPE HARDWARE, UNO.
- ALL COMMON AREA RATED DOORS TO HAVE SMOKE SEALS (GASKETS), CLOSURES, AND LATCH HARDWARE.
- UNIT ENTRY DOORS TO HAVE SPRING HINGES & LATCH HARDWARE, TYP UNO.
- ALL DOORS INTENDED FOR PASSAGE TO HAVE 32" CLEAR WIDTH PER ICC ANSI A117.1

DOOR TYPES

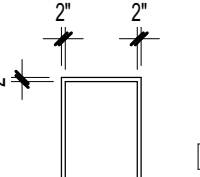


A1
SINGLE SWING
FLUSH

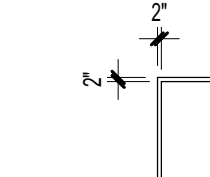


J2
CASED OPENING

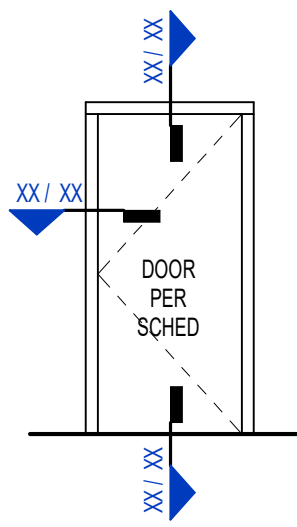
FRAME TYPES



KD
KNOCK DOWN
w/ TRIM



PH
PRE-HUNG
w/ TRIM



**TYPICAL INTERIOR
DOOR CASING**

2

DOOR TRIM & CASING - TYPICAL

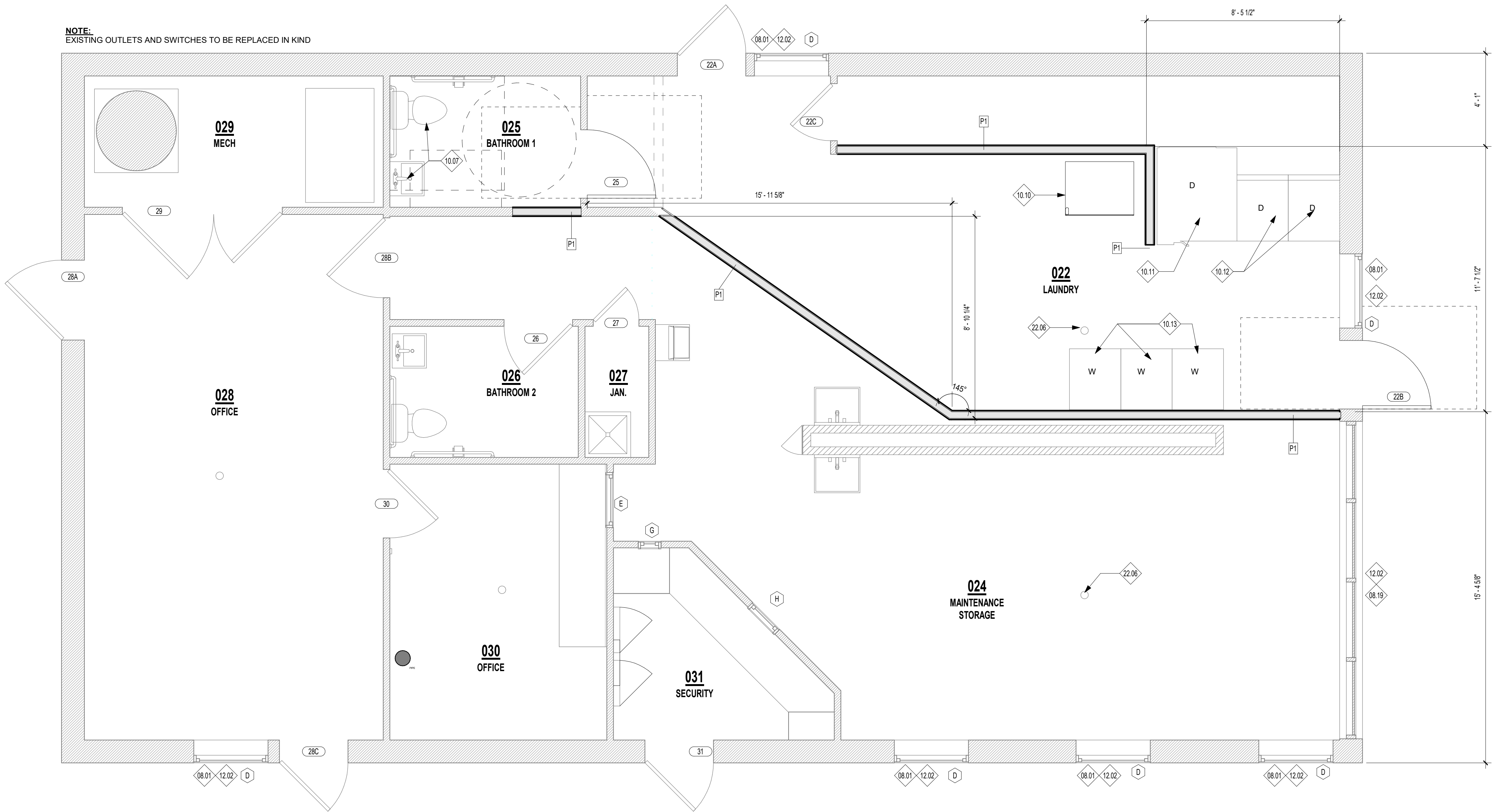
1/4" = 1'-0"

REFERENCE G-003 FOR GENERAL NOTES

KEYNOTE LEGEND

- 08.01 EXISTING VINYL WINDOWS TO REMAIN - SEE WINDOW SCHEDULE.
- 08.19 EXISTING STOREFRONT WINDOW SYSTEM TO REMAIN.
- 10.07 EXISTING BATHROOM TOILET & ASSOCIATED EQUIPMENT, TOILET ACCESSORIES, SINK, FINISHES, AND FLOORING TO REMAIN.
- 10.10 RELOCATED VENDING MACHINE.
- 10.11 EXISTING INDUSTRIAL SIZE DRYER TO REMAIN.
- 10.12 EXISTING COMMERCIAL DRYER TO REMAIN.
- 10.13 EXISTING COMMERCIAL WASHERS TO REMAIN. WASHERS TO BE MOVED FORWARD +/- 8" TO ACCOMMODATE THE NEW WALL.
- 12.02 PROVIDE (1") VINYL, HORIZONTAL WINDOW BLINDS AT ALL WINDOWS PER SPECIFICATIONS.
- 22.06 EXISTING FLOOR DRAIN TO REMAIN.

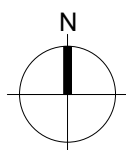
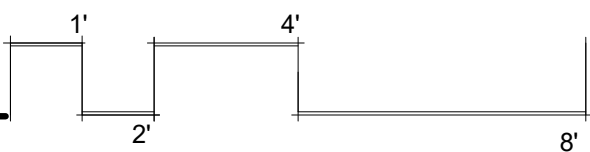
NOTE:
EXISTING OUTLETS AND SWITCHES TO BE REPLACED IN KIND



1

BUILDING 43 - ENLARGED FLOOR PLAN

3/8" = 1'-0"



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BEAR CREEK APARTMENTS

1109 ELLETA BLVD.
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SHEET TITLE

BUILDING 43 - ENLARGED FLOOR
PLAN

PROJECT NUMBER: 24127.PR

SHEET NUMBER:

A-203

REFERENCE G-003 FOR GENERAL NOTES

MATERIAL LEGEND

- EXISTING PREFINISHED LAP SIDING. PAINT SW621.
- EXISTING FACE BRICK

KEYNOTE LEGEND

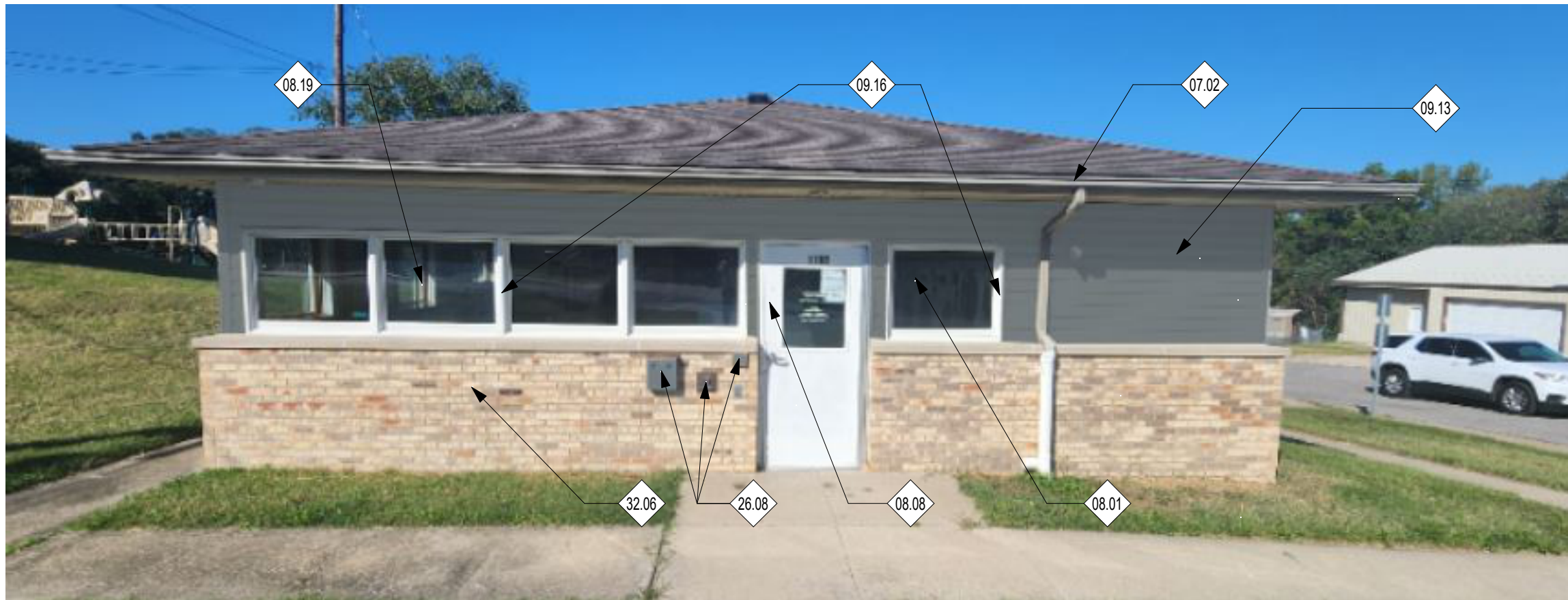
- 07.02 EXISTING PREFINISHED GUTTER & DOWNSPOUT.
- 08.01 EXISTING VINYL WINDOWS TO REMAIN - SEE WINDOW SCHEDULE.
- 08.07 EXISTING DOOR TO REMAIN. REFER TO DOOR SCHEDULE.
- 08.08 NEW DOOR AND FRAME. REFER TO DOOR SCHEDULE.
- 08.19 EXISTING STOREFRONT WINDOW SYSTEM TO REMAIN.
- 09.13 REPAINT EXISTING EXTERIOR FINISH MATERIAL USING PPG1040-7 - GOBLIN
- 09.16 EXISTING TRIM TO BE PAINTED WHITE TO MATCH EXISTING WINDOWS.
- 23.01 EXISTING VENT TO REMAIN.
- 23.02 EXISTING HVAC EQUIPMENT TO REMAIN.
- 26.08 EXISTING EXTERIOR ELECTRICAL EQUIPMENT TO REMAIN.
- 32.06 WASH BRICK VENEER.
- 32.08 EXISTING HANDRAIL AND STAIR TO REMAIN.



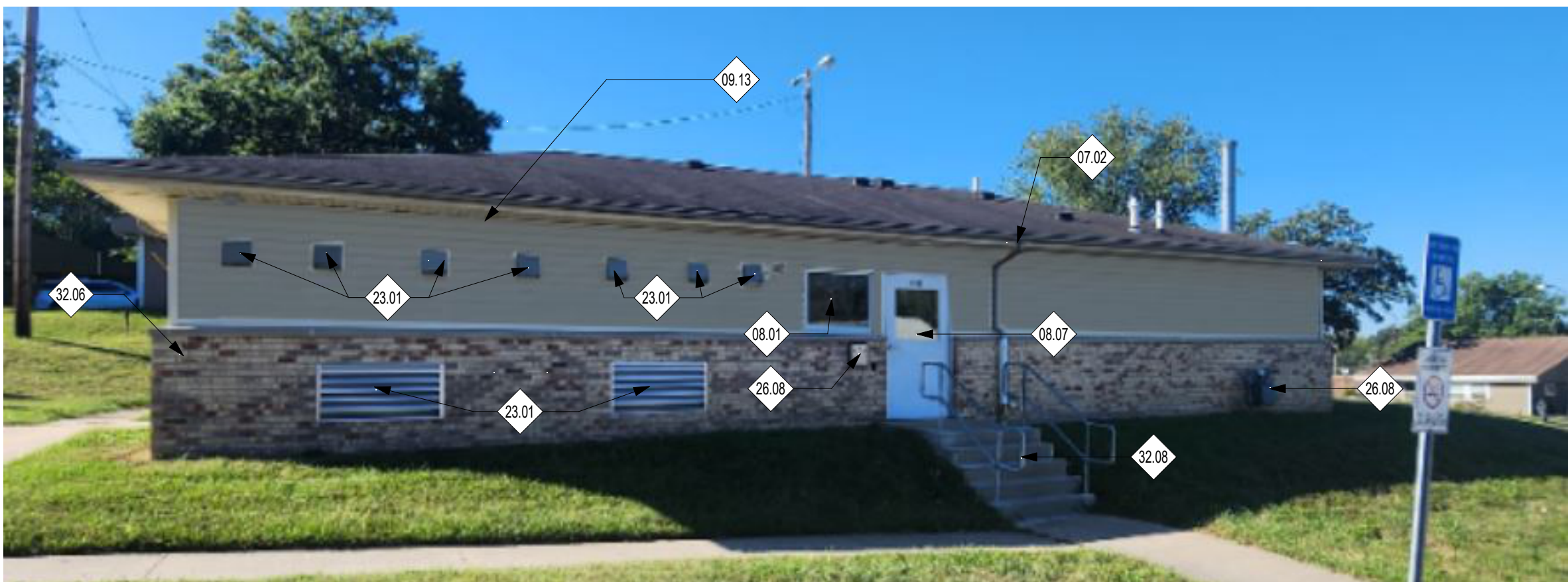
4 BUILDING 43 - WEST ELEVATION
NOT TO SCALE



3 BUILDING 43 - SOUTH ELEVATION
NOT TO SCALE



2 BUILDING 43 - EAST ELEVATION
NOT TO SCALE



1 BUILDING 43 - NORTH ELEVATION
NOT TO SCALE

PRINTS ISSUED
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SHEET TITLE
BUILDING 43 - EXTERIOR
ELEVATIONS

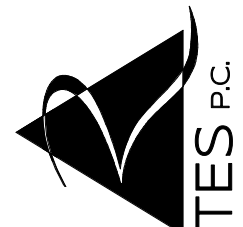
PROJECT NUMBER: 24127.PR

SHEET NUMBER:

A-204

NOTES:
1. REPLACE EXISTING STAIR AND RAMP IN KIND
2. SEE DETAILS E1/A-501, E2/A-501, E4/A-501 FOR TYPICAL DETAILS
3. SAVE RAILING SYSTEM FOR REUSE
4. PAINT RAILING AFTER REINSTALLATION

PRINTS ISSUED
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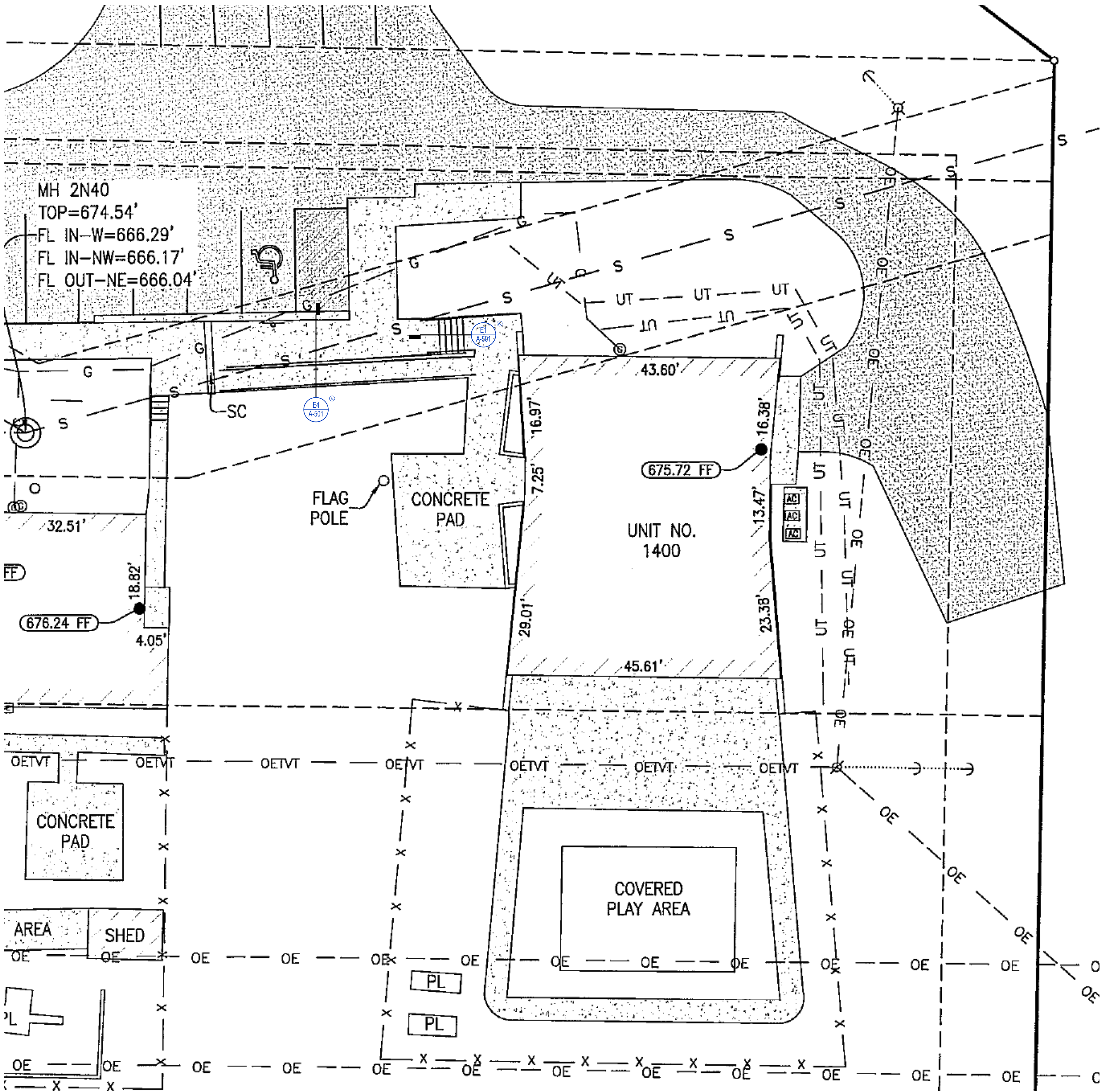
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BEAR CREEK APARTMENTS

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COLUMBIA, MO 65202

SHEET TITLE
DETAILS
PROJECT NUMBER: 24127.PR
SHEET NUMBER:

A-500



1 CONCRETE RAMP AND STAIRS PLAN
1" = 10'-0"



Representations, Certifications, and Other Statements of Bidders

Public and Indian Housing Programs

Table of Contents

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

1. Certificate of Independent Price Determination

(a) The bidder certifies that--

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

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

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

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

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

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

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

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

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

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

[] [Contracting Officer check if following paragraph is applicable]

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

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

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

2. Contingent Fee Representation and Agreement

(a) Definitions. As used in this provision:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

4. Organizational Conflicts of Interest Certification

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

(a) Result in an unfair competitive advantage to the bidder; or,

(b) Impair the bidder's objectivity in performing the contract work.

[] In the absence of any actual or apparent conflict, I hereby certify that to the best of my knowledge and belief, no actual or apparent conflict of interest exists with regard to my possible performance of this procurement.

5. Bidder's Certification of Eligibility

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

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

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

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

6. Minimum Bid Acceptance Period

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

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

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

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

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

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

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

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

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

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

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

(Check the block applicable to you)

[] Black Americans [] Asian Pacific Americans

[] Hispanic Americans [] Asian Indian Americans

[] Native Americans [] Hasidic Jewish Americans

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

The bidder represents and certifies that it:

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

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

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

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

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

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

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

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

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

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

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

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

(1) Obtain identical certifications from the proposed subcontractors;

(2) Retain the certifications in its files; and

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

Notice to Prospective Subcontractors of Requirement for Certifications of Nonsegregated Facilities

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

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

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

The bidder certifies that:

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

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

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

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

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

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

13. Bidder's Signature

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

(Signature and Date)

(Typed or Printed Name)

(Title)

(Company Name)

(Company Address)

BID BOND

KNOW ALL PERSONS BY THESE PRESENTS, That we, the undersigned,

_____, as **PRINCIPAL**,
(Name of Principal)

and _____, as **SURETY**
(Name of Surety)

are hereby held and firmly bound unto the **Housing Authority of the City of Columbia, Missouri**, hereinafter called the "**OWNER**" in the penal sum of:

for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH that whereas the Principal has submitted the accompanying bid to the Owner,

dated _____, 20____.

for _____
(Description of Bid)

NOW, THEREFORE, if said BID shall be rejected, or said BID shall be accepted and...

The Principal shall execute and deliver a contract in the Form of Contract attached hereto (properly completed in accordance with said BID) and shall furnish a BOND for his faithful performance of said contract, and for the payment of all persons performing labor or furnishing materials in connection therewith, and shall in all other respects perform the agreement created by the acceptance of said BID, then this obligation shall be void, otherwise the same shall remain in force and effect; it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall, in to event, exceed the penal amount of this obligation as herein stated.

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

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

Principal

(SEAL)

Surety

IMPORTANT

Surety companies executing BONDS must appear on the Treasury Department's list (Circular 570 as amended) and be authorized to transact business in the State of Missouri.

Housing Authority
of the City of Columbia, Missouri

WORK AUTHORIZATION AFFIDAVIT

Pursuant to 285.530 RSMO (for all bids in excess of \$5,000.00)

State of _____)

County of _____)

My name is _____, and I am the _____ (title)

and authorized agent of _____ (business name).

This business is enrolled and participates in a federal work authorization program for all employees working in connection with services provided to the Housing Authority of the City of Columbia, MO. This business does not knowingly employ any person who is an unauthorized alien in connection with the services being provided.

Documentation of participation in a federal work authorization program is attached to this affidavit.

Furthermore, all subcontractors working on this contract shall affirmatively state in writing in their contracts that they are not in violation of Section 285.530 RSMo and shall not thereafter be in violation. All subcontractors shall also submit a sworn affidavit under penalty of perjury that all employees are lawfully present in the United States.

Affidavit Signature

Subscribed and sworn to before me this _____ day of _____, 20____.

Notary Public

My Commission expires: _____

Missouri Revised Statutes

Chapter 285

Employers and Employees Generally

Section 285.530

August 28, 2012

Employment of unauthorized aliens prohibited--federal work authorization program, requirements for participation in--liability of contractors and subcontractors.

285.530. 1. No business entity or employer shall knowingly employ, hire for employment, or continue to employ an unauthorized alien to perform work within the state of Missouri.

2. As a condition for the award of any contract or grant in excess of five thousand dollars by the state or by any political subdivision of the state to a business entity, or for any business entity receiving a state-administered or subsidized tax credit, tax abatement, or loan from the state, the business entity shall, by sworn affidavit and provision of documentation, affirm its enrollment and participation in a federal work authorization program with respect to the employees working in connection with the contracted services. Every such business entity shall also sign an affidavit affirming that it does not knowingly employ any person who is an unauthorized alien in connection with the contracted services. Any entity contracting with the state or any political subdivision of the state shall only be required to provide the affidavits required in this subsection to the state and any political subdivision of the state with which it contracts, on an annual basis. During or immediately after an emergency, the requirements of this subsection that a business entity enroll and participate in a federal work authorization program shall be suspended for fifteen working days. As used in this subsection, "emergency" includes the following natural and manmade disasters: major snow and ice storms, floods, tornadoes, severe weather, earthquakes, hazardous material incidents, nuclear power plant accidents, other radiological hazards, and major mechanical failures of a public utility facility.

3. All public employers shall enroll and actively participate in a federal work authorization program.

4. An employer may enroll and participate in a federal work authorization program and shall verify the employment eligibility of every employee in the employer's hire whose employment commences after the employer enrolls in a federal work authorization program. The employer shall retain a copy of the dated verification report received from the federal government. Any business entity that participates in such program shall have an affirmative defense that such business entity has not violated subsection 1 of this section.

5. A general contractor or subcontractor of any tier shall not be liable under sections 285.525 to 285.550 when such general contractor or subcontractor contracts with its direct subcontractor who violates subsection 1 of this section, if the contract binding the contractor and subcontractor affirmatively states that the direct subcontractor is not knowingly in violation of subsection 1 of this section and shall not henceforth be in such violation and the contractor or subcontractor receives a sworn affidavit under the penalty of perjury attesting to the fact that the direct subcontractor's employees are lawfully present in the United States.

NON-COLLUSIVE AFFIDAVIT OF PRIME BIDDER

State of: _____ County of: _____

_____, being duly sworn, deposes and says that:

1. He/she is (Owner, Partner, Officer, Representative, or Agent) of _____
_____, the Bidder that has submitted the attached bid;

2. He is fully informed respecting the preparation and contents of the attached bid and all pertinent circumstances respecting such bid;

3. Such bid is genuine and is not a collusive or sham bid;

4. Neither the said Bidder nor any of its officers, partners, owners, agents, representatives, employees or parties in interest, including this affidavit, has in any way colluded, conspired, connived, or agreed, directly or indirectly, with any other bidder, firm or person to submit a collusive or sham bid in connection with the contract for which the attached bid has been submitted or to refrain from bidding in connection with such contract, or has in any manner, directly or indirectly, sought by other bidder, firm or person to fix the price or prices in the attached bid or any other bidder, or to fix any overhead, profit or cost element of the bid price of the other bidder, or to secure through any collusion, conspiracy, connivance or unlawful agreement any advantage against the Owner or any person interested in the proposed contract;

5. The price or prices quoted in the attached bid are fair and proper, and are not tainted by any collusion, conspiracy, connivance or unlawful agreement on the part of the Bidder or any of its agents, representatives, owners, employees, or parties in interest, including this affidavit.

Signed: _____ Title: _____

Subscribed and sworn to before me this _____ day of _____, 20____

_____ My commission expires: _____

**PERFORMANCE AND PAYMENT BOND &
CERTIFICATE AS TO CORPORATE PRINCIPAL**
With Current "Power of Attorney" Attached

KNOW ALL PERSONS BY THESE PRESENTS, That we, the undersigned,

_____ as **PRINCIPAL**,
(Name of Principal)

and _____, as **SURETY**
(Name of Surety)

are hereby held and firmly bound unto the **Housing Authority of the City of Columbia, Missouri**, hereinafter called the "**OWNER**" and all persons, firms and corporations who may furnish labor or materials for the said Contract in the penal sum of:

_____ (\$_____)

for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has entered into a contract with the Owner in which a copy of is hereto attached and; made a part hereof;

Contract Number: _____ Dated: _____, 20____

For: _____
(Description of Contract)

NOW, THEREFORE, if the said Principal shall well and truly perform and complete said project in strict accordance with said Agreement, Instructions to Bidder, Bid, Plans and Specifications, and related documents; and the following obligations are fulfilled, then these presents shall be void; otherwise they shall remain in full force and effect.

- The Principal shall pay all just claims for work or labor performed and materials furnished in connection with said Agreement as they become due, including all amounts due for tools, equipment, materials, and fuels and lubricants consumed or used in connection with the construction of such work.
- The Principal shall pay all insurance premiums, both compensation and all other kinds of insurance, on said work.
- The Principal shall pay all labor performed in such work whether by subcontractor or otherwise.
- The Principal shall pay all services rendered in connection with the performance of said work, including utility and transportation services.
- The Principal shall defend, indemnify and save harmless said Owner against any and all liens, encumbrances, damages, claims, demands, expenses, costs, and charges of every kind, including patent infringement claims, except as otherwise provided in said specifications and other contract documents, arising out of or in relation to the performance of said work and the provisions of said Agreement.

The obligation is made for the use of the Owner and also for the use and benefit of all persons who may perform any work or labor or furnish any material in the execution of said agreement and may be sued on thereby in the name of Owner.

PROVIDED FURTHER, that no final settlement between the Owner and the Principal shall abridge the right of any beneficiary hereunder whose claim may be Unsatisfied. The said surety, for the value received, hereby stipulates and agrees that no change, extension of time, alterations, or addition to the terms of the contract, or the work to be performed thereunder or in the specifications accompanying the same shall in any way affect its obligation on this bond, and it does hereby waive notice of any change, extension of time, or addition to the terms of the contract, or to the work, or to the specifications.

PROVIDE FURTHER, that if any legal action to be filed in this Bond, venue shall lie in the City of Columbia, State of Missouri.

IN WITNESS WHEREOF, the aforesaid Principal and Surety have executed this instrument and affixed their seals hereto, this _____ day of _____, 20_.

In presence of:

_____	Individual Principal (SEAL)
	Business Address

Attest:

_____	Partnership (SEAL)
	Business Address
	By _____

Attest:

_____	Corporate Principal (CORPORATE SEAL)
	Business Address
	By _____

Attest:

_____	Corporate Surety (CORPORATE SEAL)
	Business Address
	By _____

Countersigned:

By _____	/	/	_____
* Attorney-in-Fact	State of		Business Address

- Power-of-attorney for person signing for Surety Company must be attached to bond.

CERTIFICATE AS TO CORPORATE PRINCIPAL

I, _____, certify that I am the _____ Secretary for
(Name of Secretary) (Type of Secretary)

_____ ; named Principal in the within bond and
(Name of Corporation)

that _____, who signed the said Bond on behalf of the Principal as
(Name of Corporate Endorser)

the _____ of the said Corporation, that I know his/her signature, and
(Title of Corporate Endorser)

his/her signature is genuine; and that the said Bond was duly signed, sealed, and attested to for and

in the behalf of said Corporation by the authority of this governing body.

Signature: _____

(Corporate Seal)

Title: _____

Contract Clauses Required under the American Rescue Plan Act (ARPA)

State and Local Fiscal Recover Fund

Compliance Supplement (date 04/2022) states the County/Subrecipient must, “ensure that every contract includes the applicable contract clauses required by 2 CFR section 200.327.”

2 CFR Section 200.327 states that, “The Non-Federal entity's contracts must contain the applicable provisions described in Appendix II to this part [2 CFR Part 200].”

Appendix II to 2 CFR Part 200 states that, “Contract Provisions for Non-Federal Entity Contracts Under Federal Awards lists the following contract provision that are required... all contracts made by the non-Federal entity under the Federal award must contain provisions covering the following, as applicable.”

1. Contracts for more than the simplified acquisition threshold - administrative, contractual, or legal remedies in instances where contractors violate or breach contract terms, and provide for such sanctions and penalties as appropriate.
2. Contracts for more than \$10,000 – termination for cause and for convenience by the non-Federal entity including the manner by which it will be affected and the basis for settlement.
3. Equal Employment Opportunity.
4. Davis-Bacon Act,
5. Contract Work Hours and Safety Standards Act
6. Rights to Inventions Made Under a Contract or Agreement.
7. Clean Air Act
8. Debarment and Suspension
9. Byrd Anti-Lobbying Amendment (31 U.S.C. 1352)
10. See § 200.323. § 200.323 Procurement of recovered materials.
11. See § 200.216. 200.216 Prohibition on certain telecommunications and video surveillance services or equipment.
12. See § 200.322. Domestic preferences for procurements.

We have taken the liberty of compiling the content of these required contract provision below. Please note, Forvis Mazars is providing guidance, but is not a legal firm and is in no way providing legal advice. We recommend consulting with an attorney for contract law requirements, provisions, and enforceability of the outlined provisions.

1. Termination.

- a. Termination for Convenience: The Contract may be terminated by the Contractee without cause, in whole or in part, at any time during the term specified in the Contract, by providing the other party thirty (30) calendar days advance written notice of the termination. The Contract may be suspended by the Contractee without cause, in whole or in part, at any time during the term specified in the Contract, by providing the Contractor thirty (30) calendar days advance written notice of the suspension.
- b. Termination for Default: The Contractee may terminate or suspend this Contract, in whole or in part, upon ten (10) days advance written notice if: (1) the Contractor breaches any duty, obligation, or service required pursuant to this Contract. If the Contract is terminated by the Contractee pursuant to Contract or this Appendix, the Contractor shall be liable for damages, including any additional costs of procuring similar goods or services from another source. If the termination results from acts or omissions of the Contractor, including but not limited to misappropriation or nonperformance of required goods, the Contractor shall return to the Contractee immediately any funds, misappropriated or unexpended, that have been paid to the Contractor by the Contractee.
- c. Termination for Non-Appropriation: If expected or actual funding is withdrawn, reduced, or limited in any way prior to the termination date set forth in the Contractor, the Contractee may, upon ten (10) days advance written notice to the Contractor, terminate or suspend this Contract in whole or in part. If the Contract is terminated or suspended as provided in this Section: (1) the Contractee will be liable only for payment in accordance with the terms of this Contract for goods delivered prior to the effective date of termination or suspension; and (2) the Contractor shall be released from any obligation to provide such further goods pursuant to the Contract as are affected by the termination or suspension.
- d. Non-Waiver of Rights: Nothing herein shall limit, waive, or extinguish any right or remedy provided by this Contract or by law or equity that either party may have if any of the obligations, terms, and conditions set forth in this Contract are breached by the other party.

2. Equal Employment Opportunity. The Contractor hereby agrees that it will incorporate or cause to be incorporated into any contract for construction work, or modification thereof, as defined in the regulations of the Secretary of Labor at 41 CFR Chapter 60, which is paid for in whole or in part with funds obtained from the Federal Government or borrowed on the credit of the Federal Government pursuant to a grant, contract, loan, insurance, or guarantee, or undertaken pursuant to any Federal program involving such grant, contract, loan, insurance, or guarantee, the following equal opportunity clause:

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

- (1) The Contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, or national origin. The Contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their

- race, color, religion, sex, sexual orientation, gender identity, or national origin. Such action shall include, but not be limited to the following: Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.
- (2) The Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin.
 - (3) The Contractor will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or applicants as a part of such employee's essential job functions discloses the compensation of such other employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with the contractor's legal duty to furnish information.
 - (4) The Contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
 - (5) The Contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.
 - (6) The Contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.
 - (7) In the event of the Contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be canceled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.
 - (8) The Contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through (8) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965,

so that such provisions will be binding upon each subcontractor or vendor. The Contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance: Provided, however, that in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

The Contractor further agrees that it will be bound by the above equal opportunity clause with respect to its own employment practices when it participates in federally assisted construction work: Provided, that if the party so participating is a State or local government, the above equal opportunity clause is not applicable to any agency, instrumentality or subdivision of such government which does not participate in work on or under the contract.

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

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

3. Davis-Bacon; Prevailing Wage. If any purchase exceeds \$2,000 and federal funds in addition to ARPA funds will be used, the Contract shall include the necessary Davis-Bacon Act clause addressing prevailing wage rates, as applicable.

Alternatively, to the extent required by Law, Contractor agrees to pay not less than the prevailing hourly rate of wages to all of its workers performing work for the public use or benefit or that uses public funds under this Agreement, or, alternatively, as applicable, the public works contracting minimum wage. The prevailing hourly rate of wages shall be those as set out in the Wage Order attached to and made part of the Contract. Each worker shall be paid the locally prevailing wage or public works contracting minimum wage, as applicable,

pursuant §§ 290.210 – 290.340, RSMo. and pursuant to each workers' scope of work and in accordance with the occupational titles and work descriptions set forth in state regulation.

Contractor agrees to keep full and accurate records of the names, occupations and crafts of every worker employed by it in connection with the Agreement, together with an accurate record of the number of hours worked by each worker and the actual wages paid for a period of one year following completion of the Work. Contractor shall provide these records at the end of each month during the Project. Contractor shall post a legible list of prevailing wage rates in a prominent and easily accessible place at the work site for the full time that any worker is on the job. Upon completion of the Project and prior to final payment, Contractor agrees to complete and certify in an affidavit stating that the Contractor has fully complied with the Missouri Prevailing Wage law.

Contractor agrees to be responsible for payment of any penalty to the Contractee of One Hundred Dollars (\$100) per day (or portion of a day) for each worker that is paid less than the prevailing rate for any work performed under this Agreement by Contractor.

4. Contract Work Hours and Safety Standards Act. Where applicable, all contracts in excess of \$100,000 that involve the employment of mechanics or laborers shall include a provision for compliance with 40 U.S.C 3702 and 3704 of the Contract Work Hours and Safety Standards Act, as supplemented by the Department of Labor regulations (29 CFR part 5). Under Section 3702 of the Act, each Contractor shall be required to compute the wages of every mechanic and laborer on the basis of a standard workweek of forty (40) hours. Work in excess of the standard workweek is permissible provided that the worker is compensated at a rate of not less than one and a half times the basic rate of pay for all hours worked in excess of forty (40) hours in the workweek. The requirements of 40 U.S.C. 3704 are applicable to construction work and provides that no laborer or mechanic shall be required to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous. These requirements do not apply to the purchases of supplies or materials or articles ordinarily available on the open market, or contracts for transportation or transmission of intelligence.

5. Rights to Inventions Made Under a Contract or Agreement. If a Contractor wishes to enter into a contract with a small business firm or nonprofit organization regarding the substitution of parties, assignment or performance of experimental, developmental, or research work under that "funding agreement," the recipient or subrecipient must comply with the requirements of 37 CFR Part 401.

6. Clean Air Act & Federal Water Pollution Control Act. Where applicable, all contracts for the purchase of goods in excess of \$150,000, Contractor agrees to comply with all applicable standards, orders, and regulations issued pursuant to the Clean Air Act, as amended, 42 U.S.C. § 7401. Contractor agrees to comply with all applicable standards, orders, or regulations issued pursuant to the Federal Water Pollution Control Act, as amended, 33 U.S.C. 1251. Contractor agrees to report each violation of the Clean Air Act and the Water Pollution Control Act to Contractee and understands that the Contractee will, in turn, report

each violation as required to assure notification to the Federal Emergency Management Agency, and the appropriate Environmental Protection Agency Regional Office. Contractor agrees to include these requirements in each subcontract exceeding \$150,000 financed in whole or in part with Federal assistance.

7. Suspension and Debarment. If this Contract is a covered transaction for purposes of federally funded grant requirements, the Contractor is required to verify that none of the Contractor, its principals, as defined at 49 CFR 29.995, or affiliates, as defined at 49 CFR 29.905, are excluded or disqualified as defined at 49 CFR 29.940 and 29.945. The Contractor is required to comply with 49 CFR 29, Subpart C and must include the requirement to comply with 49 CFR 29, Subpart C in any lower tier covered transaction it enters into. Debarment status may be verified at <https://www.sam.gov>. By signing and submitting this Contract, the Contractor certifies as follows:

The certification in this clause is a material representation of fact relied upon by Contractee. If it is later determined that the Contractor knowingly rendered an erroneous certification, in addition to remedies available to Contractee, the Federal Government may pursue available remedies, including but not limited to suspension and/or debarment. The Contractor agrees to comply with the requirements of 49 CFR 29, Subpart C while performing this Contract and further agrees to include a provision requiring such compliance in its lower tier covered transactions

8. Byrd Anti-Lobbying Amendment. Contractor certifies that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, officer or employee of Congress, or an employee or a Member of Congress in connection with obtaining any Federal contract, grant, or any other award covered by 31 U.S.C. § 1352. Contractor shall also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the recipient who in turn will forward the certifications to the awarding agency.

9. Procurement of Recovered Materials. Where applicable, within the performance of this Contract involving the use of materials, the Contractor shall make maximum use of products containing recovered materials that are EPA-designated items unless the product cannot be acquired. Contractor agrees to comply with all other applicable requirements of Section 6002 of the Solid Waste Disposal Act.

10. Prohibition on Certain Telecommunications and Video Surveillance Services or Equipment. Contractor agrees to comply with all requirements of 2 CFR 200.216 regarding prohibition on certain telecommunications and video surveillance services or equipment. Contractor asserts that this Contract does not relate to such prohibited telecommunications and video surveillance services or equipment.

11. Domestic Preference. Contractor should, to the greatest extent practicable under Federal award, provide a preference of the purchase, acquisition, or use of goods, products, or

materials produced in the United States (including but not limited to iron, aluminum, steel, cement, and other manufactured products) pursuant with 2 CFR § 200.322. The requirements of this section must be included in all subawards including all contracts and purchase orders for work or products under this award.

COMPLIANCE WITH LAW: comply with all applicable local, state, and federal laws and regulations, regardless of whether laws are specifically reference in the Agreement

[illegible]

Attachment M: Evaluation Scoring Sheet

Housing Authority of the City of Columbia, Missouri

201 Switzler Street, Columbia, MO 65203

Office: (573) 443-2556 | Fax: (573) 443-0051 | TTY: (800) 735-2966

www.ColumbiaHA.com

Request for Proposal (RFP) Scoring Criteria

Introduction

The Columbia Housing Authority (CHA) is seeking proposals from qualified general contractors and project management firms for Bear Creek Renovations. This document outlines the criteria and scoring methodology that will be used to evaluate submitted proposals. Please note the following critical project milestones:

- General Contractor Contract Execution Deadline: December 18, 2025
- Project Completion Deadline: May 1, 2026

All proposals must demonstrate the ability to meet these deadlines.

Evaluation Criteria and Scoring

Experience and Qualifications (30 points)

- Relevant Experience: Demonstrated experience in similar projects, with emphasis on affordable housing, public housing, and projects involving ARPA funding.
- Qualifications of Key Personnel: Expertise and credentials of the proposed project team, including project managers and key staff.
- Past Performance: Proven track record of successful project completion, particularly adherence to timelines and budgets.

Technical Approach (25 points)

- Project Understanding: Clear comprehension of the project scope, objectives, and requirements.
- Methodology: Proposed approach and methodology for project execution, including innovative solutions and industry best practices.

- **Schedule and Work Plan:** Detailed project schedule and work plan, including milestones, deliverables, and a clear strategy to meet the required contract and completion deadlines (December 18, 2025 and May 1, 2026).

Cost Proposal (35 points)

- **Cost Reasonableness:** Competitiveness and justification of proposed costs.
- **Budget Detail:** Clarity and completeness of the budget, including a comprehensive breakdown of all costs.

References and Past Performance (10 points)

- **Client References:** Quality and relevance of references from previous clients, including feedback on performance, reliability, and professionalism.
- **Past Performance Evaluations:** Previous performance evaluations from similar projects.

Evaluation Process

The Columbia Housing Authority will review and score each proposal based on the criteria outlined above. Proposals that best meet the requirements and demonstrate the ability to achieve the specified contract and completion deadlines may be invited for interviews or further negotiations.

Note: Proposals that do not clearly demonstrate the ability to execute the contract by December 18, 2025, and complete the project by May 1, 2026, may be deemed non-responsive.

Scoring Matrix

Criteria	Description	Points
Experience and Qualifications	Relevant experience, qualifications of key personnel, past performance	30
Technical Approach	Project understanding, methodology, schedule and work plan	25
Cost Proposal	Cost reasonableness and budget detail	35
References and Past Performance	Client references and past performance evaluations	10
Total		100

"General Decision Number: M020250067 09/05/2025

Superseded General Decision Number: M020240067

State: Missouri

Construction Type: Residential

Counties: Boone and Howard Counties in Missouri.

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)(1).

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:	. Executive Order 14026 generally applies to the contract. . The contractor must pay all covered workers at least \$17.75 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 2025.
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:	. Executive Order 13658 generally applies to the contract. . The contractor must pay all covered workers at least \$13.30 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 2025.

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 <http://www.dol.gov/whd/govcontracts>.

Modification Number	Publication Date
0	01/03/2025
1	02/21/2025

2	04/11/2025
3	05/16/2025
4	05/23/2025
5	07/18/2025
6	09/05/2025

BRM00015-019 04/01/2023

	Rates	Fringes
BRICKLAYER.....	\$ 32.79	21.31

ELEC0257-013 03/01/2025

	Rates	Fringes
ELECTRICIAN.....	\$ 18.23	9.91

ENGI0101-036 04/01/2025

HOWARD COUNTY

	Rates	Fringes
POWER EQUIPMENT OPERATOR:		
Backhoe/Excavator.....	\$ 45.48	22.42
Roller.....	\$ 45.48	22.42

ENGI0513-021 05/01/2023

BOONE COUNTY

	Rates	Fringes
POWER EQUIPMENT OPERATOR:		
Backhoe/Excavator.....	\$ 34.61	29.50
Roller.....	\$ 34.61	29.50

LAB00955-010 03/01/2025

	Rates	Fringes
LABORER		
Brick Mason Tender.....	\$ 23.94	15.80
Common or General.....	\$ 23.94	15.80

PAIN1185-007 04/01/2025

	Rates	Fringes
PAINTER		
Brush and Roller.....	\$ 28.56	17.21

PLUM0562-003 07/01/2024

	Rates	Fringes
PLUMBER		
Mechanical Contracts		
including all piping and		
temperature control work		
\$7.0 million & under.....	\$ 50.60	29.38
Mechanical Contracts		
including all piping and		
temperature control work		

over \$7.0 million.....\$ 50.60 29.38

ROOF0020-012 09/19/2023

	Rates	Fringes
ROOFER.....	\$ 33.60	19.99

SHEE0002-032 07/01/2011

HOWARD COUNTY

	Rates	Fringes
SHEET METAL WORKER (Including HVAC Duct and HVAC System).....	\$ 27.37	8.14

* SHEE0036-031 07/01/2025

BOONE COUNTY

	Rates	Fringes
SHEET METAL WORKER (Including HVAC Duct and HVAC System).....	\$ 36.51	22.39

* SUM02011-011 08/11/2011

	Rates	Fringes
CARPENTER.....	\$ 18.33	1.32
CEMENT MASON/CONCRETE FINISHER...	\$ 16.00 **	0.00

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

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** Workers in this classification may be entitled to a higher minimum wage under Executive Order 14026 (\$17.75) or 13658 (\$13.30). Please see the Note at the top of the wage determination for more information. Please also note that the minimum wage requirements of Executive Order 14026 are not currently being enforced as to any contract or subcontract to which the states of Texas, Louisiana, or Mississippi, including their agencies, are a party.

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) (iii)).

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

Union Rate Identifiers

A four-letter identifier beginning with characters other than ""SU"", ""UAVG"", ?SA?, or ?SC? denotes that a union rate was prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2024. PLUM is an identifier of the union whose collectively bargained rate 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. The date, 07/01/2024 in the example, is the effective date of the most current negotiated rate.

Union prevailing wage rates are updated to reflect all changes over time that are reported to WHD in the rates in the collective bargaining agreement (CBA) governing the classification.

Union Average Rate Identifiers

The UAVG identifier indicates that no single rate prevailed for those classifications, but that 100% of the data reported for the classifications reflected union rates. EXAMPLE: UAVG-OH-0010 01/01/2024. UAVG indicates that the rate is a weighted union average rate. OH indicates the State of Ohio. The next number, 0010 in the example, is an internal number used in producing the wage determination. The date, 01/01/2024 in the example, indicates the date the wage determination was updated to reflect the most current union average rate.

A UAVG rate will be updated once a year, usually in January, to reflect a weighted average of the current rates in the collective bargaining agreements on which the rate is based.

Survey Rate Identifiers

The ""SU"" identifier indicates that either a single non-union rate prevailed (as defined in 29 CFR 1.2) for this classification in the survey or that the rate was derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As a weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SUFL2022-007

6/27/2024. SU indicates the rate is a single non-union prevailing rate or a weighted average of survey data for that classification. FL indicates the State of Florida. 2022 is the year of the 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. The date, 6/27/2024 in the example, indicates the survey completion date for the classifications and rates under that identifier.

?SU? wage rates typically remain in effect until a new survey is conducted. However, the Wage and Hour Division (WHD) has the discretion to update such rates under 29 CFR 1.6(c)(1).

State Adopted Rate Identifiers

The ""SA"" identifier indicates that the classifications and prevailing wage rates set by a state (or local) government were adopted under 29 C.F.R 1.3(g)-(h). Example: SAME2023-007 01/03/2024. SA reflects that the rates are state adopted. ME refers to the State of Maine. 2023 is the year during which the state completed the survey on which the listed classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. The date, 01/03/2024 in the example, reflects the date on which the classifications and rates under the ?SA? identifier took effect under state law in the state from which the rates were adopted.

----- WAGE DETERMINATION APPEALS PROCESS

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

- a) a survey underlying a wage determination
- b) an existing published wage determination
- c) an initial WHD letter setting forth a position on a wage determination matter
- d) an initial conformance (additional classification and rate) determination

On survey related matters, initial contact, including requests for summaries of surveys, should be directed to the WHD Branch of Wage Surveys. Requests can be submitted via email to davisbaconinfo@dol.gov or by mail to:

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

Regarding any other wage determination matter such as conformance decisions, requests for initial decisions should be directed to the WHD Branch of Construction Wage Determinations. Requests can be submitted via email to BCWD-Office@dol.gov or by mail 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 an initial decision has been issued, then any interested party (those affected by the action) that disagrees with the decision can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Requests for review and reconsideration can be submitted via email to dba.reconsideration@dol.gov or by mail to:

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

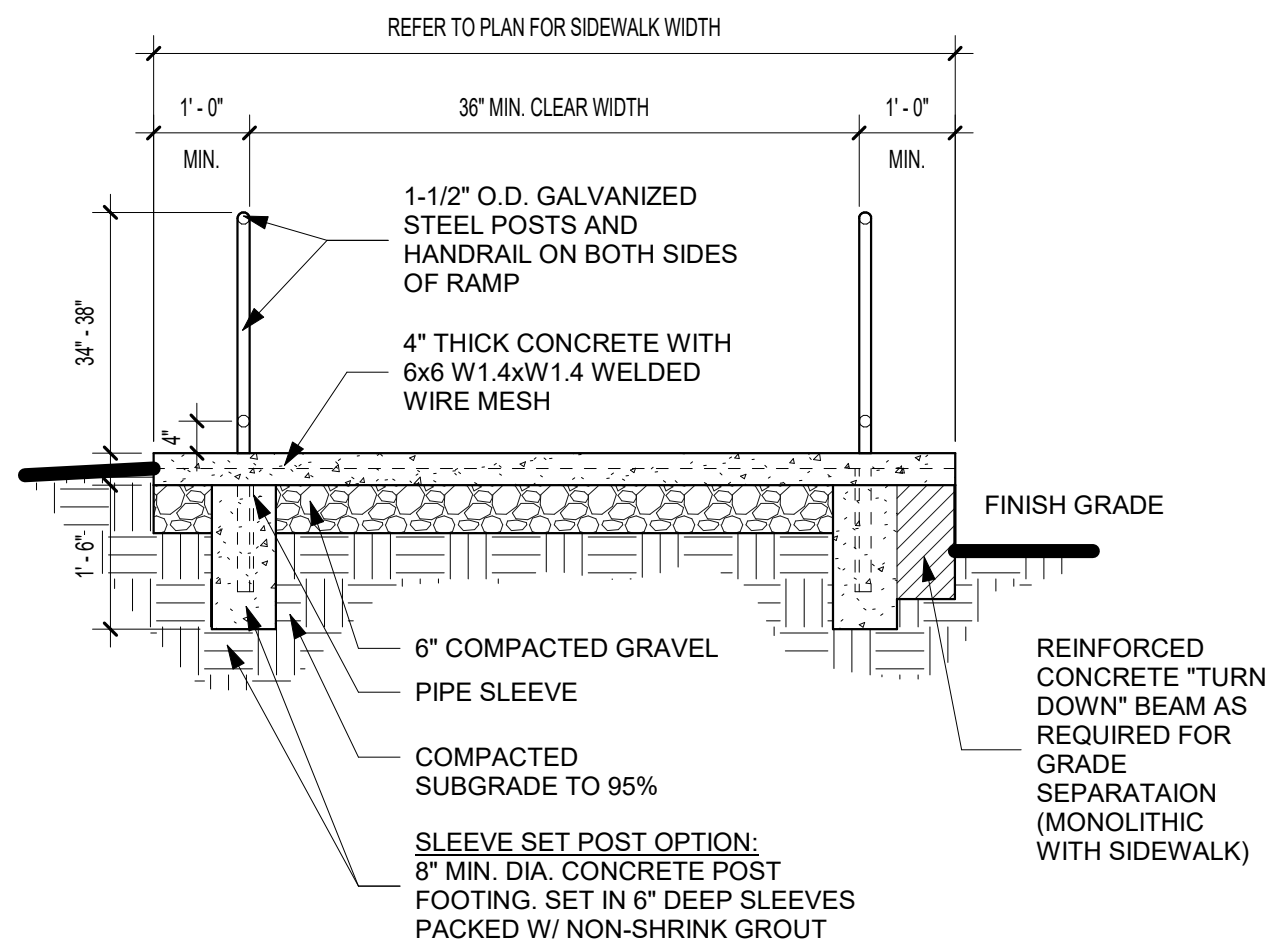
The request should be accompanied by a full statement of the interested party's position and any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

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:

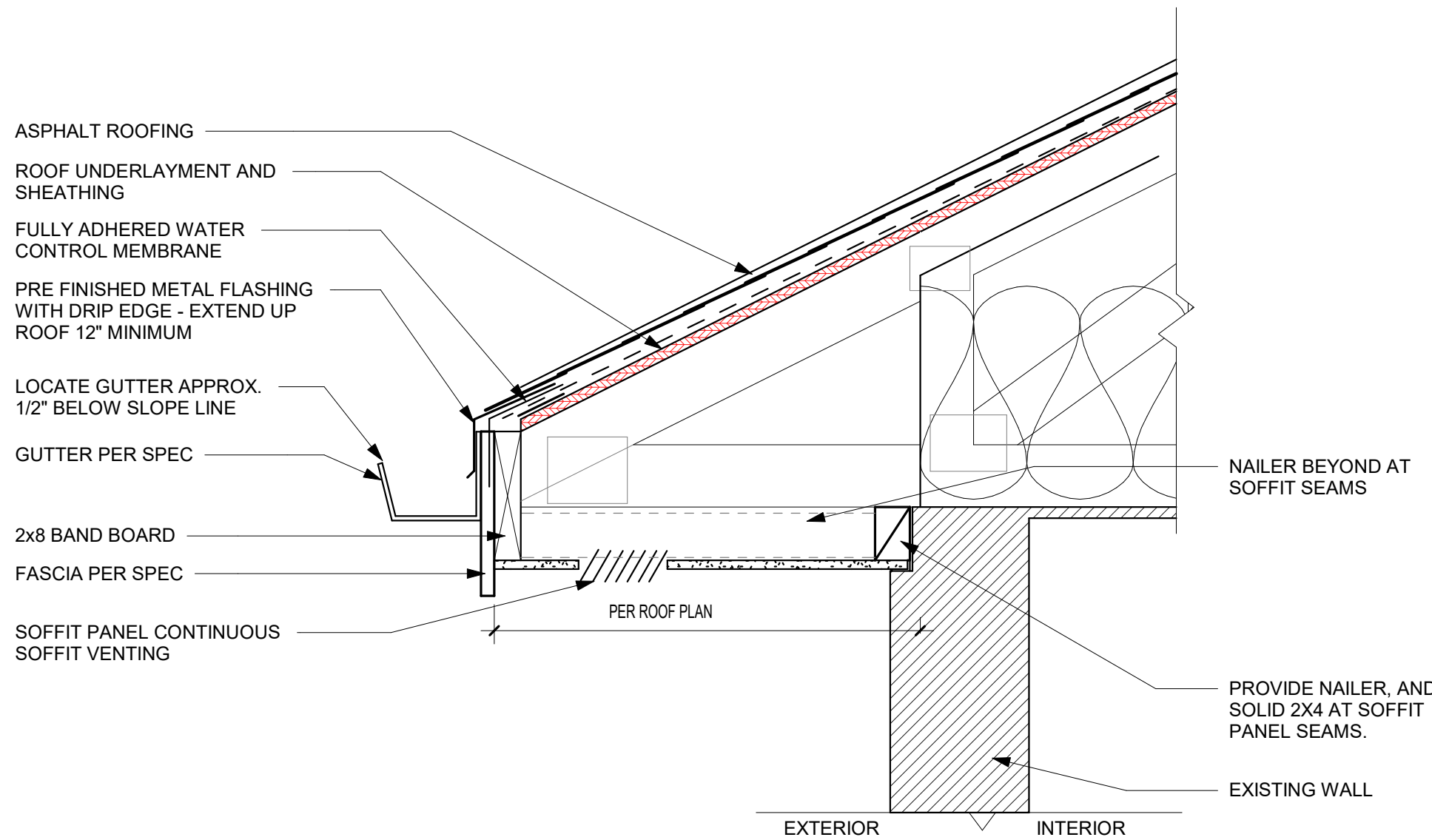
Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210.

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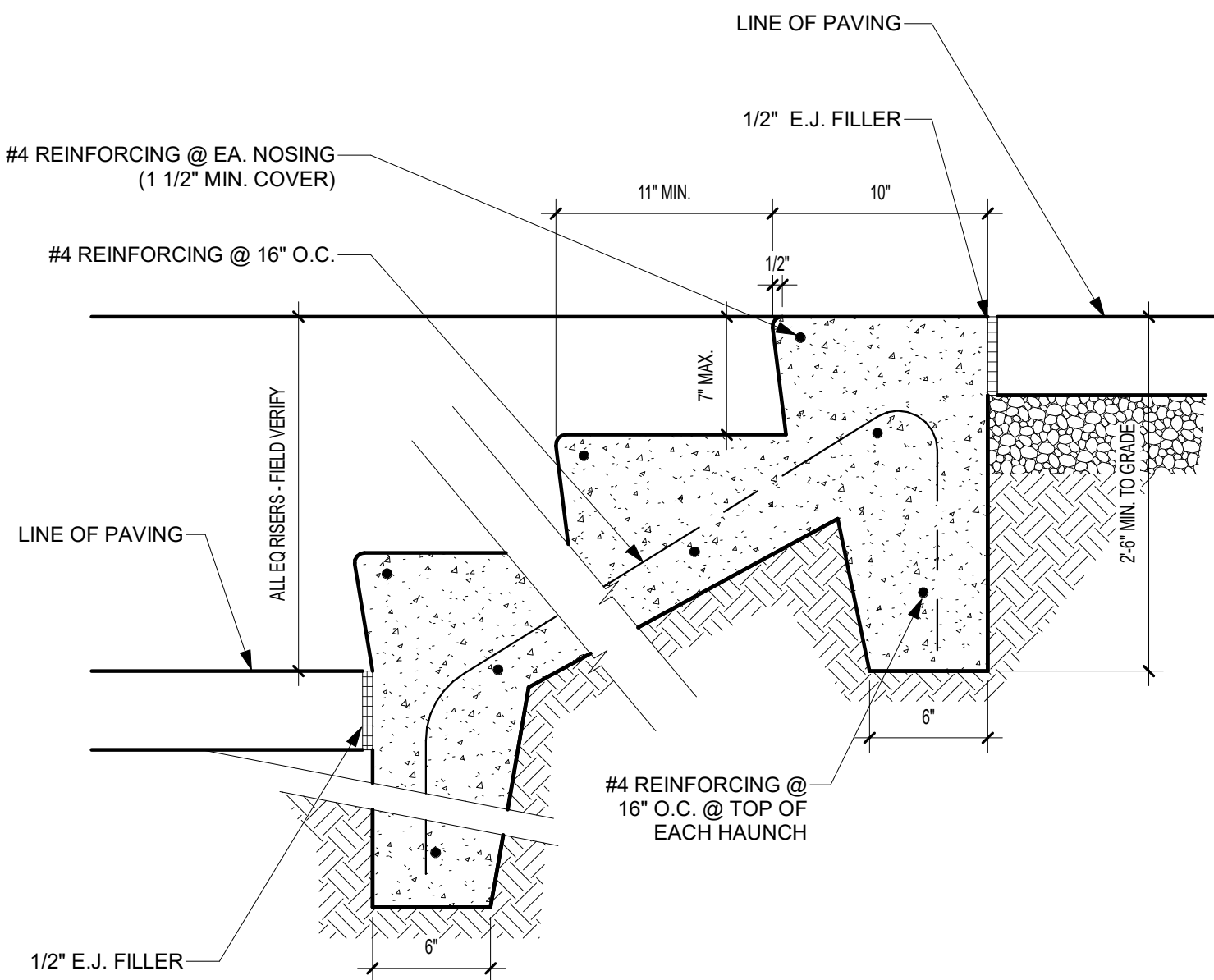
END OF GENERAL DECISION"



E4 CONCRETE RAMP DETAIL (TYP)
1/2" = 1'-0"



E2 ROOF - WOOD STUD - ASPHALT/SIDING - @ EAVE
1 1/2" = 1'-0"



E1 CONCRETE STAIR DETAIL (TYP)
1 1/2" = 1'-0"



D1 RAMP PHOTO - OVERALL
1/16" = 1'-0"



C3 RAMP PHOTO - STAIRS
1/16" = 1'-0"



C1 RAMP PHOTO - OVERALL STAIRS
1/16" = 1'-0"



A3 RAMP PHOTO - STAIRS LANDING
1/16" = 1'-0"



A1 RAMP PHOTO - BOTTOM OF RAMP
1/16" = 1'-0"