

Project Manual and Specifications

Montgomery County Senior Center

for the

Montgomery County Fiscal Court

Mt. Sterling, Montgomery County, Kentucky

CDBG Number: 21-014

MSE Project Number: 5067-03

September 2024

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Montgomery County Fiscal Court

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Division 0 – Bidding and Contract Requirements

**ADVERTISEMENT FOR
BIDS
Montgomery County Fiscal Court
Montgomery Co. Senior Center Project
Mt. Sterling, Montgomery Co., Kentucky**

Sealed bids for the construction of the approximately 6,292 s.f. new Senior Center and all work shown in the contract documents will be received by the Montgomery County Fiscal Court, 44 W. Main Street, KY, will be received in the office of Chris Haddix, Judge Executive, Montgomery County Fiscal Court, 44 W. Main St., Mt. Sterling, KY 40353, (859) 498-8707, until 2:00 p.m., local time, January 8, 2025 and then at said office will be publicly opened and read aloud. General Contractor must follow all CDBG guidelines. Faxed or electronic bids will not be accepted.

The CONTRACT DOCUMENTS may be reviewed at the following locations: MSE Web Site: mselex.com under Bid Opportunities.

All Contract Documents and Addenda will be posted on our web page, mselex.com under Bid Opportunities and will be distributed via email to all plan holders from Lynn Imaging.

Copies of the Contract Documents may be obtained at the office of Lynn Imaging, 328 E. Vine St., Lexington, KY 40507, (859) 226-5850 upon receipt of a check made payable to Lynn Imaging in the amount of \$150.00 (non-refundable). All orders must be prepaid. There will be a 24-hour turn-around on all orders.

A certified check or bank draft, payable to Montgomery Fiscal Court, government bonds, or a satisfactory bid bond executed by the bidder and acceptable sureties in an amount equal to five percent of the bid shall be submitted with bid. The successful bidder will be required to furnish and pay for the following: 1) 5% Bid Bond; and 2) A performance and payment bond for 100% of the contract price.

Attention of bidders is particularly called to the requirements as to conditions of employment to be observed and minimum wage rates to be paid under the contract, Section 3, Segregated Facility, Section 109 and E.O. 11246 and Title VI and other requirements. Minority bidders are encouraged to bid.

The Owner may consider informal any bid not prepared and submitted in accordance with the provisions of this advertisement and/or the specifications and may waive any informalities or reject any and all Bids. Any proposal received after the time and date specified shall not be considered and will be returned unopened to the proposer. The owner reserves the right to waive any informalities or to reject any or all bids. Sealed bid should be labeled "Montgomery Co. Senior Center Project".

Federal Wage Rates apply to this project.

No Bidder may withdraw the Bid for a period of sixty (60) days after the actual date of the opening thereof.

Award will be made to the lowest, responsive, responsible bidder. Bidding is for the sole benefit of the Montgomery County Fiscal Court. The Montgomery County Fiscal Court is an Equal Employment Opportunity Employer.

SECTION 00100 - INSTRUCTIONS TO BIDDERS
ADDITIONAL INFORMATION

PART 1 - GENERAL

1.01 DEFINITIONS

- A. AIA Document A701/2018, Instructions to Bidders, inclusive, is a part of this Contract.
- B. General Conditions of the Contract for Construction, AIA Document A201/2017 or current edition, are a part of this Contract.

1.02 BIDDING DOCUMENTS

- A. The Bidding Documents are the Bidding and Contract Requirements, the Specifications, the Drawings and any addenda issued prior to receipt of bids.
- B. Documents are on file and may be examined or obtained for bidding purposes as stated in Section 00020 - Advertisement for Bids.

1.03 SUBSTITUTIONS AND APPROVALS DURING BIDDING

- A. Whenever products or materials are specified as "Standards" or they are otherwise named, approval of other equal quality products shall be obtained by requesting in writing and presenting for evaluation, such product or material, to the Architect, no later than seven (7) days prior to date set for receipt of bids. Submittals circumventing the above time frame will not be processed.
 - 1. If approval is granted, product or material will be added by Addendum.
 - 2. No direct reply will be made to any requests for changes, but any requested changes approved by the Architect will be stated in an Addendum issued to all prime-bidders.
 - 3. Issuance of Bidding Documents does not constitute approval of products, materials, or subcontractors.

1.04 ADDENDA

Article 3: Bidding Documents. 3.4 Addenda, 3.4.3. Change the four days to read as follows: Addenda will be issued by the Architect when in the opinion of the Architect the issuance of an addenda is in the interest of the bid process and the Owner.

1.05 BIDDER'S REPRESENTATION

- A. Each Bidder, by making his bid, represents that he has read and understands the bidding documents.

- B. Each Bidder, by making his bid, represents that he has familiarized himself with the local conditions under which the Work is to be performed.
 - 1. No additional costs of any type will be allowed by the failure of the Bidder to avail himself of the privilege of a complete and thorough, on-site inspection.
- C. Each bidder must visit and inspect the site.

1.06 BID SECURITY

- A. Provide bid security in the form of Bid Bond, AIA Documents A310, for five percent (5%) of bid made payable to the Montgomery County Fiscal Court. This security shall be forfeited if the bidder is awarded the contract and subsequently fails to enter into a contract with and furnish the required contract bond to the OWNER within ten (10) days after notice of acceptance of his proposal is made.
- B. The bid security of all unsuccessful bidders will be returned promptly after an award has been made, or in the event that all bids are rejected. The bid security of the successful bidder will be returned when a satisfactory performance and labor and material payment bond has been furnished and the contract executed.

1.07 PREPARATION OF BIDS

- A. Bids shall be submitted in duplicate only on proposal bid form as included herein.
- B. Any interlineation, alteration, or erasure will be grounds for rejection of the Bid. Bids shall contain no recapitulation of the work to be done.
- C. Bids shall be based on the materials, construction, equipment and methods named or described in the specifications and on the drawings, and any addenda issued prior to receipt of bids.
- D. Proposals shall be sealed in an opaque envelope marked with the bidder's name and business address, and bearing the following caption:
 - 1. Proposal for:
Montgomery County Fiscal Court
Montgomery County Senior Center
 - 2. Proposals shall be addressed and delivered to:
Montgomery County Fiscal Court
44 W. Main St.
Mt. Sterling, KY 40353

1.08 BID SUPPLEMENTS

- A. Bids shall be accompanied by the following supplemental documents, all properly signed and notarized:
 - 1. Bid Security, Bid Bond, AIA Document A310
 - 2. Document SC-1 - Subcontractors List (may use your own form)
 - 3. Document PC-1 - Project Cost Breakdown (may use your own form)
 - 4. Non-Collusion Affidavit

1.09 SELECTION OF BIDS

- A. The Owner reserves the right to reject any and/or all bids and to waive any informality in bidding.

1.10 AWARD OF CONTRACTS

- A. Contracts shall be deemed to have been awarded when Notice of Award shall have been duly served upon the Bidder by any officer or agent of the Owner duly authorized to give such notice. Before the contract becomes valid, the Bidder must provide all necessary bonds, insurance and other information herein called for.

1.11 THE SUCCESSFUL BIDDER WILL BE REQUIRED TO FURNISH THE FOLLOWING:

- A. A One Hundred Percent (100%) Performance/Payment Bond, in an amount equal to the total contract price. This bond shall guarantee all labor and materials to be as required, the faithful performance of the contract and the prompt and faithful payment of any claim or liens from any cause for which the Contractor is liable, including those for labor, materials, utility services, transportation costs and for supplies, equipment and machinery (or rental thereof).
- B. Such guarantee bonds shall remain in effect and full force for one (1) year after final acceptance of the work. Such bond shall not be executed as of a date prior to the executing of the contract.

1.12 DETAILED COST BREAKDOWN

- A. Upon award of contract, Contractor will have seven (7) working days to generate a finalized detailed cost breakdown and a detailed project schedule of the project. All construction draws made on the project will require updating the Contractor's cost breakdown. Architect and Owner approval will be required on all pay requests.

1.13 CONTRACTOR'S RESPONSIBILITY REGARDING SUB-CONTRACTORS

- A. It shall be prime contractor's responsibility to check all sub-bids carefully to determine whether or not any exceptions, omissions, or alterations to the drawings and specifications have been noted therein, as he is solely responsible for a complete job in strict accordance with drawings and specifications.

1.14 COMMENCING WORK

- A. Contractor shall commence work within ten (10) days after written Notice to Proceed is issued by the Owner, unless otherwise arranged by the Owner.

1.15 OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970

- A. These construction documents are to be governed, at all times, by applicable provisions of the federal laws, including but not limited to the latest amendments of the following:
 - 1. William - Steiger Occupational Safety and Health Act of 1970, Public Law 91-596.
 - 2. Part 1910 - Occupational Safety and Health Standards, Chapter XVII of Title 29, Code of Federal Regulations.
- B. All prime contractors, sub-contractors and their employees shall be solely responsible to conduct their work in conformance with the regulations contained in this act and as amended. All material suppliers and manufacturers shall be fully aware of their responsibilities and the requirements of the finished project under the regulations of this Act, and as amended. Such materials and fabricated products incorporated in this project shall, at the time of installation or application, be in conformance with the regulations of this act, and as amended.

END OF SECTION

SECTION 00200 INFORMATION FOR BIDDERS

1. Receipt and Opening of Bids:

Sealed bids for the construction of the Montgomery County Senior Center for the Montgomery County Fiscal Court, Mt. Sterling, KY, will be received by Chris Haddix, Judge Executive, at the Montgomery County Courthouse, 44 W. Main Street, Mt. Sterling, KY 40353, (859) 498-8707, until _____, local time, _____, _____, 2024 and then at said office will be publicly opened and read aloud.

The Owner may consider informal any bid not prepared and submitted in accordance with the provisions hereof and may waive any informalities or reject any and all bids. Any bid may be withdrawn prior to the above scheduled time for the opening of bids or authorized postponement thereof. Any bid received after the time and date specified shall not be considered. No bidder may withdraw a bid within 90 days after the date of the opening thereof.

2. Preparation of Bid: Each bid must be submitted on the prescribed form and accompanied by Certification of Bidder Regarding Equal Employment Opportunity, Form 950.1; Certification of Bidder (Contractor) Concerning Labor Standards and Prevailing Wage Requirements, Form 1421; Certification of Bidder Regarding Section 3 and Segregated Facilities; and Contractor Eligibility Certification Regarding Debarment, Suspension and Other Responsibilities. All blank spaces for bid prices must be filled in, in ink or typewritten, in both words and figures, and the foregoing Certifications must be fully completed and executed when submitted.

Each bid must be submitted in a sealed envelope bearing on the outside the name of the bidder, his/her address, and the name of the project for which the bid is submitted. If forwarded by mail, the sealed envelope containing the bid must be enclosed in another envelope addressed as specified in the bid form.

3. Subcontracts: The bidder is specifically advised that any person, for, or other party to whom it is proposed to award a subcontract under this contract:

- a. Must be acceptable to the Owner and have current eligibility status for federal programs; and
- b. Must submit Form 950.2, Certification by Proposed Subcontractor Regarding Equal Employment Opportunity, Certification of Proposed Subcontractor Regarding Section 3 and Segregated Facilities, and Subcontractor Eligibility Certification Regarding Debarment, Suspension and Other Responsibilities. Approval of the proposed subcontract award cannot be given by the Owner unless and until the proposed subcontractor has submitted the Certifications and/or other evidence showing that it has fully complied with any reporting requirements to which it is or was subject. Although the bidder is not required to attach such Certifications by proposed subcontractors to his/her bid, the bidder is here advised of this requirement so that appropriate action can be taken to prevent subsequent delay in subcontract awards.

4. Electronic/Facsimile Modification: Any bidder may modify his/her bid by electronic or facsimile communication at any time prior to the scheduled closing time for receipt of bids, provided such communication is received by the Owner prior to the closing time, and provided further, the Owner is satisfied that a written confirmation of the electronic/facsimile modification over the signature of the bidder was mailed prior to the closing time. The communication should not reveal the bid price but should provide the addition or subtraction or other modification so that the final prices or terms will not be known by the Owner until the sealed bid is opened. If written

confirmation is received within two days from the closing time, no consideration will be given to the electronic/facsimile modification.

5. Method of Bidding: The Owner invites the following bid(s):

Construction of 6,292 SF Senior Center.

6. Qualifications of Bidder: The Owner may make such investigations as he/she deems necessary to determine the ability of the bidder to perform the work, and the bidder shall furnish to the Owner all such information and data for this purpose as the Owner may request. The Owner reserves the right to reject any bid if the evidence submitted by, or investigation of, such bidder fails to satisfy the Owner that such bidder is properly qualified to carry out the obligations of the contract and to complete the work contemplated therein. Conditional bids will not be accepted.

7. Bid Security: Each bid must be accompanied by cash, certified check of the bidder, or a bid bond prepared on the Bid Bond Form attached hereto, duly executed by the bidder as principal and having as surety thereon a surety company approved by the Owner, in the amount of 5% of the bid. Such cash, checks or bid bonds will be returned promptly after the Owner and the accepted bidder have executed the contract, or if no award has been made within 30 days after the date of the opening of bids, upon demand of the bidder at any time thereafter, so long as he/she has not been notified of the acceptance of his/her bid.

8. Liquidated Damages for Failure to Enter into Contract: The successful bidder, upon his/her failure or refusal to execute and deliver the contract and bonds required within 10 days after s/he has received notice of the acceptance of his/her bid, shall forfeit to the Owner, as liquidated damages for such failure or refusal, the security deposited with his/her bid.

9. Time of Completion and Liquidated Damages: Bidder must agree to commence work on or before a date to be specified in a written "Notice to Proceed" of the Owner and to fully complete the project within 300 consecutive calendar days thereafter. Bidder must agree also to pay as liquidated damages, the sum of \$500 for each consecutive calendar day thereafter as hereinafter provided in the General Conditions. Time for construction and associated liquidated damages will be adjusted, increased due to supply chain issues and equipment delays beyond the control of the General Contractor and their subcontractors.

10. Conditions of Work: Each bidder must inform him/herself fully of the conditions relating to the construction of the project and the employment of labor thereon. Failure to do so will not relieve a successful bidder of his/her obligation to furnish all material and labor necessary to carry out the provisions of his/her contract. Insofar as possible, the contractor, in carrying out the work, must employ such methods or means as will not cause any interruption of or interference with the work of any other contractor.

11. Addenda and Interpretations: No interpretation of the meaning of the plans, specifications or other pre-bid documents will be made to any bidder orally.

Every request for such interpretation should be in writing addressed to:
Mary Friedman, Architect at MSE of Kentucky, Inc., 624 Wellington Way, Lexington, KY 40503 or mfriedman@mselex.com and to be given consideration must be received at least five (5) days prior to the date fixed for the opening of bids. Any and all such interpretations and any supplemental instructions will be in the form of written addenda to the specifications which, if issued, will be mailed by certified mail with return receipt requested to all prospective bidders (at

the respective addresses furnished for such purposes), not later than three days prior to the date fixed for the opening of bids. Failure of any bidder to receive any such addendum or interpretation shall not relieve such bidder from any obligation under his/her bid as submitted. All addenda so issued shall become part of the contract documents.

12. Security for Faithful Performance: Simultaneously with his/her delivery of the executed contract, the contractor shall furnish a surety bond or bonds as security for faithful performance of this contract and for the payment of all persons performing labor on the project under this contract and furnishing materials in connection with this contract, as specified in the General Conditions included herein. The surety on such bond or bonds shall be a duly authorized surety company satisfactory to the Owner.

13. Power of Attorney: Attorneys-in-fact who sign bid bonds or contract bonds must file with each bond a certified and effectively dated copy of their power of attorney.

14. Notice of Special Conditions: Attention is particularly called to those parts of the contract documents and specifications which deal with the following:

- a. Inspection and testing of materials.
- b. Insurance requirements.
- c. Wage rates.
- d. Stated allowances.

15. Laws and Regulations: The bidder's attention is directed to the fact that all applicable State laws, municipal ordinances and the rules and regulations of all authorities having jurisdiction over construction of the project shall apply to the contract throughout, and they will be deemed to be included in the contract the same as though herein written in full.

16. Method of Award - Lowest Qualified Bidder: If at the time this contract is to be awarded, the lowest base bid submitted by a responsible bidder does not exceed the amount of funds then estimated by the Owner as available to finance the contract, the contract will be awarded on the base bid only. If such bid exceeds such amount, the Owner may reject all bids or may award the contract on the base bid combined with such deductible alternates applied in numerical order in which they are listed in the Form of Bid, as produces a net amount which is within the available funds. If all bids exceed funds available to finance the contract once all deductive alternatives have been applied, the owner may enter into negotiations with the three (3) lowest bidders. The only factor subject to negotiation, however, is price.

17. Obligation of Bidder: At the time of the opening of bids each bidder will be presumed to have inspected the site and to have read and to be thoroughly familiar with the plans and contract documents (including all addenda). The failure or omission of any bidder to examine any form, instrument or document shall in no way relieve any bidder from any obligation in respect of his/her bid.

18. Safety Standards and Accident Prevention: With respect to all work performed under this contract, the contractor shall:

- a. Comply with the safety standards provisions of applicable Laws, building and construction codes and the "Manual of Accident Prevention in Construction" published by the Associated General Contractors of America, the requirements of the Occupational Safety and Health Act of 1970 (Public Law 91-596), and the requirements of Title 29 of the Code of Federal Regulations, Section 1518 as

published in the "Federal Register", Volume 36, No.75, Saturday, April 17, 1971.

- b. Exercise every precaution at all times for the prevention of accidents and the protection of persons (including employees) and property.
- c. Maintain at his/her office or other well-known place at the job site, all articles necessary for giving first aid to the injured, and shall make standing arrangements for the immediate removal to a hospital or a doctor's care of persons (including employees), who may be injured on the job site before the employer has made a standing arrangement for removal of injured persons to a hospital or a doctor's care.

SECTION 00310 - BID SCHEDULE

Proposal of _____ (hereinafter called "BIDDER"), organized and existing under the laws of the State of _____ doing business as _____ *

to the Montgomery County Fiscal Court (hereinafter called "OWNER").

In compliance with your Advertisement for Bids, BIDDER hereby proposes to perform all WORK for the Montgomery County Senior Center in strict accordance with the Contract Documents, within the time set forth and the prices stated below.

By submission of this BID, each BIDDER certifies, and in the case of a joint BID, each party thereto certifies as to its own organization, that this BID has been arrived at independently, without consultation, communication, or agreement as to any matter relating to this BID with any other BIDDER or with any competitor.

BIDDER hereby agrees to commence Work under this contract on or before a date to be specified in the Notice to Proceed and to complete the Project within three hundred (300) consecutive calendar days following the Notice to Proceed. BIDDER further agrees to pay as liquidated damages, the sum of \$500.00 for each consecutive calendar day thereafter as provided in the General Conditions and the Special Conditions.

BIDDER agrees to perform all the WORK described in the CONTRACT DOCUMENTS for the lump sum contained in the following Bid Schedule.

*Insert "a corporation", "a partnership", or "an individual" as applicable.

Item	Description	Unit	Cost of Item
1.	Architectural	LS	\$ _____
2.	Mechanical/Electrical	LS	\$ _____
3.	Structural	LS	\$ _____
4.	All Other Miscellaneous Costs	LS	\$ _____
TOTAL COST OF ITEMS 1 - 4			\$ _____

The bid prices shall include all labor, materials, overhead, profit, insurance, and other costs necessary to install the finished work of the several items called for. Changes shall be processed in accordance with the General Conditions. Contract will be awarded based on the total cost of items 1-4.

This is an invitation for offer to bid, not an offer to enter into a contract.

Accompanying this Proposal is a certified check or standard Bid Bond in the sum of _____ Dollars (\$ _____), in accordance with the Information for Bidders. The BIDDER, by submittal of this Bid, agrees with the OWNER that the amount of the bid security deposited with this Bid fairly and reasonably represents the amount of damages the OWNER will suffer due to the failure of the BIDDER to fulfill his agreements as provided in this Proposal.

Addenda to the Drawings and Specifications issued heretofore are hereby acknowledged by the undersigned as being:

No. _____ Date: _____ No. _____ Date: _____
 No. _____ Date: _____ No. _____ Date: _____

BIDDER understands that the OWNER reserves the right to reject any or all Bids and to waive any informalities in the Bidding.

BIDDER agrees that this Bid shall be good and may not be withdrawn for a period of sixty (60) calendar days after the actual date of bid opening.

Within ten (10) calendar days after receiving written notice of the acceptance of this Bid by the OWNER, the Bidder will execute and deliver to the OWNER four (4) copies of the Agreement and such other required Contract Documents.

BIDDER: _____
(Name of Company or Partnership)

By: _____
(Signature) (Date)

(Print Name) (Title)

(Street Address/P.O. Box) (Phone Number)

(City, State, Zip)

(Email Address)

Attested By: _____
(Signature) (Date)

Seal (If bid is by a corporation)

END OF SECTION

SECTION 00410 - BID SECURITY FORM

PART 1 - GENERAL

1.01 DESCRIPTION

- A. Bid security for this project shall be in the form of a Bid Bond executed on AIA Document A310 form in the amount of five percent (5%) of the bid, made payable to the Owner.
 1. The bid security of all unsuccessful bidders will be returned promptly after an award has been made or in the event that all bids are rejected. The bid security of the successful bidder will be returned when satisfactory performance and labor and material payment bonds (AIA Document A312) have been furnished and contract executed, including one year warranty period.

END OF SECTION

SECTION 00480 - NON-COLLUSION AFFIDAVIT

PART 1 - GENERAL

1.01 DESCRIPTION

- A. The Non-Collusion Affidavit for the project shall be submitted with the bid proposal, and a copy of this document is bound herewith.
 - 1. When properly executed, this Document shall become a part of the successful bidder's Contract Document.

END OF SECTION

NON-COLLUSION AFFIDAVIT

The undersigned bidder, on behalf of its officers and agents or representatives being duly sworn, states that it has not in any way, directly or indirectly, entered into any arrangement or agreement with any other bidder, or with any other person or public officer whereby bidder has paid or is to pay to such other bidder or other person or public officer any sum or money, or has given or is to give to such other bidder or other person or public officer anything of value whatever, or such affiant or either of them has not, directly or indirectly, entered into any arrangement or agreement with any other bidder or bidders, which tends to or does lessen or destroy free competition in the letting of the contract sought for by the attached bids; that no inducement of any form or character other than that which appears upon the face of the bid will be suggested, offered, paid or delivered to any person whomsoever to influence the acceptance of the said bid or awarding of the contract, nor has this bidder any agreement or understanding of any kind whatsoever, with any person whomsoever to pay, deliver to, or share with any other person in any way or manner, any of the proceeds of the contract sought by this bid.

Subscribed and sworn to before me by _____ this
_____ day of _____, 20____.

My Commission expires:

Notary Public

END OF AFFIDAVIT

SECTION 00490 - NOTICE OF AWARD

To: _____

Project Description: Montgomery County Senior Center

The Owner has considered the Bid submitted by you for the above, described Work in response to its Advertisement for Bids dated _____ and Information for Bidders.

You are hereby notified that your Bid has been accepted for items in the amount of \$_____

You are required by the Information for Bidders to execute the Agreement and furnish the Required Contractor’s Performance Bond, Payment Bond and certificates of insurance within ten (10) calendar days from the date of this Notice to you.

If you fail to execute said Agreement and to furnish said Bonds within ten (10) days from the date of this Notice, said Owner will be entitled to consider all your rights arising out of the Owner’s acceptance of your Bid as abandoned and as a forfeiture of your Bid Bond. The Owner will be entitled to such other rights as may be granted by law.

You are required to return an acknowledged copy of this Notice of Award to the Owner.

Dated this _____ day of _____, 2024.

Montgomery County Fiscal Court
Owner

By: _____
Chris Haddix, Judge Executive

ACCEPTANCE OF NOTICE

Receipt of the above NOTICE OF AWARD is hereby acknowledged by _____ this the _____ day of _____, 2024.

By: _____
(Name/Title)

SECTION 00500 - AGREEMENT

PART 1 - GENERAL

1.01 DESCRIPTION

- A. The contract Agreement for this project shall be AIA Document A101, Owner - Contractor Agreement Form - Stipulated Sum, 2017 edition and Guide 27 Attachment 3.
- B. This form, when fully executed, shall become a part of the successful bidder's Contract Documents.

END OF SECTION

**SECTION 00610 - PERFORMANCE BOND AND
LABOR AND MATERIAL PAYMENT BOND**

PART 1 - GENERAL

1.01 DESCRIPTION

- A. A performance bond for 100% of the final contract amount shall be executed in favor of the Owner; the forms for this bond shall be AIA Document A 312, "Performance Bond", 2010 edition.
- B. A Payment Bond on part of the contractor for 100% of the contract price as it may be increased, the forms for this bond shall be, AIA Document A312, "Payment Bond", 2010 edition.
- C. Consent of Surety to Reduction in or Partial Release of Retainage: AIA Document G707A, 1994 Edition.
- D. Consent of Surety to Final Payment: AIA Document G707, 1994 Edition.
- E. Furnish the required bonds within seven (7) days of receipt of Notice of Award.
- F. When fully executed, these bonds shall become part of the successful bidder's Contract Documents.
- G. Application and Certificate for Payment: AIA Document G702 and G703, 1992 Edition.
- H. Contractors Affidavit of Payment of Debts: AIA Document G706, 1994 Edition.
- I. Contractors Affidavit of Release of Liens: AIA Document G706A, 1994 Edition.
- J. Certificate of Substantial Completion: AIA Document G704, 2017 Edition.

END OF SECTION

SECTION 00650 - CERTIFICATES OF INSURANCE

PART 1 - GENERAL

1.01 GENERAL

- A. Certificates of Insurance shall be filed with the Owner prior to the commencement of any work. Insurance shall be purchased by the General Contractor.
 - 1. These certificates shall contain a provision that coverages afforded under the policies shall not be canceled or in any way terminated until at least thirty days prior written notice has been given to the Owner and Architect.
 - 2. The Owner and the Architect shall be specifically named as additional insureds on all insurance coverage for this project.
- B. Detailed insurance requirements are covered in Section 00800 - Supplementary General Conditions, and all certificates shall reflect these minimum requirements for the project.

END OF SECTION

SECTION 00680 - NOTICE TO PROCEED

TO: _____ Date: _____
_____ Project: Montgomery County Senior Center

You are hereby notified to commence WORK in accordance with the Agreement dated _____, on or before _____, and you are to complete the WORK within _____ consecutive calendar days thereafter. The date of completion of all WORK is therefore _____.

Owner

Signature
Chris Haddix, Judge Executive

Name/Title

ACCEPTANCE OF NOTICE

Receipt of the above NOTICE TO PROCEED is hereby acknowledged by _____
_____ this the _____ day of _____, 2024.

Contractor

Signature

Name/Title

CDBG Requirements

Certification of Bidder Regarding Equal Employment Opportunity

CERTIFICATION OF BIDDER REGARDING EQUAL EMPLOYMENT OPPORTUNITY

Instructions

This certification is required pursuant to Executive Order 11246 (30 F.R. 12319-25). The Implementing rules and regulations provide that any bidder or prospective contractor, or any of their proposed subcontractors, shall state as an initial part of the bid or negotiations of the contract whether it has participated in any previous contract or subcontract subject to the equal opportunity clause, and if so, whether it has filed all compliance reports due under applicable instructions.

Where the certification indicates that the bidder has not filed a compliance report due under applicable instructions, such bidder shall be required to submit a compliance report within seven calendar days after bid opening. No contract shall be awarded unless such report is submitted.

For contracts over \$10,000, the Contractor agrees 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. "Segregated facilities," as used in this clause, 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, sex, sexual orientation, gender identity or national origin because of written or oral policies or employee custom. The term does not include separate or single-user rest rooms or necessary dressing or sleeping areas provided to assure privacy between the sexes. The Contractor agrees that a breach of this clause is a violation of the Equal Opportunity clause in this contract. The Contractor shall include this clause in every subcontract and purchase order that is subject to the Equal Opportunity clause of this contract.

Gender identity and *Sexual Orientation* have the meanings given by the Department of Labor's Office of Federal Contract Compliance Programs, and are found at www.dol.gov/ofccp/LGBT/LGBT_Faq's.html.

Certification by Bidder

Name and Address of Bidder (include zip code)

1. Bidder has participated in a previous contract or subcontract subject to the Equal Opportunity Clause.		
Yes	No	
2. All required compliance reports were filed in connection with such contract or subcontract.		
Yes	No	
3. Bidder has filed all compliance reports due under applicable instructions, including Monthly Employment Utilization Report (257)		
Yes	No	None Required
4. Have you ever been or are you being considered for sanction due to violation of Executive Order 11246, as amended?		
Yes	No	
5. 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.		
Name and Title of Signer (please type)		
Signature	Date	

Certification of Bidder Regarding Section 3

Name of Prime Contractor

Montgomery County Senior Center

Project Name

21-014

Project Number

The undersigned hereby certifies that:

- a) Section 3 provisions are included in the Contract.
- b) If bid exceeds \$100,000, a Contractor Section 3 Plan was prepared and submitted as part of the bid proceedings.

Name and Title of Signer (print or type)

Signature

Date

Contractor Section 3 Plan (If bid exceeds \$100,000)

_____ (Name of Contractor) agrees to implement the following specific affirmative action steps directed at increasing the utilization of lower income residents and businesses within the County of Montgomery.

- A. To ascertain from the locality's CDBG program official the exact boundaries of the Section 3 covered project area and where advantageous, seek the assistance of local officials in preparing and implementing the Section 3 Plan.
- B. To attempt to recruit from within the city the necessary number of lower income residents through: Local advertising media, signs placed at the proposed site for the project, and community organizations and public or private institutions operating within or serving the project area such as Service Employment and Redevelopment (SER), Opportunities Industrialization Center (OIC), Urban League, Concentrated Employment Program, Hometown Plan, or the U.S. Employment Service.
- C. To maintain a list of all lower-income residents who have applied either on their own or on referral from any source, and to employ such persons, if otherwise eligible and if a vacancy exists.
- D. To insert this Section 3 plan in all bid documents, and to require all bidders on subcontracts to submit a Section 3 plan including utilization goals and the specific steps planned to accomplish these goals. *
- E. To insure that subcontract which are typically let on a negotiated rather than a bid basis in areas other than Section 3 covered project areas, are also let on a negotiated basis, whenever feasible, when let in a Section 3 covered project area.*
- F. To formally contact unions, subcontractors and trade associations to secure their cooperation for this program.
- G. To insure that all appropriate project area business concerns are notified of pending subcontractual opportunities.
- H. To maintain records, including copies of correspondence, memoranda, etc., which document that all of the above affirmative action steps have been taken.
- I. To appoint or recruit an executive official of the company or agency as Equal Opportunity Officer to coordinate the implementation of this Section 3 plan.
- J. To list on Table A, information related to subcontracts to be awarded.
- K. To list on Table B, all projected workforce needs for all phases of this project by occupation, trade, skill level and number of positions.

*Loans, grants, contracts and subsidies for \$100,000 or less are exempt.

As officers and representatives of _____
(Name of Contractor)

We the undersigned have read and fully agree to this Section 3 Plan, and become a party to the full implementation of this program.

Signature

Title

Date

Signature

Title

Date

TABLE A

Proposed subcontracts breakdown for the period covering _____ through _____
(Duration of the CDBG-Assisted Project)

Column 1	Column 2	Column 3	Column 4	Column 5
TYPE OF CONTRACT (BUSINESS OR PROFESSION)	TOTAL NUMBER OF CONTRACTS	TOTAL APPROXIMATE DOLLAR AMT.	ESTIMATED NO. OF CONTRACTS TO SECTION 3 BUSINESSES*	ESTIMATE DOLLAR AMT. TO SECTION 3 BUSINESSES

* A Section 3 business is: one that is owned by Section 3 residents (low and very low income residents of the project area, public housing residents or persons with disabilities); one that employs Section 3 residents; or one that subcontracts to businesses that provide opportunities for low and very low income residents.

The Project Area is coextensive with the Bath County's boundaries.

Company

Montgomery County Senior Center

21-014

Project Name

Project Number

EEO Officer-Signature

Date

Contractor Section 3 Plan

TABLE B
Estimated Project Workforce Breakdown

Column 1	Column 2	Column 3	Column 4	Column 5
JOB CATEGORY	TOTAL ESTIMATED POSITIONS	NO. POSITIONS CURRENTLY OCCUPIED BY PERMANENT EMPLOYEES	NO. POSITIONS NOT CURRENTLY OCCUPIED BY PERMANENT EMPLOYEES	NO. POSITIONS TO BE FILLED WITH SECTION 3 RESIDENTS*
OFFICERS SUPERVISORS				
PROFESSIONALS				
TECHNICIANS				
HOUSING SALES RENTAL/MANAGEMENT				
OFFICE CLERICAL				
SERVICE WORKERS				
OTHERS				

TRADE:

JOURNEYMEN				
HELPERS				
APPRENTICES				
MAXIMUM NO. TRAINEES				
OTHERS				

TRADE:

JOURNEYMEN				
HELPERS				
APPRENTICES				
MAXIMUM NO. TRAINEES				
OTHERS				

TRADE:

JOURNEYMEN				
HELPERS				

APPRENTICES				
MAXIMUM NO. TRAINEES				
OTHERS				

* Section 3 residents include low and very low-income persons who live in the project area, public housing residents and persons with disabilities.

Company

Montgomery County Senior Center

21-014

Project Name

Project Number

EEO Officer-Signature

Date

Certification by Proposed Subcontractor Regarding Equal Employment Opportunity

CERTIFICATION BY PROPOSED SUBCONTRACTOR REGARDING EQUAL EMPLOYMENT OPPORTUNITY	
Name of Prime Contractor	Project Number 21-014
Instructions	
<p>This certification is required pursuant to Executive Order 11246 (30 F.R. 12319-25). The Implementing rules and regulations provide that any bidder or prospective contractor, or any of their proposed subcontractors, shall state as an initial part of the bid or negotiations of the contract whether it has participated in any previous contract or subcontract subject to the equal opportunity clause, and if so, whether it has filed all compliance reports due under applicable instructions.</p> <p>Where the certification indicates that the subcontractor has not filed a compliance report due under applicable instructions, such subcontractor shall be required to submit a compliance report before the owner approves the subcontract or permits work to begin under the subcontract.</p> <p>For subcontracts over \$10,000, the Subcontractor agrees 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. "Segregated facilities," as used in this clause, 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, sex, sexual orientation, gender identity or national origin because of written or oral policies or employee custom. The term does not include separate or single-user rest rooms or necessary dressing or sleeping areas provided to assure privacy between the sexes. The Subcontractor agrees that a breach of this clause is a violation of the Equal Opportunity clause in this contract. The Subcontractor shall include this clause in every subcontract and purchase order that is subject to the Equal Opportunity clause of this contract.</p> <p><i>Gender identity</i> and <i>Sexual Orientation</i> have the meaning given by the Department of Labor's Office of Federal Contract Compliance Programs, and are found at www.dol.gov/ofccp/LGBT/LGBT_Faq's.html.</p>	

Subcontractor's Certification	
Name and Address of Subcontractor (include zip code)	
1. Subcontractor has participated in a previous contract or subcontract subject to the Equal Opportunity Clause. Yes___ No___	
2. All required compliance reports were filed in connection with such contract or subcontract. Yes___ No___	
3. Subcontractor has filed all compliance reports due under applicable instructions, including Monthly Employment Utilization Report (257) Yes___ No___ None Required___	
4. Have you ever been or are you being considered for sanction due to violation of Executive Order 11246, as amended? Yes___ No___	
5. 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.	
Name and Title of Signer (please type)	
Signature	Date

**Certification of Proposed Subcontractor Regarding
Section 3**

Name of Subcontractor

Montgomery County Senior Center

Project Name

21-014

Project Number

The undersigned hereby certifies that:

- (a) Section 3 provisions are included in the Contract.
- (b) If bid exceeds \$100,000, a written Section 3 plan was prepared and submitted as part of the bid proceedings.

Name & Title of Signer (print or type)

Signature

Date

Contractor's Certification Concerning Labor Standards and Prevailing Wage Requirements

TO (Appropriate Recipient):	DATE
C/O	PROJECT NUMBER (if any) 21-014
	PROJECT NAME Montgomery County Senior Center

1. The undersigned, having executed a contract with _____ for the construction of the above identified project, acknowledges that:
 - (a) The Labor Standards provisions are included in the aforesaid contract;
 - (b) Prevailing wage requirements are followed, including paying the applicable Federal wage rate by labor classification.
 - (c) Correction of any infractions of the aforesaid conditions, including infractions by any of his subcontractors and any lower tier subcontractors, is his responsibility.

2. He certifies that:
 - (a) Neither he nor any firm, partnership or association in which he has substantial interest is designated as an ineligible contractor by the Comptroller of the United States pursuant to Section 5.6(b) of the Regulations of the Secretary of Labor., Part 5 (29 CFR, Part 5) or pursuant to Section 3(a) of the Davis-Bacon Act, as amended (40 U.S. C. 276a-2(a)).
 - (b) No part of the aforementioned contract has been or will be subcontracted to any subcontractor if such subcontractor or any firm, corporation, partnership or association in which such subcontractor has a substantial interest is designated as an ineligible contractor pursuant to any of the aforementioned regulatory or statutory provisions.

3. He agrees to obtain and forward to the aforementioned recipient within ten days after the execution of any subcontract, including those executed by his subcontractors and any lower tier subcontractors, a Subcontractor's Certification Concerning Labor Standards and Prevailing Wage Requirements executed by the subcontractors.

4. He certifies that:
 - (a) The legal name and the business address of the undersigned are:

(b) The undersigned is:

(1) A SINGLE PROPRIETORSHIP	(3) A CORPORATION ORGANIZED IN THE STATE OF:
(2) A PARTNERSHIP	(4) OTHER ORGANIZATION (Describe)

(c) The name, title and address of the owner, partners, or officers of the undersigned are:

NAME	TITLE	ADDRESS
_____	_____	_____
_____	_____	_____
_____	_____	_____

(d) The names and addresses of all other persons, both natural and corporate, having a substantial interest in the undersigned, and the nature of the interest are (if none, so state)

NAME	ADDRESS	NATURE OF INTENT
_____	_____	_____
_____	_____	_____
_____	_____	_____

(e) The names, addresses and trade classifications of all other building construction contractors in which undersigned ha a substantial interest (if none, so state):

NAME	ADDRESS	TRADE CLASSIFICATION
_____	_____	_____
_____	_____	_____
_____	_____	_____

Date _____ (Contractor)

By: _____

WARNING

U.S. Criminal Code, Section 1010, Title 18, U.S. C., provides in part: "Whoever makes, passes, utters, or publishes any statement knowing the same to be false..... shall be fined not more than \$5,000 or imprisoned not more than two years, or both."

Certificate of Owner's Attorney

I, the undersigned, _____, the duly authorized and acting legal representative of Montgomery County Fiscal Court hereby certify as follows:

I have examined the attached contract(s) and surety bonds and the manner of execution thereof, and I am of the opinion that each of the aforesaid agreements has been duly executed by the proper parties thereto acting through their duly authorized representatives; that said representatives have full power and authority to execute said agreements on behalf of the respective parties named thereon; and that the foregoing agreements constitute valid and legally binding obligations upon the parties executing the same in accordance with terms, conditions and provisions thereof.

Signature

Date

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I. General Conditions Including Federal Labor Standards Provisions

1. Contract and Contractor Documents

The project to be constructed and pursuant to this Contract will be financed with assistance from the Kentucky Community Development Block Grant Program and is subject to all applicable Federal laws and regulations.

The plans, specifications and addenda, hereinafter enumerated in Paragraph 1 of the Supplemental General Conditions on page 30, shall form part of this Contract and the provisions thereof shall be as binding upon the parties hereto as if they were herein fully set forth. The table of contents, titles, headings, running headlines and marginal notes contained herein and in said documents is solely to facilitate reference to various provisions of the Contract Documents and in no way affect, limit or cast light on the interpretation of the provisions to which they refer.

2. Definitions

The following terms as used in this contract are respectively defined as follows:

- (a) "Contractor": A person, firm or corporation with whom the contract is made by the Owner.
- (b) "Subcontractor": A person, firm or corporation supplying labor and materials or only labor for work at the site of the project for, and under separate contract or agreement with, the Contractor.
- (c) "Work on (at) the project": Work to be performed at the location of the project, including the transportation of materials and supplies to or from the location of the project by employees of the Prime Contractor and any Subcontractor.

3. Additional Instructions and Detail Drawings

The Contractor will be furnished additional instructions and detail drawings as necessary to carry out the work included in the contract. The additional drawings and instructions thus supplied to the Contractor will coordinate with the Contract Documents and will be so prepared that they can be reasonably interpreted as part thereof. The Contractor shall carry out the work in accordance with the additional detail drawings and instructions. The Contractor and the Architect/Engineer will prepare jointly (a) a schedule, fixing the dates at which special detail drawings will be required, such drawings, if any, to be furnished by the Architect/Engineer in accordance with said schedule, and (b) a schedule fixing the respective dates for the submission of show drawings, the beginning of manufacture, testing and installation of materials, supplies and equipment, and the completion of the various parts of the

work; each such schedule to be subjected to change from time to time in accordance with the progress of the work.

4. Shop or Setting Drawings

The Contractor shall submit promptly to the Architect/Engineer two copies of each shop or setting drawing prepared in accordance with the schedule predetermined as aforesaid. After examination of such drawings by the Architect/Engineer and the return thereof, the Contractor shall make such corrections to the drawings as have been indicated and shall furnish the Architect/Engineer with two corrected copies. If requested by the Architect/Engineer the Contractor must furnish additional copies. Regardless of corrections made in or approval given to such drawings by the Architect/Engineer, the Contractor will nevertheless be responsible for the accuracy of such drawings and for their conformity to the plans and specifications, unless he notifies the Architect/Engineer in writing of any deviations at the time he furnishes such drawings.

5. Materials, Services and Facilities

- (d) It is understood that except as otherwise specifically stated in the Contract Documents, the Contractor shall provide and pay for all materials, labor, tools, equipment, water, light, power, transportation, superintendence, temporary construction of every nature and all other services and facilities of every nature whatsoever necessary to execute, complete and deliver the work within the specified time.
- (e) Any work necessary to be performed after regular working hours, on Sunday or Legal Holidays, shall be performed without additional expense to the Owner.

6. Contractor's Title to Materials

No materials or supplies for the work shall be purchased by the Contractor subject to any chattel mortgage or under a conditional sale contract or other agreement by which an interest is retained by the seller. The Contractor warrants that he has good title to all materials and supplies used by him in the work, free from all liens, claims or encumbrances.

7. Inspection and Testing of Materials

- (a) All materials and equipment used in the construction of the project shall be subject to adequate inspection and testing in accordance with accepted standards. The laboratory or inspection agency shall be selected by the Owner. The Owner will pay for all laboratory inspection service direct, and not as a part of the Subcontract.

- (b) Materials of construction, particularly those upon which the strength and durability of the structure may depend, shall be subject to inspection and testing to establish conformance with specifications and suitability for uses intended.

8. “Or Equal” Clause

Whenever a material, article or piece of equipment is identified on the plans or in the specifications by reference to manufacturers' or vendors' names, trade names, catalogue numbers, etc., it is intended merely to establish a standard; and, any materials, article or equipment of other manufacturers and vendors which will perform adequately to the duties imposed by the general design will be considered equally acceptable provided the material, article or equipment so proposed, is, in the opinion of the Architect/Engineer, of equal substance and function. It shall not be purchased or installed by the Contractor without the Architect/Engineer's written approval.

9. Copyrights and Patents

- (a) The Contractor shall hold and save the Owner and its officers, agents, servants and employees harmless from liability of any nature or kind, including cost and expenses for, or on account of, any patented or unpatented invention, process, article or appliance manufactured or used in the performance of the Contract, including its use by the Owner, unless otherwise specifically stipulated in the Contract Documents.
- (b) License or Royalty Fees: License and/or royalty fees for the use of a process which is authorized by the Owner of the project must be reasonable, and paid to the holder of the patent, or his authorized licensee, direct by the Owner and not by or through the Contractor.
- (c) If the contractor uses any design, device or materials covered by letters, patent or copyright, he shall provide for such use by suitable agreement with the Owner of such patented or copyrighted design, device or material. If is mutually agreed and understood, that without exception, the contract prices shall include all royalties or costs arising from the use of such design, device or materials, in any say involved in the work. The Contactor and/or his Sureties shall indemnify and save harmless the Owner of the project from any and all claims for infringement by reason of the use of such patented or copyrighted design, device or materials or any trademark or copyright in connection with work agreed to be performed under this Contract, and shall indemnify the Owner for any cost, expense or damage which it may be obliged to pay by reason of such infringement at any time during the prosecution of the work or after completion of the work.
- (d) Any copyrightable work resulting from this Agreement is available to the author for such, but the City and the Department of Local Government reserve the option for unlimited use and license to such work. Any discovery or invention shall be reported promptly to the City and the

Department of Local Government for the determination as to whether patent protection should be sought and how the rights of any patent shall be disposed of and administered in order to protect the public interest.

10. Surveys, Permits and Regulations

Unless otherwise expressly provided for in the specifications, the Owner will furnish the Contractor all surveys necessary for the execution of the work.

The Contractor shall procure and pay all permits, licenses and approvals necessary for the execution of this Subcontract.

The Contractor shall comply with all laws, ordinances, rules, orders and regulations relating to performance of the work, the protection of adjacent property and the maintenance of passageways, guard fences or other protective facilities.

11. Contractor's Obligations

The Contractor shall and will, in good workmanlike manner, do and perform all work and furnish all supplies and materials, machinery, equipment, facilities and means, except as herein otherwise expressly specified, necessary or proper to perform and complete all the work required by this Contract, within the time herein specified, in accordance with the provisions of this Contract and said specifications and in accordance with the plans and drawings covered by this Contract any and all supplemental plans and drawings, and in accordance with the directions of the Contractor and/or Architect/Engineer as given from time to time during the progress of the work. He shall furnish, erect, maintain and remove such construction plant and such temporary works as may be required.

The Contractor shall observe, comply with, and be subject to all terms, conditions, requirements and limitations of the Contract and specifications, and shall do, carry on and complete the entire work to the satisfaction of the Contractor, Architect/Engineer and the Owner.

12. Weather Conditions

In the event of temporary suspension of work, or during inclement weather, or whenever the Architect/Engineer shall direct, the Contractor will, and will cause his Subcontractors to protect carefully his and their work and materials against damage or injury from the weather. If, in the opinion of the Architect/Engineer, any work or materials shall have been damaged or injured by reason of failure on the part of the Contractor or any of his Subcontractors to protect his work, such materials shall be removed and replaced at the expense of the Contractor.

13. Protection of Work and Property – Emergency

The Contractor shall at all times safely guard the Owner's property from injury or loss in connection with this Contract. He shall at all times safely guard and protect his own work, and that of adjacent property from damage. The Contractor shall replace

or make good any such damage, loss or injury unless such is caused directly by errors contained in the Contract or by the Owner, or his duly authorized representatives.

In case of an emergency which threatens loss or injury of property, and/or safety of life, the Contractor will be allowed to act, without previous instructions from the Architect/Engineer, in a diligent manner. He shall notify the Architect/Engineer immediately thereafter. Any claim for compensation by the Contractor due to such extra work shall be promptly submitted to the Architect/Engineer for approval.

Where the Contractor has not taken action but has notified the Architect/Engineer of an emergency threatening injury to persons or damage to the work or any adjoining property, he shall act as instructed or authorized by the Architect/Engineer.

The amount of reimbursement claimed by the Contractor on account of any emergency action shall be determined in the manner provided in Paragraph 17 of the General Conditions.

14. Inspection

The authorized representatives and agents of the Department of Local Government and the Department of Housing and Urban Development shall be permitted to inspect all work, materials, payrolls, and records of personnel, invoices of materials and other relevant data and records.

15. Reports, Records and Data

The Contractor shall submit to the Owner such schedule of quantities and costs, progress schedules, payrolls, reports, estimates, records and other data as the Owner may request concerning work performed or to be performed under this Contract.

16. Superintendence by Contractor

At the site of the work the Contractor shall employ a construction superintendent or foreman who shall have full authority to act for the Contractor. It is understood that such representative shall be acceptable to the Architect/Engineer and shall be one who can be continued in that capacity for the particular job involved unless he ceases to be on the Contractor's payroll.

17. Changes in Work

No changes in the work covered by the approved Contract Documents shall be made without having prior written approval of the Owner. Charges or credits for the work covered by the approved change shall be determined by one or more, or a combination of the following methods:

- (a) Unit bid prices previously approved.
- (b) An agreed lump sum.

(c) The actual cost of

1. Labor, including foremen.
2. Materials entering permanently into the work.
3. The ownership or rental cost of construction plant and equipment during the time of use on the extra work.
4. Power and consumable supplies for the operation of power equipment.
5. Insurance.
6. Social Security and old age and unemployment contributions.

18. Extras

Without invalidating the Contract, the Owner may order extra work or make changes by altering, adding to or deducting from the work, the contract sum being adjusted accordingly, and the consent of the Surety being first obtained where necessary or desirable. All the work of the kind bid upon shall be paid for at the price stipulated in the proposal, and no claims for any extra work or materials shall be allowed unless the work is ordered in writing by the Owner or its Architect/Engineer, acting officially for the Owner, and the price is stated in such order.

19. Time for Completion and Liquidated Damages

It is hereby understood and mutually agreed, by and between the Contractor and the Owner, that the date of beginning and the time for completion as specified in the contract of the work to be done hereunder are ESSENTIAL CONDITIONS of this Contract; and it is further mutually understood and agreed that the work embraced in this Contract shall be commended on a date to be specified in the "Notice to Proceed".

The Contractor agrees that said work shall be prosecuted regularly, diligently and uninterruptedly at such rate of progress as will insure full completion thereof within the time specified. It is expressly understood and agreed, by and between the Contractor and the Owner, that the time for the completion of the work described herein is a reasonable time for the completion of the same, taking into consideration the average climatic range and usual industrial conditions prevailing in this locality.

If the said Contractor shall neglect, fail or refuse to complete the work within the time herein specified, or any proper extension thereof granted by the Owner, then the Contractor does hereby agree, as part consideration for the awarding of this Contract, to pay to the Owner the amount specified in the Contract, not as a penalty but as liquidated damages for such breach of contract as hereinafter set forth, for each and every calendar day that the Contractor shall be in default after the time stipulated in the Contract for completing the work.

The said amount is fixed and agreed upon by and between the Contractor and the Owner because of the impracticability and extreme difficulty of fixing and ascertaining the actual damages the Owner would in such event sustain, and said amount is agreed to be the amount of damages which the Owner would sustain and

said amount shall be retained from time to time by the Owner from current periodical estimates.

It is further agreed that time is of the essence of each and every portion of this Contract and of the specifications wherein a definite and certain length of time is fixed for the performance of any act whatsoever; and where under the Contract an additional time is allowed for the completion of any work, the new time limit fixed by such extension shall be of the essence of this Contract. Provided, that the Contractor shall not be charged with liquidated damages or any excess cost when the Owner determines that the contractor is without fault and the Contractor's reasons for the time extension are acceptable to the Owner; provided, further, that the Contractor shall not be charged with liquidated damages or any excess cost when the delay in completion of the work is due:

- (a) To any preference, priority or allocation order duly issued by the Government.
- (b) To unforeseeable cause beyond the control and without fault or negligence of the Contractor, including, but not restricted to, acts of God, or of the public enemy, acts of the Owner, acts of another Contractor in performance of a contract with the Owner, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes and severe weather.
- (c) To any delays of Subcontractors or suppliers occasioned by any of the causes specified in subsections (a) and (b) of this article.

Provided, further, that the Contractor shall, within ten (10) days from the beginning of such delay, unless the Owner shall grant a further period of time prior to the date of final settlement of the Contract, notify the Owner, in writing, of the causes of the delay, who shall ascertain in the facts and extent of the delay and notify the Contractor within a reasonable time of its decision in the matter.

20. Correction of Work

All work, all materials, whether incorporated in the work or not, all processes of manufacture, and all methods of construction shall be at all times and places subject to the inspection of the Architect/Engineer who shall be the final judge of the quality and suitability of the work, materials, processes of manufacture and methods of construction for the purposes for which they are used. Should they fail to meet his approval they shall be forthwith reconstructed, made good, replaced and/or corrected, as the case may be, by the Contractor at his own expense. Rejected materials shall immediately be removed from the site. If, in the opinion of the Architect/Engineer, it is undesirable to replace any defective or damaged materials or to reconstruct or correct any portion of the work injured or not performed in accordance with the Contract Documents, the compensation to be paid to the Contractor hereunder shall be reduced by such amount as in the judgment of the Architect/Engineer shall be equitable.

21. Subsurface Conditions Found Different

Should the Contractor encounter subsurface and/or latent conditions at the site materially differing from those shown on the plans or indicated in the specifications, he shall immediately give notice to the Architect/Engineer of such conditions before

they are disturbed. The Architect/Engineer will thereupon promptly investigate the conditions, and if he finds that they materially differ from those shown on the plans or indicated in the specifications he will at once make such changes in the plans and/or specifications as he may find necessary, any increase or decrease of cost resulting from such changes to be adjusted in the manner provided in Paragraph 17 of the General Conditions.

22. Claims for Extra Cost

No claim for extra work or associated cost shall be allowed unless the same was done in pursuance of a written order of the Architect/Engineer approved by the Owner, as aforesaid and the claim presented with the first estimate after the changed or extra work is done. When work is performed under the terms of subparagraph 17(c) of the General Conditions, the Contractor shall furnish satisfactory bills, payrolls and vouchers covering all items of cost and when requested by the Owner, give the Owner access to accounts relating thereto.

23. Right of Owner to Terminate Contract

In the event that any of the provisions of this Contract are violated by the Contractor, or by any of his Subcontractors, the Owner may serve written notice upon the Contractor and the Surety of its intention to terminate the Contract, such notices to contain the reasons for such intention to terminate the Contract, and unless within ten (10) days after the serving of such notice upon the Contractor, such violation or delay shall cease and satisfactory arrangement of correction be made, the Contract shall, upon the expiration of said ten (10) days, cease and terminate. In the event of any such termination, the Owner shall immediately serve notice thereof upon the Surety and the Contractor and the Surety shall have the right to take over and perform the Contract; provided, however, that if the Surety does not commence performance thereof within ten (10) days from the date of the mailing to such Surety of notice of termination, the Owner may take over the work and prosecute the same to completion by contract or by force account for the account and at the expense of the Contractor and the Contractor and his Surety shall be liable to the Owner for any excess cost occasioned by the Owner thereby, and in such event the Owner may take possession of and utilize in completing the work, such materials, appliances and plant as may be on the site of the work and necessary therefore.

The Owner may terminate this Contract at any time by giving at least ten (10) days notice in writing to the Contractor. If the Contract is terminated by the Owner as provided herein, the Contractor will be paid for the time provided and expenses incurred up to the termination date. If the Contract is terminated due to the fault of the Contractor, the above paragraph relative to termination shall apply.

24. Construction Schedule and Periodic Estimates

Immediately after execution and delivery of the Contract, and before the first partial payment is made, the Contractor shall deliver to the Owner an estimated construction progress schedule in form satisfactory to the Owner, showing the proposed dates of commencement and completion of each of the various subdivisions of work required under the Contract Documents and the anticipated

amount of each monthly payment will become due the Contractor in accordance with the progress schedule. The Contractor shall also furnish on forms to be supplied by the Owner (a) a detailed estimate giving a complete breakdown of the contract price and (b) periodic itemized estimates of work done for the purpose of making partial payments thereon. The costs employed in making up any of these schedules will be used only for determining the basis of partial payments and will not be considered as fixing a basis for additions to or deductions from the contract price.

25. Payments to the Contractor

- (a) Not later than the _____ day of each calendar month the Owner shall make a progress payment to the Contractor on the basis of a duly certified and approved estimate of the work performed during the preceding calendar month under this Contract, but to insure the proper performance of this Contract, the Owner shall retain ten percent (10%) of the amount of each estimate until final completion and acceptance of all work covered by this Contract; provided, that the Contractor shall submit his estimate not later than the _____ day of the month; provided, further, that on completion and acceptance of each separate building, public work, or other division of the Contract, on which the price is stated separately in the Contract, payment may be made in full, including retained percentages thereon, less authorized deductions.
- (b) In preparing estimates the material delivered on the site and preparatory work done may be taken into consideration.
- (c) All material and work covered by partial payments made shall thereupon become the sole property of the Owner, but this provision shall not be construed as relieving the Contractor from the sole responsibility for the care and protection of materials and work upon which payments have been made or the restoration of any damaged work, or as a waiver of the right of the Owner to require the fulfillment of all of the terms of the Contract.
- (d) Owner's Right to Withhold Certain Amounts and Make Application Thereof:
The Contractor agrees that he will indemnify and save the Owner harmless from all claims growing out of the lawful demands of subcontractors, laborers, workmen, mechanics, materialmen and furnishers of machinery and parts thereof, equipment, power tools and all supplies, including commissary, incurred in the furtherance of the performance of this Contract. The Contractor shall, at the Owner's request, furnish satisfactory evidence that all obligations of the nature hereinabove designated have been paid, discharged or waived. If the Contractor fails to do so, then the Owner may, after having served written notice on the said Contractor, either pay unpaid bills, of which the Owner has written notice, direct, or withhold from the Contractor's unpaid compensation a sum of money deemed reasonably sufficient to pay any and all such lawful claims until satisfactory evidence is furnished that all liabilities have been fully discharged whereupon payment to the Contractor shall be resumed, in accordance with the terms of this

Contract, but in no event shall the provisions of this sentence be construed to impose any obligations upon the Owner to either the Contractor or his Surety. In paying any unpaid bills of the Contractor, the Owner shall be deemed the agent of the Contractor, and any payment so made by the Owner shall be considered as a payment made under the Contract by the Owner to the Contractor and the Owner shall not be liable to the Contractor for any such payments made in good faith.

26. Acceptance of Final Payment Constitutes Release

The acceptance by the Contractor of final payment shall be and shall operate as a release to the Owner of all claims and all liability to the Contractor for all things done or furnished in connection with this work and for every act and neglect of the Owner and others relating to or arising out of this work. No payment, however, final or otherwise, shall operate to release the Contractor or his Sureties from any obligations under this Contract or the performance and payment bond.

27. Payments by Contractor

The Contractor shall pay (a) for all transportation and utility services not later than the _____ day of the calendar month following that in which services are rendered, (b) for all materials, tools and other expendable equipment to the extent of ninety percent (90%) of the cost thereof, not later than the day of the calendar month following that in which such materials, tools and equipment are delivered at the site of the project, and the balance of the cost thereof, not later than the day following the completion of that part of the work in or on which such materials, tools and equipment are incorporated or used, and (c) to each of his Subcontractors, not later than the day following each payment to the Contractor, the respective amount allowed the Contractor on account of the work performed by his Subcontractors to the extent of each Subcontractor's interest therein.

28. Insurance

The Contractor shall not commence work under this Contract until he has obtained all the insurance required under this paragraph and such insurance has been approved by the Owner, nor shall the Contractor allow any Subcontractor to commence work on this subcontract until the insurance required of the Subcontractor has been so obtained and approved.

- (a) Compensation Insurance: The Contractor shall procure and shall maintain during the life of this Contract Workmen's Compensation Insurance as required by applicable State or territorial law for all of his employees to be engaged in work at the site of the project under this Contract, and, in case of any such work sublet, the Contractor shall require the Subcontractor similarly to provide Workmen's Compensation Insurance for all of the latter's employees to be engaged in such work unless such employees are covered by the protection afforded by the Contractor's Workmen's Compensation Insurance. In case any class of employees engaged in

hazardous work on the project under this Contract is not protected under the Workmen's Compensation Statute, the Contractor shall provide and shall cause each Subcontractor to provide adequate employer's liability insurance for the protection of such of his employees as are not otherwise protected.

- (b) Contractor's Public Liability and Property Damage Insurance and Vehicle Liability Insurance: The Contractor shall procure and maintain during the life of this Contract Contractor's Public Liability Insurance, Contractor's Property Damage Insurance and Vehicle Liability Insurance in the amounts specified in Supplemental General Conditions.
- (c) Subcontractor's Public Liability and Property Damage Insurance and Vehicle Liability Insurance: The Contractor shall either (1) require each of his Subcontractors to procure and to maintain during the life of his subcontract Subcontractor's Public Liability and Property Damage Insurance and Vehicle Liability Insurance of the type and in the amounts specified in the Supplemental General Conditions specified in subparagraph (B) hereof, or (2) insure the activities of his policy, specified in subparagraph (b) hereof.
- (d) Scope of Insurance and Special Hazards: The insurance required under subparagraphs (b) and (c) hereof shall provide adequate protection for the Contractor and his Subcontractors, respectively, against damage claims which may arise from operations under this Contract, whether such operations be by the insured or by anyone directly or indirectly employed by him and, also against any of the special hazards which may be encountered in the performance of this Contract as enumerated in the Supplemental General Conditions.
- (e) Builder's Risk Insurance (Fire and Extended Coverage): Until the project is completed and accepted by the Owner, the Owner or Contractor (at the Owner's option as indicated in the Supplemental General Conditions. Form HUD-4238-N) is required to maintain Builder's Risk Insurance (fire and extended coverage) on a 100 percent completed value basis on the insurable portion of the project for the benefit of the Owner, the Contractor, and Subcontractors as their interests may appear. The Contractor shall not include any costs for Builder's Risk Insurance (fire and extended coverage) premiums during construction unless the Contractor is required to provide such insurance, however, this provision shall not release the Contractor from his obligation to complete, according to plans and specifications, the project covered by the Contract, and the Contractor and his Surety shall be obligated to full performance of the Contractor's undertaking.
- (f) Proof of Carriage of Insurance: The Contractor shall furnish the Owner with certificates showing the type, amount, class of operations covered, effective dates and date of expiration of policies. Such certificates shall also contain substantially the following statement: "The insurance covered by this certificate will not be canceled or materially altered, except after ten (10) days written notice has been received by the Owner."

29. Contract Security

The Contractor shall furnish a performance bond in an amount at least equal to one hundred percent (100%) of the contract prices as security for the faithful performance of this Contract and also a payment bond in an amount not less than one hundred percent (100%) of the contract price or in a penal sum not less than that prescribed by State, territorial or local law, as security for the payment of all persons performing labor on the project under this Contract and furnishing materials in connection with this Contract. The performance bond and the payment bond may be in one or in separate instruments in accordance with local law.

30. Additional or Substitute Bond

If at any time the Owner for justifiable cause shall be or become dissatisfied with any Surety or Sureties, then upon the performance or payment bonds, the Contractor shall within five (5) days after notice from the Owner to do so, substitute an acceptable bond (or bonds) in such form and sum and signed by such other Surety or Sureties as may be satisfactory to the Owner. The premiums on such bond shall be paid by the Contractor. No further payments shall be deemed due nor shall be made until the new Surety or Sureties shall have furnished such an acceptable bond to the Owner.

31. Assignments

The Contractor shall not assign the whole or any part of this Contract or any moneys due or to become due hereunder without written consent of the Owner. In case the Contractor assigns all or any part of any moneys due or to become due under this Contract, the instrument of assignment shall contain a clause substantially to the effect that it is agreed that the right of the assignee in and to any moneys due or to become due to the corporations of services rendered or materials supplied for the performance of the work called for in this contract.

32. Mutual Responsibility of Contracts

If, through acts of neglect on the part of the Contractor, any other Contractor or any Subcontractor shall suffer loss or damage on the work, the Contractor agrees to settle with such other Contractor or Subcontractor by agreement or arbitration if such other Contractor or Subcontractor will so settle. If such other Contractor or Subcontractor shall assert any claim against the Owner on account of any damage alleged to have been sustained, the Owner shall notify the Contractor, who shall indemnify and save harmless the Owner against any such claim.

33. Separate Contracts

The Contractor shall coordinate his operations with those of other Contractors. Cooperation will be required in the arrangement for the storage of materials and in

the detailed execution of the work. The Contractor, including his Subcontractors, shall keep informed of the progress and the detail work of other Contractors and shall notify the Architect/Engineer immediately of lack of progress or defective workmanship on the part of other Contractors. Failure of a Contractor to keep informed of the work progressing on the site and failure to give notice of lack of progress or defective workmanship by others shall be construed as acceptance by him of the status of the work as being satisfactory for proper coordination with his own work.

34. Subcontracting

The Contractor may utilize the services of specialty Subcontractors on those parts of the work which, under normal contracting practices, are performed by specialty Subcontractors.

The Contractor shall not award any work to any Subcontractor without prior written approval of the Owner, which approval will not be given until the Contractor submits to the Owner a written statement concerning the proposed award to the Subcontractor, which statement shall contain such information as the Owner may require.

The Contractor shall be as fully responsible to the Owner for the acts and omissions of his Subcontractors, and of persons either directly or indirectly employed by them, as he is for the acts and omissions of persons directly employed by him.

The Contractor shall cause appropriate provisions to be inserted in all subcontracts relative to the work to bind Subcontractors to the Contractor by the terms of the General Conditions and other Contract Documents insofar as applicable to the work of Subcontractors and to give the Contractor the same power as regards terminating any subcontract that the Owner may exercise over the Contractor under any provision of the Contract Documents.

Nothing contained in this Contract shall create any contractual relation between any Subcontractor and the Owner.

35. Architect/Engineer's Authority

The Architect/Engineer shall give all orders and directions contemplated under this contract and specifications, relative to the execution of the work. The Architect/Engineer shall determine the amount, quality, acceptability and fitness of the several kinds of work and materials which are to be paid for under this Contract and shall decide all questions which may arise in relation to said work and the construction thereof. The Architect/Engineer's estimates and decisions shall be final and conclusive, except as herein otherwise expressly provided. In case any question shall arise between the parties hereto relative to said Contract and specifications, the determination or decision of the Architect/Engineer shall be a condition precedent to the right of the Contractor to receive any money or payment for work under this Contract affected in any manner or to any extent by such question.

The Architect/Engineer shall decide the meaning and intent of any portion of the specifications and of any plans or drawings where the same may be found obscure

or be in dispute. Any differences or conflicts in regard to their work which may arise between the Contractor under this Contract and other Contractors performing work for the Owner shall be adjusted and determined by the Architect/Engineer.

36. Stated Allowances

The Contractor shall include in his proposal the cash allowances stated in the Supplemental General Conditions. The Contractor shall purchase the "Allowed Materials" as directed by the Owner on the basis of the lowest and best bid of at least three competitive bids. If the actual price for purchasing the "Allowed Materials" is more or less than the "Cash Allowance," the contract price shall be adjusted accordingly. The adjustment in contract price shall be made on the basis of the purchase price without additional charges for overhead, profit, insurance or any other incidental expenses. The cost of installation of the "Allowed Materials" shall be included in the applicable sections of the Contract Specifications covering this work.

37. Use of Premises and Removal of Debris

The Contractor expressly undertakes at his own expense:

- (a) To take every precaution against injuries to persons or damage to property.
- (b) To store his apparatus, materials, supplies and equipment in such orderly fashion at the site of the work as will not unduly interfere with the progress of his work or the work of any other Contractors.
- (c) To place upon the work or any part thereof only such loads as are consistent with the safety of that portion of the work.
- (d) To clean up frequently all refuse, rubbish, scrap materials and debris caused by his operations, to the end that at all times the site of the work shall present a neat, orderly and workmanlike appearance.
- (e) Before final payment to remove all surplus material, false-work, temporary structures, including foundations thereof, plant of any description and debris of every nature resulting from his operations, and to put the site in a neat, orderly condition.
- (f) To affect all cutting, fitting or patching of his work required to make the same to conform to the plans and specifications and, except with the consent of the Architect/Engineer, not to cut or otherwise alter the work of any other Contractor.

38. Quantities of Estimate

Wherever the estimated quantities of work to be done and materials to be furnished under this Contract are shown in any of the documents including the proposal, they are given for use in comparing bids and the right is especially reserved except as herein otherwise specifically limited, to increase or diminish them as may be deemed reasonably necessary or desirable by the Owner to complete the work contemplated by this Contract, and such increase or diminution shall in no way vitiate this Contract, nor shall any such increase or diminution give cause for claims or liability for damages.

39. Lands and Rights-of-Way

Prior to the start of construction, the Owner shall obtain lands and rights-of-way necessary for the carrying out and completion of work to be performed under this Contract. All acquisitions of real property including temporary and permanent easements must follow the Uniform Relocation Act requirements.

40. General Guaranty

Neither the final certificate of payment nor any provision in the Contract Documents, nor partial or entire occupancy of the premises by the Owner, shall constitute an acceptance of work not done in accordance with the Contract Documents or relieve the Contractor of liability in respect to any express warranties or responsibility for faulty materials or workmanship. The Contractor shall remedy any defects in the work and pay for any damage to other work resulting therefrom, which shall appear within a period of one year from the date of final acceptance of the work unless a longer period is specified. The Owner will give notice of observed defects with reasonable promptness.

41. Conflicting Conditions

Any provisions in any of the Contract Documents which may be in conflict or inconsistent with any of the paragraphs in these General Conditions shall be void to the extent of such conflict or inconsistency.

42. Notice and Service Thereof

Any notice to any Contractor from the Owner relative to any part of this Contract shall be in writing and considered delivered and the service thereof completed, when said notice is posted, by certified or registered mail, to the said Contractor at his last given address or delivered in person to the said Contractor or his authorized representative on the work.

43. Provisions Required by Law Deemed Inserted

Each and every provision of law and clause required by law to be inserted in this Contract shall be deemed to be inserted herein and the Contract shall be read and enforced as though it were included herein, and if through mistake or otherwise any such provision is not inserted, or is not correctly inserted, then upon the application of either party the Contract shall forthwith be physically amended to make such insertion or correction.

44. Protection of Lives and Health

"The Contractor shall exercise proper precaution at all times for the protection of persons and property and shall be responsible for all damages to persons or property, either on or off the site, which occur as a result of his prosecution of the work. The safety provisions of applicable laws and building and construction codes, in addition to specific safety and health regulations described by Chapter XIII, Bureau of Labor Standards, Department of Labor, Part 1518, Safety and Health Regulations for Construction, as outlined in the Federal Register, Volume 36, No.75, Saturday, April 17, 1971. Title 29 - Labor shall be observed and the Contractor shall take or cause to be taken, such additional safety and health measures as the Contracting Authority may determine to be reasonably necessary."

45. Subcontracts

"The Contractor will insert in any subcontracts the Federal Labor Standards Provision contained herein and such other clauses as the Department of Housing and Urban Development may, by instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts which they may enter into, together with a clause requiring this insertion in any further subcontracts that may in turn be made."

46. Conflict of Interest

No person who is an employee, agent, consultant, officer or elected or appointed official of recipient or subrecipient who exercises or has exercised any functions or responsibilities with respect to KCDBG activities or who is in a position to participate in a decision making process or gain inside information with regard to such activities may obtain a financial interest or benefit from a KCDBG activity, have an interest or benefit from the activity or have an interest in any contract, subcontract or agreement with respect to a CDBG activity or its proceeds, for themselves or those with whom they have family or business ties. The prohibition applies during their tenure and for one year thereafter.

47. Interest of Member of or Delegate to Congress

No member of or delegate to Congress or Resident Commissioner shall be admitted to any share or part of this Contract or to any benefit that may arise therefrom, but this provision shall not be construed to extend to this Contract if made with a corporation for its general benefit.

48. Other Prohibited Interests

No official of the Owner who is authorized in such capacity and on behalf of the Owner to negotiate, make, accept or approve, or to take part in negotiating, making, accepting or approving any architectural, engineering, inspection, construction or material supply contract or any subcontract in connection with the construction of the project, shall become directly or indirectly interested personally in this Contract or in any part thereof. No officer, employee, architect, attorney, engineer or inspector of or for the Owner who is authorized in such capacity and on behalf of the Owner to exercise any legislative, executive, supervisory or other similar functions in connection with the construction of the project, shall become directly or indirectly interested personally in this Contract or in any part thereof, any material supply contract, subcontract, insurance contract or any other contract pertaining to the project.

49. Use and Occupancy Prior to Acceptance by Owner

The Contractor agrees to use and occupancy of a portion or unit of the project before formal acceptance by the Owner, provided the Owner:

- Secures written consent of the Contractor except in the event, in the opinion of the Architect/Engineer, the Contractor is chargeable with unwarranted delay in final cleanup of punch list items or other Contract requirements. Secures endorsement from the insurance carrier and consent of the surety permitting occupancy of the building or use of the project during the remaining period of construction.

Or

- When the project consists of more than one building, and one of the buildings is occupied, secures permanent fire and extended coverage insurance, including a permit to complete construction. Consent of Surety must also be obtained.

50. Photographs of the Project

If required by the Owner, the Contractor shall furnish photographs of the project, in the quantities and as described in the Supplemental General Conditions.

51. Suspension of Work

Should the Owner be prevented or enjoined from proceeding with work either before or after the start of construction by reason of any litigation or other reason beyond the control of the Owner, the Contractor shall not be entitled to make or assert claim for damage by reason of said delay; but time for completion of the work will be extended to such reasonable time as the Owner may determine will compensate for time lost by such delay with such determination to be set forth in writing.

52. Access to Records

The Contractor shall maintain accounts and project records, including personnel, property and financial records, adequate to identify and account for all costs pertaining to the Contract and such other records as may be deemed necessary by the City/County to assure proper accounting for all project funds, both CDBG and non-CDBG shares. These records will be made available to the City, the Department of Local Government, Commonwealth of Kentucky Finance & Administration Cabinet, Commonwealth of Kentucky Auditor of Public Audits, Commonwealth of Kentucky Legislative Research Commission, U.S. Department of Housing and Urban Development, the U. S. Department of Labor, and the Comptroller General of the United States, or any of their duly authorized representatives. These parties shall have access to any books, documents, papers and records of the Contractor which are directly pertinent to the project, for the purpose of making audit, examination, excerpts, and transcriptions. All records shall be maintained for five years after project closeout.

53. Federal Labor Standards Provisions (HUD-4010, 2-84)

Applicability

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

A.1. (i) Minimum Wages. All laborers and mechanics employed or working upon the site of the work (or under the United States Housing Act of 1937 or under the Housing Act of 1949 in the construction or development of the project), will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR

Part 3), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics. Contributions made or costs reasonably anticipated for bona fide fringe benefits under Section 1 (b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of 29 CFR 5.5(a)(1)(iv); also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs, which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period.

Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR Part 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: provided, that the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under 29 CFR Part 5.5(a)(1)(ii) and the Davis-Bacon poster (WH-1321 shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can easily be seen by the workers.

(ii) (a) Any class of laborers or mechanics which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. HUD shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

1. The work to be performed by the classification requested is not performed by a classification in the wage determination;
2. The classification is utilized in the area by the construction industry; and
3. The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(b) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and HUD or its designee agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by HUD or its designee to the Administrator of the Wage and Hour Division, Employment Standards Administration, U. S. Department of Labor, Washington, D.C. 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise HUD or its designee or will notify HUD or its designee within the 30-day period that additional time is necessary. (Approved by the Office of Management and Budget under OMB Control Number 1215-0140.)

(c) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and HUD or its designee do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), HUD or its designee shall refer the questions, including the views of all interested parties and the recommendation of HUD or its designee, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise HUD or its designee or will notify HUD or its designee within the 30-day period that additional time is necessary. (Approved by the Office of Management and Budget under OMB Control Number 1215-0140.)

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

(iii) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

(iv) If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, provided, that the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program. (Approved by the Office of Management and Budget under OMB Control Number 1215-0140.)

2. **Withholding.** HUD or its designee shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld from the contractor under this contract or any other Federal Contract with the same prime contractor, or any other Federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee or helper, employed or working on the site of the work (or under the United States Housing Act of 1937 or under the Housing Act of 1949 in the construction or development of the project), all or part of the wages required by the contract, HUD or its designee may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased. HUD or its designee may, after written notice to the contractor, disburse such amounts withheld for and on account of the contractor or subcontractor to the respective

employees to whom they are due. The Comptroller General shall make such disbursements in the case of direct Davis-Bacon Act contracts.

3. Payrolls and Basic Records.

(i) Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work (or under the United States Housing Act of 1937 or under the Housing Act of 1949 in the construction or development of the project). Such records shall contain the name, address and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in Section 1 (b)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in Section 1 (b)(2)(B) of 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 the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs. (Approved by the Office of Management and Budget under OMB Control Numbers 1215-0140 and 1215- 0017.)

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

(b) Each payroll submitted shall be accompanied by a 'Statement of Compliance,' signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

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

2. That each laborer or mechanic (including each helper 1 apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in 29 CFR Part 3.
3. That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

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

(d) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under Section 1001 of Title 18 and Section 231 and Title 31 of the United States Code.

(iii) The contractor or subcontractor shall make the records required under paragraph A.3(i) of this section available for inspection, copying, or transcription by authorized representatives of HUD or its designee or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, HUD or its designee may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant 20 CFR Part 5.12.

4. (i) **Apprentices and Trainees.** Apprentices. Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U. S. Department of Labor, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a State Apprenticeship Agency recognized by the Bureau, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Bureau of Apprenticeship and Training or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program

shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Bureau of Apprenticeship and Training, or a State Apprenticeship Agency recognized by the Bureau, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(ii) Trainees. Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U. S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

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

5. Compliance with Copeland Act Requirements. The contractor shall comply with the requirements of 29 CFR Part 3 which are incorporated by reference in this contract.
6. Subcontracts. The contractor or subcontractor will insert in any subcontracts the clause contained in 29 CFR 5.5(a)(1) through (10) and such other clauses as HUD or its designee may be appropriate instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR Part 5.5.
7. Contract Termination; Debarment. A breach of contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and subcontractor as provided in 29 CFR Part 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 of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR Parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and HUD or its designee, the U. S. Department of Labor, or the employees or their representatives.
10. (i) Certification of Eligibility .By entering into this contract, the contractor certified that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of Section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1) or to be awarded HUD contracts or participate in HUD programs pursuant to 24 CFR Part 24.

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

(iii) The penalty for making false statements is prescribed in the U. S. Criminal Code, 18 U.S.C.1001. Additionally, U. S. Criminal Code, Section 1010, Title 18, U.S.C., "Federal Housing Administration transactions," provides in part: "Whoever, for the purpose of ...influencing in any way the action of such Administration ...makes, utters, or publishes any statement, knowing the same to be false ...shall be fined not more than \$5,000 or imprisoned not more than two years, or both."
11. Complaints, Proceedings, or Testimony by Employees. No laborer or mechanic to whom the wage, salary, or other labor standards provisions of this Contract

are applicable shall be discharged or in any other manner discriminated against by the Contractor or subcontractor because such employee has filed any complaint or instituted or caused to be instituted any proceeding or has testified or is about to testify in any proceeding under or relating to the labor standards applicable under Contract to his employer.

B. Contract Work Hours and Safety Standards Act (over \$100,000). As used in this paragraph, the terms "laborers" and "mechanics" include watchmen and guards.

- (1) **Overtime Requirements.** No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.
- (2) **Violation; Liability for Unpaid Wages; Liquidated Damages.** In the event of any violation of the clause set forth in subparagraph (1) of this paragraph, the contractor and any subcontractor responsible therefore shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in subparagraph (1) of this paragraph, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in subparagraph (1) of this paragraph.
- (3) **Withholding For Unpaid Wages and Liquidated Damages.** HUD or its designee shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contract, or any other Federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in subparagraph (2) of this paragraph.
- (4) **Subcontracts.** The contractor or subcontractor shall insert in any subcontracts the clauses set forth in subparagraph (1) through (4) of this paragraph and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in subparagraphs (1) through (4) of this paragraph.

C. Health and Safety

- (1) No laborer or mechanic shall be required to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous to his health and safety as determined under construction safety and health standards promulgated by the Secretary of Labor by regulation.
- (2) The Contractor shall comply with all regulations issued by the Secretary of Labor pursuant to Title 29 Part 1926 (formerly Part 1518) and failure to comply may result in imposition of sanctions pursuant to the Contract Work Hours and Safety Standards Act (Public Law 91- 54, 83 Stat. 96).
- (3) The Contractor shall include the provisions of this Article in every subcontract so that such provisions will be binding on each subcontractor. The Contractor shall take such action with respect to any subcontract as the Secretary of Housing and Urban Development or the Secretary of Labor shall direct as a means of enforcing such provisions.

54. Anti-Kickback Act

Attachment to Federal Labor Standards Provisions, So-Called "Anti-Kickback Act" and Regulations Promulgated Pursuant Thereto by the Secretary of Labor. United States Department of Labor. Title 18, U.S.C., Section 874 (HUD-4010, 2-76) (Replaces section 1 of the Act of June 13, 1934 (48 Stat. 948, 40 U.S.C., Section 276B) pursuant to the Act of June 25, 1948, 62 Stat. 862).

Kickbacks from Public Works Employees

Whoever, by force, intimidation, or threat of procuring dismissal from employment, or by any other manner whatsoever induces any person employed in the construction, prosecution, completion or repair of any public building, public work, or building or work financed in whole or in part by loans or grants from the United States, to give up any part of the compensation to which he is entitled under his contract of employment, shall be fined not more than \$5,000 or imprisoned not more than five years, or both.

Section 2 of the Act of June 13, 1934, as amended (48 Stat. 948, 62 Stat. 862, 63 Stat. 108, Stat. 967, 40 U.S.C., section 276c).

The Secretary of Labor shall make reasonable regulations for contractors and subcontractors engaged in the construction, prosecution, completion or repair of buildings, public works or buildings or works financed in whole or in part by loans or grants from the United States, including a provision that each contractor shall furnish weekly a statement with respect to the wages paid each employee during the preceding week. Section 1001 of Title 18 (United States Code) shall apply to such statements.

Pursuant to the aforesaid Anti-Kickback Act, the Secretary of Labor, United States Department of Labor, has promulgated the regulations hereinafter set forth, which regulations are found in Title 29, Subtitle A, Code of Federal Regulations, Part 3. The term "this part", as used in the regulations hereinafter set forth, refers to Part 3 last above mentioned. Said regulations are as follows.

Title 29 – Labor; Subtitle A – Office of the Secretary of Labor, Part 3 – Contractors and Subcontractors on Public Building or Public Work Financed in Whole or in part by loans or grants from the United States.

Section 3.1 – Purpose and scope

This part prescribes "anti-kickback" regulations under section 2 of the Act of June 13, 1934, as amended (40 U.S.C. 276c), popularly known as the Copeland Act. This part applies to any contract which is subject to Federal wage standards and which is for the construction, prosecution, completion, or repair of public buildings, public works or buildings or works financed in whole or in part by loans or grants from the United States. The part is intended to aid in the enforcement of the minimum wage provisions of the Davis-Bacon Act and the various statutes dealing with Federally- assisted construction that contain similar minimum wage provisions, including those provisions which are not subject to Reorganization Plan No.14 (e.g., the College Housing Act of 1950, the Federal Water Pollution Control Act, and the Housing Act of 1959), and in the enforcement of the overtime provisions of the Contract Work Hours Standards Act whenever they are applicable to construction work. The part details the obligation of contractors and subcontractors relative to the weekly submission of statements regarding the wages paid on work covered thereby; sets forth the circumstances and procedures governing the making of payroll deductions from the wages of those employed on such work; and delineates the methods of payment permissible on such work.

Section 3.2 – Definitions.

As used in the regulations in this part:

- (a) The terms "building" or "work" generally include construction activity as distinguished from manufacturing, furnishing of materials, or servicing and maintenance work. The terms include, without limitation, buildings, structures, and improvements of all types, such as bridges, dams, plants, highways, parkways, streets, subways, tunnels, sewers, mains, power lines, pumping stations, railways, airports, terminals, docks, piers, wharves, ways, lighthouses, buoys, jetties, breakwaters, levees, and canals; dredging, shoring, scaffolding, drilling, blasting, excavating, clearing, and landscaping. Unless conducted in connection with and at the site of such a building or work as is described in the foregoing sentence, the manufacture or furnishing of materials, articles, supplies, or equipment (whether or not a Federal or State agency acquires title to such materials, articles, supplies, or equipment during the course of the manufacture or furnishing, or owns the materials from which they are manufactured or furnished) is not a "building" or "work" within the meaning of the regulations in this part.
- (b) The terms "construction", "completion," or "repair" mean all types of work done on a particular building or work at the site thereof, including, without

limitation, altering, remodeling, painting and decorating, the transporting of materials and supplies to or from the building or work by the employees of the construction contractor or construction subcontractor, and the manufacturing or furnishing of materials, articles, supplies, or equipment on the site of the building or work, by persons employed at the site by the contractor or subcontractor.

- (c) The terms "public building" or "public work" include building or work for whose construction, prosecution, completion, or repair, as defined above, a Federal agency is a contracting party, regardless of whether title thereof is in a Federal agency.
- (d) The term "building or work financed in whole or in part by loans or grants from the United States" includes building or work for whose construction, prosecution, completion, or repair, as defined above, payment or part payment is made directly or indirectly from funds provided by loans or grants by a Federal agency. The term does not include building or work for which Federal assistance is limited solely to loan guarantees or insurance.
- (e) Every person paid by a contractor or subcontractor in any manner for his labor in the construction, prosecution, completion, or repair of a public building or public work or work financed in whole or in part by loans or grants from the United States is "employed" and receiving "wages," regardless of contractual relationship alleged to exist between him and the real employer.
- (f) The term "any affiliated person" includes a spouse, child, parent, or other close relative of the contractor or subcontractor; a partner or officer of the contractor or subcontractor; a corporation closely connected with the contractor or subcontractor as parent, subsidiary or otherwise, and an officer or agent of such corporation.
- (g) The term "Federal agency" means the United States, the District of Columbia, and all executive departments, independent establishments, administrative agencies, and instrumentalities of the United States and of the District of Columbia, including corporations, all or substantially all of the stock of which is beneficially owned by the United States, by the District of Columbia, or any of the foregoing departments, establishments, agencies and instrumentalities.

Section 3.3 – Weekly statement with respect to payment of wages

- (a) As used in this section, the term "employee" shall not apply to persons in classifications higher than that of laborer or mechanic and those who are the immediate supervisors of such employees.
- (b) Each contractor or subcontractor engaged in the construction, prosecution, completion, or repair of any public building or public work, or building or work financed in whole or in part by loans or grants from the United States, shall furnish each week a statement with respect to the wages paid each of its employees engaged on work covered by 29 CFR Parts 3 and 5 during the preceding weekly payroll period. This statement shall be executed by the contractor or subcontractor or by an authorized officer or employee of the contractor or subcontractor who supervises the payment of wages and shall be on form WH 348, "Statement of Compliance," or on an identical form on the back of WH 347, "Payroll (For Contractors Optional Use)" or on any form with identical wording. Sample copies of WH 347 and WH 348 may be

obtained from the Government contracting or sponsoring agency, and copies of these forms may be purchased at the Government Printing Office.

- (c) The requirements of this section shall not apply to any contract of \$2,000 or less.
- (d) Upon a written finding by the head of a Federal agency, the Secretary of Labor may provide reasonable limitations, variations, tolerances and exemptions from the requirements of this section subject to such conditions as the Secretary of Labor may specify.

(29 F.R. 95, Jan. 4 1964, as amended at 33 FR 10186, July 17, 1968)

Section 3.4 – Submission of weekly statements and the preservation and inspection of weekly payroll records.

- (a) Each weekly statement required under SS 3.3 shall be delivered by the contractor or subcontractor within seven days after the regular payment date of the payroll period, to a representative of a Federal or State agency in charge at the site of the building or work, or, if there is no representative of a Federal or State agency at the site of the building or work, the statement shall be mailed by the contractor or subcontractor, within such time, to a Federal or State agency contracting for or financing the building or work. After such examination and check as may be made, such statement, or a copy thereof, shall be kept available, or shall be transmitted together with a report of any violation, in accordance with applicable procedures prescribed by the United States Department of Labor.
- (b) Each contractor or subcontractor shall preserve his weekly payroll records for a period of three years from date of completion of the contract. The payroll records shall set out accurately and completely the name and address of each laborer and mechanic, his correct classification, rate of pay, daily and weekly number of hours worked, deductions made, and actual wages paid. Such payroll records shall be made available at all times for inspection by the contracting officer or his authorized representative, and by authorized representatives of the Department of Labor.

Section 3.5 – Payroll deductions permissible without application to or approval of the Secretary of Labor.

Deductions made under the circumstances or in the situations described in the paragraphs of this section may be made without application to and approval of the Secretary of Labor.

- (a) Any deduction made in compliance with the requirements of Federal, State or local law, such as Federal or State withholding income taxes and Federal social security taxes.
- (b) Any deduction of sums previously paid to the employee as a bona fide prepayment of wages when such prepayment is made without discount or interest. A "bona fide prepayment of wages" is considered to have been made only when cash or its equivalent has been advanced to the person

employed in such manner as to give him complete freedom of disposition of the advanced funds.

- (c) Any deduction of amounts required by court process to be paid to another, unless the deduction is in favor of the contractor, subcontractor or any affiliated person, or when collusion or collaboration exists.
- (d) Any deduction constituting a contribution on behalf of the person employed to funds established by the employer or representatives of employees, or both, for the purpose of providing *either* from principal or income, or both, medical or hospital care, pensions or annuities on retirement, death benefits, compensation for injuries, illness, accidents, sickness, or disability, or for insurance to provide any of the foregoing. or unemployment benefits, vacation pay, savings accounts, or similar payments for the benefit of employees, their families and dependents: Provided, however, That the following standards are met: (1) The deduction is not otherwise prohibited by law; (2) it is either: (i) Voluntarily consented to by the employee in writing and in advance of the period in which the work is to be done and such consent is not a condition either for the obtaining of or for the continuation of employment, or (ii) provided for in a bona fide collective bargaining agreement between the contractor or subcontractor and representatives of its employees; (3) no profit or other benefit is otherwise obtained, directly or indirectly, by the contractor or subcontractor or any affiliated person in the form of commission, dividend, or otherwise; and (4) the deductions shall serve the convenience and interest of the employee.
- (e) Any deduction contribution toward the purchase of United States Defense Stamps and Bonds when voluntarily authorized by the employee.
- (f) Any deduction requested by the employee to enable him to repay loans to or to purchase shares in credit unions organized and operated in accordance with Federal and State credit union statutes.
- (g) Any deduction voluntarily authorized by the employee for the making of contributions to governmental or quasi-governmental agencies, such as the American Red Cross.
- (h) Any deduction voluntarily authorized by the employee for the making of contributions to Community Chests, United Givers Funds, and similar charitable organizations.
- (i) Any deductions to pay regular union initiation fees and membership dues, not including fines or special assessments: Provided, however, that a collective bargaining agreement between the contractor or subcontractor and representatives of its employees provides for such deductions and the deductions are not otherwise prohibited by law.
- (j) Any deduction not more than for the "reasonable cost" of board, lodging, or other facilities meeting the requirements of section 3(m) of the Fair Labor Standards Act of 1938, as amended, and Part 431 of this title. When such a deduction is made the additional records required under SS 516.27(a) of this title shall be kept.

Section 3.6 – Payroll deductions permissible with the approval of the Secretary of Labor.

Any contractor or subcontractor may apply to the Secretary of Labor for permission to make any deduction not permitted under SS 3.5. The Secretary may grant permissions whenever he finds that:

- (a) The contractor, subcontractor, or any affiliated person does not make a profit or benefit directly or indirectly from the deduction either in the form of a commission, dividend, or otherwise;
- (b) The deduction is not otherwise prohibited by law;
- (c) The deduction is either (1) voluntarily consented to by the employee in writing and in advance of the period in which the work to be done, and such consent is not a condition either for the obtaining of employment or its continuance, or (2) provided for in a bona fide collective bargaining agreement between the contractor or subcontractor and representatives of its employees; and
- (d) The deduction serves the convenience and interest of the employee.

Section 3.7 – Applications for the approval of the Secretary of Labor.

Any application for the making of payroll deductions under SS 3.6 shall comply with the requirements prescribed in the following paragraphs of this section:

- (a) The application shall be in writing and shall be addressed to the Secretary of Labor.
- (b) The application shall identify the contract or contracts under which the work in question is to be performed. Permission will be given for deductions only on specific, identified contracts, except upon a showing of exceptional circumstances.
- (c) The application shall state affirmatively that there is compliance with the standards set forth in the provisions of SS 3.6. The affirmation shall be accompanied by a full statement of the facts indicating such compliance.
- (d) The application shall include a description of the proposed deduction, the purpose to be served thereby, and the classes of laborers or mechanics from whose wages the proposed deduction would be made.
- (e) The application shall state the name and business of any third person to whom any funds obtained from the proposed deductions are to be transmitted and the affiliation of such person, if any, with the applicant.

Section 3.8 – Action by the Secretary of Labor upon applications.

The Secretary of Labor shall decide whether or not the requested deduction is permissible under provisions of SS 3.6; and shall notify the applicant in writing of his decision.

Section 3.9 – Prohibited payroll deductions.

Deductions not elsewhere provided for by this part and which are not found to be permissible under SS 3.6 are prohibited.

Section 3.10 – Methods of payment of wages.

The payment of wages shall be by cash, negotiable instruments payable on demand, or the additional forms of compensation for which deductions are permissible under this part. No other methods of payment shall be recognized on work subject to the Copeland Act.

Section 3.11 – Regulations part of contract.

All contracts made with respect to the construction, prosecution, completion, or repair of any public building or public work or building or work financed in whole or in part by loans or grants from the United States covered by the regulations in this part shall expressly bind the contractor or subcontractor to comply with such of the regulations in this part as may be applicable. In this regard, see SS 5.5(a) of this subtitle.

CDBG Supplemental General Conditions Including Equal Opportunity Provisions

1. Enumeration of Plans, Specifications and Addenda
2. Stated Allowances
3. Special Hazards
4. Contractor's and Subcontractor's Public Liability, Vehicle Liability and Property Damage Insurance
5. Photographs of Project
6. Schedule of Occupational Classifications and Minimum Hourly Wage Rates
7. Builder's Risk Insurance
8. Special Equal Opportunity Provisions
9. Certification of Compliance with Air and Water Acts
10. Special Conditions Pertaining to Hazards, Safety Standards and Accident Prevention
11. Energy Efficiency
12. Access to Records
13. Wage Rate Determination(s)
14. Contract Work Hours and Safety Standards Act

1. Enumeration of Plans, Specifications and Addenda

Following are the Plans, Specifications and Addenda which form a part of this Contract, as set forth in paragraph 1 of the General Conditions, "Contract and Contract Documents":

DRAWINGS

General Construction: Nos. _____
Heating and Ventilating: Nos. _____
Plumbing: Nos. _____
Electrical: Nos. _____
Nos. _____
Nos. _____

SPECIFICATIONS:

General Construction: Page _____ to _____, inclusive
Heating and Ventilating: Page _____ to _____, inclusive
Plumbing: Page _____ to _____, inclusive
Electrical: Page _____ to _____, inclusive
Page _____ to _____, inclusive
Page _____ to _____, inclusive

ADDENDA:

No. _____ Date _____ No. _____ Date _____
No. _____ Date _____ No. _____ Date _____

2. Stated Allowances

Pursuant to Paragraph 36 of the General Conditions, the Contractor shall include the following cash allowances in his proposal

(a) For _____ (Page _____ of Specifications) \$ _____

- (b) For _____ (Page _____ of Specifications) \$ _____
- (c) For _____ (Page _____ of Specifications) \$ _____
- (d) For _____ (Page _____ of Specifications) \$ _____
- (e) For _____ (Page _____ of Specifications) \$ _____
- (f) For _____ (Page _____ of Specifications) \$ _____

3. Special Hazards

The Contractor's and his Subcontractor's Public Liability and Property Damage Insurance shall provide adequate protection against the following special hazards:

4. Contractor's and Subcontractor's Public Liability, Vehicle Liability and Property Damage Insurance

As required under paragraph 28 of the General Conditions, the Contractor's Public Liability Insurance and Vehicle Insurance shall be in an amount not less than \$ _____ for injuries, including accidental death, to any one person, and subject to the same limit for each person, in an amount not less than \$ _____ on account of one accident, and Contractor's Property Damage Insurance in an amount not less than \$ _____.

The Contractor shall either (1) require each of his Subcontractors to procure and to maintain during the life of his subcontract, Subcontractor's Public Liability and Property Damage Insurance of the type and in the same amounts as specified in the preceding paragraph, or (2) insure the activities of his Subcontractors in his own policy.

5. Photographs of Project

As provided in paragraph 50 of General Conditions, the Contractor will furnish photographs in the number, type and stage as enumerated below:

6. Schedule of Occupational Classifications and Minimum Hourly Wage Rate as required under paragraph 53 of the General Conditions.

Given on pages _____, _____, and _____

7. Builder's Risk Insurance

As provided in the General Conditions, paragraph 28(e), the Contractor will/will not* maintain Builder's Risk Insurance (fire and extended coverage) on a 100 percent completed value basis on the insurable portions of the project for the benefit of the Owner, the Contractor and all Subcontractors, as their interests may appear.

* Strike out one.

8. Special Equal Opportunity Provisions

- A. 3-Paragraph Equal Opportunity Clause for Activities and Contracts Not subject to Executive Order 11246, as Amended (applicable to Federally assisted construction contracts and related subcontracts \$10,000 and under)

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

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

- B. Executive Order 11246 (contracts/subcontracts above \$10,000)

1. Section 202 Equal Opportunity Clause

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

- a. The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, 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 by the contracting officer setting forth the provisions of this nondiscrimination clause.

b. The contractor will, in all solicitations or advancements 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.

c. 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.

d. 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 by the agency contracting officer, advising the labor union or workers' representative of the contractor's commitments under Section 202 of Executive Order No. 11246 of September 24, 1965, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

e. The contractor will comply with all provisions of Executive Order No. 11246 of Sept. 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

f. The contractor will furnish all information and reports required by Executive Order No. 11246 of September 24, 1965, and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the contracting agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

g. In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of such rules, regulations, or orders, this contract may be cancelled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts in accordance with procedures authorized in Executive Order No. 11246 of Sept. 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order No. 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

h. The contractor will include 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 No. 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 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 becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction, the contractor may request the United States to enter into such litigation to protect the interests of the United States." [Sec. 202 amended by EO 11375 of Oct. 13, 1967, 32 FR 14303,

3 CFR, 1966-1970 Comp., p. 684, EO 12086 of Oct. 5, 1978, 43 FR 46501, 3 CFR, 1978 Comp., p. 230, EO 13665 of April 8, 2014, 79 FR 20749, EO 13672 of July 21, 2014, 79 FR 42971]

2. Notice of Requirement for Affirmative Action to Ensure Equal Employment Opportunity (Executive Order 11246) (applicable to contract/subcontracts exceeding \$10,000)
 - a. The Offeror's or Bidder's attention is called to the "Equal Opportunity Clause" and the "Affirmative Action Compliance Requirements for Construction clause", set forth herein.
 - b. The goals and timetables for minority and female participation, expressed in percentage terms for the Contractor's aggregate workforce in each trade on all construction work in the covered area, are as follows:

Goals for Minority <u>Participation</u>	Goals for Female <u>Participation</u>
12.0	6.9

These goals are applicable to all the Contractor's construction work (whether or not it is Federal or Federally assisted) performed in the covered area. If the Contractor performs construction work in a geographic area located outside of the covered area, it shall apply the goals established for such geographic area where the work is actually performed. Goals are published periodically in the *Federal Register* in notice form, and these notices may be obtained from any Office of Federal Contract Compliance Programs office.

The Contractor's compliance with Executive Order 11246, as amended, and the regulations in 41 CFR 60-4 shall be based on (1) its implementation of the Equal Opportunity Clause, (2) specific affirmative action obligations required by the clause entitled *Affirmative Action Compliance Requirements for Construction*, and (3) its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade. The Contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be a violation of the Contract, Executive Order 11246, as amended, and the regulations in 41 CFR 60-4. Compliance with the goals will be measured against the total work hours performed.

- c. The Contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within 10 working days following award of any construction subcontract in

excess of \$10,000 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address and telephone number of the Subcontractor; employer identification number of the subcontractor; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the contract is to be performed.

- d. As used in this notice, and in any contract resulting from this solicitation, the "covered area" is Montgomery County, Kentucky.
3. Affirmative Action Compliance Requirements for Construction (Executive Order 11246)
 - a. As used in these specifications:
 - (1) "Covered area" means the geographical area described in solicitation from which this Contract resulted.
 - (2) "Deputy Assistant Secretary" means the Deputy Assistant Secretary for the Office of Federal Contract Compliance Program, United States Department of Labor, or a designee.
 - (3) "Employer identification number" means the Federal Social Security number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941.
 - (4) *Gender Identity* has the meaning given by the Department of Labor's Office of Federal Contract Compliance Programs, and is found at www.dol.gov/ofccp/LGBT/LGBT_Faq's.html.
 - (5) *Sexual Orientation* has the meaning given by the Department of Labor's Office of Federal Contract Compliance Programs, and is found at www.dol.gov/ofccp/LGBT/LGBT_Faq's.html.
 - (6) "Minority" includes:
 - (a) Black (all persons having origins in any of the Black African racial groups not of Hispanic origin).
 - (b) Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish culture or origin, regardless of race).

- (c) Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent or the Pacific Islands.
 - (d) American Indian or Alaskan Native (all persons having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership and participation or community identification.
- (7) Whenever the Contractor, or any Subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of \$10,000 this clause and the Notice containing the goals for minority and female participation which is stated in the solicitations from which this Contract resulted.
- (8) If the Contractor is participating (pursuant to 41 CFR 60-4) in a Hometown Plan approved by the U. S. Department of Labor in the covered area either individually or through an association, its affirmative action obligations on all work in the plan area (including goals) shall comply with that plan for those trades which have unions participating in the plan. Contractors must be able to demonstrate their participation in, and compliance with, the provisions of the plan. Each Contractor or Subcontractor participating in an approved plan is also required to comply with its obligations under the EEO clause, and to make a good faith effort to achieve each goal under the plan in each trade in which it has employees. The overall good faith performance by other Contractors or Subcontractors toward a goal in an approved Plan does not excuse any Contractor's or Subcontractor's failure to take good faith efforts to achieve the plan's goals.
- (9) The Contractor shall implement the specific affirmative action standards provided in paragraphs 10a through p of this clause. The goals stated in the solicitation from which this Contract resulted are expressed as percentages of the total hours of employment and training of minority and female utilization that the Contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. Covered construction Contractors-performing contracts in geographical areas where they do not have a Federal or Federally-assisted construction contract shall apply the minority and female goals established for the geographic area where the contract is being performed. The Contractor

is expected to make substantially uniform progress toward its goals in each craft.

- (10) Neither the terms and conditions of any collective bargaining agreement, nor the failure by a union with whom the Contractor has a collective bargaining agreement, to refer either minorities or women shall excuse the Contractor's obligations under this clause, Executive Order 11246, as amended, or the regulations thereunder.
- (11) In order for the nonworking training hours of apprentices and trainees to be counted in meeting the goals, apprentices and trainees must be employed by the Contractor during the training period, and the Contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U. S. Department of Labor.
- (12) The Contractor shall take affirmative action to ensure equal employment opportunity. The evaluation of the Contractor's compliance with this clause shall be based upon its effort to achieve maximum results from its actions. The Contractor shall document these efforts fully and shall implement affirmative action steps at least as extensive as the following:
 - (a) Ensure and maintain a working environment free of harassment, intimidation and coercion at all sites, and in all facilities at which the Contractor's employees are assigned to work. The Contractor, if possible, will assign two or more women to each construction project. The Contractor shall specifically ensure that foremen, superintendents and other on-site supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at these sites or facilities.
 - (b) Establish and maintain a current list of sources for minority and female recruitment. Provide written notification to minority and female recruitment sources and community organizations when the Contractor or its unions have employment opportunities

available, and maintain a record of the organization's responses.

- (c) Maintain a current file of the names, addresses and telephone numbers of each minority and female off-the-street applicant, referrals of minorities or females from unions, recruitment sources, or community organizations and the action taken with respect to each individual. If an individual was sent to the union hiring hall for referral and not referred back to the Contractor by the union or, if referred back, not employed by the Contractor, this shall be documented in the file, along with whatever additional actions the Contractor may have taken.
- (d) Immediately notify the Deputy Assistant Secretary when the union or unions with which the Contractor has a collective bargaining agreement has not referred back to the Contractor a minority or woman sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Contractor's efforts to meet its obligations.
- (e) Develop on-the-job training opportunities and/or participate in training programs for the area which expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the Department of Labor. The Contractor shall provide notice of these programs to the sources compiled under subparagraph 10b of this clause.
- (f) Disseminate the Contractor's EEO policy by-
 - (i) Providing notice of the policy to unions and to training, recruitment and outreach programs, and requesting their cooperation in assisting the Contractor in meeting its EEO obligations;
 - (ii) Including the policy in any policy manual and collective bargaining agreements;

- (iii) Publicizing the policy in the company newspaper, annual report, etc.;
 - (iv) Review the policy with all management personnel at least once a year; and
 - (v) Posting the policy on bulletin boards accessible to all employees at each location where construction work is performed
- (g) Review, at least annually, the contractor's Equal Employment Opportunity policy and affirmative action obligations with all employees having responsibility for hiring, assignment, layoff, termination or other employment decisions. Conduct review of this policy with all onsite supervisory personnel before initiating construction work at a job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed and disposition of the subject matter.
- (h) Disseminate the Contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media. Provide written notification to and discuss the policy with other Contractors and Subcontractors with which the Contractor does or anticipates doing business.
- (i) Direct recruitment efforts, both oral and written, to minority, female and community organizations, to schools with minority and female students and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than one month before the date for the acceptance of applications for apprenticeship or training by any recruitment source, send written notification to organizations such as the above, describing the openings, screening procedures and tests to be used in the selection process.

- (j) Encourage present minority and female employees to recruit minority persons and women. Where reasonable, provide after school, summer and vacation employment to minority and female youth both on the site and in other areas of a Contractor's work force.
 - (k) Validate all tests and other selection requirements required under 41 CFR Part 60-3.
 - (l) Conduct, at least annually, an inventory and evaluation at least of all minority and female personnel for promotional opportunities. Encourage these employees to seek or to prepare for, through appropriate training, etc., opportunities for promotion.
 - (m) Ensure that seniority practices, job classifications, work assignments and other personnel practices, do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the Contractor's obligations under these specifications are being carried out.
 - (n) Ensure that all facilities and company activities are non-segregated except that separate or single-use restrooms and necessary dressing or sleeping areas shall be provided to assure privacy between the sexes.
 - (o) Maintain a record of solicitations for subcontracts from minority and female construction contractors and suppliers, including circulation of solicitations to minority and female contractor associations and other business associations.
 - (p) Conduct a review, at least annually, of all supervisors' adherence to and performance under the Contractor's Equal Employment Opportunity policy and affirmative action obligations.
- (13) The Contractor is encouraged to participate in voluntary associations that may assist in fulfilling one or more of the affirmative action obligations contained

is subparagraphs 10(a) through (p) of this clause. The efforts of a contractor association, joint contractor-union, contractor- community, or similar group of which the Contractor is a member and participant, may be asserted as fulfilling one or more of its obligations under 10(a) through (p) of this clause provided that the Contractor-

- (a) Actively participates in the group;
 - (b) Makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry;
 - (c) Ensures that the concrete benefits of the program are reflected in the Contractor's minority and female workforce participation;
 - (d) Makes a good faith effort to meet its individual goals and timetables;
 - (e) Can provide access to documentation that demonstrates the effectiveness of actions taken on behalf of the Contractor. The obligation to comply is the Contractor's, and failure of such a group to fulfill an obligation shall not be a defense for the Contractor's non-compliance.
- (14) A single goal for minorities and a separate single goal for women shall be established. The Contractor is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, the Contractor may be in violation of Executive Order 11246, as amended, if a particular group is employed in a substantially disparate manner.).
- (15) The Contractor shall not use the goals and timetables or affirmative action standards to discriminate against any person because of race, color, religion, sex, sexual orientation, gender identity, or national origin.
- (16) The Contractor shall not enter into any subcontract with any person or firm debarred from Government contracts under Executive Order 11246, as amended.
- (17) The Contractor shall carry out such sanctions and penalties for violation of this clause and of the Equal Employment Opportunity Clause, including suspension,

termination and cancellation of existing subcontracts as may be imposed or ordered under Executive Order 11246, as amended, and its implementing regulations, by the Office of Federal Contract Compliance Programs. Any failure to carry out such sanctions and penalties shall be in violation of this clause and Executive Order 11246, as amended.

- (18) The Contractor, in fulfilling its obligations under this clause, shall implement specific affirmative action steps, at least as extensive as those standards prescribed in paragraph 10 of this clause, so as to achieve maximum results from its efforts to ensure equal employment opportunity .If the Contractor fails to comply with the requirements of Executive Order 11246 as amended, the implementing regulations or these specifications, the Deputy Assistant Director shall proceed in accordance with 41 CFR 60-4.8.
- (19) The Contractor shall designate a responsible official to-
 - (a) monitor all employment related activity to ensure that the Contractor's Equal Employment policy is being carried out;
 - (b) to submit reports as may be required by the Government and;
 - (c) Keep records that shall at least include for each employee the name, address, telephone numbers, construction trade, union affiliation if any, employee identification number, social security number, race, sex, status (e.g., mechanic, apprentice, trainee, helper or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form; *however*, to the degree that existing records satisfy this requirement, separate records are not required to be maintained.
- (20) Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance or upon the application of requirements for the hiring of local or other area residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).

C. Certification of Nonsegregated Facilities (over \$10,000)

By the submission of this bid, the bidder, offeror, applicant or subcontractor certifies that s/he does not maintain or provide for his/her employees any segregated facility at any of his/her establishments, and that s/he does not permit employees to perform their services at any location, under his/her control, where segregated facilities are maintained. S/he certifies further that s/he will not maintain or provide for employees any segregated facilities at any of his/her establishments, and s/he will not permit employees to perform their services at any location under his/her control where segregated facilities are maintained. The bidder, offeror, applicant or subcontractor agrees that a breach of this certification is a violation of the Equal Employment Opportunity Clause of this Contract. As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, rest rooms and wash rooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas transportation and housing facilities provided for employees which are segregated by explicit directive or are in fact segregated on the basis of race, color, religion, sex, sexual orientation, gender identity or national origin, because of habit, local custom or otherwise. The term does not include separate or single-user restrooms or necessary dressing or sleeping areas provided to assure privacy between the sexes. S/he further agrees that (except where he/she has obtained identical certifications. from proposed Subcontractors for specific time periods) he/she will obtain identical certification from proposed Subcontractors prior to the award of subcontracts exceeding \$10,000 which are not exempt from the provisions of the Equal Opportunity Clause; that he/she will retain such certifications in his/her files; and that he/she will forward the following notice to such proposed Subcontractors (except where proposed Subcontractors have submitted identical certifications for specific time periods).

D. Title VI Clause, Civil Rights Act of 1964

Under Title VI of the Civil Rights Act of 1964, no person shall, on the grounds of race, color or national origin be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.

E. Section 109 Clause, Housing and Community Development Act of 1974

No person in the United States shall on the grounds of race, color national origin or sex be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity funded in whole or in part with funds made available under this title.

F. "Section 3" Compliance in the Provision of Training, Employment and Business Opportunities (Over \$100,000)

1. The work to be performed under this Contract is on a project assisted under a program providing direct Federal financial assistance from the Department of Housing and Urban Development and is subject to the requirements of Section 3 of the Housing and Urban Development Act of 1968, as amended, 12 U.S.C. 1701 u. Section 3 requires that to the greatest extent feasible, opportunities for training and employment be given low and very low income residents of the project area (including public housing residents and persons with disabilities) and contracts for work in connection with the project be awarded to business concerns which are owned by or employee low and very low income residents of the project area.
2. The parties to this Contract will comply with the provisions of said Section 3 and the regulations issued pursuant thereto by the Secretary of Housing and Urban Development set forth in 24 CFR 135, and all applicable rules and orders of the Department issued thereunder prior to the execution of this Contract. The parties to this Contract certify and agree that they are under no contractual or other disability which would prevent them from complying with these requirements.
3. The Contractor will send to each labor organization or representative of workers with which he has a collective bargaining agreement or other contract of understanding, if any, a notice advising the said labor organization or workers' representative of his commitments under this Section 3 clause and shall post copies of the notice in conspicuous places available to employees and applicants for employment or training.
4. The Contractor will include this Section 3 clause in every subcontract for work in connection with the project and will, at the direction of the applicant for or recipient of Federal financial assistance, take appropriate action pursuant to the subcontract upon a finding that the Subcontractor is in violation of regulations issued by the Secretary of Housing and Urban Development, 24 CFR Part 135. The Contractor will not subcontract with any Subcontractor where it has notice or knowledge that the latter has been found in violation of regulations under 24 CFR Part 135 and will not let any subcontract unless the Subcontractor has first provided it with a preliminary statement of ability to comply with the requirements of these regulations.
5. Compliance with the provisions of Section 3, the regulations set forth in 24 CFR Part 135, and all applicable rules and orders of the Department issued hereunder prior to the execution of the Contract, shall be a condition of the Federal financial assistance provided to the project, binding upon the applicant or recipient for such assistance, its successors and assigns. Failure to fulfill these requirements shall subject the applicant or recipient, its contractors and subcontractors, its successors and assigns to those sanctions specified by the grant or loan agreement or contract through which Federal assistance is provided, and to such sanctions as are specified in 24 CFR Part 135.

G. Rehabilitation Act of 1973, Section 503 Handicapped (if \$10,000 or over)

Affirmative Action for Handicapped Workers

1. The Contractor will not discriminate against any employee or applicant for employment because of physical or mental handicap in regard to any position for which the employee or applicant for employment is qualified. The Contractor agrees to take affirmative action to employ, advance in employment and otherwise treat qualified handicapped individuals without discrimination based upon their physical or mental handicap in all employment practices such as the following: employment, upgrading, demotion or transfer, recruitment, advertising, layoff or termination, rates of pay or other forms of compensation, and selection for training including apprenticeship.
2. The Contractor agrees to comply with the rules, regulations and relevant orders of the Secretary of Labor issued pursuant to the Act.
3. In the event of the Contractor's non-compliance with the requirements of this clause, actions for non-compliance may be taken in accordance with the rules, regulations, and relevant orders of the Secretary of Labor issued pursuant to the Act.
4. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment notices in a form to be prescribed by the Director, provided by or through the contracting officer. Such notices shall state the Contractor's obligation under the law to take affirmative action to employ and advance in employment qualified handicapped employees and applicants for employment, and the rights of applicants and employees.
5. The Contractor will notify each labor union or representative of workers with which it has a collective bargaining agreement or other contract understanding, that the Contractor is bound by the terms of Section 503 of the Rehabilitation Act of 1973, and is committed to take affirmative action to employ and advance in employment physical and mentally handicapped individuals.
6. The Contractor will include the provisions of this clause in every subcontract or purchase order of \$10,000 or more unless exempted by rules, regulations or orders of the Secretary issued pursuant to Section 503 of the Act, 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 Director of the Office of Federal Contract Compliance Programs may direct to enforce such provisions, including action for non-compliance.

H. Vietnam Era Veterans' Readjustment Assistance Act of 1974, as amended;
41 CFR Part 60-250 (if \$100,000 or over)

1. The contractor will not discriminate against any employee or applicant for employment because he or she is a special disabled veteran or veteran of the Vietnam era in regard to any position for which the employee or applicant for employment is qualified. The contractor agrees to take affirmative action to employ, advance in employment and otherwise treat qualified individuals without discrimination based on their status as a special disabled veteran or veteran of the Vietnam era in all employment practices, including the following:
 - i. recruitment, advertising, and job application procedures
 - ii. hiring, upgrading, promotion, award of tenure, demotion, transfer, layoff, termination, right of return from layoff and rehiring;
 - iii. rates of pay or any other form of compensation and changes in compensation;
 - iv. job assignments, job classifications, organizational structures, position descriptions, lines of progression, and seniority lists;
 - v. leaves of absence, sick leave, or any other leave;
 - vi. fringe benefits available by virtue of employment, whether or not administered by the contractor
 - vii. selection and financial support for training, including apprenticeship, and on-the-job training under 38 U.S.C 3687, professional meetings, conferences, and other related activities, and selection for leaves of absence to pursue training;
 - viii. activities sponsored by the contractor including social or recreational programs; and
 - ix. any other term, condition, or privilege of employment.
2. The contractor agrees to immediately list all employment openings which exist at the time of the execution of this contract and those which occur during the performance of this contract, including those not generated by this contract and including those occurring at an establishment of the contractor other than the one wherein the contract is being performed, but excluding those of independently operated corporate affiliates, at an appropriate local employment service office of the state employment security agency wherein the opening occurs. Listing employment openings with the U.S. Department of Labor's America's Job Bank shall satisfy the requirement to list jobs with the local employment service office.
3. Listing of employment openings with the local employment service office pursuant to this clause shall be made at least concurrently with the use of any other recruitment source or effort and shall involve the normal

obligations which attach to the placing of a bona fide job order, including the acceptance of referrals of veterans and nonveterans. The listing of employment openings does not require the hiring of any particular job applicants or from any particular group of job applicants, and nothing herein is intended to relieve the contractor from any requirements in Executive orders or regulations regarding nondiscrimination in employment.

4. Whenever the contractor becomes contractually bound to the listing provisions in paragraphs 2 and 3 of this clause, it shall advise the state employment security agency in each state where it has establishments of the name and location of each hiring location in the state, provided that this requirement shall not apply to state and local governmental contractors. As long as the contractor is contractually bound to these provisions and has so advised the state agency, there is no need to advise the state agency of subsequent contracts. The contractor may advise the state agency when it is no longer bound by this contract clause.
5. The provisions of paragraphs 2 and 3 of this clause do not apply to the listing of employment openings which occur and are filled outside of the 50 states, the District of Columbia, the Commonwealth of Puerto Rico, Guam, and the Virgin Islands.
6. As used in this clause:
 - i. All employment openings includes all positions except executive and top management, those positions that will be filled from within the contractor's organization, and positions lasting three days or less. This term includes full-time employment, temporary employment of more than three days' duration, and part-time employment.
 - ii. Executive and top management means any employee:
 - a) Whose primary duty consists of the management of the enterprise in which he or she is employed or of a customarily recognized department or subdivision thereof; and
 - b) who customarily and regularly directs the work of two or more other employees therein; and
 - c) who has the authority to hire or fire other employees or whose suggestions and recommendations as to the hiring or firing and as to the advancement and promotion or any other change of status of other employees will be given particular weight; and
 - d) who customarily and regularly exercises discretionary powers; and

- e) who does not devote more than 20 percent, or, in the case of an employee of a retail or service establishment who does not devote as much as 40 percent, of his or her hours of work in the work week to activities which are not directly and closely related to the performance of the work described in (a) through (d) of this paragraph 6. ii.; Provided, that (e) of this paragraph 6.ii. shall not apply in the case of an employee who is in sole charge of an independent establishment or a physically separated branch establishment, or who owns at least a 20-percent interest in the enterprise in which he or she is employed.
- iii. Positions that will be filled from within the contractor's organization means employment openings for which no consideration will be given to persons outside the contractor's organization (including any affiliates, subsidiaries, and parent companies) and includes any openings which the contractor proposes to fill from regularly established "recall" lists. The exception does not apply to a particular opening once an employer decides to consider applicants outside of his or her own organization.
7. The contractor agrees to comply with the rules, regulations, and relevant orders of the Secretary of Labor issued pursuant to the Act.
 8. In the event of the contractor's noncompliance with the requirements of this clause, actions for noncompliance may be taken in accordance with the rules, regulations, and relevant orders of the Secretary of Labor issued pursuant to the Act.
 9. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices in a form to be prescribed by the Deputy Assistant Secretary for Federal Contract Compliance Programs, provided by or through the contracting officer. Such notices shall state the rights of applicants and employees as well as the contractor's obligation under the law to take affirmative action to employ and advance in employment qualified employees and applicants who are special disabled veterans or veterans of the Vietnam era. The contractor must ensure that applicants or employees who are special disabled veterans are informed of the contents of the notice (e.g., the contractor may have the notice read to a visually disabled individual, or may lower the posted notice so that it might be read by a person in a wheelchair).
 10. The contractor will notify each labor organization or representative of workers with which it has a collective bargaining agreement or other contract understanding, that the contractor is bound by the terms of the Vietnam Era Veterans' Readjustment Assistance Act of 1974, as amended, and is committed to take affirmative action to employ and advance in employment qualified special disabled veterans and veterans of the Vietnam era.

11. The contractor will include the provisions of this clause in every subcontract or purchase order of \$10,000 or more, unless exempted by the rules, regulations, or orders of the Secretary issued pursuant to the Vietnam Era Veterans' Readjustment Assistance Act of 1974, as amended, 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 Deputy Assistant Secretary for Federal Contract Compliance Programs may direct to enforce such provisions, including action for noncompliance.

I. Age Discrimination Act of 1975

During the performance of this Contract, the Contractor agrees as follows: the Contractor agrees not to exclude from participation, deny program benefits, or discriminate on the basis of age.

9. Certification of Compliance with Air and Water Acts (applicable to Federally-assisted construction contracts and related subcontracts exceeding \$100,000)

During the performance of this Contract, the Contractor and all Subcontractors shall comply with the requirements of the Clean Air Act, as amended, 42 USC 1857 et seq., the Federal Water Pollution Control Act, as amended, 33 USC 1251 et seq., and the regulations of the Environmental Protection Agency with respect thereto, at 40 CFR Part 15, as amended.

In addition to the foregoing requirements, all "nonexempt" Contractors and Subcontractors shall furnish to the Owner, the following:

- A. A stipulation by the Contractor or Subcontractors, that any facility to be utilized in the performance of any nonexempt contract or subcontract, is not listed on the List of Violating Facilities issued by the Environmental Protection Agency (EPA) pursuant to 40 CFR 15.20.
- B. Agreement by the Contractor to comply with all the requirements of Section 114 of the Clean Air Act, as amended, (42 USC 1857c-8) and Section 308 of the Federal Water Pollution Control Act, as amended, (33 USC 1318) relating to inspection, monitoring, entry, reports and information, as well as all other requirements specified in said Section 114 and Section 308, and all regulations and guidelines issued thereunder.
- C. A stipulation that as a condition for the award of the Contract, prompt notice will be given of any notification received from the Director, Office of Federal Activities, EPA, indicating that a facility utilized, or to be utilized for the Contract, is under consideration to be listed on the EPA List of Violating Facilities.
- D. Agreement by the Contractor that he will include, or cause to be included, the criteria and requirements in paragraphs A through D of this section in every nonexempt subcontract and requiring that the Contractor will take such

actions as the Government may direct as a means of enforcing such provisions.

10. Special Conditions Pertaining to Hazards, Safety Standards and Accident Prevention

- A. Lead-Based Paint Hazards (applicable to contracts for construction or rehabilitation of residential structures)

The construction or rehabilitation of residential structures is subject to the HUD Lead-Based Paint regulations, 24 CFR Part 35. The Contractor and Subcontractors shall comply with the provisions for the elimination of lead-based paint hazards under sub-part B of said regulations. The Owner will be responsible for the inspections and certifications required under Section 35.14(f) thereof.

- B. Use of Explosives (modify as required)

When the use of explosives is necessary for the prosecution of the work, the Contractor shall observe all local, State and Federal laws in purchasing and handling of explosives. The Contractor shall take all necessary precaution to protect completed work, neighboring property, water lines or other underground structures. Where there is danger to structures or property from blasting, the charges shall be reduced and the material shall be covered with suitable timer, steel or rope mats. The Contractor shall notify all owners of public utility property of intention to use explosives at least eight hours before blasting is done close to such property. Any supervision or direction of use of explosives by the Engineer, does not in any way reduce the responsibility of the Contractor or his Surety for damages that may be caused by such use.

- C. Danger Signals and Safety Devices (modify as required)

The Contractor shall make all necessary precautions to guard against damages to property and injury to persons. He shall put up and maintain in good condition, sufficient red or warning lights at night, suitable barricades and other devices necessary to protect the public. In case the Contractor fails or neglects to take such precautions, the Owner may have such lights and barricades installed and charge the cost of this work to the Contractor. Such action by the Owner does not relieve the Contractor of any liability incurred under these specifications or Contract.

11. Energy Efficiency

The Contractor shall recognize mandatory standards and policies relating to energy efficiency, which are contained in the State Energy Conservation Plan issued in Compliance with the Energy Policy and Conservation Act.

12. Access to Records

The Contractor shall maintain accounts and project records, including personnel, property and financial records, adequate to identify and account for all costs

pertaining to the Contract and such other records as may be deemed necessary by the City to assure proper accounting for all project funds, both CDBG and non-CDBG shares. These records will be made available to the City, the Department of Local Government, Commonwealth of Kentucky Finance & Administration Cabinet, Commonwealth of Kentucky Auditor of Public Audits, Commonwealth of Kentucky Legislative Research Commission, U.S. Department of Housing and Urban Development, the U. S. Department of Labor, and the Comptroller General of the United States, or any of their duly authorized representatives. These parties shall have access to any books, documents, papers and records of the Contractor, which are directly pertinent to the project, for the purpose of making audit, examination, excerpts and transcriptions. All records shall be maintained for five years after project closeout.

13. Wage Rate Determination(s)

(Appropriate wage rates shall be inserted here)

14. Contract Work Hours and Safety Standards Act

All grantees and subgrantee's contracts must contain provisions requiring compliance with sections 103 and 107 of the Contract Work Hours and Safety Standards Act (40 USC 327-330) as supplemented by Department of Labor regulations (29 CFR Part 5) where construction contracts are awarded by grantees or subgrantees in excess of \$2,000, and in excess of \$2,500 for other contracts involving the employment of mechanics and laborers.

CDBG Project Sign

**Temporary Black & White Construction Sign for projects funded by the
Department for Local Government (DLG)**

**Andy Beshear
Governor**



**Matt Sawyers
Commissioner**

**Office of the Governor
Department for Local Government**

**Project Title
Centered, Black Letters**

Project Sponsor: Montgomery County Fiscal Court

Sponsor Address: 44 W. Main St., Mt. Sterling, KY

Architect: MSE of Kentucky, Inc.

Contractor:



**This project is funded by a Community
Development Block Grant administered by the
Department for Local Government and
financed by the U.S. Department of Housing
and Urban Development.**

Equal Opportunity Employer

Sign Dimensions: 1200mm x 2400mm x 19 mm (app. 4' x 8' x 3/4") Plywood Panel (APA Rated A-B grade – Exterior)

Davis-Bacon Wage Rates

"General Decision Number: KY20240032 12/13/2024

Superseded General Decision Number: KY20230032

State: Kentucky

Construction Type: Building

County: Montgomery County in Kentucky.

BUILDING CONSTRUCTION PROJECTS (does not include single family homes or 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).

<p>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:</p>	<ul style="list-style-type: none"> . Executive Order 14026 generally applies to the contract. . The contractor must pay all covered workers at least \$17.20 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 2024.
<p>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:</p>	<ul style="list-style-type: none"> . Executive Order 13658 generally applies to the contract. . The contractor must pay all covered workers at least \$12.90 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 2024.

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	01/05/2024
1	02/09/2024

2	02/16/2024
3	05/31/2024
4	06/14/2024
5	07/05/2024
6	09/06/2024
7	09/20/2024
8	11/15/2024
9	12/13/2024

ASBE0051-001 03/01/2024

	Rates	Fringes
ASBESTOS WORKER/HEAT & FROST INSULATOR.....	\$ 29.31	19.28

BOIL0040-001 01/01/2021

	Rates	Fringes
BOILERMAKER.....	\$ 37.60	27.49

CARP1076-001 04/01/2024

	Rates	Fringes
MILLWRIGHT.....	\$ 34.40	27.12

CARP1650-003 06/01/2024

	Rates	Fringes
CARPENTER (Acoustical Ceiling Installation, Drywall Hanging, and Metal Stud Installation Only).....	\$ 32.25	18.09

ENGI0181-084 07/01/2024

	Rates	Fringes
POWER EQUIPMENT OPERATOR (Oiler).....	\$ 32.45	19.10

ENGI0181-085 07/01/2024

	Rates	Fringes
POWER EQUIPMENT OPERATOR (Crane).....	\$ 37.83	19.10

CRANES WITH BOOM 150 FEET & OVER, INCLUDING JIB, SHALL RECEIVE \$.75 ABOVE THE WAGE RATE.
 ALL CRANES WITH PILING LEADS WILL RECEIVE \$.50 ABOVE THE WAGE, REGARDLESS OF BOOM LENGTH.

ENGI0181-086 07/01/2024

	Rates	Fringes
POWER EQUIPMENT OPERATOR (Forklift).....	\$ 37.83	19.10

IRON0070-004 06/01/2024

	Rates	Fringes
IRONWORKER, STRUCTURAL.....	\$ 34.59	25.00

 IRON0782-015 08/01/2024

	Rates	Fringes
IRONWORKER, REINFORCING.....	\$ 34.01	24.83

 LAB00189-025 06/01/2024

	Rates	Fringes
LABORER (Carpenter Tender, Grade Checker).....	\$ 27.23	16.48

 LAB00189-027 06/01/2024

	Rates	Fringes
LABORER (Pipelayer, Tamper - Hand Held).....	\$ 27.63	16.48

 LAB00189-029 06/01/2024

	Rates	Fringes
LABORER (Grouting).....	\$ 27.83	16.48

 * PAIN1072-006 12/01/2024

	Rates	Fringes
PAINTER (Drywall Finishing/Taping and Spray Only).....	\$ 34.29	23.95

 PLUM0452-021 11/01/2024

	Rates	Fringes
PIPEFITTER (Includes HVAC Pipe and Unit Installation).....	\$ 41.00	21.66

 SFKY0669-002 04/01/2024

	Rates	Fringes
SPRINKLER FITTER.....	\$ 41.33	25.49

 SHEE0110-006 06/01/2021

	Rates	Fringes
SHEET METAL WORKER (Excludes HVAC Duct Installation).....	\$ 33.74	23.31

 * UAVG-KY-0010 01/01/2024

	Rates	Fringes
IRONWORKER, ORNAMENTAL.....	\$ 34.04	25.74

* UAVG-KY-0012 01/01/2023

	Rates	Fringes
LABORER: Power Tool Operator....	\$ 24.38	16.73

* UAVG-KY-0013 01/01/2023

	Rates	Fringes
OPERATOR: Bulldozer.....	\$ 37.19	19.55

* SUKY2015-015 06/02/2015

	Rates	Fringes
BRICKLAYER.....	\$ 23.53	11.62
CARPENTER (Form Work Only).....	\$ 19.97	9.54
CARPENTER, Excludes Acoustical Ceiling Installation, Drywall Hanging, Form Work, and Metal Stud Installation.....	\$ 22.53	10.25
CEMENT MASON/CONCRETE FINISHER...	\$ 20.92	10.90
ELECTRICIAN.....	\$ 29.53	12.94
LABORER: Common or General.....	\$ 21.65	0.00
LABORER: Mason Tender - Brick...	\$ 22.36	10.76
LABORER: Mason Tender - Cement/Concrete.....	\$ 23.17	10.05
OPERATOR: Backhoe/Excavator/Trackhoe.....	\$ 24.55	10.61
OPERATOR: Bobcat/Skid Steer/Skid Loader.....	\$ 24.64	13.00
OPERATOR: Grader/Blade.....	\$ 24.33	13.00
PAINTER (Brush and Roller).....	\$ 21.28	11.14
PLUMBER.....	\$ 30.36	13.62
ROOFER.....	\$ 22.31	7.41
SHEET METAL WORKER (HVAC Duct Installation Only).....	\$ 27.74	13.20
TILE FINISHER.....	\$ 17.67	7.45
TILE SETTER.....	\$ 25.77	6.10
TRUCK DRIVER: Dump Truck.....	\$ 17.07 **	6.25

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 (\$17.20) or 13658 (\$12.90). 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"

SECTION 00800 - SUPPLEMENTAL CONDITIONS

PART 1 - GENERAL

1.01 DESCRIPTION

- A. The "General Conditions of the Contract for Construction," AIA Document A201, 2017 is a part of this Contract.

1.02 SUPPLEMENTS

- A. The following supplements modify, change, delete or add to the "General Conditions of the Contract for Construction." Where any Article, Paragraph, Sub-Paragraph or Clause thereof is modified or deleted by these supplements, the unaltered provisions of that Article, Paragraph, SubParagraph or Clause shall remain in effect.

PART 2 - ARTICLE 2: OWNER

2.01 2.2 INFORMATION AND SERVICES REQUIRED OF THE OWNER

- 2.2.5 The Contractor can download pdf's from mselex.com.
MSE will not furnish the Contractor any sets of drawings or project manuals for their use during construction.

PART 3 - ARTICLE 3: CONTRACTOR

3.01 REVIEW OF CONTRACT SUB-PARAGRAPHS

- A. Add the following sub-paragraphs:
 - 322 The Contractor shall not perform any work at any time requested by persons other than the Architect. Any interpretations to the documents, or request for minor changes in the work will be by the Architect.
 - 323 Where there is a conflict in or between the Drawings and Specifications, the Contractor shall be deemed to have estimated on the more expensive way of doing the work and/or the larger quantity required. Only changes in interpretations covered by Addenda or in writing from the Architect will be permitted during construction of the work.

3.02 WARRANTY

- A. Add the following sub-paragraph:
 - 3.5.2 General Contractor shall guarantee the work for a period of one year from the date of acceptance by the Owner, except where a longer guarantee is specified and will thus control and leave the work in perfect order at completion. Neither the final certificate of payment any provision in the Contract Documents shall relieve the Contractor of responsibility within the extent and period provided by said guarantee or by law whichever is longer. Upon written notice, he shall remedy any damage to other work resulting therefrom, including necessary labor for removing and replacing.

PART 4 - ARTICLE 8: TIME OF COMPLETION AND LIQUIDATED DAMAGES

See the Bid Schedule, Section 00310, for the time allotted for this contract. The time allowed for completion shall begin at midnight, local time, on the date which the Owner shall instruct the Contractor, in writing, to start work, but not later than 7 days after Notice to Proceed.

The Contract completion time stipulated above includes an allowance for an average number of inclement weather days as follows:

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Precip.	7	7	9	8	8	8	8	7	6	5	6	7
Freeze	10	6	1								1	5

- When number of days (including Saturdays, Sundays and Holidays) of precipitation in excess of 0.1" per day or maximum daily temperatures of 32 F exceed those shown above in any month, the Contractor shall be entitled to an equal number of additional days for Contract Completion.

This provision for inclement weather shall only apply to that time while foundations are being constructed and prior to the building being "under-roof".

It is understood that time is the essence of this contract and that the Owner will sustain damages, monetary and otherwise, in the event of delay in completion of the work hereby contracted.

Therefore, if the said Contractor shall neglect, fail or refuse to complete the work within the time herein specified, or any proper extension thereof granted by the Owner, then the Contractor does hereby agree, as part consideration for the awarding of this contract, to pay the Owner the amount specified in the contract, not as a penalty, but as liquidated damages for such breach of contract as hereinafter set forth, for each and every calendar day that the Contractor shall be in default after the time stipulated in the contract for completing the work.

The said amount is fixed and agreed upon by and between the Contractor and the Owner because of the extreme difficulty in fixing and ascertaining the actual damages the Owner would in such event sustain, and said amount is agreed to be the amount of damages which the Owner would sustain and said amount shall be retained from time to time by the Owner from current periodical estimates.

PART 5 - ARTICLE 9: PAYMENTS AND COMPLETION

5.01 APPLICATIONS FOR PAYMENT

A. Add the following sub-paragraph:

- 9.3.1.1 Monthly payments will be based on one hundred (100%) percent of the value of the work done and materials delivered and suitably stored until work under this contract is fifty (50%) completed. If at that time, progress of the work has been satisfactory, there will be no additional retainage, provided the Contractor submits Consent of Surety for each application, authorizing any remaining partial payments to be paid in full. The form of Application for Payment shall be AIA Document G702, Application for Certificate for Payment, supported by AIA Document G702A Continuation Sheet.

PART 6 - ARTICLE 11: INSURANCE AND BONDS

6.01 11.1 CONTRACTOR'S LIABILITY INSURANCE

A. Change as follows:

General Contractor shall take out and maintain insurance of such types and in such amounts as are necessary to cover his responsibilities and liabilities on all projects, and shall require all his subcontractors to carry similar insurance.

1. The Owner will accept in lieu of all subcontractors carrying similar insurance an "Owner's and Contractor's Protective Liability Policy" paid for by the Contractor and written in the name of the Owner for the amount specified hereinafter including all the special coverages. Said policy must protect the Owner for all claims for bodily injury and/or property damage arising out of operations for the named insured by said Contractor, or any subcontractor of said Contractor.
- B.** No Contractor shall commence work under this contract until he has obtained all insurance required under this section and such insurance has been approved by the Owner, nor shall any Contractor allow any subcontractor to commence work on his subcontract until the same insurance has been obtained by the subcontractor and approved by the Owner. Each and every contractor and subcontractor shall maintain all insurance required under paragraphs (1) and (2) of this section for not less than one year after completion of this contract.
- C.** Each Contractor shall file with the Owner and Architect, a Certificate of Insurance. Any certificate submitted and found to be altered or incomplete will be returned as unsatisfactory.
- D.** If requested by the Owner, Contractor shall furnish the Owner with true copies of each policy required of him or his subcontractors. Said policies will not be canceled or materially altered, except after fifteen (15) days advance written notice to the Owner and Architect, mailed to the addresses indicated herein.
- E.** Insurance under this section, as a minimum, shall include the following coverages:
1. Workman's Compensation and Employer's Liability Insurance: Workman's Compensation and Occupational Disease Insurance of statutory limits as provided by the state in which his contract is performed and Employers' Liability Insurance at a limit of not less than \$100,000.00 for all damages arising from each accident or occupational disease.
 2. Comprehensive General Liability Insurance covering:
 - a. Operations- Premises Liability:
Including, but not limited to, Bodily Injury, including death at any time resulting therefrom, to any person or Property Damage resulting from execution of the work provided for in this contract, or due to or arising in any manner from any act of omission or negligence of the Contractor and any Subcontractor, their respective employees or agents.

b. Contractor's Protective Liability:
Including, but not limited to, Bodily Injury, including death at any time, resulting therefrom to any person, or Property Damage arising from acts or omissions of any subcontractor, their employees or agents.

c. Products-- Completed Operation Liability:
Including, but not limited to, Bodily Injury, including death at any time, resulting therefrom to any person, or Property Damage because of goods, products, materials or equipment used or installed under this contract, or because of completed operation, which may become evident within one year after acceptance of the building, including damage to the building or its contents.

d. Contractual Liability:

Each and every policy for liability insurance, carried by each Contractor and Subcontractor, as required by this section shall specifically include Contractual Liability coverage with respect to Section F of this Division.

e. Special Requirements:

The insurance required under Paragraph (2) of this Section shall specifically include the following special hazards:

Property Damage caused by conditions otherwise subject to exclusions "x, c, u," Explosion, Collapse or Underground Damage.

Broad Form Property Damage endorsement, which has reference to property in the "care, custody, or control" of the insured.

"Occurrence" Bodily Injury coverage in lieu of "caused by accident."

"Occurrence" Property Damage coverage in lieu of "caused by accident."

f. Limits of Liability:

The insurance under Paragraph (2) of this Section shall be written in the following limits of liability, as a minimum:

<u>Bodily injury</u>	<u>Property Damage</u>
\$1,000,000 Each Person	\$1,000,000 Each Occurrence
\$3,000,000 Each Occurrence	\$2,000,000 General Aggregate
\$500,000 Aggregate Products	\$1,000,000 Aggregate Protective
	\$1,000,000 Aggregate Contractual

3. Comprehensive Automobile Liability covering:
 - a. All owned, hired, or non-owned vehicles including the loading or unloading thereof.
 - b. Special Requirements: The insurance required under paragraph (3) of this section shall specifically include the following special hazards:

"Occurrence" Bodily Injury in lieu of "caused by accident."

"Occurrence" Property Damage in lieu of "caused by accident."

The insurance under Paragraph (3) of this section shall be written in the following limits of liability as a minimum:

<u>Automobile Bodily Injury</u>	<u>Automobile Property Damage</u>
\$1,000,000 Each Person	\$1,000,000 Each Occurrence
\$3,000,000 Each Occurrence	
\$5,000,000 Excess/Umbrella Liability	

F. Hold Harmless Agreement:

1. The Contractor shall indemnify and hold harmless the Owner and the Architect and their agents and employees from and against all claims, damages, losses and expenses including attorney's fees arising out of or resulting from the performance of the work, provided that any such claim, damage, loss or expense (a) is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the work itself) including the loss of use resulting therefrom and (b) is caused in whole or part by any negligent act or omission of the Contractor, any subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, regardless of whether or not it is caused in part by a party indemnified hereunder.
2. In any and all claims against the Owner or the Architect or any of their agents or employees by any employee of the Contractor, Subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, the indemnification obligation under this Hold Harmless agreement shall not be limited in any way by any limitation on the amount payable by or for the Contractor or any Subcontractor under workman's compensation acts, disability benefit acts or other employee benefit acts.
3. The obligations of the Contractor under this Hold Harmless Agreement shall not extend to any claim, damage, loss or expense arising out of professional services performed by the Architect, his agents, or employees, including (a) the preparation of maps, plans, opinions, reports, surveys, designs or specifications, and (b) supervisory, inspection or engineering services.

PART 7 - ARTICLE 11.3: PROPERTY INSURANCE (Purchased by the General Contractor)

7.01 A. Change the first sentence of paragraph 11.3.1 to read: The contractor shall purchase....

B. Change the second sentence of Paragraph 11.3.1 to read:

11.3.1 "This insurance shall include the interests of the Owner, the Contractor, the Subcontractor and Sub-Subcontractors in the work and shall insure against the perils of fire, extended coverage, vandalism, malicious mischief and theft."

C. Add the following subparagraph:

"11.3.1.1 If by the terms of this insurance any mandatory deductibles are required, or if the Owner should elect to increase the mandatory deductible amounts or purchase this insurance with voluntary deductible amounts, the Owner shall be responsible for payment of the amount of the deductible in the event of a paid claim."

11.3.6 Revise a portion on the first sentence in Subparagraph to read as follows: "...and

(2) the Architect, his consultants, and separation contractors, if any..."

D. Add the following Article to the General Conditions of the Contract for Construction:

PART 8 - ARTICLE 15: EQUAL OPPORTUNITY

8.01 15.1 Employment Policies

15.1.1 The Contractor and all Subcontractors shall not discriminate against any employee or applicant for employment because of race, religion, color, sex, national origin or age. The Contractor shall take affirmative action to insure that applicants are employed, and that employees are treated during employment without regard to their race, religion, color, sex, national origin or age. Such action shall include, but not be limited to, the following: employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates or 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 setting forth the policies of non-discrimination.

15.1.2 The Contractor and all Subcontractors shall, in all solicitations or advertisements for employees placed by them or on their behalf, state that all qualified applicants will receive consideration for employment without regard to race, religion, color, sect, national origin or age.

PART 9 - ARTICLE 16: CHARACTER OF WORKERS, METHODS, AND EQUIPMENT

- 161 The Contractor shall, at all times, employ sufficient and equipment for prosecuting the work to full completion in the manner and time required by the contract, drawings, and specifications. Suitable number of foremen and supervisors shall be available on the job to insure proper prosecution and coordination of the work. All workers shall have sufficient skill and experience to perform properly the work assigned to them. Workers engaged in special work or skilled work shall have sufficient experience in such work and in the operation of the equipment required to perform the work satisfactorily.
- 162 Any person employed by the Contractor or by any subcontractor who, in the opinion of the Owner and Architect, does not perform his work in a proper and skillful manner or is intemperate or disorderly shall, at the written request of the Architect, be removed forthwith by the Contractor or Subcontractor employing such person, and shall not be employed again in any portion of the work.
- 163 Should the Contractor fail to remove such person or persons or fail to furnish suitable and sufficient personnel for the proper prosecution of the work, the Architect may suspend the work by written notice until compliance with such orders.
- 164 After the beginning of work on the site, the Contractor may not remove his Superintendent from the project without the prior written approval of the Owner.

END OF SECTION

Section 00815 - Supplemental General Conditions
Part Two

- 1) General Contractors and Sub-contractors are hereby notified that they are encouraged, to the greatest extent practicable, to purchase American-made equipment and products with funding provided under this Award.

End of Section

Division I – General Requirements

SECTION 01010 - SUMMARY OF WORK

PART 1 - GENERAL

1.01 SUMMARY OF WORK

- A. Work covers construction of the new EMS Facility located on property address: 749 Clearfield Dr., Morehead, KY 40351.
- B. Existing structures and trees on site will be removed by the Owner.
- C. Related requirements specified elsewhere:
 - 1. Submittals- Section 01300
 - 2. Temporary Facilities- Section 01500
 - 3. Project Closeout - Section 01700
- C. Contractor's Duties:
 - 1. Except as specifically noted, provide and pay for:
 - a. Labor, materials, tools, and equipment.
 - b. Permits.
 - c. Fees.
 - d. Licenses.
 - e. Taxes.
 - 2. Give required notices.
 - 3. Comply with codes, ordinances, rules, regulations, orders, and other legal requirements of public authorities which bear on performance of work.
 - 4. Promptly submit written notice to Architect of observed variance of Contract Documents from legal requirements.
 - 5. Contractor shall verify all grades, lines, levels, and dimensions indicated on the drawings and shall report any inconsistencies before commencing work.
 - 6. Each Sub Contractor shall be responsible for the layout for their specific phase of work.

1.02 CONTRACT (OWNER AND GENERAL CONTRACTOR)

- A. Construction work shall be under a single lump sum contract, which shall include all general construction, steel, concrete, mechanical, electrical, plumbing and site work, etc.

1.03 CONTRACTORS' USE OF PREMISES

A. Confine operations at site to areas permitted by:

General Contractor can store material in the existing building and use existing utilities.

1. Law.
2. Ordinances.
3. Permits.
4. Contract Documents.
5. Owner.

B. Do not unreasonably encumber site with materials or equipment.

C. Do not load structure with weight that will endanger structure.

D. Assume full responsibility for protection and safekeeping of products stored on site.

E. Move any stored products which interfere with operations of the Owner.

END OF SECTION

**SECTION 01027 - APPLICATIONS FOR PAYMENT
REQUIREMENTS OF CONTRACTOR**

PART 1 - GENERAL

1.01 SECTION INCLUDES:

- A. Procedures of Contractor for preparation and submittal of applications for payment.

1.02 RELATED SECTIONS

- A. Document 00500 - Agreement: Contract Sum amounts of progress payments and retainages.
- B. Section 00800 - Supplementary Conditions: Progress payments and final payment.
- C. Section 01028 - Modification Requirements: Procedures for changes to the Work.
- D. Section 01300 - Submittals: Submittal procedures.
- E. Section 01700 - Contract Closeout - Final Payment

1.03 FORMAT

- A. For each item, provide a column for listing each of the following:
 - 1. Item Number.
 - 2. Description of Work.
 - 3. Scheduled Values.
 - 4. Previous Applications.
 - 5. Work in Place and Stored Materials under this Application.
 - 6. Authorized Change Orders.
 - 7. Total Completed and Stored to Date of Application.
 - 8. Percentage of Completion.
 - 9. Balance to Finish.
 - 10. Retainage.

1.04 PREPARATION OF APPLICATIONS

- A. Present required information in typewritten form on specified AIA Documents.
- B. Execute certification by signature of authorized officer.
- C. Use data from approved Schedule of Values. Provide dollar value in each column for each line item for portion of work performed and for stored Products.

- D. List each authorized Change Order as an extension on AIA G703 Continuation Sheet, listing Change Order number and dollar amount as for an original item of Work.
- E. Prepare Application for Final Payment as specified in Section 01700.
- F. Submit partial release of liens waiver for all work completed to date with each payment application.
- G. Submit up-to-date (revised) construction schedule.

1.05 SUBMITTAL PROCEDURES

- A. Submit three copies of each Application for Payment.
- B. Submit an updated construction schedule with each Application for Payment.
- C. Payment Period: Submit at intervals stipulated in the Agreement.
- D. Submit with transmittal letter as specified for Submittals in Section 01300.

1.06 DETAILED COST BREAKDOWN

- A. Upon award of contract, Contractor will have seven working days to generate a finalized cost breakdown of the project.

1.07 SUBSTANTIATING DATA

- A. When Architect/Engineer requires substantiating information, Contractor shall submit data justifying dollar amounts in question.
- B. Provide one copy of data with cover letter for each copy of submittal. Show application number and date, and line item by number and description.

PART 2 - PRODUCTS

Not Applicable.

PART 3 - EXECUTION

Not Applicable.

END OF SECTION

**SECTION 01028 - MODIFICATION REQUIREMENTS
OF CONTRACTOR**

PART 1 - GENERAL

1.01 SECTION INCLUDES:

- A. Submittals.
- B. Documentation of change in Contract Sum and Contract Time.
- C. Change procedures.
- D. Construction Change Directive.
- E. Stipulated Sum change order.
- F. Execution of change orders.
- G. Correlation of Contractor submittals.

1.02 SUBMITTALS

- A. Submit name of the individual authorized to receive change documents, and be responsible for informing others in Contractor's employ or Subcontractors of changes to the Work.
- B. Change Order Forms: AIA G701 Change Order.

1.03 DOCUMENTATION OF CHANGE IN CONTRACT SUM AND CONTRACT TIME

- A. Maintain detailed records of work performed. Provide full information required for evaluation of proposed changes, and to substantiate costs of changes in the Work.
- B. Document each quotation for a change in cost or time with sufficient data to allow evaluation of the quotation.
- C. Provide additional data to support computations:
 - 1. Quantities of products, labor, and equipment.
 - 2. Taxes, insurance, and bonds.
 - 3. Overhead and profit.
 - 4. Justification for any change in Contract Time.
 - 5. Credit for deletions from Contract, similarly documented.
- D. Support each claim for additional costs, and for work performed, with additional information:
 - 1. Origin and date of claim.
 - 2. Dates and times work was performed, and by whom.
 - 3. Time records and wage rates paid.
 - 4. Invoices and receipts for products, equipment, and subcontracts, similarly documented.

1.04 CHANGE PROCEDURES

- A. The Architect/Engineer will advise of minor changes in the Work not involving an adjustment to Contract Sum/Price or Contract Time as authorized by AIA A201, 2007 Edition, Paragraph 7.4 by issuing supplemental instructions on AIA Form G710.
- B. The Architect/Engineer may issue a Proposal Request which includes a detailed description of a proposed change with supplementary or revised Drawings and specifications, a change in Contract Time for executing the change. Contractor will prepare and submit an estimate within seven (7) days.

1.05 CONSTRUCTION CHANGE DIRECTIVE

- A. Architect/Engineer may issue a document, signed by the Owner, instructing the Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.
- B. The document will describe changes in the Work, and will designate method of determining any change in Contract Sum or Contract Time.
- C. Contractor shall include in his costs any and all costs associated with contract documents modification required by the Architect/Engineer as a part of modifications.
- D. Promptly execute the change in Work.

1.06 STIPULATED SUM CHANGE ORDER

- A. Based on Proposal Request and Contractor's fixed price quotation.

1.07 CHANGE ORDER

- A. Submit itemized account and supporting data after completion of change, within time limits indicated in the Conditions of the Contract.
- B. Architect/Engineer will determine the change allowable in Contract Sum and Contract Time as provided in the Contract Documents pending Owner approval.
- C. Maintain detailed records of work performed.
- D. Provide full information required for evaluation of proposed changes, and to substantiate costs for changes in the Work.

1.08 EXECUTION OF CHANGE ORDERS

- A. Execution of Change Orders: Architect/Engineer will issue Change Orders for signatures of parties as provided in the Conditions of the Contract.

1.09 CORRELATION OF CONTRACTOR SUBMITTALS

- A. Promptly revise Schedule of Values and Application for Payment forms to record each authorized Change Order as a separate line item and adjust the Contract Sum.
- B. Promptly revise progress schedules to reflect any change in Contract Time, revise sub-schedules to adjust times for other items of work affected by the change, and resubmit.
- C. Promptly enter changes in Project Record Documents.

PART 2 - PRODUCTS

Not Used.

PART 3 - EXECUTION

Not Used.

END OF SECTION

SECTION 01041 - PROJECT COORDINATION

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Project coordination.
- B. Construction mobilization.
- C. Schedules.
- D. Submittals.
- E. Coordination drawings.
- F. Closeout procedures.

1.02 RELATED SECTIONS

- A. Section 00800 - Supplementary Conditions
- B. Section 01011 - Summary of Project: Work sequence.
- C. Section 01700 - Contract Closeout: Contract Closeout Procedures.

1.03 CONSTRUCTION MOBILIZATION

- A. Comply with procedures for intra-project communications; submittals, reports and records, schedules, coordination drawings, and recommendations; and resolution of ambiguities and conflicts.
- B. Comply with instructions for use of temporary utilities and construction facilities.
- C. Coordinate field engineering and layout work.

1.04 SCHEDULES

- A. Submit preliminary progress schedule in accordance with Section 01310.
- B. After review, revise and resubmit schedule to comply with revised Project schedule. Submit revised or up-to-date schedule with each application for payment.
- C. During progress of work revise and resubmit as directed.

1.05 SUBMITTALS

- A. Provide submittals for review and transmittal to Architect/Engineer.
- B. Submit applications for payment on AIA G702 forms for review, and for transmittal to Architect/Engineer.
- C. Submit requests for interpretation of Contract Documents, and obtain instructions through the Architect/Engineer.
- D. Process requests for substitutions, and change orders.
- E. Deliver closeout submittals for review and preliminary inspection reports, for transmittal to Architect/Engineer.

1.06 COORDINATION DRAWINGS

- A. Provide information required by Architect/Engineer for preparation of coordination drawings.
- B. Review drawings prior to submission to Architect/Engineer.

1.07 CLOSEOUT PROCEDURES

- A. Notify Architect/Engineer when Work is considered ready for Substantial Completion.
- B. Comply with Architect/Engineer's instructions to correct items of work listed in executed Certificates of Substantial Completion and for access to Owner occupied areas.
- C. Notify Architect/Engineer when Work is considered finally complete.
- D. Comply with instructions for completion of items of Work determined by Architect/Engineer's final inspection.

PART 2 - PRODUCTS

Not Used.

PART 3 - EXECUTION

Not Used.

END OF SECTION

**SECTION 01045 - CUTTING AND PATCHING
REQUIREMENTS OF CONTRACTOR**

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Requirements and limitations for cutting and patching of Work, including:
 - 1. Cutting, fitting, or patching that may be required to complete the work or make its several parts fit together properly.
 - 2. Uncovering work to provide for installation of ill-timed work.
 - 3. Removing and replacing defective work.
 - 4. Removing and replacing work not conforming to requirements of the Contract Documents.
 - 5. General Contractor shall be responsible for cutting and patching of construction as required to facilitate work, including work by his mechanical and electrical subcontractors. He shall assign proper trades normally associated with the materials being cut and patched to perform work.

1.02 RELATED SECTIONS

- A. Section 01010 - Summary of Work.
- B. Section 01300 - Submittals.
- C. Section 01620 - Product Delivery, Storage and Handling.
- D. Individual Product Specification Sections:
 - 1. Cutting and patching incidental to work of the section.
 - 2. Advance notification to other sections of openings required in work of those sections.

1.03 SUBMITTALS

- A. Submit written request in advance of cutting or alteration which affects:
 - 1. Structural integrity of any element of Project.
 - 2. Integrity of weather exposed or moisture resistant element.
 - 3. Efficiency, maintenance, or safety of any operational element.
 - 4. Visual qualities of sight exposed elements.
 - 5. Work of Owner or separate contractor.

B. Include in request:

1. Identification of Project.
2. Location and description of affected Work.
3. Necessity for cutting or alteration.
4. Description of proposed Work and Products to be us.
5. Alternatives to cutting and patching.
6. Effect on work of Owner or separate contractor.
7. Written permission of affected separate contractor.
8. Date and time work will be executed.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Primary Products: Those required for original installation.
- B. Product Substitution: For any proposed change in materials, submit request for substitution.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Examine existing conditions prior to commencing Work, including elements subject to damage or movement during cutting and patching.
- B. After uncovering existing Work, assess conditions affecting performance of work.
- C. Beginning of cutting or patching means acceptance of existing conditions.

3.02 PREPARATION

- A. Provide temporary supports to ensure structural integrity of the Work. Provide devices and methods to protect other portions of Project from damage.
- B. Provide protection from elements for areas which may be exposed by uncovering work.
- C. Maintain excavations free of water.

3.03 CUTTING

- A. Execute cutting and fitting including excavation and fill to complete the Work.
- B. Uncover work to install improperly sequenced work.
- C. Remove and replace defective or non-conforming work.
- D. Provide openings in the Work for penetration of mechanical and electrical work.
- E. Employ skilled and experienced installer to perform cutting for weather exposed and moisture resistant elements, and sight exposed surfaces.
- F. Cut rigid materials using masonry saw or core drill. Pneumatic tools not allowed without prior approval.

3.04 PATCHING

- A. Execute patching to complement adjacent Work.
- B. Fit Products together to integrate with other Work.
- C. Execute work by methods to avoid damage to other Work, and which will provide appropriate surfaces to receive patching and finishing.
- D. Employ original installer to perform patching for weather exposed and moisture resistant elements, and sight-exposed surfaces.
- E. Restore work with new products in accordance with requirements of Contract Documents.
- F. Fit work air tight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.
- G. At penetrations of fire rated walls, partitions, ceiling, or floor construction, completely seal voids with fire resistant material to full thickness of the penetrated element.
- H. Refinish surfaces to match adjacent finish. For continuous surfaces, refinish to nearest intersection or natural break. For an assembly, refinish entire unit. When possible, do not cut-and-patch work which is exposed in occupied spaces of building, in a manner resulting in reductions of visual qualities or resulting substantial evidence of cut-and-patch work, both as judged solely by Architect. Remove and replace work judged by Architect to be cut-and-patched in a visually unsatisfactory or otherwise objectionable manner.

END OF SECTION

SECTION 012300 - ALTERNATES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for alternates.

1.3 DEFINITIONS

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

1.4 PROCEDURES

- A. Coordination: Revise or adjust affected adjacent work as necessary to completely integrate work of the alternate into Project.
 - 1. Include as part of each alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether or not indicated as part of alternate.
- B. Notification: Immediately following award of the Contract, notify each party involved, in writing, of the status of each alternate. Indicate if alternates have been accepted, rejected, or deferred for later consideration. Include a complete description of negotiated revisions to alternates.
- C. Execute accepted alternates under the same conditions as other work of the Contract.

- D. Schedule: A schedule of alternates is included at the end of this Section. Specification Sections referenced in schedule contain requirements for materials necessary to achieve the work described under each alternate.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 SCHEDULE OF ALTERNATES

- A. Deductive Alternate No. 1: Delete Landscaping Plan Labor & Materials
 - 1. Base Bid: Include Landscaping Plan Labor & Materials.
 - 2. Deductive Alternate: Delete Landscaping Plan Labor & Materials.
- B. Deductive Alternate No. 2: Delete Structural Canopy with Standing Seam metal roof Labor & Materials and provide extruded aluminum canopy system.
 - 1. Base Bid: Install Structural Canopy with Standing Seam metal roof (exclude extruded aluminum canopy).
 - 2. Deductive Alternate: Delete Structural columns A3 & A5, delete Structural details for canopy K & G /S-3, and H, E & G / S-4 in reference to Structural Canopy and standing seam roofing Labor & Material.
- C. Deductive Alternate No. 3: Delete flagpole system and base
 - 1. Base Bid: Install concrete base and flagpole system.
 - 2. Deductive Alternate: Delete concrete base, electrical connection and flagpole system Labor & Material.
- D. Deductive Alternate No. 4: Delete Exterior Building Naming Sign.
 - 1. Base Bid: Install Exterior Building naming sign.
 - 2. Deductive Alternate: Delete Exterior Building Naming Sign Labor & Material.

END OF SECTION 01230

SECTION 01300 - SUBMITTALS

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Submittal procedures.
- B. Shop Drawings.
- C. Test reports.
- D. Certificates.
- E. Erection drawings.

1.02 REFERENCES

- A. AGC (Associated General Contractors of America) publication "The Use of CPM in Construction - A Manual for General Contractors and the Construction Industry".

1.03 SUBMITTAL PROCEDURES FOR SHOP DRAWINGS

- A. All shop drawings must be reviewed by the General Contractor before submitting them to the Architect.
- B. Transmit each submittal with accepted form, containing the following:
 - 1. Date
 - 2. Project title
 - 3. Contractor's name and address
 - 4. Notification of any deviations from the contract documents.
 - 5. Identify project as "Powell County Senior Citizens Center"
 - 6. Other pertinent data as required.
- C. Identify Project, Contractor, Subcontractor, Manufacturer or supplier; pertinent drawing and detail number, and specification section number, as appropriate.
 - 1. Provide identification of product or material size, type, finish and color as appropriate.
 - 2. Field dimensions, clearly identified as such.
 - 3. All working and erection dimensions, views, as required to indicate fully all construction and fabrication methods, profiles and materials.
- D. On all shop drawings 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.

1.04 CERTIFICATES

- A. When specified in individual specifications sections, submit certification by the manufacturer, installation/application/subcontractor, or the Contractor to Architect/Engineer, in quantities specified for Product Data.
- B. Indicate material or Product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.
- C. Certificates may be recent or previous test results on material or Product, but must be acceptable to Architect/Engineer.

PART 2 - PRODUCTS

Not used.

PART 3 - EXECUTION

Not used.

END OF SECTION

SECTION 01310 - CONSTRUCTION PROGRESS SCHEDULES

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Format.
- B. Content.
- C. Revisions to schedules.
- D. Submittals.

1.02 RELATED SECTIONS

- A. Section 01011 - Summary of Work.
- B. Section 01027 - Applications for Payment: Application for payment.
- C. Section 01300 - Submittals: Shop drawings.

1.03 REFERENCES

- A. AGC (Associated General Contractors of America) publication "The Use of CPM in Construction - A Manual for General Contractors and the Construction Industry".

1.04 FORMAT

- A. Prepare schedules starting with Notice to Proceed date through substantial completion, as a horizontal bar chart or Gantt chart with separate bar for each major portion of Work or operation, identifying first work day of each week.
- B. Sequence of Listings: The chronological order of the start of each item of Work.
- C. Scale and Spacing: To provide space for notations and revisions.
- D. Sheet Size: Maximum 30" x 42" OR multiples of 8½" x 11".

1.05 CONTENT

- A. Show complete sequence of construction by activity, with dates for beginning and completion of each element of construction.
- B. Identify each item by specification section number.
- C. Identify work of separate stages and other logically grouped activities.
- D. Provide sub-schedules for each stage of Work.
- E. Provide sub-schedules to define critical portions of the entire schedule.
- F. Include conferences and progress meetings in schedule.
- G. Show accumulated percentage of completion of each item, and total percentage of Work completed, to coincide with schedule of values in each application for payment.

- H. Provide separate schedule of submittal dates for shop drawings, product data, and samples, including Owner furnished products and dates reviewed submittals will be required from Architect/Engineer. Indicate decision dates for selection of finishes.
- I. Include scheduling for fabrication of structural steel.
- J. Include scheduling of erection sequence of building structural steel, precast walls and delivery to site.
- K. Include scheduling of erection sequence of building precast walls and delivery to site.

1.06 REVISIONS TO SCHEDULES

- A. Indicate progress of each activity to date of submittal, and projected completion date of each activity.
- B. Identify activities modified since previous submittal, major changes in scope, and other identifiable changes.
- C. Provide narrative report to define problem areas, anticipated delays, and impact on Schedule. Report corrective action taken, or proposed, and its effect including the effect of changes on schedules of separate contractors.

1.07 SUBMITTALS

- A. Submit initial schedules within 15 days after date of Owner-Contractor Agreement. After review, resubmit required revised data within seven days.
- B. Submit revised Progress Schedules with each Application for Payment.
- C. Submit the number of opaque reproductions which Contractor requires, plus two copies which will be retained by Architect/Engineer.

1.08 DISTRIBUTION

- A. Distribute copies of reviewed schedules to Project site file, Subcontractors, suppliers, and other concerned parties.
- B. Instruct recipients to promptly report, in writing, problems anticipated by projections indicated in schedules.

PART 2 - PRODUCTS

Not Used.

PART 3 - EXECUTION

Not Used.

END OF SECTION

SECTION 01400 - QUALITY CONTROL

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Quality assurance - control of installation.
- B. Tolerances
- C. Mock-up.
- D. Manufacturers' field services.

1.02 RELATED SECTIONS

- A. Section 01300 - Submittals: Submission of manufacturers' instructions and certificates.
- B. Section 01410 - Testing Services.
- C. Section 01620 - Product Delivery, Storage and Handling.
- D. Section 01650 - Starting of Systems

1.03 QUALITY ASSURANCE - CONTROL OF INSTALLATION

- A. Monitor quality control over suppliers, manufacturers, Products, services, site conditions, and workmanship, to produce Work of specified quality.
- B. Comply with manufacturers' instructions, including each step in sequence.
- C. Should manufacturers' instructions conflict with Contract Documents, request clarification from Architect/Engineer before proceeding.
- D. Comply with specified standards as minimum quality for the Work except where more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.
- E. Verify that field measurements are as indicated on shop drawings or as instructed by the manufacturer.
- F. Secure Products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, or disfigurement.
- G. Perform Work by persons qualified to product required and specified quality.

1.04 TOLERANCES

- A. Monitor fabrication and installation tolerance control of Products to produce acceptable Work. Do not permit tolerances to accumulate.
- B. Comply with manufacturers' tolerances. Should manufacturers' tolerances conflict with Contract Documents, request clarification from Architect/Engineer before proceeding.
- C. Adjust Products to appropriate dimensions; position before securing Products in place.

1.05 MOCK-UP

- A. Tests will be performed under provisions identified in this section and identified in the respective Product specification sections.
- B. Assemble and erect specified items with specified attachment and anchorage devices, flashings, seals, and finishes.
- C. Accepted mock-ups shall be a comparison standard for the remaining Work.
- D. Where mock-up has been accepted by Architect/Engineer and is specified in product specification sections to be removed; remove mock-up and clear area when directed to do so.

1.06 MANUFACTURERS' FIELD SERVICES

- A. When specified in individual specification sections, require material or Product suppliers or manufacturers to provide qualified staff personnel to observe site conditions, conditions of surfaces and installation, quality of workmanship, start-up of equipment, test, adjust and balance of equipment and additional products as specified, as applicable, and to initiate instructions when necessary.
- B. Report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturers' written instructions.

PART 2 - PRODUCTS

Not Used.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Verify that existing site conditions and substrate surfaces are acceptable for subsequent Work. Beginning new Work means acceptance of existing conditions.
- B. Examine and verify specific conditions described in individual specification sections.
- C. Verify that utility services are available, of the correct characteristics, and in the correct locations.

3.02 PREPARATION

- A. Clean substrate surfaces prior to applying next material or substance.
- B. Seal cracks or openings of substrate prior to applying next material or substance.
- C. Apply manufacturer required or recommended substrate primer, sealer, or conditioner prior to applying any new material or substance in contact or bond.

END OF SECTION

SECTION 01410– STRUCTURAL SPECIAL INSPECTIONS

PART 1 – GENERAL

1.1 SUMMARY

- A. Special inspections as defined in The Kentucky Building Code are required.
- B. The Inspection Agency shall conduct inspections under the supervision of a qualified professional engineer licensed in the State of Kentucky (Special Inspector).
- C. Seismic Design Category for the structure is shown in the General Notes section of the structural drawings.

1.2 SELECTION AND PAYMENT

- A. The Inspection Agency shall be EMPLOYED by the Owner. The Inspection Agency will be responsible for providing all Structural Special Inspection (including testing as listed herein) – scope of work may not be broken into separate contracts with multiple firms.
- B. Special inspections are additional to testing and inspection requirements shown elsewhere in the specifications and on the drawings, which is to be paid for by the Contractor and is not part of the SPECIAL INSPECTION services. The Contractor shall also pay for additional structural testing and inspection required for his convenience. Inspection work not part of the Structural Special Inspections may be performed by an Inspection Agency of the Contractor's choosing, unless noted otherwise.
- C. Costs for reinspection and retesting, should discrepancies be found, will be paid for by the owner, as part of the Special Inspection Services, except where rework is due to negligence or omission deemed excessive by the Owner.
 - 1. In case of excessive rework, such retesting and reinspection shall be paid for by the Contractor as an additional service of the Inspection Agency.
 - 2. In case of excessive waste/lost time of the Special Inspector due to inadequate scheduling by the Contractor, such time shall be paid for by the Contractor as an additional service of the Inspection Agency.

1.3 QUALITY ASSURANCE

- A. Qualified Certification Authorities: Subject to compliance with Kentucky Building Code Requirements, Qualified Certification Authorities providing certification which may be applicable to Project include:
 - 1. American Concrete Institute (ACI).

2. American Institute of Steel Construction (AISC).
 3. American Welding Society (AWS).
 4. National Institute of Certified Engineering Technology (NICET).
- B. Each inspector performing work on the Project shall be qualified to perform inspections for the particular type of construction or operation requiring special inspection by a Qualified Certification Authority as defined in the Kentucky Building Code. "Qualification" for purposes of this section shall mean a certified professional where certification in that jurisdiction exists. Subject to compliance with Kentucky Building Code requirements, Qualified Certification Authorities providing certification which may be applicable to Project include, but are not limited to, the following:
1. Steel Construction
 - a. Material verifications, bolted connections, visual observation of welds – AWS Level 1.
 - b. Steel frame connection details – Professional Engineer licensed in the State of Kentucky with experience in the design of building structures.
 2. Concrete Construction
 - a. Use of design mix – ACI Level 2.
 - b. Material verifications, sampling of fresh concrete – NICET Level 1 (concrete).
 - c. Reinforcing inspection – NICET Level 2 (concrete).
 3. Soils and Rock Bearing Materials
 - a. NICET Level 2 (soils).
- C. Prior to any construction, Inspection Agency shall submit list of personnel who may provide inspection work on project. List shall include the name and certification level (qualification) of each inspector. List shall also include the name and professional engineering registration number of the Special Inspector and the Professional Engineer with experience in the design of building structures.
- D. The Inspection Agency shall carry professional liability insurance for errors and omissions to a minimum limit of \$1,000,000 per occurrence and shall submit certificate of insurance along with the qualifications to the Architect and Engineer.
- E. Special Inspector Qualifications: A professional engineer who is legally authorized to practice in the State of Kentucky and who is experienced in providing testing and inspection services of structure system types similar to this Project in material, design, and extent.

PART 2 – EXECUTION

2.1 PROGRESS MEETINGS

- A. The Special Inspector shall attend any pre-construction meetings which may be conducted at the construction site by the Structural Engineer to discuss quality issues.
- B. The Special Inspector shall attend construction progress meetings which will be held at the construction site by the Construction Manager.

2.2 CONTRACTOR'S RESPONSIBILITIES

- A. Coordinate with the Inspection Agency to provide inspection and testing services.
- B. Provide a complete copy all structural shop drawings to the Structural Testing/Inspection Agency.
- C. Arrange the preconstruction meeting to discuss quality issues.
- D. Notify the Structural Testing/Inspection Agency sufficiently in advance of operations to allow assignment of personnel and scheduling of tests.
- E. Cooperate with Structural Testing/Inspection Agency and provide access, including equipment with operator, to work. Access equipment includes, but is not limited to, man lifts, excavation equipment, etc.
- F. Provide samples of materials to be tested in required quantities.
- G. Provide storage space for Structural Testing/Inspection Agency's exclusive use, such as for storing and curing concrete testing samples. If required by Special Inspector, Contractor shall provide cure box with electricity, water, and blankets for curing concrete specimens.
- H. Provide labor to assist the Structural Testing/Inspection Agency in performing tests/inspections. Labor includes, but is not limited to, construction of masonry prisms, etc.
- I. Neither the observation of the Architect/Structural Engineer in the administration of the contract, nor tests/inspections by the Testing/Inspection Agency, nor approvals by persons other than the Architect/Structural Engineer shall relieve the Contractor from his obligation to perform the work in accordance with the Contract Documents.

2.3 SPECIAL INSPECTOR'S RESPONSIBILITIES

- A. Cooperate with the Contractor and provide timely service.
- B. Notify Contractor of minimum advance notice for each type of inspection/test.
- C. Upon arriving at the construction site, sign in and notify the Contractor of presence.
- D. Select the representative samples that are to be tested/inspected.

- E. Perform tests/inspections as outlined in Contract Documents, the applicable codes, and as directed by the Structural Engineer.
- F. Keep records of all inspections.
- G. Furnish inspection reports to the Architect, Structural Engineer, and Construction Manager weekly as construction progresses.
- H. Inform Contractor and / or Fabricator of all discrepancies immediately for correction.
 - 1. Document in writing correction of discrepancies.
 - 2. Highlight discrepancies within the report.
 - 3. If discrepancies are not corrected, the discrepancies shall be brought to the attention of the Code Official and the Structural Engineer prior to the completion of that phase of the work.
- I. Leave copies of field notes with the Contractor prior to leaving the construction site. Field notes shall include the message given to the Contractor, date, time of message, name of Contractor's representative informed, type and location of work or materials tested/inspected, whether the work or materials complies with Contract Documents and name of the Structural Testing/Inspection Agency's representative.
- J. Immediately notify Contractor, Architect, and Structural Engineer by separate letter if work yet to be inspected is found on site that is either being covered by other work or was to receive continuous inspection.
- K. Structural Testing/Inspection Agency shall not alter requirements of Contract Documents, approve or reject any portion of the work, or perform duties of the Contractor.
- L. Submit a final report of inspections documenting completion of all required Special Inspections and correction of any discrepancies noted in inspections to the Structural Engineer. Final report shall be prepared by, sealed, and signed by the Special Inspector and shall include a complete list of materials and work inspected during the course of the project.
 - 1. Submit one complete set of all special inspection reports to Structural Engineer of Record with final report of special inspections. Report set shall be bound, divided by construction type, and in chronological order.

2.4 INSPECTION OF FABRICATORS

- A. Inspect the fabrication of structural load-bearing members where such work is being performed on the premises of the Fabricator's shop.
 - 1. Fabricators shall be exempt from special inspection when a Qualified Certification Authority has periodically reviewed and approved Fabricator's written procedural and quality control manuals and fabrication practices.

Subject to compliance with Kentucky Building Code requirements, Qualified Certification Authorities providing certification which may be applicable to Project include, but are not limited to, the following:

- a. Structural Steel Fabricators – AISC or AWS certified.
 - b. Steel Joist Fabricators – SJI certified.
2. Fabricators exempt from special inspection shall submit a certificate of compliance to the structural engineer of record at the completion of fabrication stating that all work was completed in accordance with the approved construction documents.
- B. Verify that the Fabricator maintains and review for completeness Fabricator's detailed fabrication and quality control procedures which provide a basis for control of the workmanship and ability to conform to the approved construction documents and reference standards.
- C. Perform special inspections at Fabricator's shop as outlined in this specification for each type of construction.

2.5 INSPECTION OF STEEL CONSTRUCTION

- A. Provide special inspection of the fabrication of steel structural elements and assemblies in accordance with the *Inspection of Fabricators*.
- B. Verify that certification numbers on bolt, nut, and washer containers correspond to the identification numbers on mill test reports and that manufacturer's symbol and grade markings appear on all bolts and nuts. Also verify that bolts, nuts, and washers are being properly cared for at the site.
- C. Verify that identification markings on structural steel members conform to ASTM standards specified on the approved construction documents.
- D. Verify that identification markings on weld filler materials conform to ASTM standards specified on the approved construction documents. Also verify that weld filler material is being properly cared for.
- E. Test and inspect high-strength bolted connections according to RCSC's "Specification for Structural Joints Using ASTM A325 or A490 Bolts."
1. Perform periodic inspection of bearing type connections.
 2. Perform continuous inspection of slip-critical type connections.
 3. Verify that direct-tension indicator gaps comply with ASTM F 959, Table 2.
 4. Verify that twist-off-type tension-control assemblies have been properly tightened.
- F. Inspect and test welds during fabrication (where applicable) and erection of structural steel as follows:

1. Certify welders and conduct inspections and tests as required. Record types and locations of defects found in work. Record work required and performed to correct deficiencies.
 2. Inspect all weld procedures and welders according to the requirements of AWS D1.1-2000.
 3. Use non-destructive testing according to AWS D1.1-2000, Section 6.11, on all welds that appear to have excessive inclusions, porosities, cracks, and incomplete penetrations as described by AWS D1.1-2000, or have the questionable weld removed and rewelded.
 4. Perform continuous non-destructive testing according to AWS D1.1-2000, Section 6.11, on all complete penetration and/or partial penetration groove welds and on all splices of main members where those splices are required.
 5. Perform continuous inspection according to AWS D1.1-2000, Section 6.9 (visual inspection) on all multi-pass fillet welds and on all single-pass fillet welds larger than 5/16”.
 6. Perform periodic inspection according to AWS D1.1-2000, Section 6.9 (visual inspection) on all single-pass fillet welds smaller than 5/16” and on all floor, form, and roof deck welds.
- G. Inspect all steel frame connection details for compliance with approved construction documents and approved steel erection shop drawings.
1. Verify completeness and construction of all bracing, stiffening, and connections.
 2. Verify location, completeness and accuracy of all members.

2.6 INSPECTION OF CONCRETE CONSTRUCTION

- A. Provide special inspection of the fabrication of concrete structural elements and assemblies in accordance with the *Inspection of Fabricators*.
- B. Periodically verify the use of the proper design mix.
- C. Verify use of proper grade and ASTM designation of reinforcing steels.
- D. Perform periodic inspection on placement, spacing, clear cover, number, and splice lap lengths of reinforcing steel.
- E. Monitor concrete quality by means of site and laboratory tests. The Inspection Agency is authorized to reject plastic concrete not conforming to specifications. Immediately inform the Contractor, the Architect and the Structural Engineer of inadequacies in concrete quality. Sampling and testing for quality control during concrete placement shall include the following:
 1. Sampling Fresh Concrete: ASTM C 172.

- a. Slump: ASTM C 143; one test at point of discharge for each day's pour of each type of concrete; additional tests when concrete consistency seems to have changed.
 - b. Air Content: ASTM C 173, volumetric method for lightweight or normal weight concrete; ASTM C 231, pressure method for normal weight concrete; one for each day's pour of each type of air-entrained concrete.
 - c. Concrete Temperature: ASTM C 1064; one test hourly when air temperature is 40 deg F (4 deg C) and below, when 80 deg F (27 deg C) and above, and one test for each set of compressive-strength specimens.
 - d. Compression Test Specimen: ASTM C 31; one set of four standard cylinders for each compressive-strength test, unless otherwise directed. Mold and store cylinders for laboratory-cured test specimens except when field-cured test specimens are required.
 - e. Compressive-Strength Tests: ASTM C 39; one set for each day's pour exceeding 5 cu. yd. plus additional sets for each 50 cu. yd. more than the first 25 cu. yd. of each concrete class placed in any one day; one specimen tested at 7 days, two specimens tested at 28 days, and one specimen retained in reserve for later testing if required.
- 2. When frequency of testing will provide fewer than five strength tests for a given class of concrete, conduct testing from at least five randomly selected batches or from each batch if fewer than five are used.
 - 3. When strength of field-cured cylinders is less than 85 percent of companion laboratory-cured cylinders, evaluate current operations and provide corrective procedures for protecting and curing the in-place concrete.
 - 4. Strength level of concrete will be considered satisfactory if averages of sets of three consecutive strength test results equal or exceed specified compressive strength and no individual strength test result falls below specified compressive strength by more than 500 psi.
 - 5. Test results will be reported in writing to Architect, Structural Engineer, ready-mix producer, and Contractor within 24 hours after tests. Reports of compressive strength tests shall contain the Project identification name and number, date of concrete placement, name of concrete testing service, concrete type and class, location of concrete batch in structure, design compressive strength at 28 days, concrete mix proportions and materials, compressive breaking strength, and type of break for both 7-day tests and 28-day tests.
- F. Perform continuous inspection of concrete placement to verify proper application techniques.
 - G. Perform periodic inspection of concrete curing procedures to verify maintenance of specified curing temperature, protection, and techniques.
 - H. Nondestructive Testing: Impact hammer, sonoscope, or other nondestructive device may be permitted but shall not be used as the sole basis for acceptance or rejection.

- I. Additional Tests: The testing agency will make additional tests of in-place concrete when test results indicate specified concrete strengths and other characteristics have not been attained in the structure, as directed by Architect. Testing agency may conduct tests to determine adequacy of concrete by cored cylinders complying with ASTM C 42, or by other methods as directed.

2.7 INSPECTION OF MASONRY CONSTRUCTION

- A. At onset of masonry construction and periodically thereafter, verify proportions of site-prepared mortar, construction of mortar joints, and location of reinforcement and connectors.
- B. Perform periodic inspection to verify size and location of structural elements; type, size, and location of anchors, including anchorage to other structural elements, frames, and construction; and specified size, grade, and type of reinforcement.
- C. Prior to each grouting operation, verify cleanliness of grout space, placement of all reinforcement and connectors, including lap splice lengths, and proportions of site-prepared grout.
- D. Perform continuous inspection of grout placement to verify compliance with contract document provisions.
- E. Perform periodic inspection of masonry curing procedures to verify maintenance of specified curing temperature, protection, and techniques.
- F. Sample and test grout compressive strength according to ASTM C 1019 and the following:
 - 1. Compression Test Sample: one set of three standard cube specimens for each compressive-strength test, unless otherwise directed. Mold and store cubes for laboratory-cured test specimens except when field-cured test specimens are required.
 - 2. Compressive-Strength Tests: one sample for each day's grouting; one specimen tested at 7 days, one specimen tested at 28 days, and one specimen retained in reserve for later testing if required.

2.8 INSPECTION OF SOILS

- A. Inspect the existing site soil conditions, fill placement, and load-bearing requirements for compliance with the recommendations of the approved geotechnical investigation report.
 - 1. Where the site is specified to be undercut by the geotechnical investigation report, verify all existing uncontrolled fills have been removed from below applicable foundation elements to the specified depth.

- B. Prior to placement of any engineered fill, determine that the site has been prepared in accordance with the recommendations of the approved geotechnical investigation report.
- C. During placement and compaction of the engineered fill material, verify that the material being used, maximum lift thickness, and in-place dry density comply with the recommendations of the approved geotechnical report.

END OF SECTION 01410

SECTION 01500 - CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS REQUIREMENTS OF CONTRACTOR

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Temporary Controls: Barriers, enclosures and fencing, protection of the Work, and water control.
- B. Construction Facilities: Access roads, parking and progress cleaning.

1.02 RELATED SECTIONS

- A. Section 01510 - Temporary Utilities.
- B. Section 01540 - Security.
- C. Section 01550 - Access Roads and Parking Areas.
- D. Section 01580 - Project Identification and Signs.
- E. Section 01700 - Project Closeout: Final cleaning.

1.03 BARRIERS

- A. Provide barriers to prevent unauthorized entry to construction areas and to protect existing facilities and adjacent properties from damage from construction operations.
- B. Provide protection for plants designated to remain. Replace damaged plants.
- C. Protect non-owned vehicular traffic, stored materials, site, and structures from damage.

1.04 WATER CONTROL

- A. Protect site from puddling or running water. Provide water barriers as required to protect site from soil erosion.

1.05 PROTECTION OF INSTALLED WORK

- A. Protect installed Work and provide special protection where specified in individual specification sections.
- B. Provide temporary and removable protection for installed Products. Control activity in immediate work area to prevent damage.
- C. Provide protective coverings at walls, projections, jambs, sills, and soffits of openings.
- D. Protect finished floors, stairs, and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects, by protecting with durable sheet materials.
- E. Prohibit traffic or storage upon waterproofed or roofed surfaces. If traffic or activity is

necessary, obtain recommendations for protection from waterproofing or roofing material manufacturer.

F. Prohibit traffic from landscaped areas.

1.06 PROGRESS CLEANING AND WASTE REMOVAL

- A. Maintain areas free of waste materials, debris, and rubbish. Maintain site in a clean and orderly condition.
- B. Remove debris and rubbish from pipe chases, plenums, attics, crawl spaces, and other closed or remote spaces, prior to enclosing the space.
- C. Broom and vacuum clean interior areas prior to start of surface finishing, and continue cleaning to eliminate dust.
- D. Collect and remove waste materials, debris, and rubbish from site periodically and dispose off-site.
- E. Open free-fall chutes are not permitted. Terminate closed chutes into appropriate containers with lids.

PART 2 - PRODUCTS

Not Used.

PART 3 - EXECUTION

Not Used.

END OF SECTION

**SECTION 01580 - PROJECT IDENTIFICATION AND SIGNS
REQUIREMENTS OF CONTRACTOR**

PART 1 - GENERAL

There will be one (1) sign for this project.

1.01 SECTION INCLUDES

- A. Project identification sign.

1.02 RELATED SECTIONS

- A. Section 01010 - Summary of Work.

1.03 QUALITY ASSURANCE

- A. Design sign and structure to withstand 60 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.

1.04 SUBMITTALS

- A. Section 01300 - Submittals: Shop drawings.
- B. Show content, layout, lettering, color, foundation, structure, sizes, and grades of members.

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, contrasting colors as selected.

2.02 PROJECT IDENTIFICATION SIGN

- A. One painted sign of construction, design, and content shown on Drawings, location designated.

- B. Content:
 - 1. Project title, logo and name of Owner as indicated on Contract Documents.
 - 2. Names and titles of authorities.
 - 3. Names and titles of Architect/Engineer and Consultants.
 - 4. Name of Prime Contractor and major Subcontractors.
- C. Graphic Design, Colors, Style of Lettering: Designated by Architect/Engineer and approved by Owner.

2.03 PROJECT INFORMATIONAL SIGNS

- A. Painted informational signs of same colors and lettering as Project Identification sign, or standard products; size lettering to provide legibility at 100-foot distance.
- B. Provide at each field office, and directional signs to direct traffic into and within site. Relocate as Work progress requires.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Install project identification sign within 30 days after date fixed by Owner-Contractor Agreement.
- 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 plumb 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

SECTION 01620 - PRODUCT DELIVERY, STORAGE & PROTECTION

PART 1 - GENERAL

1.01 APPLICABILITY

- A. This Section applies to all products furnished under this Agreement. Shipments of equipment or materials to be used by the Contractor or its subcontractors shall be delivered to the site only during regular working hours. All shipping papers and shipments shall be addressed and consigned to the Contractor giving the name of the Project with address. Under no circumstances will Owner accept shipments directed to it or the Architect/Engineer unless otherwise specified.

1.02 DELIVERY

- A. Products shall not be delivered to the Owner or the Architect/Engineer.
- B. Products shall not be delivered to the project site until related shop drawings have been reviewed by the Architect/Engineer.
- C. Products shall not be delivered to the project site until appropriate storage facilities are in place (on-site storage space is very limited).
- D. Products shall be delivered to the site in manufacturer's original, unopened, labeled containers.
- E. The Contractor shall not drop, roll or skid products off delivery vehicles. Hand carry or use suitable materials-handling equipment.

1.03 STORAGE AND PROTECTION

- A. General:
 - 1. The Contractor shall store and protect products in accordance with the manufacturer's recommendations and the requirements specified herein. No on-site existing storage facilities are available for use by the Contractor. All on-site facilities for storage shall be furnished by the Contractor.
 - 2. The Contractor shall not block or restrict the use of public right-of way, access roads or private property with stored materials.
 - 3. The Contractor shall not store products where they will interfere with operations of the Owner.
 - 4. The Contractor shall protect all products from damage or deterioration by weather.

5. The Contractor shall not store any products directly on the ground.
6. The Contractor shall not store any products in drainage ditches or areas where water may stand.
7. The Contractor shall label containers to identify materials inside using the terminology found in these Specifications.

B. Uncovered Storage:

1. The following types of materials may be stored out of doors without cover:
 - a. Masonry units
 - b. Reinforcing steel
 - c. Piping
 - d. Precast concrete items
 - e. Castings
2. The above-mentioned materials shall be stored on wood blocking.

C. Fully Protected Storage:

1. The Contractor shall store all products not named above in buildings or trailers which have a concrete or wooden floor, a roof; and fully enclosed walls on all sides.
2. The Contractor shall provide heated storage space for materials which would be damaged by freezing.
3. The Contractor shall protect mechanical and electrical equipment from being contaminated by dust and dirt.
4. The Contractor shall maintain temperature and humidity at levels recommended by manufacturer(s) for electrical and electronic equipment.

END OF SECTION

SECTION 01650 - STARTING OF SYSTEMS

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Starting systems.
- B. Demonstration and instructions.
- C. Testing, adjusting, and balancing.

1.02 RELATED SECTIONS

- A. Section 01400 - Quality Control: Manufacturers field reports.
- B. Section 01700 - Contract Closeout: System operation and maintenance data and extra materials.

1.03 STARTING SYSTEMS

- A. Coordinate schedule for start-up of various equipment and systems.
- B. Notify Owner seven days prior to start-up of each item.
- C. Verify that each piece of equipment or system has been checked for proper lubrication, drive rotation, belt tension, control sequence, and for conditions which may cause damage.
- D. Verify tests, meter readings, and specified electrical characteristics agree with those required by the equipment or system manufacturer.
- E. Verify that wiring and support components for equipment are complete and tested.
- F. Execute start-up under supervision of applicable manufacturer's representative or Contractors' personnel in accordance with manufacturers' instructions.
- G. When specified in individual specification Sections, require manufacturer to provide authorized representative to be present at site to inspect, check, and approve equipment or system installation prior to start-up, and to supervise placing equipment or system in operation.

1.04 DEMONSTRATION AND INSTRUCTIONS

- A. Demonstrate operation and maintenance of Products to Owner's personnel prior to date of Substantial Completion.
- B. For equipment or systems requiring seasonal operation, perform demonstration for other season within six months.
 - 1. Warranty period to begin at start-up of season.
- C. Utilize operation and maintenance manuals as basis for instruction. Review contents of manual with Owners' personnel in detail to explain all aspects of operation and maintenance.
- D. Demonstrate start-up, operation, control, adjustment, trouble-shooting, servicing, maintenance, and shutdown of each item of equipment at scheduled time at designated location.
- E. Prepare and insert additional data in operations and maintenance manuals when need for additional data becomes apparent during instruction.
- F. The amount of time required for instruction on each item of equipment and system is that specified in individual sections.

PART 2 - PRODUCTS

Not Used.

PART 3 - EXECUTION

Not Used.

END OF SECTION

SECTION 01700 - PROJECT CLOSEOUT REQUIREMENTS OF CONTRACTOR

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Closeout procedures.
- B. Final cleaning.
- C. Adjusting.
- D. Project record documents.
- E. Operation and maintenance data.
- F. Spare parts and maintenance products.
- G. Warranties and bonds.

1.02 RELATED SECTIONS

- A. Section 01650 - Starting of Systems: System start-up, testing, adjusting, and balancing.

1.03 CLOSEOUT PROCEDURES

- A. Submit written certification that Contract Documents have been reviewed, Work has been inspected, and that Work is complete in accordance with Contract Documents and ready for Architect/Engineer's review.
- B. Provide submittals to Architect/Engineer that are required by governing or other authorities.
- C. Submit final Application for Payment identifying total adjusted Contract Sum, previous payments, and sum remaining due.
- D. Deliver all close-out documents to the Architect within forty-five (45) days of the date of Substantial Completion. Indemnify the Architect for failure to perform this requirement including legal fees incurred by the Architect in enforcing this requirement. Failure to deliver all required close-out documents to the Architect within forty-five (45) days from sign-off of AIA Document G704, "Certificate of Substantial Completion," shall invoke costs of the Architect's services to be borne by the Contractor.
- E. Submit Certificate of Substantial Completion: AIA Document G704, 2017 Edition.
- F. Submit Contractor's Affidavit of Payment of Debts and Claims: AIA Document G706, 1994 Edition.

- G. Submit Contractor's Affidavit of Release of Liens: AIA Document G706A, 1994 Edition.
- H. Submit certification prior to submission of final application for payment attesting those certain products meet required manufacturer's approval.

1.04 FINAL CLEANING

- A. Execute final cleaning prior to final project assessment. Use experienced workmen or professional cleaners for final cleaning.
- B. Clean interior and exterior glass, surfaces exposed to view; remove temporary labels, stains and foreign substances, polish transparent and glossy surfaces, vacuum carpeted and soft surfaces.
- C. Clean equipment and fixtures to a sanitary condition with cleaning materials appropriate to the surface and material being cleaned.
- D. Replace filters of operating equipment.
- E. Clean debris from roofs, gutters, downspouts, and drainage systems.
- F. Clean site; sweep paved areas, rake clean landscaped surfaces.
- G. Remove waste and surplus materials, rubbish, and construction facilities from the site weekly (or more often as required by accumulation). Remove waste materials, rubbish and debris from the site and legally dispose of at public or private dumping areas off-site at least once a week. Site to be approved by Owner.
- H. Each subcontractor has the responsibility for protecting equipment and finishes at the job site from damages resulting from work under his control, for all cleaning required as a result of his failure to protect equipment and finishes, and for removal of protective covers.
- I. Safety Standards: Maintain project in accordance with the OSHA safety standards, as stipulated under the Occupational Safety and Health Act of 1970 and printed May 29, 1971 in the Federal Register.
- J. Fire Protection: Store volatile waste in covered metal containers and remove from premises daily.
- K. Pollution Control: Conduct cleanup and disposal operations to comply with local ordinances and anti-pollution laws.
 - 1. Disposal of volatile fluid wastes (such as mineral spirits, oil, or paint thinner) in storm or sanitary sewer systems or into streams or waterways is not permitted.

- L. Vacuum clean interior building areas when ready to receive finish painting and continue vacuum cleaning on an as-needed basis until building is ready for acceptance or occupancy.
- M. Repair, patch and touch-up marred surfaces to match adjacent finishes. Coordinate with requirements specified under the various sections of these specifications.
- N. Schedule cleaning operations so that dust and other contaminants resulting from cleaning process will not fall on wet, newly-painted surfaces.

1.05 ADJUSTING

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

1.06 PROJECT RECORD DOCUMENTS

- A. Maintain on site one set of the following record documents in clean, dry, legible condition; record actual revisions to the Work:
 - 1. Drawings
 - 2. Specifications
 - 3. Addenda
 - 4. Change Orders and other modifications to the Contract.
 - 5. Reviewed Shop Drawings, Product Data, and Samples.
 - 6. Manufacturer's instruction for assembly, installation, adjusting, maintenance and operation.
- B. Ensure entries are complete and accurate, enabling future reference by Owner.
- C. Store record documents separate from documents used for construction.
- D. Record information concurrent with construction progress. Label each document "Project Record."
- E. Specifications: Legibly mark and record at each Product section description of actual Products installed, including the following:
 - 1. Manufacturer's name and product model and number.
 - 2. Product substitutions or alternates utilized.
 - 3. Changes made by Addenda and modifications.
- F. Record Drawings: Legibly mark each item to record actual construction including:
 - 1. Measured depths of foundations in relation to finish first floor datum.
 - 2. Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.
 - 3. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of the Work.
 - 4. Field changes of dimension and detail.

5. Details not on original Contract drawings.
 6. Review applied changes to C.A.D. drawings.
- G. Submit documents to Architect/Engineer prior to claim for final Application for Payment.
1. The Contractor shall submit to the Architect one set of "Record" drawings which accurately reflect the actual installation of any and all materials, piping, conduit, etc., which were not installed exactly in accordance with the contract drawings.
 2. Contractor shall submit to the Architect two (2) (corrected) final record copies of shop drawings marked "for job use" which reflect all changes required in previous submittals including these marked "Approved as Noted," or similarly revised by the Engineer.

1.07 OPERATION AND MAINTENANCE DATA

- A. Submit data bound in 8½ x 11-inch (A4) text pages, three D side ring binders with durable plastic covers.
- B. Prepare binder cover with printed title "OPERATION AND MAINTENANCE INSTRUCTIONS."
- C. Internally subdivide the binder contents with permanent page dividers, logically organized as described below; with tab titling clearly printed under reinforced laminated plastic tabs.
- D. Contents: Prepare a Table of Contents for each volume, with each Product or system description identified, typed on white paper, in three parts as follows:
 1. Part 1: Directory, listing names, addresses, and telephone numbers of Architect/Engineer, Contractor, Subcontractors, and major equipment suppliers.
 2. Part 2: Operation and maintenance instructions, arranged by system and subdivided by specification section. For each category, identify names, addresses, and telephone numbers of Subcontractors and suppliers. Identify the following:
 - a. Significant design criteria.
 - b. List of equipment.
 - c. Parts list for each component.
 - d. Operating instructions.
 - e. Maintenance instructions for equipment and systems.
 - f. Maintenance instructions for special finishes, including recommended cleaning methods and materials, and special precautions identifying detrimental agents.
 3. Part 3: Project documents and certificates, including the following:
 - a. Shop drawings and product data.
 - b. Air and water balance reports.
 - c. Certificates.
 - d. Originals of warranties.

- E. Submit 1 draft copy of completed volumes 15 days prior to final inspection. This copy will be reviewed and returned after final inspection, with Architect/Engineer comments. Revise content of all document sets as required prior to final submission.
- F. Submit three (3) sets of revised final volumes to Architect/Engineer within thirty (30) days of Architect/Engineer review.

1.08 SPARE PARTS AND MAINTENANCE PRODUCTS

- A. Provide spare parts, maintenance, and extra Products in quantities specified in individual specification sections.
- B. Deliver to Project site and place in location as directed by Owner; obtain receipt prior to final payment.

1.09 WARRANTIES AND BONDS

- A. Provide notarized copies.
- B. Execute and assemble transferable warranty documents from Subcontractors, suppliers, and manufacturers.
- C. Provide Table of Contents and assemble in three D side ring binder with durable plastic cover.
- D. Submit one (1) original and two (2) copies prior to final Application for Payment. All such documents shall indicate the name and location of the project and the name of the purchaser.
- E. For items of Work delayed beyond date of Substantial Completion, provide updated submittal within 10 days after acceptance, listing date of acceptance as start of warranty period.

PART 2 - PRODUCTS

Not Used.

PART 3 - EXECUTION

Not Used.

END OF SECTION

Division II – Site Work

SECTION 02010 - SOILS INVESTIGATION

Refer to the Geotechnical Report for this project.

END OF SECTION

SECTION 02200 - EARTH AND ROCK WORK

PART 1 - GENERAL

1.01 Work Included

- A. This section includes all labor, materials, equipment, and related items to complete all earth and rock work.
- B. The extent of earth and rock work is shown on drawings. The following work is included:
 - 1. Strip top soil and vegetation from the work area.
 - 2. Perform earthwork to achieve the required grades.
 - 3. Establish and maintain horizontal and vertical ground control throughout the work.
 - 4. Locate and clearly mark all utilities on or adjacent to the site.

1.02 Related Work Specified Elsewhere

- A. Section 02100 - Erosion Control
- B. Section 02110 - Site Clearing
- C. Section 02936 - Seeding

1.03 Excavation Classification

- A. All mass, structural, and trench excavation shall be considered unclassified. No adjustments will be allowed to the contract price for rock encountered during mass or structural excavation.

1.04 Quality Assurance

- A. Codes and Standards: Perform earth and rock work in compliance with applicable requirements of governing authorities having jurisdiction. Applicable references include the following:

ASTM D422 Particle Size Analysis of Soils.

ASTM D423 Test for Liquid Limit of Soils.

ASTM D424 Test for Plastic Limit and Plasticity Index of Soils.

ASTM D698 Laboratory Compaction Characteristics of Soil Using Standard Effort

ASTM D3017 Moisture content of Soil Aggregates in Place by Nuclear Methods (Shallow Depth).

- B. Testing and Inspection Service: A testing laboratory will be employed to perform soil testing and inspection services for quality control testing during earth and rock work operations. Testing laboratory employed is to observe, test and report to the Engineer that the compaction requirements specified herein have been obtained.

1.05 Submittals

- A. Test Reports-Excavating: Coordinate and schedule in a timely manner the following quality related items. The following reports shall be submitted directly to the Engineer from the testing services, with copy to the Contractor:
- Test reports on borrow material.
 - Field density test reports of sufficient number to verify compaction of structural fill.
 - One optimum moisture-density curve for each type of soil encountered. Determine particle size, liquid limit, plastic limit, plasticity index and maximum density of each type of soil.
 - Observe proof-rolling.

1.06 Job Conditions

- A. Site Information. Data on indicated subsurface conditions are not intended as representations or warranties of accuracy or continuity between soil borings. It is expressly understood that the Owner will not be responsible for interpretations or conclusions drawn by the Contractor. The data is made available for the convenience of the Contractor and is not guaranteed to represent all condition that may be encountered. No claim for extra compensation, or for extension of time, will be allowed on account of subsurface conditions inconsistent with the data shown. Additional test borings and other site examination and exploratory operations may be made by Contractor at no cost to Owner. Notify Owner prior to making any subsurface exploration.
- B. Groundwater. Groundwater may be encountered during the excavation. Control the ground water to a level at least three feet below the top of the subgrade.
- C. Explosives. Blasting shall only be conducted by licensed blasters and shall be in accordance with state and local requirements, and after conducting a thorough pre-blast survey.
- D. Protection of Persons and Property. Barricade open excavations occurring as part of this work and post with warning lights.
- E. Bench Marks and Monuments. Maintain carefully all bench marks, monuments and other reference points. If disturbed or destroyed, replace as directed at no cost to the owner.
- F. Notify the Engineer 48 hours prior to the beginning of any excavation work.

PART 2 - PRODUCTS

2.01 Materials

- A. Satisfactory soil. Satisfactory soils are materials complying with Unified Soil Classification System (USCS), ASTM D 2487-93, soil classification group SP, SM, SC, ML, MH and CL.

PART 3 - EXECUTION

3.01 Excavation

- A. Excavation consists of removal and disposal of material encountered when establishing required finish grade elevations. For the purpose of this contract, mass, structural and trench excavation of all materials shall be considered unclassified. Adjustments for rock or similar materials will not be considered.
- B. Unauthorized excavation. Unauthorized excavation consists of removal of materials beyond indicated subgrade elevations or dimensions without specific direction of Engineer.

Unauthorized excavation, as well as remedial work directed by Engineer, shall be at Contractor's expense.

Backfill and compact unauthorized excavations, as specified for authorized excavations of same classification, unless otherwise directed by Engineer.

- C. Additional Excavation. When excavation has reached required subgrade elevations, notify Engineer who will make an inspection of conditions.

If unsuitable bearing materials are encountered at required subgrade elevations, carry excavations deeper and replace excavated material as directed by Engineer.

Removal of unsuitable bearing material and its replacement as directed will be paid on basis of contract conditions relative to changes in work.

- D. Stability of Excavations. Slope sides of excavations to comply with local codes and ordinances having jurisdiction. Shore and brace where sloping is not possible because of space restriction or stability of material excavated. Maintain sides and slopes of excavations in safe condition until completion of backfilling.
- E. Shoring and Bracing. Provide materials for shoring and bracing, such as sheet piling, uprights, stringers, and cross-braces, in good serviceable condition.

Establish requirements for trench shoring and bracing to comply with local codes and authorities having jurisdiction.

Maintain shoring and bracing in excavations, regardless of time period excavations will be open. Carry down shoring and bracing as excavation progresses.

- F. Dewatering. Prevent surface water and subsurface or ground water from flowing into excavations and flooding project site and surrounding area.

Do not allow water to accumulate in excavations. Remove water to prevent softening of excavation bottoms and soil changes detrimental to stability of subgrades. Provide and maintain pumps, well points, sumps, suction and discharge lines, and other dewatering system components necessary to convey water away from excavations.

Convey water removed from excavations and rain water to collecting or run-off areas. Establish and maintain temporary drainage ditches and other diversions outside excavation limits for each structure. Do not use trench excavations as temporary drainage ditches. Site grading should be maintained during construction so that positive drainage of the site is promoted at all times.

- G. Material Storage. Stockpile satisfactory excavated materials, where directed by Engineer, until required for backfill or fill. Place, grade and shape stockpiles for proper drainage.

Locate and retain soil materials away from edge of excavations. Do not store within drip line of trees indicated to remain.

Dispose of excess soil material and waste materials as herein specified.

- H. Cold Weather Protection. Protect excavation bottoms against freezing when atmospheric temperature is less than 35 degrees F (1 degree C).
- I. Proofrolling. After excavation and before any fill placement, entire subgrade shall be proof-rolled with a loaded pneumatic tired vehicle, such as a dual axle dump truck with a gross weight of 16 to 20 tons, or similar equipment. Remove any soft, organic, or highly plastic soil encountered during proof-rolling and replace it with properly compacted fill.

3.02 Compaction

- A. General. Control soil compaction during construction, providing minimum percentage of density specified for each area classification.
- B. Lift Thickness. Soil used for structural fill construction should be placed in layers no greater than 10 inches in loose placement for heavy equipment placement, or 5 inches for hand operated whacker or vibratory plate placement.
- C. Percentage of Maximum Density Requirements. Compact soil as required by the Geotechnical Report to the required percentage of the maximum dry density.
- D. Moisture Control. Maintain soil moisture to required range of optimum moisture content. Where soil must be moisture conditioned before compaction, uniformly apply water to prevent free water from appearing on surface during or subsequent to compaction operations. Remove and replace, or scarify and air dry, soil material that is too wet to permit compaction to specified density. Soil material that has been removed because it is too wet to permit compaction may be stockpiled or spread and allowed to dry. Assist drying by disking, harrowing or pulverizing until moisture content is reduced to a satisfactory value.

3.03 Backfill and Fill

- A. General. Place acceptable soil material in layers to required subgrade elevations.
- B. Backfill excavations as promptly as work permits, but not until acceptance of construction below finish grade and removal of trash and debris.

- C. Ground Surface Preparation. Remove vegetation, debris, unsatisfactory soil materials, obstructions, and deleterious materials from ground surface prior to placement of fills. Plow, strip, or break up sloped surfaces steeper than 1 vertical to 4 horizontal so that fill material will bond with existing surface.
- D. Placement and Compaction. Place backfill and fill materials in layers to provide lift thickness.

3.04 Grading

Uniformly grade areas within limits of grading under this section, including adjacent transition areas. Smooth finished surface within specified tolerances, compact with uniform levels or slopes between points where elevations are shown, or between such points and existing grades.

3.05 Field Quality Control

- A. Quality Control Testing During Construction. Allow testing service to inspect and approve subgrades and fill layers before further construction work is performed. It shall be the Contractor's responsibility to notify the testing agency at least 24 hours prior to beginning any work which requires testing.
- B. If in opinion of Engineer, based on testing service reports and inspection, subgrade or fills which have been placed are below specified density, provide additional compaction and testing at no additional expense to the Owner.

3.06 Maintenance

- A. Protection of Graded Areas. Protect newly graded areas from traffic and erosion. Keep free of trash and debris. Repair and reestablish grades in settled, eroded and rutted areas to specified tolerances.
- B. Reconditioning Compacted Areas. Where completed compacted areas are disturbed by subsequent construction operations or weather, scarify surface, reshape and compact to required density prior to further construction.
- C. Settling. Where settling is measurable or observable at excavated areas during general project warranty period, add backfill material, compact, and replace surface treatment. Restore appearance, quality and condition of surface or finish to match adjacent work, and eliminate evidence of restoration to greatest extent possible.
- D. Desiccation. Where desiccation cracks are observable, remove and replace soil to restore appearance, quality and condition of surface.

3.07 Disposal of Excess and Waste Materials

Stockpile excess excavated material at a location near the site designated by the Engineer.

End of Section

SECTION 02250 - SOIL TREATMENT

PART 1 - GENERAL

1.01 Work Included

- A. Soil treatment below slabs-on-grade for subterranean insects.
- B. Soil treatment at interior and exterior foundation perimeter, for subterranean insects.

1.02 References

- A. EPA - Federal Insecticide, Fungicide and Rodenticide Act.

1.03 Quality Assurance

- A. Applicator: Company specializing in soil treatment for termite control with five years documented experience.
- B. Materials: Provide certification that toxicants conform to requirements of authority having jurisdiction.
- C. Material Packaging: Manufacturer's labels and seals identifying content.

1.04 Regulatory Requirements

- A. Conform to Federal, State and Local requirements for application licensing and authority to use toxicant chemicals.
- B. Treatment for termites to be provided by using a registered product, mixed and applied by a licensed professional in accordance with the manufacturer's instruction located on the label.

1.05 Product Data

- A. Submit product data.
- B. Indicate toxicants to be used, composition by percentage, dilution schedule, and intended application rate.
- C. Submit manufacturer's installation instructions.

1.06 Project Record Documents

- A. Accurately record moisture content of soil before treatment, date and rate of application, areas of application, diary of meter readings and corresponding soil coverage.

1.07 Warranty

- A. Provide five year warranty for material and installation.
- B. Warranty: Cover against invasion or propagation of subterranean termites, damage to building or building contents caused by termites, repairs to building or building contents so caused.
- C. Inspect work annually and report in writing to Owner.
- D. Owner reserves right to renew warranty for an additional five years.

PART 2 - PRODUCTS

2.01 Acceptable Manufacturers

- A. Terminix
- B. Orkin
- C. All-Rite Pest Control
- D. Approved equal

2.02 Materials

- A. Toxicant chemicals: As recommended by the manufacturer for the intended use.

PART 3 - EXECUTION

3.01 Inspection

- A. Verify the soil surfaces as unfrozen, sufficiently dry to absorb toxicant, and ready to receive treatment.
- B. Beginning of application assumes acceptance of soil conditions as suitable.

3.02 Application

- A. Apply toxicant in accordance with manufacturer's instructions.
- B. Apply extra treatment to structure penetrations, pipe, ducts, and other soil penetrations.
- C. Coordinate soil treatment at foundation perimeter with finish grading and landscaping work to avoid disturbance of treated soil. Re-treat disturbed treated soil.

3.03 Re-treatment

- A. If inspection identifies the presence of termites, re-treat soil and re-test.
- B. Use same toxicant as for original treatment.

END OF SECTION

SECTION 02936 - SEEDING

PART 1 - GENERAL

1.01 Work Included

The work described herein shall consist of application of seed, fertilizer and agricultural limestone to establish turf.

PART 2 - PRODUCTS

201 Seed

Seed shall be of the following mixture:

<u>Seed Type</u>	<u>Percentage</u>
Fine Lawn Fescue	60%
Bluegrass	25%
Perennial Rye	15%

Seed shall be applied uniformly at the rate of three pounds per 1,000 square feet.

202 Agricultural Limestone

Agricultural limestone shall have a minimum calcium carbonate equivalent of 90 percent and shall be ground to such a fineness that at least 90 percent will pass a 10-mesh sieve and at least 50 percent will pass a 60-mesh sieve. Agricultural ground limestone shall be from quarries approved by the Kentucky Department of Agriculture.

Agricultural limestone shall be applied uniformly at the rate of 100 pounds per 1,000 square feet.

203 Fertilizer

Fertilizer shall be commercial grade, free flowing, uniform in composition.

Fertilizer shall be 10-20-20 applied uniformly at the rate of 25 pounds per 1,000 square feet.

204 Mulch

Mulch shall be clean straw and shall be applied at a rate of 100 pounds per 1,000 square feet.

PART 3 - EXECUTION

3.01 Delivery, Storage and Handling

Fertilizer and limestone shall be delivered to the site in the original, unopened containers bearing the manufacturer's guaranteed chemical analysis, name, trade name, trademark, and conformance to State and Federal laws. In lieu of containers, fertilizer and limestone may be furnished in bulk and a certificate indicating the above information shall accompany each delivery.

Seed, limestone and fertilizer shall be kept in dry storage away from contaminants, insects and rodents.

3.02 Seeding

Seed shall be broadcast uniformly. The seed shall be covered to an average depth of 1/4 inch by means of spike-tooth harrow, cultipacker, no till drill or other approved device. Seed shall not be broadcast when winds are above 10 mph. Immediately after seeding, the entire area shall be firmed with a roller not exceeding 90 pounds for each foot of roller width and the soil moistened to a depth of 6-8 inches. If seeding is performed with a cultipacker-type seeder or if seed is applied in combination with hydromulching, rolling will not be required.

3.03 Maintenance

Seeded areas shall be protected and maintained by watering and replanting as may be necessary to produce a uniform stand of grass. Maintenance shall continue until a dense, uniform turf is established composed of the grasses specified and until acceptance, and shall include repair of damage caused by erosion.

End of Section

Division III – Concrete

SECTION 03110 - CONCRETE FORMWORK

PART 1 - GENERAL

- A. The general provisions of the Contract, including General Conditions and Requirements, apply to the work specified in this section.

PART 2 - DESCRIPTION OF WORK

- A. The extent of formwork is indicated by the concrete structures shown on the drawings.
- B. The work includes providing formwork and shoring for cast-in-place concrete, and installation into formwork of items furnished by others, such as anchor bolts, setting plates, bearing plates, anchorages, inserts, frames, nosings and other items to be embedded in concrete (but not including reinforcing steel).

PART 3 - QUALITY ASSURANCE

- A. The Installer must examine the substrate and the conditions under which concrete formwork is to be performed, and notify the Contractor in writing of unsatisfactory conditions. Do not proceed with the work until unsatisfactory conditions have been corrected in a manner acceptable to the Installer.

PART 4 - CODES AND STANDARDS

- A. Unless otherwise shown or specified, design, construct, erect, maintain, and remove forms and related structures for cast-in-place concrete work in compliance with the American Concrete Institute Standard ACI 347, "Recommended Practice for Concrete Formwork".
- B. Construct formwork to provide completed cast-in-place concrete surfaces complying with the tolerances specified in ACI 347, and as follows:
 - 1. Variation from plumb in lines and surfaces of walls, and arises; 1/4" per 10 ft., but not more than 1". For exposed control joint grooves, and other conspicuous lines, 1/4" in any bay or 20 ft. max; 1/2" max. in 40 ft. or more.
 - 2. Variation from level or grade in slab, walls and in arises 1/8" in 10 ft., 3/8" in any bay or 20 ft. max., and 3/4" in 40 ft. or more. For exposed horizontal grooves and other conspicuous lines, 1/4" in any bay or 20 ft. max. and 1/2" in 40 ft. or more.
 - 3. Variation from position of the linear building lines and related walls, and partitions, 1/2" in any bay or 20 ft. max., and 1" in 40 ft. or more.
 - 4. Variation in cross-sectional dimensions of thickness of slabs and walls, minus 1/4" and plus 1/2".

5. Variations in footings plan dimensions, minus 1/2" and plus 2"; misplacement or eccentricity, 2% of the footing width in direction of misplacement but not more than 2"; thickness reduction minus 2%.
 6. Variation in steps; in a flight of stairs, 1/8" for rise and 1/4" for treads; in consecutive steps, 1/16" for rise and 1/8" for treads.
- C. Before concrete placement check the lines and levels of erected formwork. Make corrections and adjustments to ensure proper size and location of concrete members and stability of forming systems.
 - D. During concrete placement check formwork and related supports to ensure that forms are not displaced and that completed work will be within specified tolerances.

PART 5 - SUBMITTALS

- A. For information only, submit 2 copies of manufacturer's data and installation instructions for proprietary materials including form coatings, manufactured form systems, ties and accessories.
- B. Submit shop drawings for fabrication and erection of specific finished concrete surfaces as shown or specified.
- C. Architects review will be for general architectural applications and features only. Design of formwork for structural stability and sufficiency is the Contractor's responsibility.

PART 6 - FORM MATERIALS

- A. Unless otherwise shown or specified, construct formwork for exposed concrete surfaces with plywood, metal, metal-framed plywood-faced or other panel type materials acceptable to Architect, to provide continuous, straight, smooth as-cast surfaces. Furnish in largest practicable sizes to minimize number of joints and to conform to joint system shown on drawings. Provide form material with sufficient thickness to withstand pressure of newly placed concrete without bow or deflection.
 1. Use plywood complying with U.S. Product Standards PS-1, "B-B (Concrete Form) Plywood" Class 1, Exterior Grade or better, mill-oiled and edge-sealed, with each piece bearing the legible trademark of an approved inspection agency.
- B. Form concrete surfaces which will be unexposed in the finished structure with plywood, lumber, metal, or other acceptable material. Provide lumber that is dressed on at least 2 edges and 1 side for tight fit.
- C. Provide factory-fabricated, adjustable-length, removable or snap-off metal form ties, designed to prevent form deflection, and to prevent spalling concrete surfaces upon removal.

- D. Unless otherwise shown, provide ties so that portion remaining within concrete after removal of exterior parts is at least 1½" from the outer concrete surface. Unless otherwise shown, provide form ties which will not leave a hole larger than 1" diameter in the concrete surface.
- E. Form ties fabricated on the project site and wire ties are not acceptable.
- F. Provide commercial formulation form-coating compounds that will not bond with, stain, nor adversely affect concrete surfaces, and will not impair subsequent treatment of concrete surfaces requiring bond or adhesion, nor impede the wetting of surfaces to be cured with water or curing compounds.
- G. Provide metal inserts for anchorage of materials or equipment to concrete construction, not supplied by other trades and as required for the work.

PART 7 - DESIGN OF FORMWORK

- A. Design, erect, support, brace and maintain formwork so that it will safely support vertical and lateral loads that might be applied, until such loads can be supported by the concrete structure. Carry vertical and lateral loads to ground by formwork system and in-place construction that has attained adequate strength for that purpose. Construct formwork so that concrete members and structures are of correct size, shape, alignment, elevation and position.
- B. Design forms and falsework to include assumed values of live load, dead load, weight of moving equipment operated on formwork, concrete mix, height of concrete drop, vibrator frequency, ambient temperature, foundation pressures, stresses, lateral stability, and other factors pertinent to safety of structure during construction.
- C. Provide shores and struts with positive means of adjustment capable of taking up formwork settlement during concrete placing operations, using wedges or jacks or a combination thereof. Provide trussed supports when adequate foundations for shores and struts cannot be secured.
- D. Support form facing materials by structural members spaced sufficiently close to prevent deflection. Fit forms placed in successive units for continuous surfaces to accurate alignment, free from irregularities and within allowable tolerances.
- E. Provide temporary openings in wall forms, and at other locations necessary to permit inspection and clean-out.
- F. Design formwork to be readily removable without impact, shock or damage to cast-in-place concrete surfaces and adjacent materials.
- G. Provide formwork sufficiently tight to prevent leakage of cement paste during concrete placement. Solidly butt joints and provide backup material at joints as required to prevent leakage and fins.
- H. Side forms of footings may be omitted and concrete placed directly against excavation

only when requested by Contractor and accepted by Architect. When omission of forms is accepted, provide additional concrete required beyond the minimum design profiles and dimensions of the footings as detailed, at no cost to the Owner.

PART 8 - FORM CONSTRUCTION

- A. General: Construct forms complying with ACI 347, to the exact sizes, shapes, lines and dimensions shown, and as required to obtain accurate alignment, location, grades, level and plumb work in finished structures. Provide for openings, offsets, sinkages, keyways, recesses, moldings, rustications, reglets, chamfers, blocking, screens, bulkheads, anchorages and inserts, and other features required. Use selected material to obtain required finishes.
- B. Fabricate forms for easy removal without hammering or prying against concrete surfaces. Provide crush plates or wrecking plates where stripping may damage cast concrete surfaces. Kerf wood inserts for forming keyways, reglets, recesses, and the like, to prevent swelling and assure ease of removal.
- C. Provide temporary openings where interior area of formwork is inaccessible for cleanout, for inspection before concrete placement, and for placement of concrete. Brace temporary closures and set tightly to forms to prevent loss of concrete mortar. Locate temporary openings on forms in as inconspicuous location as possible, consistent with project requirements.
- D. Form intersecting planes to provide true, clean-cut corners, with edge grain of plywood not exposed as form for concrete.
- E. Provide openings in forms to accommodate other work, including mechanical and electrical work. Accurately place and securely support items required to be built into the forms.

PART 9 - FORMS FOR EXPOSED CONCRETE

- A. Drill forms to suit ties used and to prevent leakage of concrete mortar around tie holes. Do not splinter forms by driving ties through improperly prepared holes.
- B. Do not use metal cover plates for patching holes or defects in forms.
- C. Provide sharp, clean corners at intersecting planes, without visible edges or offsets. Back joints with extra studs or girts to maintain true, square intersections.
- D. Use extra studs, walers and bracing to prevent bowing of forms between studs and to avoid bowed appearance in concrete. Do not use narrow strips of form material which will produce bow.
- E. Assemble forms so they may be readily removed without damage to exposed concrete surfaces.
- F. Form molding shapes, recesses and projections with smooth-finish materials, and install

in forms with sealed joints to prevent displacement.

- G. Form chamfers with 3/4" x 3/4" strips, unless otherwise shown, accurately formed and surfaced to produce uniformly straight lines and tight edge joints. Extend terminal edges to required limit and miter chamfer strips at changes in direction.
- H. Unexposed corners may be formed either square or chamfered.

PART 10 - CONTROL JOINTS

- A. See 3A section for treatment of control and construction joints, including wood screeds, metal keyways and sawcuts. Locate as indicated.

PART 11 - PROVISION FOR OTHER TRADES

- A. Provide openings in concrete formwork to accommodate work of other trades, including those under separate prime contracts (if any). Size and location of openings, recesses and chases are the responsibility of the trade requiring such items. Accurately place and securely support items to be built into forms.

PART 12 - CLEANING AND TIGHTENING

- A. Thoroughly clean forms and adjacent surfaces to receive concrete. Remove chips, wood, sawdust, dirt or other debris just before concrete is to be placed. Retighten forms immediately after concrete placement as required to eliminate mortar leaks.

PART 13 - FORM COATINGS

- A. Coat form contact surfaces with form-coating compound before reinforcement is placed. Do not allow excess form coating material to accumulate in the forms or to come into contact with surfaces which will be bonded to fresh concrete. Apply in compliance with manufacturer's instructions.
- B. Coat steel forms with a non-staining, rust-preventative form oil or otherwise protect against rusting. Rust-stained steel formwork is not acceptable.

PART 14 - REMOVAL OF FORMS

- A. General: Formwork not supporting concrete, such as sides of walls, and similar parts of the work, may be removed after cumulatively curing at not less than 50°F for 24-hours after placing concrete, provided concrete is sufficiently hard to not be damaged by form removal operations, and provided that curing and protection operations are maintained.

PART 15 - RE-USE OF FORMS

- A. Clean and repair surfaces of forms to be re-used in the work. Split, frayed, delaminated or otherwise damaged form facing material will not be acceptable. Apply new form coating compound material to concrete contact surfaces as specified for new formwork.

- B. When forms are extended for successive concrete placement, thoroughly clean surfaces, remove fins and laitance, avoid offsets. Do not use "patched" forms for exposed concrete surfaces, except as acceptable to the Architect.

PART 16 - CAST-IN-PLACE CONCRETE WALLS

- A. Forms for concrete work shall be so constructed as to produce finished concrete of precise sizes, shapes, lines, and locations shown on drawings, as approved by the Architect.
- B. Forms shall be substantially built with sufficient strength and rigidity to support dead-weight of wet concrete, impact at pouring, force of vibration of concrete without spreading or buckling, accurately put together with tight joints to prevent leakage of cement and water.
- C. Forms shall be clean, free of papers, sawdust, dirt debris. Temporary clean-out panels shall be provided in column, interior side of wall forms and at other points where necessary to facilitate cleaning and inspection immediately before depositing concrete. Dust or debris will not be tolerated in forms when concrete is to be placed. Joints in forms for cleanout panels shall be located away from finished surfaces wherever possible. Such joints shall be neat, tight, and leave only marks of type which can be removed by light grinding finished concrete. Provide cover of polyethylene sheeting for column and wall forms to prevent accumulation of dirt, debris, etc., in forms.
- D. Form ties for finished walls, if used, must be lined up, uniformly spaced in each panel in both horizontal and vertical directions. Form tie patching shall be approved by the Architect for profile and finish. Where openings occur at right regular spacings do not use wall ties above, below or between openings. Use wall ties only through openings. Provide walers, bracing beams above, below, between openings as required to contain freshly placed concrete.
 - 1. This Contractor shall construct forms for openings, slots, beam pockets, light recesses, notches or chases required in concrete members for installation by other trades as directed by subcontractor requiring same.

End of Section

SECTION 03210 - CONCRETE REINFORCEMENT

PART 1 - GENERAL

- A. The general provisions of the Contract, including General Conditions and Requirements, apply to the work specified in this section.
- B. Codes and Standards: Comply with requirements of the following codes and standards, except as herein modified:
- C. Also, the work includes reinforcement for independent foundations and retaining walls.

PART 2 - QUALITY ASSURANCE

- A. The Installer must examine the substrate and the conditions under which concrete reinforcement is to be placed, and notify the Contractor in writing of unsatisfactory conditions. Do not proceed with the work until unsatisfactory conditions have been corrected in a manner acceptable to the Installer.
- B. Codes and Standards: Comply with requirements of the following codes and standards, except as herein modified:
 - 1. Concrete Reinforcing Steel Institute, "Manual of Standard Practice."
 - 2. American Concrete Institute, ACI 318 "Building Code Requirements for Reinforced Concrete".
- C. For information only, submit 2 copies of steel producer's certificates of mill analysis, tensile and bend tests for reinforcing steel.
- D. Submit shop drawings for fabrication, bending, and placement of concrete reinforcement. Comply with the ACI 315, "Manual of Standard Practice for Detailing Reinforced concrete Structures". Show Bar schedules, stirrup spacing, diagrams of bent bars, arrangements and assemblies, as required for the fabrication and placement of concrete reinforcement.
- E. Deliver reinforcement to the project site bundled, tagged and marked. Use metal tags indicating bar size, lengths, and other information corresponding to markings shown on placement diagrams.

PART 3 - MATERIALS

- A. Reinforcing Bars (ReBar): ASTM A 615, ASTM A 616 or ASTM 617, as follows:
 - 1. Provide Grade 60 for Bars No. 2 to 11
- B. Steel Wire: ASTM A 82
- C. Welded Wire Fabric (WWF): ASTM A 185
- D. Supports for Reinforcements: Bolsters, chairs, spacers and other devices for spacing, supporting and fastening reinforcement in place.
 - 1. Use wire bar type supports complying with CRSI recommendations, unless otherwise indicated. Do not use wood, brick, and other unacceptable materials.
- E. Over waterproof membranes, use precast concrete chairs to prevent penetration of the membrane.

PART 4 - FABRICATION

- A. General: Fabricate reinforcing bars to conform to required shapes and dimensions, with fabrication tolerances complying with CRSI "Manual of Standard Practice". In case of fabricating errors, do not re-bend or straighten reinforcement in a manner that will injure or weaken the material.
- B. Unacceptable Materials: Reinforcement with any of the following defects will not be permitted in the work:
 - 1. Bar lengths, depths and bends exceeding specified fabrication tolerances.
 - 2. Bend or kinks not indicated on drawings or final shop drawings.
 - 3. Bars with reduced cross-section due to excessive rusting or other cause.

PART 5 - INSTALLATION

- A. Comply with the specified codes and standards, and Concrete Reinforcing Steel Institute recommended practice for "Placing Reinforcing Bars", for details and methods of reinforcement placement and supports, and as herein specified.
- B. Clean reinforcement to remove loose rust and mill scale, earth, ice, and other materials

- which reduce or destroy bond with concrete.
- C. Position, support, and secure reinforcement against displacement by formwork, construction, or concrete placement operations. Locate and support reinforcing by metal chairs, runners, bolsters, spacers and hangers, as required.
 - D. Place reinforcement to obtain the minimum coverages for concrete protection. Arrange, space, and securely tie bars and bar supports together with 16 gage wire to hold reinforcement accurately in position during concrete placement operations. Set wire ties so that twisted ends are directed away from exposed concrete surfaces.
 - E. Install welded wire fabric in as long lengths as practicable. Lap adjoining pieces at least one full mesh and lace splices with 16 gage wire. Do not make end laps midway between supporting beams, or directly over beams of continuous structures. Offset end laps in adjacent widths to prevent continuous laps.
 - F. Provide sufficient numbers of supports and of strength to carry reinforcement. Do not place reinforcing bars more than 2" beyond the last leg of any continuous bar support. Do not use supports as bases for runways for concrete conveying equipment and similar construction loads.
 - G. Splices: Provide standard reinforcement splices by lapping ends, placing bars on contact, and tightly wire tying. Comply with requirements of ACI 318 for minimum lap of spliced bars.
 - H. Welded wire fabric must have end laps of one full mesh plus two (2) inches between cross wires and edge laps. Welded wire fabric should extend into supporting beams and walls for anchorage unless an expansion joint is called for on the drawings.
 - I. Provide dowels in walls at all construction joints and in wall footings, equivalent in size and number to vertical steel extending 30 bar diameters into footing and 30 bar diameters into wall. Lap vertical wall and column rebars 30 bar diameters unless otherwise shown.
 - J. Reinforcing steel bends to be made as per diagram, and/or in accordance with the ACI Code.

End of Section

SECTION 03310 - CAST-IN-PLACE CONCRETE

PART 1 - GENERAL

- A. The general provisions of the Contract, including General Conditions and Requirements, apply to the work of this section.

PART 2 - DESCRIPTION OF WORK

- A. Work includes furnishing, forming and placing of all concrete work as shown on the drawings, and specified herein, including the following:
 - 1. All anchor bolts required for anchoring steel columns to concrete installed only.
 - 2. All inserts, anchors, etc., that must be placed in forms for later attachment of work of other trades, except Mechanical-Electrical.
 - 3. Building-in of inserts, anchors, sleeves, etc., as furnished by the Mechanical-Electrical Contractors and Structural Steel Supplier.
 - 4. Expansion Joint Filler.
 - 5. Joint Filler and sealer at edge of slabs.
 - 6. Waterstops.
 - 7. Crushed stone fill under slabs on grade.
 - 8. Vapor barrier under slabs on grade.
 - a. 6 mil. polyethylene
 - b. Vapor Seal 1/8" Heavy Duty
 - 9. Curing Compound, Sealer and Hardener.
- B. The extent of cast-in-place concrete (CIP-Conc) work is shown on the drawings.
- C. The work includes providing cast-in-place concrete (CIP-Conc) consisting of portland cement, fine and coarse aggregate, water, and selected admixtures; combined, mixed, transported, placed, finished and cured as herein specified.

PART 3 - RELATED WORK SPECIFIED ELSEWHERE

- A. Concrete Formwork: Section 03110.
- B. Concrete Reinforcement: Section 03210.

PART 4 - CODES AND STANDARD

- A. Comply with the provisions of the following codes, specifications and standards, except as otherwise shown or specified.
 - 1. ACI 301 "Specifications for Structural Concrete for Buildings".
 - 2. ACI 318 "Building Code Requirements for Reinforced Concrete".
 - 3. ACI 304 "Recommended Practice for Measuring, Mixing, Transporting and Placing Concrete".
 - 4. ACI 311 "Recommended Practice for Concrete Inspection".
- B. Where provisions of the above codes and standards are in conflict with building code in force for this project, the building code shall govern.

- C. The Contractor shall employ, at his own expense, a testing laboratory experienced in design of concrete materials and mixes to design concrete mixes.
 - 1. Testing of concrete materials will be paid out of the testing allowance.
- D. Selection of a testing laboratory is subject to the Architect's acceptance.
- E. The testing laboratory shall perform field quality control testing. The Contractor shall provide free access and facilities at any time during the progress of the work.
- F. Materials and installed work may require testing and retesting, as directed by the Architect, at any time during the progress of the work. Allow free access to material stockpiles and facilities at all times. Tests, including the retesting of rejected materials and installed work, shall be done at the Contractor's expense.

PART 5 - TESTS FOR CONCRETE MATERIALS

- A. For normal weight concrete, test aggregates by the methods of sampling and testing of ASTM C33.
- B. For portland cement, sample the cement and determine the properties by the methods of test of ASTM C150.
- C. Submit written reports to the Architect for each material sampled and tested, prior to the start of work. Provide the project identification name and number, date of report, name of contractor, name of concrete testing service, source of concrete aggregates, material manufacturer and brand name for manufactured materials, values specified in the referenced specification for each material, and test results. Indicate whether or not material is acceptable for intended use.

PART 6 - SUBMITTALS

- A. For information only, submit 2 copies of manufacturer's specifications with application and installation instructions for proprietary materials and items, including admixtures, bonding agents, waterstops, joint systems, chemical floor hardeners, and dry shake finish materials.
- B. Submit samples of materials as specified and as otherwise may be requested by the Architect, including names, sources and descriptions as required.
- C. Submit 2 copies of laboratory test reports for concrete materials and mix design tests. The Architect's review will be for general information only. Production of concrete to comply with specified requirements is the Contractor's responsibility.
- D. Provide materials certificates in lieu of materials laboratory test reports only when permitted by the Architect. Material certificates shall be signed by the material manufacturer and the Contractor, certifying that each material item complies with, or exceeds, the specified requirements.
- E. Delivery Tickets: Furnish copies of delivery tickets for each load of concrete delivered to the site. Provide items of information as specified.

PART 7 - CONCRETE

- A. All concrete shall conform and be designed, mixed, placed, tested and cured in accordance with the ultimate strength provisions of the American Concrete Institute Building Code. All concrete shall develop the following compressive strength in 28 days.

Compressive Strength Concrete Schedule

	Minimum 28-Day Compr. Str.	Minimum Cement (per cu.yd.)	Max-Min Slump (inch)	Air Content (%)
All concrete not otherwise indicated	3,500	5-1/2 sacks	4-1	2%-4%
Exterior plaza slabs	4,000	6 sacks	3-1	4%-7%

PART 8 - CONCRETE MATERIALS

- A. Portland Cement: ASTM C 150, as follows:
1. Provide Type 1 cement, except as otherwise indicated. Type 3 cement may be used in lieu of Type 1 at Contractor's option, when acceptable to the Architect.
 2. Provide Type 3 cement for High-Early Strength concrete for exterior concrete when acceptable to the Architect.
- B. Use only one brand of cement for each required type throughout the project, unless otherwise accepted by the Architect.
- C. Aggregates: ASTM C 33, and as herein specified.
1. Local aggregates not complying with ASTM C 33 but which have shown by special test or actual service to produce concrete of adequate strength and durability may be used when acceptable to the Architect.
 2. Do not use aggregates containing soluble salts or other substances such as iron sulfides, pyrite, marcasite or ochre which can cause stains on exposed concrete surfaces.
 3. Fine Aggregate: Clean, sharp, natural sand free from loam, clay, lumps or other deleterious substances.
 4. Dune sand, bank run sand and manufactures sand are not acceptable.
 5. Coarse Aggregate: Clean, uncoated, processed aggregate containing no clay, mud, loam, or foreign matter.
 6. Crushed stone, processed from natural rock or stone.
 7. Washed gravel, either natural or crushed. Use of pit or bank run gravel is not permitted.

8. Maximum Aggregate Size: Not larger than one-fifth of the narrowest dimension between sides of forms, one-third of the depth of slabs, nor three-fourths of the minimum clear spacing between individual reinforcing bars or bundles of bars.
- D. Supply of Aggregates: Provide aggregates from one source of supply to ensure uniformity in color, size and shape.
- E. Water: Clean, fresh, drinkable.
- F. Provide admixtures produced by established reputable manufacturers and use in compliance with the manufacturer's printed directions. Do not use admixtures which have not been incorporated and tested in the accepted mixes, unless otherwise authorized in writing by the Architect.
 1. Air-Entraining Admixtures: ASTM C 260.
 2. Water-Reducing Admixture: ASTM C 494, Type A.
- G. Calcium Chloride: Do not use calcium chloride in concrete, unless otherwise authorized in writing by the Architect. Do not use admixtures containing calcium chloride where concrete is placed against galvanized steel, or in mix using high-early strength cement.

PART 9 - PROPORTIONING AND DESIGN OF MIXES

- A. Prepare design mixes for each type of concrete. Use an independent testing facility acceptable to the Architect for preparing and reporting proposed mix designs.
- B. Proportion mixes by either laboratory trial batch or field experience methods, using materials to be employed on the project for each class of concrete required, complying with ACI 211.1 and report to the Architect the following data:
 1. Complete identification of aggregate source of supply.
 2. Tests of aggregates for compliance with specified requirements.
 3. Scale weight of each aggregate.
 4. Absorbed water in each aggregate.
 5. Brand, type and composition of cement.
 6. Brand, type and amount of each admixture.
 7. Amounts of water used in trial mixes.
 8. Proportions of each material per cu. yd.
 9. Gross weight and yield per cu. yd of trial mixtures.
 10. Measured slump.
 11. Measured air content.
 12. Compressive strength developed at least 7 days and 28 days, from not less than 3 test cylinders cast for each 7 and 28-day test, and for each design mix.
- C. Submit written reports to the Architect of each proposed mix for each type of concrete at least 15 days prior to start of work. Do not begin concrete production until mixes have been reviewed by the Architect.
- D. Laboratory Trial Batches: When laboratory trial batches are used to select concrete proportions, prepare test specimens in accordance with ASTM C 192 and conduct strength tests in accordance with ASTM C 39, as specified in ACI 301.

- E. Establish a curve showing relationship between water-cement ratio (or cement content) and compressive strength, with at least 3 points representing batches which produce strengths above and below that required. Use not less than 3 specimens tested at 28-days, or an earlier age when acceptable to the Architect, to establish each point on the curve.
- F. Field Experience Method: When field experience methods are used to select concrete proportions, establish proportions as specified in ACI 301.
- G. Strength data for establishing standard deviation will be considered suitable if the concrete production facility has certified records consisting of at least 30 consecutive tests in one group or the statistical average for 2 groups totaling 30 or more tests, representing similar materials and project conditions.
 - 1. Standard Deviation: If standard deviation exceeds 600 psi or if no suitable records available, select proportions to produce an average strength of at least 1200 psi greater than the required compressive strength concrete.
 - 2. After sufficient experience and test data become available from the job, using ACI 214 methods of evaluation, the standard deviation may be reduced when the probable frequency of tests more than 500 psi below required compressive strength will not exceed 1 in 100, and that the probable frequency of an average of 3 consecutive tests below required compressive strength will not exceed 1 in 100.
- H. Adjustment to Concrete Mixes: Mix design adjustments may be requested by the Contractor when characteristics of materials, job conditions, weather, test results, or other circumstances warrant; at no additional cost to the Owner and as accepted by the Architect. Laboratory test data for revised mix designs and strength results must be submitted to and accepted by the Architect before using in the work.
- I. Use air-entraining admixture in exterior exposed concrete, unless otherwise shown or specified. Add air-entraining admixture at the manufacturer's prescribed rate to result in concrete at the point of placement having air content within the following limits:
 - 1. Concrete structures and slabs exposed to freezing and thawing or subjected to hydraulic pressure:
 - a. 4% for maximum 2" aggregate.
 - b. 6% for maximum 3/4" aggregate.
 - c. 7% for maximum 1/2" aggregate.
 - 2. Other Exterior Concrete: 2% to 4% air.
- J. Use amounts of admixtures as recommended by the manufacturer for climatic conditions prevailing at the time of placing. Adjust quantities and types of admixtures as required to maintain quality control
- K. Proportion and design mixes to result in concrete slump at the point of placement as follows:
 - 1. Ramps and Sloping Surfaces: Not more than 3".
 - 2. Reinforced Foundation Systems: Not less than 1" and not more than 3".

3. All Other Concrete: Not less than 1" and not more than 3".

PART 10 - CONCRETE MIXING

- A. Concrete may be mixed at batch plants or it may be transit-mixes as specified herein. Batch plants must comply with the requirements of ACI 304, with sufficient capacity to produce concrete of the qualities specified in quantities required to meet the construction schedule. All plant facilities are subject to testing laboratory inspection and acceptance of the Architect.
- B. Comply with the requirements of ASTM C 94, and as herein specified, provided the quantity and rate of delivery will permit unrestricted progress of the work in accordance with the placement schedule. During hot weather, or under conditions contributing to rapid setting of concrete, a shorter mixing time than specified in ASTM C 94 may be required, as specified below. Proposed changes in mixing procedures, other than herein specified, must be accepted by the Architect before implementation.
 1. Plant equipment and facilities: Conform to National Ready-Mix Concrete Association "Check List for Certification of Ready-Mixed Concrete Production Facilities.
- C. Modifications to ASTM C 94 are as follows:
 1. Quality of Concrete: Provide concrete materials, proportions, and properties as herein specified, in lieu of ASTM Section 4.
 2. Tolerances in Slump: Provide slump of not more than the values as herein specified, in lieu of ASTM Section 5.1. Comply with other criteria of ASTM Section 5.
 3. Mixing and Delivery: Delete the references for allowing additional water to be added to the batch for material with insufficient slump. Addition of water to the batch will not be permitted as specified in ASTM Section 9.7, when the air temperature is between 85 degrees F. and 90 degrees F., reduce the mixing and delivery time to 60 minutes. When a truck mixer is used for the complete mixing of the concrete, begin the mixing operation within 30 minutes after the cement has been intermingled with the aggregates.
 4. Certification: Furnish duplicate delivery tickets with each load of concrete delivered to the site, one for the Architect and one for the Contractor. In addition to the requirements of ASTM Section 14.1, provide the following information on delivery tickets:
 - a. Type and brand of cement.
 - b. Cement content per cu. yd. of concrete.
 - c. Maximum size of aggregate.
 - d. Amount and brand name of each admixture.
 - e. Total water content expressed as water/cement ratio.
 5. Strength: Delete ASTM Section 15; comply with concrete testing requirements as herein specified.
- D. Maintain equipment in proper operating condition, with drums cleaned before charging each batch. Schedule rates of delivery in order to prevent delay of placing the concrete after mixing, or holding dry-mixed materials too long in the mixer before the addition

of water and admixtures.

PART 11 - FIELD QUALITY CONTROL

- A. Perform sampling and testing for field quality control during the placement of concrete, as follows:
1. Sampling Fresh Concrete: ASTM C 172, except modified for slump to comply with ASTM C 94.
 2. Slump: ASTM C 143; one test for each concrete load at point of discharge; and one for each set of compressive strength test specimens.
 3. Air Content: ASTM C 231, pressure method; one for every other concrete load at point of discharge, or when the indicating of change requires.
 4. Compression Test Specimens: ASTM C 31; one set of 4 standard cylinders for each compressive strength test, unless otherwise directed.
 - a. Cast and store cylinders for laboratory cured test specimens and field-cured test specimens as specified in ASTM C 31.
 5. Concrete Temperature: Test hourly when air temperature is 40 degrees F. and below, and when 80 degrees F. and above and each time a set of compression test specimens made.
 6. Compressive Strength Tests: ASTM C 39; one set for each 25 cu. yds. or fraction thereof, of each mix design placed in any one day ; 1 specimen tested at 7 days, 2 specimens tested at 28 days, and one specimen retained in reserve for later testing if required.
 - a. When the frequency of testing will provide less than 5 strength tests for a given mix design, conduct testing from at least 5 randomly selected batches or from each batch if fewer than 5 are used.
 - b. When the strength of field-cured cylinders is less than 85% of companion laboratory-cured cylinders, evaluate current operations and provide corrective procedures for protecting and curing the in-place concrete.
- B. Report test results in writing to the Architect, Contractor, and Ready-Mix supplier on the same day that tests are made. Reports of compressive strength tests shall contain the project identifications name and number, date of concrete placement, name of contractor, name of concrete supplier and truck number, name of concrete testing service, concrete type and class, location of concrete batch in the structure, design compressive strength at 28 days, concrete mix proportions and materials; compressive breaking strength and type of break for both 7-day tests and 28-day tests.
- C. The testing service will make additional tests of in-place concrete when test results indicate the specified concrete strengths and other characteristics have not been attained in the structure, as directed by the Architect. The testing service shall conduct tests to determine the strength and other characteristics of the in-place concrete by compression tests on cored cylinders complying with ASTM C 42, or by load testing specified in ACI 381, or other acceptable non-destructive testing methods, as directed. The

Contractor shall pay for such tests conducted, and any other additional testing as may be required, when unacceptable concrete is verified.

- D. Do not use concrete delivered to the final point of placement which has slump or total air content outside the specified values.
- E. Compressive strength tests for laboratory-cured cylinders will be considered satisfactory if the averages of all sets of three consecutive compressive strength test results equal or exceed the 28-day design compressive strength of the type or class of concrete; and, no individual strength test falls below the required compressive strength by more than 500 psi.
- F. Strength tests of specimens cured under field conditions may be required by the Architect to check the adequacy of curing and protection of the concrete places. Specimens shall be molded by the field quality control laboratory at the same time and from the same samples as the laboratory cured specimens.
- G. Provide improved means and procedures for protecting concrete when the 28-day compressive strength of field-cured cylinders is less than 85% of companion laboratory-cured cylinders.
- H. When laboratory-cured cylinder strengths are appreciably higher than the minimum compressive strength, field-cured cylinder strengths need not exceed the minimum required compressive strength by more than 500 psi even though the 85% criterion is not met.
- I. If individual tests of laboratory-cured specimens produce strengths more than 500 psi below the required minimum compressive strength, or if tests of field-cured cylinders indicate deficiencies in protection curing, provide additional measures to assure that the load-bearing capacity of the structure is not jeopardized. If the likelihood of low-strength concrete is confirmed and computations indicate the load-bearing capacity may have been significantly reduced, tests of cores drilled from the area in question may be required.
- J. If the compressive strength tests fail to meet the minimum requirements specified, the concrete represented by such tests will be considered deficient in strength and subject to additional testing as herein specified.

PART 12 - FORMED CONCRETE DIMENSIONAL TOLERANCES

- A. Formed concrete having any dimension smaller or greater than required, and outside the specified tolerance limits, will be considered deficient in strength and subject to additional testing as herein specified.
- B. Formed concrete having any dimension greater than required will be rejected if the appearance or function of the structure is adversely affected, or if the larger dimensions interfere with other construction. Repair, or remove and replace rejected concrete as required to meet the construction conditions. When permitted, accomplish the removal of excessive material in a manner to maintain the strength of the section without affecting function and appearance.

PART 13 - STRENGTH OF CONCRETE STRUCTURES

- A. The strength of the concrete structure in-place will be considered potentially deficient if it fails to comply with any of the requirements which control the strength of structure, including the following conditions.
1. Failure to meet compressive strength tests requirements.
 2. Concrete which differs from the required dimensions or location in such a manner to reduce strength.
 3. Concrete subjected to damaging mechanical disturbances; particularly load stresses, heavy shock, and excessive vibration.
 4. Poor workmanship and quality control likely to result in deficient strength.
- B. When there is evidence that the strength of the concrete structure in-place does not meet specification requirements, the concrete testing service shall take cores drilled from hardened concrete for compressive strength determination, complying with ASTM C 42 and as follows:
1. Take at least 3 representative cores from each member or area or suspect strength, from locations directed by the Architect.
 2. Test cores in a saturated-surface-dry condition per ACI 318 if the concrete will be wet during the use of the completed structure.
 3. Test cores in an air-dry condition per ACI 318 if the concrete will be dry at all times during use of the completed structure.
 4. Strength of concrete for each series of cores will be considered satisfactory if their average compressive strength is at least 85% and no single core is less than 75% of the 28-day required compressive strength.
 5. Report test results in writing to the Architect on the same day that tests are made. Include in test reports the project identification name and number, date, name of contractor, name of concrete testing service, location of test core sample, nominal maximum size aggregate, design compressive strength, compression breaking strength and type of break (corrected for length-diameter ratio) direction of applied load to core with respect to horizontal plane of the concrete as placed, and the moisture condition of the core at time of testing.
 6. Fill core holes solid with patching mortar, and finish to match adjacent concrete surfaces.
 7. Conduct static load test and evaluations complying with ACI 318 if the results of the core tests are unsatisfactory, or if core tests are impracticable to obtain, as directed by the Architect.
- C. Concrete work which does not conform to the specified requirements, including strength, tolerances, and finishes, shall be corrected at the Contractor's expense, without

extension of time therefore. The Contractor shall also be responsible for the cost of corrections to any other work affected by or resulting from corrections to the concrete work.

PART 14 - JOINT MATERIALS

- A. Preformed Expansion Joint Fillers: Type 1 - Standard - highly resilient.
- B. Joint Sealing Compound: Polysulfide sealants, elastomeric caulk; Hornflex by Construction Products Division, W.R. Grace & Company or an approved equal.

PART 15 - MOISTURE BARRIER

- A. Provide moisture barrier cover over prepared base material where shown on drawings. Use only materials which are resistant to decay when tested in accordance with ASTM E 154, as follows:
 - 1. Polyethylene sheet not less than 10 mils thick.
 - 2. Water resistance barrier paper consisting of heavy Kraft paper laminated together with glass fiber reinforcement and overcoated with black polyethylene on each side.

PART 16 - BONDING AGENT

- A. Chemical Bonding Agent: Film-forming, freeze-thaw resistant compound suitable for brush or spray application complying with Mil B-19235.
- B. Provide concrete bonding agent as manufactured by one of the following or approved equal.
 - 1. Polyweld; Chem-Master Corp.
 - 2. Daraweld-PBA; W,R, Grace

PART 17 - CONTROL JOINTS

- A. Form control joints in concrete wall where shown and as detailed on the Drawings.

PART 18 - CONCRETE CURING MATERIALS

- A. Absorptive Cover: Burlap cloth made from jute or kenaf, weighing approximately 9 oz. per sq. yd. and complying with AASHO M 182, Class 3.
- B. Moisture-Retaining Cover: One of the following, complying with ASTM C 171:
 - Waterproof Paper
 - Polyethylene Film
 - White Burlap-Polyethylene Sheet

- C. Liquid Membrane-Forming Curing Compound: Liquid type membrane-forming curing compound complying with ASTM C 309, Type I, unless other type acceptable to the Architect.
1. Products offered by manufacturers to comply with the requirements for membrane-forming curing compounds include the following:
Masterseal; Master Builder's Co.
Clear Seal; A.C. Horn/W.R. Grace
Kure-N-Seal; Sonneborn-Contech
Polyclear; Upco Chemical/USM Corp.
Clear Cure; L&M Construction Chemicals
Klearseal; Castle Chemical Corp.
LR-151; Protect Industries

PART 19 - PREPARATION

- A. Before placing concrete, inspect and complete the form work installation, reinforcing steel, and items to be embedded or cast-in. Notify other crafts involved in ample time to permit the installation of their work; cooperate with other trades in setting such work, as required.
- B. Forms shall be constructed of materials as indicated for use and purpose intended. See Architect's Drawings also.
- C. Coordinate the installation of joint materials and moisture barriers with placement of forms and reinforcing steel.

PART 20 - CONCRETE PLACEMENT

- A. Place concrete in compliance with the practices and recommendations of ACI 304, and as herein specified.
- B. Deposit concrete continuously or in layers of such thickness that no concrete will be placed on concrete which has hardened sufficiently to cause the formation of seams or planes of weakness within the section. If a section cannot be placed continuously, provide construction joints as herein specified. Perform concrete placing at such a rate that concrete which is being integrated with fresh concrete is still plastic. Deposit concrete as nearly as practicable to its final location to avoid segregation due to handling or flowing. Do not subject concrete to any procedure which will cause segregation.
- C. Scream concrete which it is to receive other construction to the proper level to avoid excessive skimming or grouting.
- D. Do not use concrete which becomes non-plastic and unworkable, or does not meet the

required quality control limits, or which has been contaminated by foreign materials. Do not use re-tempered concrete. Remove rejected concrete from the project site and dispose of in an acceptable location.

- E. Handle concrete from the point of delivery and transfer to the concrete conveying equipment and to the locations of final deposit as rapidly as practicable by methods which will prevent segregation and loss of concrete mix materials.
- F. Provide mechanical equipment for conveying concrete to ensure a continuous flow of concrete at the delivery end. Provide runways for wheeled concrete conveying equipment from the concrete delivery point to the locations of final deposit. Keep interior surfaces of conveying equipment, including chutes, free of hardened concrete, debris, water, snow, ice, and other deleterious materials.
- G. Deposit concrete in forms in horizontal layers not deeper than 24" and in a manner to avoid inclined construction joints. Where placement consists of several layers, place each layer while preceding layer is still plastic to avoid cold joints.
- H. Remove temporary spreaders in forms when concrete placing has reached the elevation of such spreaders.
- I. Consolidate concrete placed in forms by mechanical vibrating equipment supplemented by hand-spading, rodding or tamping. Use equipment and procedures for consolidation of concrete in accordance with the recommended practices of ACI 309, to suit the type of concrete and project conditions. Vibration of forms and reinforcing will not be permitted, unless otherwise accepted by the Architect.
- J. Do not use vibrators to transport concrete inside of forms. Insert and withdraw vibrators vertically at uniformly spaced locations not farther than the visible effectiveness of the machine. Place vibrators to rapidly penetrate the layer of concrete that have begun to set. At each insertion, limit the duration of vibration to the time necessary to consolidate the concrete and complete embedment of reinforcement and other embedded items without causing segregation of the mix.
- K. Consolidate concrete during placing operations using mechanical vibrating equipment, so that concrete is thoroughly worked around reinforcement and other embedded items and into corners.
- L. Bring slab surfaces to the correct level with a straight edge and strike off. Use bull flats or darbies to smooth the surface. Do not disturb the slab surfaces prior to beginning finishing operations.
- M. Maintain reinforcing steel in the proper position continuously during concrete placement operations.

PART 21 - BONDING

- A. Roughen surfaces of set concrete at all joints, except where bonding is obtained by use of a concrete bonding agent, and clean surfaces of laitance, coatings, loose particles, and foreign matter. Roughen surfaces in manner to expose bonded aggregate uniformly and not to levee laitance, loose particles of aggregate, or damaged concrete at the surface.

PART 22 - EXTERIOR AND INTERIOR WALLS

- A. Grout air holes with mortar. Remove excess grout. Patches shall be ground to produce uniform surfaces, free of blemished and fins to the satisfaction of the Architect. Patches shall be kept continuously moist for a period minimum of six days.
- B. Fill tie holes after form oil have evaporated sufficiently for good bond as specified for patching operation above. Exposed walls shall receive a rubbed finish.
- C. At completion, concrete shall be of uniform texture and finish.

PART 23 - COLD WEATHER PLACING

- A. Protect all concrete work from physical damage or reduced strength which could be caused by frost, freezing actions, or low temperatures, in compliance with the requirements of ACI 306 and as herein specified.
- B. When the air temperature has fallen to or is expected to fall below 40 degrees F., provide adequate means to maintain the temperature in the area where concrete is being placed at either 70 degrees JF. for 3 days or 50 degrees F. for 5 days after placing. Provide temporary housings or coverings including tarpaulins or plastic film. Keep protections in place and intact at least 24 hours after artificial heat is discontinued. Avoid rapid dry-out of concrete due to overheating, and avoid thermal shock due to sudden cooling or heating.
- C. When air temperature has fallen to or is expected to fall below 40 degrees F. uniformly heat all water and aggregates before mixing as required to obtain a concrete mixture temperature of not less than 50 degrees F. and not more than 80 degree F. at point of placement.
- D. Do not use frozen materials containing ice or snow. Do not place concrete on frozen subgrade or on subgrade containing frozen materials. Ascertain that forms, reinforcing steel, and adjacent concrete surfaces are entirely free of frost, snow and ice before placing concrete.
- E. Do not use calcium chloride, salt, and other materials containing antifreeze agents or chemical accelerators.

PART 24 - HOT WEATHER PLACING

- A. When hot weather conditions exist that would seriously impair the quality and strength of concrete, place concrete in compliance with ACI 305 and as herein specified.
- B. Cool ingredients before mixing to maintain concrete temperature at time of placement below 90 degrees F. Mixing water may be chilled, or chopped ice may be used to control the concrete temperature provided the water equivalent of the ice is calculated to the total amount of mixing water.
- C. Cover reinforcing steel with water-soaked burlap if it becomes too hot, so that the steel temperature will not exceed the ambient air temperature immediately before embedment in concrete.
- D. Wet forms thoroughly before placing concrete.
- E. Use set-control admixtures when required and accepted in mix designs.

PART 25 - CONSTRUCTION JOINTS

- A. Provide keyways at least 1½" deep in all construction joints in walls, slabs, and between walls and footings.
- B. Place construction joints perpendicular to the main reinforcement. Continue all reinforcement across construction joints.

PART 26 - FINISH OR FORMED SURFACES

- A. Provide as-cast rough form finish to formed concrete surfaces that are to be concealed in the finish work or by other construction, unless otherwise indicated.
- B. Standard form finish shall be the concrete surface having the texture imparted by the form facing material used, with tie holes and defective areas repaired and patched and all fins and other projections exceeding 1/4" in height rubbed down or chipped off.
- C. Provide smooth rubbed (SmRbd-Fn) to front exterior exposed concrete surfaces, which have received smooth form finish treatment, not later than the day after form removal.
- D. At tops of walls, horizontal offsets, and similar unformed surfaces occurring adjacent to formed surfaces, strike off smooth and finish with a texture matching the adjacent formed surfaces. Continue the final surface treatment of formed surfaces uniformly across the adjacent unformed surfaces, unless otherwise shown.
- E. After placing concrete slabs, do not work the surface further until ready for floating. Begin floating when the surface water has disappeared or when the concrete has stiffened sufficiently to permit the operation of a power-driven float, or both. Consolidate the surface with power-driven floats, or by hand-floating if area is small or inaccessible to power units. Check and level the surface plane to a tolerance not exceeding 1/4" in 10' when tested with a 10' straightedge placed on the surface at not less than 2 different angles. Cut down high spots and fill all low spots. Uniformly slope

surfaces to drains. Immediately after leveling, refloat the surface to a uniform smooth, granular texture.

PART 27 - CONCRETE CURING AND PROTECTION

- A. Protect freshly placed concrete from premature drying and excessive cold or hot temperature, and maintain without drying at a relatively constant temperature for the period of time necessary for hydration of the cement and proper period of time necessary for hydration of the cement and proper handling of the concrete.
- B. Start initial curing as soon as free moisture has disappeared from the concrete surface after placing and finishing. Weather permitting, keep continuously moist for not less than 72 hours.
- C. Begin final curing procedures immediately following initial curing and before the concrete has dried. Continue final curing for at least 7 days and in accordance with ACI 301 procedures. Avoid rapid drying at the end of the final curing period.

PART 28 - CURING METHODS

- A. Perform curing of concrete by moist curing, by moisture-retaining cover curing, by membrane curing, or by combinations thereof, as herein specified, optional to the Contractor with approval from the Architect.
 - 1. For curing, use only water that is free of impurities which could etch or discolor exposed, natural concrete surfaces.
 - 2. Keeping the surface of the concrete continuously wet by covering with water.
 - 3. Continuous water-fog spray.
 - 4. Covering the concrete surface with the specified absorptive cover, thoroughly saturating the cover with water, and keeping the absorptive continuously wet. Place absorptive cover so as to provide coverage of the concrete surfaces and edges, with a 4" lap over adjacent absorptive covers.
 - 5. Cover the concrete surfaces with the specified moisture-retaining cover for curing concrete, placed in the widest practicable width with sides and ends lapped at least 3" and sealed by waterproof tape or adhesive. Immediately repair any holes or tears during the curing period using cover material and waterproof tape.
 - 6. Apply the specified membrane-forming curing compound to damp concrete surfaces as soon as the water film has disappeared. Apply uniformly in a 2-coat continuous operation by power spray equipment in accordance with the manufacturer's directions. Recoat areas which are subjected to heavy rainfall within 3 hours after initial application. Maintain the continuity of the coating and

repair damage to the coat during the entire curing period.

7. Do not use membrane curing compounds on surfaces which are to be covered with a coating material applied directly to the concrete or with a covering material bonded to the concrete, such as other concrete, liquid floor hardener, waterproofing, damp proofing, membrane roofing, flooring, painting and other coatings and finish materials, unless otherwise acceptable to the Architect.

PART 29 - CURING FORMED SURFACES

- A. Cure formed concrete surfaces, including the undersides of girders, joist, beams, supported slabs and other similar surfaces by moist curing with the forms in place for the full curing period or until forms are removed. If forms are removed, continue curing by methods specified above, as applicable.

PART 30 - CURING UNFORMED SURFACES

- A. Initially cure unformed surfaces, such as slabs and other flat surfaces by moist curing, whenever possible.
- B. Final cure unformed surfaces, unless otherwise specified, by any of the methods specified above, as applicable.
- C. Final cure concrete surfaces to receive liquid floor hardener or finish flooring by use of moisture-retaining cover, unless otherwise acceptable to the Architect.

PART 31 - FINAL CURING OF CONCRETE

- A. During the curing period, protect concrete from damaging mechanical disturbances including load stresses, heavy shock, excessive vibration, and from damage caused by rain or flowing water. Protect all finished surfaces from damage by subsequent construction operations.

PART 32 - MISCELLANEOUS CONCRETE ITEMS

- A. Provide concrete grout for reinforced masonry lintels door jambs and bond beams where indicated on drawings and as scheduled. Maintain accurate location of reinforcing steel during concrete placement.
- B. Fill-in holes and opening left in concrete structures for the passage of work by other trades, unless otherwise shown or directed, after the work of other trades is in place. Mix, place and cure concrete as herein specified, to blend with in-place construction. Provide all other miscellaneous concrete filling shown or required to complete the work.
- C. Place dove tail slots in all concrete surfaces where concrete and masonry walls connect.

- D. The concrete in each integral unit of the structure shall be placed continuously, and the Contractor shall not begin work without sufficient approved material on hand nor without sufficient forces and equipment to complete that unit without interruption in placing the concrete.
- E. Reinforce all walls, unless otherwise specified or shown on the drawings, with number five (5) bars at 12 inches on centers horizontal and vertical.
- F. Provide monolithic finish to interior curbs by stripping forms while concrete is still green and steel-troweling surfaces to a hard, dense finish with corners, intersections, and terminations slightly rounded.
- G. Equipment Bases and Foundations: Provide machine and equipment bases and foundations, as shown on the drawings. Set anchor bolts for machines and equipment to template at correct elevations, complying with certified diagrams or templates of the manufacturer furnishing the machines and equipment.

PART 33 - CONCRETE SURFACE REPAIRS

- A. Repair and patch defective areas with cement mortar immediately after removal of forms, but only when directed by the Architect.
- B. Cut out honeycomb, rock pockets, voids over 1/2" diameter, and holes left by tie rods and bolts, down to solid concrete but, in no case, to a depth of less than 1". Make edges of cuts perpendicular to the concrete surface. Before placing the cement mortar, thoroughly clean, dampen with water, and brush-coat the area to be patched with neat cement grout. Proprietary patching compounds may be used when acceptable to the Architect.
- C. For exposed-to-view-surfaces, blend white portland cement and standard portland cement so that, when dry, the patching mortar will match the color of the surrounding concrete. Provide test areas at inconspicuous location to verify mixture and color match before proceeding with the patching. Compact mortar in place and strike off slightly higher than the surrounding surface.
- D. Fill holes extending through concrete by means of a plunger-type gun or other suitable device from the least exposed face, using a flush stop held at the exposed face to ensure complete filling.
- E. Repair of Unformed Surfaces: Test unformed surfaces, such as slabs, for smoothness and to verify surface plane to the tolerances specified for each surface and finish. Correct low and high areas as herein specified.
- F. Test unformed surfaces sloped to drain for trueness of slope, in addition to smoothness,

using a template having the required slope. Correct high and low areas as herein specified.

- G. Repair finished unformed surfaces that contain defects which adversely affect the durability of the concrete. Surface defects, as such, include crazing, cracks in excess of 0.01" wide or which penetrate to the reinforcement or completely through non-reinforced sections regardless of width, spalling, popouts, honeycomb, rock pockets, and other objectional conditions.
- H. Correct high areas in unformed surfaces by grinding, after the concrete has cured sufficiently so that repairs can be made without damage to adjacent areas.
- I. Correct low areas in unformed surfaces during, or immediately after completion of surface finishing operations by cutting out the low areas and replacing with fresh concrete. Finish repaired areas to blend into adjacent concrete. Proprietary patching compounds may be used when acceptable to the Architect.
- J. Repair defective areas, except random cracks and single holes not exceeding 1" diameter, by cutting out and replacing with fresh concrete. Remove defective areas to sound concrete with clean, square cuts, and expose reinforcing steel with at least 3/4" clearance all around. Dampen all concrete surfaces in contact with patching concrete and brush with a neat cement grout coating, or use concrete bonding agent. Place patching concrete before grout takes its initial set. Mix patching concrete of the same type or class as the original adjacent concrete. Place, compact and finish as required to blend with adjacent finished concrete. Cure in the same manner as adjacent concrete.
- K. Repair isolated random cracks and single holes not over 1" in diameter by the dry-pack method. Groove the top of cracks, and cut out holes to sound concrete and clean out dust, dirt and loose particles. Dampen all cleaned concrete surfaces and brush with a neat cement grout coating. Place dry-pack before the cement grout takes its initial set. Mix dry-pack, consisting of one part portland cement to 2½ parts fine aggregate passing a No. 16 mesh sieve, using only enough water as required for handling and placing. Compact dry-pack mixture in place and finish to match adjacent concrete. Keep patched areas continuously moist for not less than 72 hours.
- L. Repair methods not specified above may be used, subject to the acceptance of the Architect.

End of Section

Division IV – Masonry

SECTION 04200 - UNIT MASONRY

PART 1 - GENERAL

- A. This Section includes all labor, materials, equipment, and related items required for the work of unit masonry as shown on the Drawings and as specified.

PART 2 - PRODUCT HANDLING

- A. Store all masonry units on screeds and under cover to properly protect from the elements until ready for use. Dirty, cracked, chipped, or otherwise damaged masonry units shall not be used.

PART 3 - ENVIRONMENTAL CONDITIONS

- A. Masonry shall not be laid in freezing weather unless suitable means are used to heat the materials and protect the work from cold and frost, and to insure that the mortar will properly harden without freezing.

PART 4 - PROTECTION

- A. The Contractor shall protect exposed masonry materials of every kind against staining, and the tops of all walls shall be kept covered with non-staining waterproof covering at the end of each work day and at any time the work thereon is not in progress. When starting or resuming work at a new level, the top surface of the work in place shall be cleaned of all loose mortar and foreign materials and in drying weather thoroughly wetted with clean water. Then resume laying.

PART 5 - MATERIALS

A. Masonry Units:

1. Face brick shall conform to ASTM C216, solid or cored. See elevation for type.
 - a. Provide all special matching face brick units for applications where indicated by the details or required, including sill units. Units shall conform to details and dimensions shown on the Drawings and finished surfaces shall be indistinguishable from those of face brick specified above.
2. Concrete block for general use throughout the project shall be hollow, load-bearing concrete masonry units complying with ASTM C90, Grade N-1, shall have nominal 8" x 16 face, or as shown, shall have a compressive strength of not less than 800 p.s.i. for individual units and an average of 1,000 for five units.
 - a. Exterior CMU shall be waterproof with waterproof mortar.
 - b. All aggregates for concrete masonry units shall conform to ASTM C331, and shall be expanded shale produced by the rotary kiln process.

- c. All units shall be made with Portland cement complying with ASTM C150, and weighing not more than 100 lbs. per cubic foot.
 - d. All units shall be square, true, and have sharp arriser. They shall be of consistent texture, and shall be dimensionally stable with regard to height, width, and lengths. All units shall be free of organic impurities that will cause rusting, staining, or pop-outs, and shall contain no combustible matter.
 - e. Steam Curing. All concrete blocks shall be steamed in an atmosphere of 100 degrees F. for a period of 4 to 6 hours. Steam curing shall commence after masonry units have been allowed to "set" for a period of 1-1/2 to 2 hours. After steam curing, allow kiln temperature to drop slowly before removing blocks from kiln. Blocks shall be stored for a period of 30 days and protected from the weather during this period before delivery to site.
3. Fire rated concrete block for use in interior shafts shall conform to general specifications for other concrete block set forth above, and shall conform to Underwriter's Laboratories D-2 classification for two-fire rating.
- a. Manufacturer of concrete block units shall provide U.L. standard certificate certifying that materials furnished meet classification specified to the Architect for approval prior to delivery of units to the site.,

B. Masonry Wall Reinforcement:

- 1. Provide all prefabricated internal or external corners required by installation.

C. Anchors and ties shall be of corrosion resistant metal equal in strength, size and numbers to conform with requirements of American standard A41.1 titled American Standard Building Code Requirements for Masonry.

- 1. Brick wall ties. crimped wall ties for anchorage of face brick to backing in metal stud frame shall be crimped galvanized metal 22 gauge, 7/8" wide x 7" long.
- 2. Truss type reinforcement for horizontal reinforcing at concrete masonry partitions. Reinforcement shall be Dur-O-Wall Truss No. 9 gauge cross rod or approved equal. All components of anchor to ave a hot dipped galvanized finish. Place joint reinforcement directly on masonry and place mortar over wire to form bed joint.

D. Damproofing material for treatment of exterior brick surfaces shall be colorless 5 percent solution of silicone resins especially formulated to render masonry surfaces water repellent, and shall be Sonneborn "Hydrocide S-X Hycon", or as manufactured by Sika, Toch Bros.

PART 6 - SAMPLE WALL

- A. Before laying any wall construction, the Contractor shall build sample composite of concrete block, 5 feet wide x 4 feet high, for approval of the Owner and Architect. Approved wall shall be standard for wall construction and for brick and block. Sample wall shall demonstrate acceptable workmanship for bond specified.

PART 7 - LAYING BRICK

- A. Lay all face brick in exterior wall construction using Type N mortar furnished under work of Section 04100.
1. All brick shall be thoroughly wet before laying, except in freezing weather. All bed and head joints shall be completely filled with mortar. Fill all head joints with a heavy buttering or mortar on one side of the brick, press the brick down into the bed joint and push the brick into place so that the mortar squeezes out from the top and sides of the head joint. Mortar should correspondingly cover the entire side of a brick before placing with next brick. Attempting to fill joints by slushing or dashing will not be permitted. Partial filling of joints by buttering or spotting the vertical edges of the brick with mortar cut from the extruded bed joint will not be permitted. Where closures are required, the opening should be filled with mortar so that insertion of the closure will extrude mortar, both laterally and vertically. All brick work shall be plumb, true to line, courses level and properly anchored to back-up, abutting masonry and concrete as follows:
 - a. Where composite wall construction is indicated, face brick shall be bonded to backup by installation of continuous masonry wall reinforcement, spaced 16" o.c. vertically, extending through both brick and backup as shown in the Drawings.
 2. Face Brick Bond. The bond for brick laid in walls shall be running bond with tooled joints throughout. Coursing shall be accurately spaced and laid out in such manner that the bond is kept plumb throughout variations in the width of vertical joints shall be inconspicuous and made only as necessary to maintain the bond. Improper layout of bond will be rejected. Intersecting and abutting walls and corners shall be bonded together by interlocking alternate courses of brick. No brick smaller than 3-3/4" long shall be used as a jamb closure, and all cuts required shall be made with a masonry saw.
 3. Face Joints. All face joints in brick shall be for horizontal joints as shown on the drawings, and for vertical or head joints may be from 5/16" to 7/16" to adjust bond and minimize cutting at openings. In exposed wall faces, joints shall be cut flush, and as the mortar takes its initial set, shall be tooled with 1/2 inch diameter round tool 6" longer than the length of the masonry unit. Tooling shall compact the mortar tightly against the masonry units on both sides of the joints. Head joints shall be tooled first. Joints must be tooled smooth, even and uniform. At completion of work, all holes in joints of exposed masonry must be filled. Rake joints 3/8" deep at jambs of brick abutting other materials and at other joints shown to be caulked by others under work of Section 07900; except that caulked control joints shall be treated as specified below.
 4. Control Joints. Provide continuous 3/8" wide vertical control joints in exterior face

brick where indicated by cutting half-brick closures in alternate courses, omitting mortar continuously in the joint. Control joints shall fall at normal head joint locations and shall be absolutely plumb so as to be inconspicuous in the finish work. Caulking of control joints is specified under Section 07900.

5. Weeps. Provide weep holes in exterior brick wall surfaces in all joints containing through wall membrane flashing at spacing shown on the Drawings. Weeps shall be made by using Quadro vents, top and bottom.

B. Workmanship. The Contractor is cautioned that the Architect will demand first class workmanship. All brick masonry shall be performed by experienced masons. Any chipped, cracked, or otherwise damaged or defective work will be rejected.

PART 8 - LAYING CONCRETE BLOCK

A. Lay all concrete block in exterior and interior wall construction where indicated, using Type N mortar furnished under work of Section 04100, except that Type S mortar shall be used in laying concrete block below grade.

B. All bed and head joints shall be completely filled with mortar. Bed joints shall be filled by spreading a thick bed of mortar. Fill head joints with a heavy buttering of mortar on one side (each flange) of block, press the block down into the bed joint, and push the block into place so that the mortar squeezes out from the top and sides of the head joint. Mortar should correspondingly cover the end flange of the block before placing the next block. Attempting to fill joints by slushing or dashing will not be permitted. Partial filling of joints with mortar cut from the extruded bed joint will not be permitted. Where closures are required, fill with mortar so that the intersection of the closure will extrude mortar, both laterally and vertically. Extend walls and partitions to heights indicated, building in around joist bearings, etc. as shown or required. Cut units as required to properly course in plan and vertical section as shown on the Drawings or as directed by the Architect. All cuts shall be accurately made with masonry saw.

1. Anchorages of concrete block to various backup material shall be as specified under Article 8 above for brick.

C. Joints and Bond. All concrete masonry units shall be laid in running bond. Joints in concrete block work shall be 3/8" wide for both head and bed joints. Joints in masonry scheduled to receive separate finish or where concealed in the work shall be cut flush. Rake joints 3/8" deep at control joints, where masonry abuts concrete surfaces, etc., and otherwise where shown on the Drawings, for caulking by others under work of Section 07900.

D. Reinforcement. Concrete masonry walls and partitions shall be reinforced continuously in every other course, (16" o.c. vertically) using masonry wall reinforcement of types as hereinbefore specified. Reinforcement shall be seated in the mortar bed by lifting cross ties as work progresses. Lay internal and external corners and intersections as required for the completed job.

- E. Chases for pipes, conduits, etc. shall be plumb and smooth on the inside, with offsets formed where required, kept free of obstructions and cleaned out on completion. There shall be at least 8" of masonry between chases and the jambs of openings.
- F. Build units accurately to metal door frames, building in anchors furnished with frames. Slush solid with mortar at jambs and head.
- G. Coordinate work with other trades, building in all items shown to be installed in concrete block work such as lintels, anchors, sleeves, etc. Prepare openings as shown or required for proper installation of mechanical, electrical, and other items.
- H. Cleaning. Extreme care shall be exercised during laying to protect units from mortar droppings, etc. Upon completion of work, all exposed concrete block shall be properly cleaned with a stiff bristle brush to remove all excess mortar, dirt and stains. Do not use acid.
- I. Workmanship. The contractor is cautioned that the Architect will demand first class workmanship. All concrete masonry work shall be performed by experienced masons. Any chipped, cracked or otherwise damaged or defective work will be rejected.

PART 10 - THROUGH-WALL MEMBRANE FLASHING

- A. Install York seal 40 mil self-adhering flashing or equal through-wall membrane flashing continuously in horizontal joints of exterior walls, at window openings, etc. where shown on the Drawings. Installation shall be in strict accordance with manufacturer's printed instruction. Flashings shall extend generally from within 1/2" of exterior wall face through the wall as detailed.
 - 1. Where laps occur, lap sheets at least 6" and seal with cold setting cement. Roll to insure full adhesion.
 - 2. At obstructions, carry flashing up 6" and secure with cold setting cement.
 - 3. Where ties or anchors, conduit, etc. penetrate through sheet, punctures shall be made minimum size possible and mastic troweled around place to thoroughly seal the puncture.
 - 4. At lintels and shelf angles, flashings shall extend minimum of 6" beyond ends of lintels.

End of Section

Division V – Metals

SECTION 05120 - STRUCTURAL STEEL

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section Includes:

- 1. Structural steel.
- 2. Grout.

- B. Related Sections:

- 1. Division 1 Section "Quality Requirements" for independent testing agency procedures and administrative requirements.
- 2. Division 5 Section "Architecturally Exposed Structural Steel Framing" for additional requirements for architecturally exposed structural steel.
- 3. Division 5 Section "Steel Deck" for field installation.
- 4. Division 5 Section "Metal Fabrications" for steel lintels and shelf angles not attached to structural-steel frame, miscellaneous steel fabrications, and other metal items not defined as structural steel.
- 5. Division 5 Section "Metal Stairs."
- 6. Division 9 painting Sections for surface-preparation and priming requirements.

1.3 DEFINITIONS

- A. Structural Steel: Elements of structural-steel frame, as classified by AISC 303, "Code of Standard Practice for Steel Buildings and Bridges."

1.4 PERFORMANCE REQUIREMENTS

- A. Connections: Provide details of connections required by the Contract Documents to be selected or completed by structural-steel fabricator, to withstand loads indicated and comply with other information and restrictions indicated.

1.5 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Shop Drawings: Show fabrication of structural-steel components.
 - 1. Include details of cuts, connections, splices, camber, holes, and other pertinent data.
 - 2. Include embedment drawings.
 - 3. Indicate welds by standard AWS symbols, distinguishing between shop and field welds, and show size, length, and type of each weld. Show backing bars that are to be removed and supplemental fillet welds where backing bars are to remain.
 - 4. Indicate type, size, and length of bolts, distinguishing between shop and field bolts. Identify pretensioned and slip-critical high-strength bolted connections.
 - 5. For structural-steel connections indicated to comply with design loads, include structural design data .
- C. Welding Procedure Specifications (WPSs) and Procedure Qualification Records (PQRs): Provide according to AWS D1.1/D1.1M, "Structural Welding Code - Steel," for each welded joint , including the following:
 - 1. Power source (constant current or constant voltage).
 - 2. Electrode manufacturer and trade name, for demand critical welds.
- D. Qualification Data: For qualified Installer AND fabricator.
- E. Welding certificates.
- F. Paint Compatibility Certificates: From manufacturers of topcoats applied over shop primers, certifying that shop primers are compatible with topcoats.
- G. Mill test reports for structural steel, including chemical and physical properties.
- H. Product Test Reports: For the following:
 - 1. Bolts, nuts, and washers including mechanical properties and chemical analysis.
 - 2. Direct-tension indicators.
 - 3. Tension-control, high-strength bolt-nut-washer assemblies.
 - 4. Shear stud connectors.
 - 5. Shop primers.
 - 6. Nonshrink grout.
- I. Source quality-control reports.

1.6 QUALITY ASSURANCE

- A. Fabricator Qualifications: A qualified fabricator that participates in the AISC Quality Certification Program and is designated an AISC-Certified Plant, Category STD., OR AWS SHOP CERTIFIED OR employ an independent special inspection agency to verify the fabrication of all structural members. This inspection agency shall have AWS D1.1 qualifications and be approved by the Engineer and Owner. The Special Inspection agency (for the steel fabricator) must submit reports of acceptance for all shop fabricated items as required in KBC-2007, section 1704.2 and 1704.3. The cost of this shall be the sole responsibility of the Steel Fabricator. Any material sent to the site without a report of acceptance from the fabricator's special inspector will be inspected by the owner's special inspector. The cost of these additional tests will be deducted from the contractor's application for payment. If the lack of inspections from the fabricator persists, then owner's special inspector will be sent to the fabricator's shop daily to inspect all of the material for this project and the costs for these inspections will be deducted from the contractor's application for payment (NO EXCEPTIONS).
- B. Installer Qualifications: A qualified installer with a minimum of 5 years experience on projects of similar (or larger) scale, with regard to size and complexity.
- C. Shop-Painting Applicators: Qualified according to AISC's Sophisticated Paint Endorsement P1 or SSPC-QP 3, "Standard Procedure for Evaluating Qualifications of Shop Painting Applicators."
- D. Welding Qualifications: Qualify procedures and personnel according to AWS D1.1/D1.1M, "Structural Welding Code - Steel."
- E. Comply with applicable provisions of the following specifications and documents:
 - 1. AISC 303.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Store materials to permit easy access for inspection and identification. Keep steel members off ground and spaced by using pallets, dunnage, or other supports and spacers. Protect steel members and packaged materials from corrosion and deterioration.
 - 1. Do not store materials on structure in a manner that might cause distortion, damage, or overload to members or supporting structures. Repair or replace damaged materials or structures as directed.
- B. Store fasteners in a protected place in sealed containers with manufacturer's labels intact.
 - 1. Fasteners may be repackaged provided Owner's testing and inspecting agency observes repackaging and seals containers.
 - 2. Clean and relubricate bolts and nuts that become dry or rusty before use.

3. Comply with manufacturers' written recommendations for cleaning and lubricating ASTM F 1852 fasteners and for retesting fasteners after lubrication.

1.8 COORDINATION

- A. Coordinate selection of shop primers with topcoats to be applied over them. Comply with paint and coating manufacturers' recommendations to ensure that shop primers and topcoats are compatible with one another.
- B. Coordinate installation of anchorage items to be embedded in or attached to other construction without delaying the Work. Provide setting diagrams, sheet metal templates, instructions, and directions for installation.

PART 2 - PRODUCTS

2.1 STRUCTURAL-STEEL MATERIALS

- A. W-Shapes: ASTM A 992/A 992M .
- B. Channels, Angles, M , S-Shapes: ASTM A 36/A 36M.
- C. Plate and Bar: ASTM A 36/A 36M.
- D. Corrosion-Resisting Structural-Steel Shapes, Plates, and Bars: ASTM A 588/A 588M, Grade 50 (345).
- E. Cold-Formed Hollow Structural Sections: ASTM A 500, Grade B, structural tubing.
- F. Corrosion-Resisting Cold-Formed Hollow Structural Sections: ASTM A 847/A 847M, structural tubing.
- G. Steel Pipe: ASTM A 53/A 53M, Type E or S, Grade B.
 1. Weight Class: As indicated on drawings.
 2. Finish: Painted, except where indicated to be galvanized.
- H. Steel Castings: ASTM A 216/A 216M, Grade WCB with supplementary requirement S11.
- I. Steel Forgings: ASTM A 668/A 668M.
- J. Welding Electrodes: Comply with AWS requirements.

2.2 BOLTS, CONNECTORS, AND ANCHORS

- A. High-Strength Bolts, Nuts, and Washers: **ASTM A 325**, Type 1, heavy-hex steel structural bolts; **ASTM A 563, Grade C**, heavy-hex carbon-steel nuts; and **ASTM F 436** Type 1, hardened carbon-steel washers; all with plain finish.
- B. Tension-Control, High-Strength Bolt-Nut-Washer Assemblies: ASTM F 1852, Type 1, round head assemblies consisting of steel structural bolts with splined ends, heavy-hex carbon-steel nuts, and hardened carbon-steel washers.
 - 1. Finish: Plain.
- C. Shear Connectors: ASTM A 108, Grades 1015 through 1020, headed-stud type, cold-finished carbon steel; AWS D1.1/D1.1M, Type B.
- D. Unheaded Anchor Rods: ASTM F 1554, Grade 55, weldable.
 - 1. Configuration: Hooked.
 - 2. Nuts: **ASTM A 563** heavy-hex carbon steel.
 - 3. Plate Washers: ASTM A 36/A 36M carbon steel.
 - 4. Washers: **ASTM F 436**, Type 1, hardened carbon steel.
 - 5. Finish: Plain.
- E. Headed Anchor Rods: ASTM F 1554, Grade 55, weldable, straight.
 - 1. Nuts: **ASTM A 563 (ASTM A 563M)** heavy-hex carbon steel.
 - 2. Plate Washers: ASTM A 36/A 36M carbon steel.
 - 3. Washers: **ASTM F 436 (ASTM F 436M)**, Type 1, hardened carbon steel.
 - 4. Finish: Plain.
- F. Threaded Rods: ASTM A 36/A 36M .
 - 1. Nuts: **ASTM A 563** heavy-hex carbon steel.
 - 2. Washers: **ASTM F 436**, Type 1, hardened carbon steel.
 - 3. Finish: Plain.
- G. Clevises and Turnbuckles: Made from cold-finished carbon steel bars, ASTM A 108, Grade 1035.
- H. Eye Bolts and Nuts: Made from cold-finished carbon steel bars, ASTM A 108, Grade 1030.
- I. Sleeve Nuts: Made from cold-finished carbon steel bars, ASTM A 108, Grade 1018.

2.3 PRIMER

- A. Primer: Comply with Division 9 painting Sections.

- B. Primer: SSPC-Paint 25, Type I, zinc oxide, alkyd, linseed oil primer.
- C. Primer: SSPC-Paint 25 BCS, Type I, zinc oxide, alkyd, linseed oil primer.
- D. Primer: SSPC-Paint 23, latex primer.
- E. Primer: Fabricator's standard lead- and chromate-free, nonasphaltic, rust-inhibiting primer complying with MPI#79 and compatible with topcoat.
- F. Galvanizing Repair Paint: ASTM A 780.
- G. Primer: SSPC-Paint 20 shall be used for all exposed exterior steel.

2.4 GROUT

- A. Metallic, Shrinkage-Resistant Grout: ASTM C 1107, factory-packaged, metallic aggregate grout, mixed with water to consistency suitable for application and a 30-minute working time.

2.5 FABRICATION

- A. Structural Steel: Fabricate and assemble in shop to greatest extent possible. Fabricate according to AISC's "Code of Standard Practice for Steel Buildings and Bridges" and AISC 360.
 - 1. Camber structural-steel members where indicated.
 - 2. Fabricate beams with rolling camber up.
 - 3. Identify high-strength structural steel according to ASTM A 6/A 6M and maintain markings until structural steel has been erected.
 - 4. Mark and match-mark materials for field assembly.
 - 5. Complete structural-steel assemblies, including welding of units, before starting shop-priming operations.
- B. Thermal Cutting: Perform thermal cutting by machine to greatest extent possible.
 - 1. Plane thermally cut edges to be welded to comply with requirements in AWS D1.1/D1.1M.
- C. Bolt Holes: Cut, drill, or punch standard bolt holes perpendicular to metal surfaces.
- D. Finishing: Accurately finish ends of columns and other members transmitting bearing loads.
- E. Cleaning: Clean and prepare steel surfaces that are to remain unpainted according to SSPC-SP 2, "Hand Tool Cleaning."

- F. Shear Connectors: Prepare steel surfaces as recommended by manufacturer of shear connectors. Use automatic end welding of headed-stud shear connectors according to AWS D1.1/D1.1M and manufacturer's written instructions.
- G. Steel Wall-Opening Framing: Select true and straight members for fabricating steel wall-opening framing to be attached to structural steel. Straighten as required to provide uniform, square, and true members in completed wall framing.
- H. Holes: Provide holes required for securing other work to structural steel and for other work to pass through steel framing members.
 - 1. Cut, drill, or punch holes perpendicular to steel surfaces. Do not thermally cut bolt holes or enlarge holes by burning.
 - 2. Baseplate Holes: Cut, drill, mechanically thermal cut, or punch holes perpendicular to steel surfaces.
 - 3. Weld threaded nuts to framing and other specialty items indicated to receive other work.

2.6 SHOP CONNECTIONS

- A. High-Strength Bolts: Shop install high-strength bolts according to RCSC's "Specification for Structural Joints Using ASTM A 325 or A 490 Bolts" for type of bolt and type of joint specified.
 - 1. Joint Type: Pretensioned (TORQUE CONTROL BOLTS).

2.7 SHOP PRIMING

- A. Shop prime steel surfaces except the following:
 - 1. Surfaces embedded in concrete or mortar. Extend priming of partially embedded members to a depth of **2 inches (50 mm)**.
 - 2. Surfaces to be field welded.
 - 3. Surfaces to be high-strength bolted with slip-critical connections.
 - 4. Surfaces to receive sprayed fire-resistive materials (applied fireproofing).
 - 5. Galvanized surfaces.
- B. Surface Preparation: Clean surfaces to be painted. Remove loose rust and mill scale and spatter, slag, or flux deposits. Prepare surfaces according to the following specifications and standards:
 - 1. SSPC-SP 2, "Hand Tool Cleaning."
 - 2. SSPC-SP 3, "Power Tool Cleaning."
- C. Priming: Immediately after surface preparation, apply primer according to manufacturer's written instructions and at rate recommended by SSPC to provide a

minimum dry film thickness of 1.5 mils (0.038 mm). Use priming methods that result in full coverage of joints, corners, edges, and exposed surfaces.

2.8 GALVANIZING

- A. Hot-Dip Galvanized Finish: Apply zinc coating by the hot-dip process to structural steel according to ASTM A 123/A 123M.
 - 1. Fill vent and drain holes that will be exposed in the finished Work unless they will function as weep holes, by plugging with zinc solder and filing off smooth.
 - 2. Galvanize lintels, shelf angles and welded door frames attached to structural-steel frame and located in exterior walls.

2.9 SOURCE QUALITY CONTROL

- A. Testing Agency: Owner will engage an independent testing and inspecting agency to perform shop tests and inspections and prepare test reports.
 - 1. Provide testing agency with access to places where structural-steel work is being fabricated or produced to perform tests and inspections.
- B. Correct deficiencies in Work that test reports and inspections indicate does not comply with the Contract Documents.
- C. Bolted Connections: Shop-bolted connections will be inspected according to RCSC's "Specification for Structural Joints Using ASTM A 325 or A 490 Bolts."
- D. Welded Connections: In addition to visual inspection, shop-welded connections will be tested and inspected according to AWS D1.1/D1.1M and the following inspection procedures, at testing agency's option:
 - 1. Liquid Penetrant Inspection: ASTM E 165.
 - 2. Magnetic Particle Inspection: ASTM E 709; performed on root pass and on finished weld. Cracks or zones of incomplete fusion or penetration will not be accepted.
 - 3. Ultrasonic Inspection: ASTM E 164.
 - 4. Radiographic Inspection: ASTM E 94.
- E. In addition to visual inspection, shop-welded shear connectors will be tested and inspected according to requirements in AWS D1.1/D1.1M for stud welding and as follows:
 - 1. Bend tests will be performed if visual inspections reveal either a less-than-continuous 360-degree flash or welding repairs to any shear connector.
 - 2. Tests will be conducted on additional shear connectors if weld fracture occurs on shear connectors already tested, according to requirements in AWS D1.1/D1.1M.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify, with steel Erector present, elevations of concrete- and masonry-bearing surfaces and locations of anchor rods, bearing plates, and other embedments for compliance with requirements.
 - 1. Prepare a certified survey of bearing surfaces, anchor rods, bearing plates, and other embedments showing dimensions, locations, angles, and elevations.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Provide temporary shores, guys, braces, and other supports during erection to keep structural steel secure, plumb, and in alignment against temporary construction loads and loads equal in intensity to design loads. Remove temporary supports when permanent structural steel, connections, and bracing are in place unless otherwise indicated.
 - 1. Do not remove temporary shoring supporting composite deck construction until cast-in-place concrete has attained its design compressive strength.

3.3 ERECTION

- A. Set structural steel accurately in locations and to elevations indicated and according to AISC 303 and AISC 360.
- B. Base Bearing and Leveling Plates: Clean concrete- and masonry-bearing surfaces of bond-reducing materials, and roughen surfaces prior to setting plates. Clean bottom surface of plates.
 - 1. Set plates for structural members on wedges, shims, or setting nuts as required.
 - 2. Weld plate washers to top of baseplate.
 - 3. Snug-tighten anchor rods after supported members have been positioned and plumbed. Do not remove wedges or shims but, if protruding, cut off flush with edge of plate before packing with grout.
 - 4. Promptly pack grout solidly between bearing surfaces and plates so no voids remain. Neatly finish exposed surfaces; protect grout and allow to cure. Comply with manufacturer's written installation instructions for shrinkage-resistant grouts.
- C. Maintain erection tolerances of structural steel within AISC's "Code of Standard Practice for Steel Buildings and Bridges."

- D. Align and adjust various members that form part of complete frame or structure before permanently fastening. Before assembly, clean bearing surfaces and other surfaces that will be in permanent contact with members. Perform necessary adjustments to compensate for discrepancies in elevations and alignment.
 - 1. Level and plumb individual members of structure.
 - 2. Make allowances for difference between temperature at time of erection and mean temperature when structure is completed and in service.
- E. Splice members only where indicated.
- F. Do not use thermal cutting during erection
- G. Do not enlarge unfair holes in members by burning or using drift pins. Ream holes that must be enlarged to admit bolts.
- H. Shear Connectors: Prepare steel surfaces as recommended by manufacturer of shear connectors. Use automatic end welding of headed-stud shear connectors according to AWS D1.1/D1.1M and manufacturer's written instructions.

3.4 FIELD CONNECTIONS

- A. High-Strength Bolts: Install high-strength bolts according to RCSC's "Specification for Structural Joints Using ASTM A 325 or A 490 Bolts" for type of bolt and type of joint specified.
 - 1. Joint Type: Pretensioned.
 - 2. "Code of Standard Practice for Steel Buildings and Bridges" for mill material.

3.5 FIELD QUALITY CONTROL

- A. Testing Agency: Owner will engage a qualified independent testing and inspecting agency to inspect field welds and high-strength bolted connections.
- B. Bolted Connections: Bolted connections will be inspected according to RCSC's "Specification for Structural Joints Using ASTM A 325 or A 490 Bolts."
- C. Welded Connections: Field welds will be visually inspected according to AWS D1.1/D1.1M.
 - 1. In addition to visual inspection, field welds will be tested and inspected according to AWS D1.1/D1.1M and the following inspection procedures, at testing agency's option:
 - a. Liquid Penetrant Inspection: ASTM E 165.

- b. Magnetic Particle Inspection: ASTM E 709; performed on root pass and on finished weld. Cracks or zones of incomplete fusion or penetration will not be accepted.
 - c. Ultrasonic Inspection: ASTM E 164.
 - d. Radiographic Inspection: ASTM E 94.
- D. In addition to visual inspection, test and inspect field-welded shear connectors according to requirements in AWS D1.1/D1.1M for stud welding and as follows:
- 1. Perform bend tests if visual inspections reveal either a less-than-continuous 360-degree flash or welding repairs to any shear connector.
 - 2. Conduct tests on additional shear connectors if weld fracture occurs on shear connectors already tested, according to requirements in AWS D1.1/D1.1M.
- E. Correct deficiencies in Work that test reports and inspections indicate does not comply with the Contract Documents.

3.6 REPAIRS AND PROTECTION

- A. Galvanized Surfaces: Clean areas where galvanizing is damaged or missing and repair galvanizing to comply with ASTM A 780.
- B. Touchup Painting: Immediately after erection, clean exposed areas where primer is damaged or missing and paint with the same material as used for shop painting to comply with SSPC-PA 1 for touching up shop-painted surfaces.
- 1. Clean and prepare surfaces by SSPC-SP 2 hand-tool cleaning or SSPC-SP 3 power-tool cleaning.
- C. Touchup Painting: Cleaning and touchup painting are specified in Division 9 painting Sections.

END OF SECTION 05120

SECTION 05400 - LIGHT GAUGE METAL FRAMINGS

PART 1 - SCOPE

- A. Work under this section includes light gauge steel studs, framing members, joist, purling's and related accessories as indicated on Drawings and specified herein.

1.01 STANDARDS:

- A. Work shall meet the requirements of the following standards.
 - 1. American Iron and Steel Institute (A.I.S.I.) Design of Cold Formed Steel Structural Members, 1980
 - 2. American Welding Society (A.W.S.) D.1.3., 1981 Structural Welding Code - Sheet Steel.
 - 3. American Society for Testing and Materials (A.S.T.M.)
 - 4. American Institute of Steel Construction (A.I.S.C.) Manual of Steel Construction, 8th Edition.
 - 5. All pertinent Federal, State and local codes.
- B. The most stringent requirements shall govern in conflicts between specified codes and standards.

1.02 SUBMITTALS:

- A. Prior to framing fabrication, submit formal fabrication and erect shop drawings for Architect's approval.
- B. Shop Drawings shall indicate:
 - 1. All member gages, spacings and sizes.
 - 2. Shop and field assembly details including cut and connections.
 - 3. Type and location of welds, bolts and fastening devices.

PART 2 - MATERIALS

- A. All studs and/or joists and accessories shall be of the type, size, gauge and spacing shown on the drawings, and shall be manufactured by United States Gypsum Company, Milcor Division of Inryco, Inc. or equal.

- B. All structural members shall be designed in accordance with American Iron and Steel Institute (AISI) "Specification for the Design of Cold-Formed Steel Structural Members," edition.
- C. All framing members shall be formed from corrosion-resistant steel, corresponding to the requirements of ASTM A446, with a minimum yield strength of 40 ksi for SJ and CS-style studs, 33 ksi for CR-runners.
- D. Fabrication:
 - 1. Framing components may be preassembled into panels prior to erecting. Prefabricated panels shall be square, with components attached in a manner as to prevent racking. Members shall be held positively in place until properly fastened.
- E. Prefabricated panels shall be square with components attached in a manner as to prevent racking and to minimize distortion while lifting.
- F. All framing components shall be cut squarely for attachment to perpendicular members, or, as required for an angular fit against abutting members.
- G. Axially loaded studs shall be installed in a manner which will assure that their ends are positioned against the inside of runner web prior to fastening.
- H. Insulation equal to that specified elsewhere shall be provided in all doubled jamb studs and doubled headers not accessible to insulation contractors.
- I. Fastening of components shall be with self-drilling screws or welding. Screws shall be of sufficient size to insure the strength of the connection. Wire tying of components shall not be permitted. All welds shall be touched up with a zinc-rich paint.

PART 3 - EXECUTION

- A. Inspection shall be for proper size to ensure members are not bent or in poor condition.
- B. Product Handling:
 - 1. Upon delivery, material shall be protected from rain and snow by impervious covering or shelter.
- C. Trusses shall be securely anchored to the supporting structure as shown on the drawings.

END OF SECTION

SECTION 05500 - MISCELLANEOUS METALS

PART 1 - SCOPE

- A. This Section includes the furnishing and installation of all miscellaneous metal items required for the project as shown on the Drawings and specified herein.

PART 2 - COORDINATION

- A. Coordinate furnishing of items specified hereunder with work of other trades so that progress of related work is not delayed.
- B. Take field measurements at the job as necessary to insure fit.

PART 3 - MATERIALS

- A. Stock or manufacturer's standard items shall be as described under individual item specifications hereunder.
- B. Fabricated items, made especially for this project, shall meet general materials specifications as listed hereunder. Materials shall be of the type, class, temper, etc., which best suit intended uses.
 - 1. Steel shall conform to ASTM Specification A-7 or A-36 for structural steel. Architectural and miscellaneous steel not otherwise indicated or specified shall be mild steel.

Shop Drawings and Data: Show complete details and instructions for fabrication, assembly, and installation. Locate anchor bolts required for installation in other work.

Inserts and Anchorages: Furnish inserts and anchoring devices to be built into other work for installation of miscellaneous metal items.

Steel Plates, Shapes, Bars: ASTM A 36

Tubular Steel Items: Square and rectangular, ASTM A 501; pipe, ASTM A 120.

Cold-Rolled Steel Sheets: ASTM A 366.

Galvanized Steel Sheets: ASTM A 526, with ASTM A 525 G90 zinc coating.

Concrete Inserts: Malleable iron (ASTM A 47) or cast steel (ASTM A 27) inserts, with steel bolts, washers and shims; hot dip galvanized.

Shop Paint: FS TT-P-86, Type 2; or, SSPC-Paint 14. Apply to prepared steel surfaces at rate to provide a 2.0-mil dry film thickness.

Galvanizing: ASTM A 386 for assembled products; A 153 for iron and steel hardware.

Fabrication, General: Use materials of size and thickness shown. Shop-paint all items not specified to be galvanized after fabrication.

Curb Edge Bars: Fabricate of shapes as shown; miter corners and weld joints. Provide anchors 6" from ends of corners and 24" o.c.

Loose Bearing Plates: Provide for steel items bearing on masonry or concrete, as shown. Drill plates to receive anchor bolts.

Miscellaneous Framing and Supports: Provide as required to complete work and not included with structural steel framework.

Steel Pipe Railings: Fabricate to dimensions shown, with smooth bends and welded joints. Use 1-1/2" steel pipe unless otherwise shown.

Installation: Perform cutting, drilling, and fitting required for installation; set work accurately in location, alignment and elevation, measured from established lines and levels. Provide anchorage devices and fasteners where necessary for installation to other work.

PART 4 - SHOP PAINTING AND PROTECTIVE COATING

- A. All ferrous metal shall be properly cleaned and given one shop coat of red lead, zinc chromate, or other approved rust resisting paint. Anchors that are built into masonry or concrete shall be coated with asphalt paint unless specified to be galvanized. Where galvanized or zinc coated metal is required, it shall not be shop primed unless specifically called for, but all abraded places and welding shall be touched up with aluminum paint. No prime coat is required for non-ferrous metal.
- B. Where hot-dip galvanized or hot zinc coating is specified, it shall be done in accordance with the Standard Specifications of the American Hot Dip Galvanizers Association.

PART 5 - FASTENINGS

- A. Welding. Perform all welding in accordance with American Welding Society publication AWS D1.0, latest edition with current supplements and addenda.
 - 1. Welds shall be made only by operators experienced in performing the type work indicated.
 - 2. Welds normally exposed to view in the finished work shall be uniformly made and ground smooth.

3. Where welding is done in proximity to glass or finished surfaces, such surfaces shall be protected from damage due to weld sparks or spatter.
- B. Bolted Screwed, and Riveted Connections. In general, use bolts for field connections only as directed. Provide washers under all heads and nuts bearing on wood. Draw all nuts tight and nick threads of permanent connections to prevent loosening. Use beveled washers where bearing is on sloped surfaces.
1. Where screws must be used for permanent connection in ferrous metal, use flat head type, countersunk.
 2. Where rivets are used, they shall be machine driven, tight, heads centered, countersunk and finished flush and smooth.

PART 6 - MISCELLANEOUS ITEMS

- A. Anchoring Devices. Furnish all miscellaneous metal anchoring devices required to be built into concrete or masonry or welded to steel framing members for anchorage of collateral work which are not specified to be furnished under other sections of the Specifications. Items include, but are not necessarily limited to the following:
1. Anchor bolts for miscellaneous anchorage built into concrete or masonry not furnished under work of structural steel shall be hex-head steel machine bolts of sizes shown in the details, shall conform to ASTM A354, and shall be furnished with nuts and plate washers of size to suit the particular application.
- B. Loose Lintels. Furnish all loose steel angle and/or plat lintels not furnished as part of structural steel under work of Section 05120 as required for support of masonry over openings. Members shall be of sizes shown, and, unless otherwise indicated, shall have minimum bearing at each end of 8".

End of Section

Division VI – Wood and Plastic

SECTION 061760 - METAL-PLATE-CONNECTED WOOD TRUSSES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes wood roof trusses and truss accessories.
- B. Related Sections include the following:
 - 1. Division 6 Section "Rough Carpentry" for roof sheathing and subflooring and dimension lumber for supplementary framing and permanent bracing.
 - 2. Division 6 Section "Miscellaneous Carpentry" for roof sheathing and subflooring and dimension lumber for supplementary framing and permanent bracing.

1.3 DEFINITIONS

- A. Metal-Plate-Connected Wood Trusses: Planar structural units consisting of metal-plate-connected members fabricated from dimension lumber and cut and assembled before delivery to Project site.
- B. Lumber grading agencies, and the abbreviations used to reference them, include the following:
 - 1. NELMA - Northeastern Lumber Manufacturers Association.
 - 2. NLGA - National Lumber Grades Authority.
 - 3. SPIB - Southern Pine Inspection Bureau.
 - 4. WCLIB - West Coast Lumber Inspection Bureau.
 - 5. WWPA - Western Wood Products Association.

1.4 PERFORMANCE REQUIREMENTS

- A. Structural Performance: Provide metal-plate-connected wood trusses capable of withstanding design loads within limits and under conditions indicated.
 - 1. Design Loads: As indicated.
 - 2. Maximum Deflection Under Design Loads:

- a. Roof Trusses: Vertical deflection of **1/240** of span.
- b. Roof Trusses: Horizontal deflection at reactions of 0.5 **inches**.

1.5 SUBMITTALS

- A. Product Data: For metal-plate connectors, metal framing anchors, bolts, and fasteners.
- B. Shop Drawings: Show location, pitch, span, camber, configuration, and spacing for each type of truss required; species, sizes, and stress grades of lumber; splice details; type, size, material, finish, design values, orientation, and location of metal connector plates; and bearing details. All shop drawings, calculations and erection plans shall bear the seal of the licensed professional engineer licensed to practice in Kentucky, responsible for the design of the trusses. Truss shop drawings (signed and sealed) shall be submitted to H.B.C. (by General Contractor).
 1. For installed products indicated to comply with design loads, include structural analysis data signed and sealed by the qualified professional engineer responsible for their preparation.
 2. Show design loadings for each truss type.
 3. Show all bracing and/or bridging on erection plan as required to prevent compression buckling of individual truss members.
 4. Submit erection plans showing the truss layout, proper handling and erection instructions along with all temporary and permanent bracing or bridging requirements.
- C. Product Certificates: For metal-plate-connected wood trusses, signed by officer of truss fabricating firm.
- D. Qualification Data: For metal-plate manufacturer/fabricator and Installer.
- E. 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 American Lumber Standards Committee Board of Review.
- F. Research/Evaluation Reports: For the following, showing compliance with building code in effect for Project:
 1. Metal-plate connectors.
 2. Metal framing anchors.

1.6 QUALITY ASSURANCE

- A. Metal Connector-Plate Manufacturer Qualifications: A manufacturer that is a member of TPI and that complies with TPI quality-control procedures for manufacture of connector plates published in TPI 1.
 - 1. Manufacturer's responsibilities include providing professional engineering services needed to assume engineering responsibility.
 - 2. Engineering Responsibility: Preparation of Shop Drawings and comprehensive engineering analysis by a qualified professional engineer, licensed to practice in the state the project is located.
- B. Fabricator Qualifications: Shop that participates in a recognized quality-assurance program that involves inspection by SPIB, Timber Products Inspection, TPI, or other independent testing and inspecting agency acceptable to Architect and authorities having jurisdiction.
- C. Source Limitations for Connector Plates: Obtain metal connector plates through one source from a single manufacturer.
- D. Comply with applicable requirements and recommendations of the following publications:
 - 1. TPI 1, "National Design Standard for Metal Plate Connected Wood Truss Construction."
 - 2. TPI DSB, "Recommended Design Specification for Temporary Bracing of Metal Plate Connected Wood Trusses."
 - 3. TPI HIB, "Commentary and Recommendations for Handling, Installing & Bracing Metal Plate Connected Wood Trusses."
- E. Wood Structural Design Standard: Comply with applicable requirements in AFPA's "National Design Specifications for Wood Construction" and its "Supplement."

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Comply with TPI recommendations to avoid damage and lateral bending. Provide for air circulation around stacks and under coverings.
- B. Inspect trusses showing discoloration, corrosion, or other evidence of deterioration. Discard and replace trusses that are damaged or defective.

1.8 COORDINATION

- A. Time delivery and erection of trusses to avoid extended on-site storage and to avoid delaying progress of other trades whose work must follow erection of trusses.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
- B. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. Metal Connector Plates:
 - a. Alpine Engineered Products, Inc.
 - b. CompuTrus, Inc.
 - c. Eagle Metal Products.
 - d. Jager Industries, Inc.
 - e. Mitek Industries, Inc.
 - f. Robbins Engineering, Inc.
 - g. TEE-LOK Corporation.
 - h. Truswal Systems Corporation.
 - 2. Metal Framing Anchors:
 - a. Alpine Engineered Products, Inc.
 - b. Cleveland Steel Specialty Co.
 - c. Harlen Metal Products, Inc.
 - d. KC Metals Products, Inc.
 - e. Silver Metal Products, Inc.
 - f. Simpson Strong-Tie Company, Inc.
 - g. Southeastern Metals Manufacturing Co., Inc.
 - h. United Steel Products Company, Inc.

2.2 DIMENSION LUMBER

- A. Lumber: DOC PS 20 and applicable rules of lumber grading agencies certified by the American Lumber Standards Committee Board of Review.
 - 1. Factory mark each piece of lumber with grade stamp of grading agency.
 - 2. Provide dressed lumber, S4S, manufactured to actual sizes required by DOC PS 20 for moisture content specified.
 - 3. Provide dry lumber with 19 percent maximum moisture content at time of dressing.
 - 4. Provide dry lumber with no less than 7 percent moisture content at time of dressing.
- B. Grade and Species: Provide dimension lumber of any species for truss chord and web members, graded visually or mechanically, and capable of supporting required loads

without exceeding allowable design values according to AFPA's "National Design Specifications for Wood Construction" and its "Supplement."

- C. Grade and Species: Provide visually graded dimension lumber for truss chord and web members, of the following grade and any of the following species:
 - 1. Grade for Chord Members: No. 2 or better.
 - 2. Grade for Web Members: No. 2 or better
 - 3. Species: Southern pine; SPIB.
 - 4. Species: Mixed southern pine; SPIB.

- D. Grade and Species: Provide dimension lumber of any species for truss chord and web members, graded as follows and of the following minimum design values for size of member required according to AFPA's "National Design Specifications for Wood Construction" and its "Supplement":
 - 1. Grading Method: mechanical.
 - 2. Design Values: Modulus of elasticity of at least **1,500,000 psi** and an extreme fiber stress in bending of at **1200 psi** .

- E. Kiln-dry material after treatment to a maximum moisture content of 19 percent. Do not use material that is warped or does not comply with requirements for untreated material.

- F. Mark each treated item with the treatment quality mark of an inspection agency approved by the American Lumber Standards Committee Board of Review.

2.3 METAL CONNECTOR PLATES

- A. General: Fabricate connector plates to comply with TPI 1 from metal complying with requirements indicated below:

- B. Hot-Dip Galvanized Steel Sheet: ASTM A 653/A 653M, **G60 (Z180)** coating designation; Designation SS, Grade 33, and not less than **0.036 inch (0.9 mm)** thick.

- C. Electrolytic Zinc-Coated Steel Sheet: ASTM A 591/A 591M, **80Z (24G)** coating designation; ASTM A 570/A 570M, Structural Steel (SS), Grade 33, and not less than **0.047 inch (1.2 mm)** thick.

- D. Aluminum-Zinc Alloy-Coated Steel Sheet: ASTM A 792/A 792M, **AZ50 (AZ150)** coating designation; Structural Steel (SS), Grade 33, and not less than **0.036 inch (0.9 mm)** thick.

- E. Stainless-Steel Sheet: ASTM A 666, Type 304, and not less than **0.035 inch (0.88 mm)** thick.

2.4 FASTENERS

- A. General: Provide fasteners of size and type indicated that comply with requirements specified in this Article for material and manufacture.
 - 1. Where trusses are exposed to weather, in ground contact, or in area of high relative humidity, provide fasteners with hot-dip zinc coating complying with ASTM A 153/A 153M
- B. Nails, Wire, Brads, and Staples: FS FF-N-105.
- C. Power-Driven Fasteners: CABO NER-272.
- D. Wood Screws: ASME B18.6.1.
- E. Lag Bolts: ASME B18.2.1. (ASME B18.2.3.8M).
- F. Bolts: Steel bolts complying with ASTM A 307, Grade A (ASTM F 568M, Property Class 4.6); with ASTM A 563 (ASTM A 563M) hex nuts and, where indicated, flat washers.
- G. Expansion Anchors: Anchor bolt and sleeve assembly of material indicated below with capability to sustain, without failure, a load equal to 6 times the load imposed when installed in unit masonry assemblies and equal to 4 times the load imposed when installed in concrete as determined by testing per ASTM E 488 conducted by a qualified independent testing and inspecting agency.
 - 1. Material: Carbon-steel components, zinc plated to comply with ASTM B 633, Class Fe/Zn 5.

2.5 METAL FRAMING ANCHORS

- A. General: Provide framing anchors made from metal indicated, of structural capacity, type, and size indicated, and as follows:
 - 1. Research/Evaluation Reports: Provide products acceptable to authorities having jurisdiction and for which model code research/evaluation reports exist that show compliance of metal framing anchors, for application indicated, with building code in effect for Project.
 - 2. Allowable Design Loads: Provide products with allowable design loads, as published by manufacturer, that 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.
- B. Galvanized Steel Sheet: Hot-dip, zinc-coated steel sheet complying with ASTM A 653/A 653M, G60 (Z180) coating designation.
- C. Stainless-Steel Sheet: ASTM A 666, Type 304.

1. Use for exterior locations and where indicated.
- D. Truss Tie-Downs (Hurricane or Seismic Ties): Bent strap tie for fastening roof trusses to wall studs below, **2-1/2 inches (63 mm)** wide by **0.062 inch (1.6 mm)** thick. Tie fits over top of truss and fastens to both sides of truss, inside face of top plates, and both sides of stud below.
- E. Roof Truss Clips: Angle clips for bracing bottom chord of roof trusses at non-load-bearing walls, **1-1/4 inches (32 mm)** wide by **0.050 inch (1.3 mm)** thick. Clip is fastened to truss through slotted holes to allow for truss deflection.
- F. Floor Truss Hangers: U-shaped hangers, full depth of floor truss, with **1-3/4-inch- (44-mm-)** long seat; formed from metal strap **0.062 inch (1.6 mm)** thick with tabs bent to extend over and be fastened to supporting member.

2.6 MISCELLANEOUS MATERIALS

- A. Galvanizing Repair Paint: SSPC-Paint 20 or DOD-P-21035, with dry film containing a minimum of 94 percent zinc dust by weight.

2.7 FABRICATION

- A. Cut truss members to accurate lengths, angles, and sizes to produce close-fitting joints.
- B. Fabricate metal connector plates to sizes, configurations, thicknesses, and anchorage details required to withstand design loads for types of joint designs indicated.
- C. Assemble truss members in design configuration indicated; use jigs or other means to ensure uniformity and accuracy of assembly with joints closely fitted to comply with tolerances in TPI 1. Position members to produce design camber indicated.
 1. Fabricate wood trusses within manufacturing tolerances in TPI 1.
- D. Connect truss members by metal connector plates located and securely embedded simultaneously in both sides of wood members by air or hydraulic press.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install wood trusses only after supporting construction is in place and is braced and secured.
- B. Before installing, splice trusses delivered to Project site in more than one piece.

- C. Hoist trusses in place by lifting equipment suited to sizes and types of trusses required, exercising care not to damage truss members or joints by out-of-plane bending or other causes.
- D. Install and brace trusses according to TPI recommendations and as indicated.
- E. Install trusses plumb, square, and true to line and securely fasten to supporting construction.
- F. Space trusses **24 inches** o.c. (max.); adjust and align trusses in location before permanently fastening.
- G. Anchor trusses securely at bearing points; use metal framing anchors. Install fasteners through each fastener hole in metal framing anchor according to manufacturer's fastening schedules and written instructions.
- H. Securely connect each truss ply required for forming built-up girder trusses.
 - 1. Anchor trusses to girder trusses as indicated.
- I. Install and fasten permanent bracing during truss erection and before construction loads are applied. Anchor ends of permanent bracing where terminating at walls or beams.
 - 1. Install and fasten strongback bracing vertically against vertical web of parallel-chord floor trusses at centers indicated.
- J. Install wood trusses within installation tolerances in TPI 1.
- K. Do not cut or remove truss members.
- L. Replace wood trusses that are damaged or do not meet requirements.
 - 1. Do not alter trusses in field.

3.2 REPAIRS AND PROTECTION

- A. Repair damaged galvanized coatings on exposed surfaces with galvanized repair paint according to ASTM A 780 and manufacturer's written instructions.
- B. Protective Coating: Clean and prepare exposed surfaces of metal connector plates. Brush apply primer, when part of coating system, and one coat of protective coating.
 - 1. Apply materials to provide minimum dry film thickness recommended by coating system manufacturer.

END OF SECTION 061760

SECTION 06200 - FINISH CARPENTRY AND MILLWORK

PART 1 - SCOPE

- A. This Section includes all labor, materials, equipment and related items required to complete the work of finish carpentry and millwork as shown on the Drawings and specified herein.

PART 2 - MATERIALS

- A. Lumber Standards and Grade-Marking. Each piece of lumber and each board, exclusive of moldings and trim, shall comply with Product Standard PS-20, latest edition, and with specific grading requirements of the association recognized as covering the species used and under whose grading rule it is produced. Each piece of lumber and each board shall be identified by the grade mark of a recognized association or independent inspection agency. Such association or independent inspection agency shall be certified by the Board of Review, American Lumber Standards Committee, Washington, D.C., to grade the species.
- B. Moldings and trim shall conform to details on the Drawings. However, stock moldings and trim of same sizes and with approximately the same profiles as those detailed may be used if all other requirements are met, subject to approval by the Architect.
- C. Plywood shall be softwood plywood, unless otherwise specified under individual item specifications, and shall conform to requirements of "Product Standard PS-1, latest edition, for American Plywood Association." Plywood's for particular applications in this project shall be as specified under Art.3, below.
1. Each standard size panel shall be stamped or branded to show group, type and grade.
- D. Moisture content of various materials shall meet the following requirements at time of installation:
1. Boards:
 - a. 8" or less in width Not more than 19%
 - b. Wider than 8" Not more than 15%
 2. Finish Lumber and Millwork Not more than 12%
- E. Dressed lumber shall be surfaced four sides (S4S) to conform to Product Standard PS-20 unless, in addition to being dressed, it has been notched, ship lapped or patterned.
- F. Dimensions of lumber specified or called for by the Drawings are nominal, except those trim dimensions shown are actual.

PART 3 - GRADES AND SPECIES

- A. Exterior wood trim 2" or greater nominal thickness and 2" or greater nominal width shall be of sizes and profiles shown on the Drawings, shall be S4S, and shall be one of the following species, provided the grade for each is not lower than the minimum shown.

Fir, Douglas, WCLB Rules "A" - Appearance Framing

Pine, Southern Yellow, SPIB Rules "A" - Appearance Framing

At the Contractor's option, other species of comparable appearance grade may be used in lieu of the above, if approved by the Architect. Running lengths of 10' or less in all applications shall be in single pieces.

- B. Exterior wood trim 2" or less nominal thickness shall be of sizes and profiles shown on the Drawings, shall be S4S, shall be same specie specified above for 2" or greater exterior trim, and shall be one of the following, provided the grade for each is not lower than the minimum shown:

Fir, Douglas, WCLB Rules Select Merchantable Boards

Pine, Southern Yellow, SPIB Rules No. 1 Boards

At the Contractor's option, other species of comparable appearance grade may be used in lieu of the above, if approved by the Architect. Running lengths of 10' or less in all applications shall be in single pieces.

- C. Exterior and interior miscellaneous trim, door and fixed window frames, etc., may be one of the following species, provided the grade for each is not lower than the minimum shown:

Fir, Douglas, WCLB Rules "D" Finish

Pine, Southern Yellow, SPIB Rules "C" Finish

At the Contractor's option, other species of comparable appearance grade maybe used in lieu of the above, if approved by the Architect. Running lengths of 10' or less in all applications shall be in single pieces and may be finger-jointed.

- D. Plywood's shall be of the types and minimum grades specified hereunder for specific applications listed. All plywoods shall be from Group 1 Species as listed by the American Plywood Association.
- E. Rough hardware needed for the proper installation of all finish carpentry and millwork shall be provided. Nails, screws, bolts and similar items shall be of proper types and ample sizes to fasten and hold the various members and items securely in place.
- F. Other materials shall be as specified hereunder.

PART 4 - STORAGE AND PROTECTION

- A. All lumber shall be piled in a manner which ensures proper ventilation and drainage, and shall be covered to protect it from the elements.
- B. Millwork and wood trim shall be protected against dampness during and after delivery. It shall be stored in well-ventilated buildings and where not exposed to extreme changes in temperature or humidity. Wood doors shall be stored in flat positions, one above another on solid, level supports, with air circulation excluded from top and bottom surfaces.
- C. Improper storage resulting in damage to millwork or trim, or warping of doors, shall be cause for their rejection.

PART 5 - GENERAL

- A. Finish Carpentry. Work of finish carpentry shall be laid out as shown on the Drawings, and shall be cut and fitted as necessitated by conditions encountered. All work shall be plumbed, leveled, and properly jointed and secured with sufficient nails, screws, bolts, etc. to ensure proper alignment and rigidity.
- B. Any piece of wood or other material with a defect or defects that prevent it from serving its intended purpose satisfactorily, including warped, split, or otherwise defective material, will be rejected and shall be replaced with an acceptable piece.

PART 6 - EXTERIOR AND INTERIOR TRIM

- A. Miscellaneous exterior and interior softwood trim, including facias, moldings, casings, etc., shall be of species and grades hereinbefore specified, as approved by the Architect and shall be furnished in longest practicable lengths.
- B. Joints in all work shall be tight and formed to conceal shrinkage. Door and window trim shall be in long lengths and jointed only where solid fastenings can be made. End joints in all built-up members shall be well distributed so that no joint occurs over another. External and internal corners shall be mitered. Where necessary, woodwork shall be scribed to adjacent work.
 - 1. Joints in running trim, including continuous wood fascia members, shall be scarfed at 45 degrees, except where butt joints may be specifically permitted by the Architect, and shall be drawn up tightly for inconspicuous joints. External exposed corners of trim shall be mitered.

End of Section

SECTION 06400 - PLASTIC LAMINATE CASEWORK AND COUNTERTOP'S

PART 1 - DESCRIPTION

- A. Furnish and install plastic laminate casework and countertops as shown on the drawings and specified herein.
- B. Work included:
 - 1. Casework - plastic laminate faced.
 - 2. Plastic laminate covered countertops for wood and laminate casework.
 - 3. Plastic laminate covered shelves.
 - 4. Standard hardware and accessories.
 - 5. Plastic laminate window stools throughout building at exterior windows as detailed.
- C. Related work specified elsewhere:
 - 1. Rough carpentry: Section 6100
 - 2. Finish carpentry: Section 6200
 - 3. Gypsum Drywall: Section 9250
 - 4. Resilient base: Section 9650
 - 5. Mechanical work: Division 15
 - 6. Electrical work: Division 16
 - 7. Metal casework: Section 11600

PART 2 - QUALITY ASSURANCE

- A. Custom plastic laminate faced casework shall match in design, material, finish and detail the stock plastic laminated casework. The materials, workmanship and installation of all casework provided under this section shall be the responsibility of this contractor.
 - 1. The contractor providing the work described herein, may be a custom casework contractor with a casework manufacturer as a subcontractor/supplier; or a stock casework with a custom casework manufacturer as a subcontractor/supplier.
- B. Any casework manufacturers requesting approval shall provide to architect, all information and specifications of the products they wish to use in bidding, ten days prior to bid date. Approval will be contingent upon whether the products meet the required specifications.
- C. The architect reserves the right to disapprove any subcontracting fabricator proposed for this project. The casework contractor shall submit to the architect, prior to fabrication, a letter signed by a responsible officer of the fabricator indicating satisfactory evidence of having completed comparable work for the past five years on similar projects utilizing equipment, methods and workmanship meeting the standards specified in this section.
- D. If requested by the architect, manufacturers requesting approval shall submit full size production line samples of the following units at least ten days prior to bid opening.
 - 1. One cabinet base unit, 36" wide with door and drawer, complete with laminate top to fit.

E. Reference standards:

1. Architectural Woodworking Institute (AWI) "Quality Standards".
2. National Electrical Manufacturers Association (NEMA) "LD 1 thru LD3" High Pressure Decorative Laminates.
3. Federal Specifications (FS) "LLL-H-00810: Building Board (Hardboard), Hard Pressed, Vegetable Fiber".
4. American National Standard (ANSI) A208.1-79 "Mat-Formed Wood Particleboard".
5. Commercial Standards (CS) "C.S. 35: Adhesives".

PART 3 - SUBMITTALS

- A. Certifications: Letter of subcontractor's qualifications and experience within the past five years and references of work completed.
- B. Color Selection: Complete range of color, textures and patterns of the proposed plastic laminate manufacturer, based upon the preliminary color selections listed hereinafter, with architect's approval. Final approval shall be contingent upon providing colors, textures and patterns matching preliminary selections.
- C. Shop Drawings: Submit shop drawings of items specified herein. Indicate: plan views, elevations, sections and details of each item; location in the building of each item; conditions in relation to adjacent materials and construction; methods of assembling sections; location and installation requirement size(s); shape and thickness of materials, joints and notations of special features; sink locations; and drawings required to illustrate deviations from the contract requirements.
- D. Rough in drawings: submit separate utility rough in drawings which indicate points of connection to each utility involved. Reference dimensions from building components.

PART 4 - PRODUCTS DELIVERY, HANDLING AND STORAGE

- A. Schedule casework for fabrication and delivery to avoid delay in work progress. Delivery to job site shall not be earlier than one month before casework can be installed. Verify delivery date with general trades contractor.
- B. Receive, unload, check, store, protect and distribute materials specified in this section.
- C. Store materials to maintain the moisture content of the wood members between 6% and 15%. Store in areas or rooms with temperatures at 70°F ± 10°F.
- D. Store under cover in a ventilated building not exposed to extreme temperature and humidity changes. Do not store or install casework until concrete, masonry and plaster work is dry.

PART 5 - JOB CONDITIONS

- A. Prior to fabrications of items of casework which are dependent upon building dimensions, take accurate field measurements of location of walls, drop soffits, columns, piers and other applicable building elements. Major discrepancies between dimensions given on the drawings and field dimensions shall be brought to the attention of the general trade's contractor. Compensate for minor dimensional changes so that fabricated items can be delivered to the job, and can be scribed to fit properly.

- B. In no instance shall any casework be stored or installed in any area unless the area is broom clean, closed in and possessing a relative humidity below 50% at 70°F.

PART 6 - WARRANTY

- A. Warranty in writing that defects due to use of improper materials or workmanship in casework provided under this contract for the period of one year from the date of substantial completion of the work, shall be rectified promptly by the casework contractor at his own expense upon notification of condition.

PART 7 - GENERAL

- A. Casework, both stock and custom shall be plastic laminate construction consisting of high-pressure decorative laminate bonded to 3/4" thick particle board.
 - 1. Fabrication shall comply with applicable requirements for "Custom grade" as indicated in Section 400 of the AWI architectural woodwork quality standards and guide specifications.
- B. Cabinet units shall be assembled at the mill, insofar as access openings to installation location will permit. Where items must be built into sections, design the units so they can be assembled at the site into one integral item, with exposed joints flush, tight and uniform. Similar adjoining doors and drawers shall be in alignment and each door and drawer shall operate smoothly, without bind or excessive play.
- C. Casework units shall be complete with bases, shelves, counter and work tops, finish and operating hardware, drawer accessories and miscellaneous accessories as indicated on the drawings and specified herein.
- D. Coordination work:
 - 1. Division 9: Provide physical openings for recessed casework.
 - 2. Section 6100: Provide grounds and blocking necessary for attachment and support of wall mounted casework.
 - 3. Plumbing Prime Contractor: provide lay-in sinks, faucets and fittings; templates for cutouts for installation; provide supply and waste lines including traps to rough in points based on information supplied by the casework contractor; and provide final connections.
 - a. Division 15: Provide stainless steel sinks with integral with tops and backsplashes, include tailpieces, drains and strainers.
 - 4. Electrical prime contractor: provide electrical fixtures and equipment noted on drawings including related boxes, conduit and conductors. Provide electrical components complete, terminating through the back of the casework unit either with a junction box or a 2" conduit stub. Allow conductors to protrude 8" to permit final connection by Division 16.

5. Division 16: Locate rough-ins based on information given on casework rough-in drawings and be responsible for work necessary to make final connections.
6. Division 9650: Apply resilient base to casework after casework has been installed.
7. Division 5500: Provide steel support braces.

E. Definitions shall conform to the following:

1. Exposed portions are those visible from a normal point of view when doors and drawers are closed. Interiors of open cabinets, and open shelving are considered exposed.
2. Semi-exposed portions are those areas not considered exposed, but which are visible from a normal point of view when solid doors and drawers are open. Backs of hinged doors, drawer parts except the exposed exterior front, and shelving in the storage areas are considered semi exposed.
3. Concealed portions include sleepers, web frames, dust panels and other surfaces not visible after installation.

PART 8 - MATERIALS

A. Particle board: 45 lbs. Minimum density and of balance construction, with moisture content less than 8%. Particle board shall conform to ANSI A208.1 and meet or exceed CS-236-66, FS LLL-B-800A and ASTM D1037-78.

1. Surfaces shall be smooth with all chips, shavings or flakes well scoured so that there shall be no visible telegraphing of the core face through the plastic laminate.
2. Square and rectangular cutouts shall have radiused corners not less than ½".
3. At cut edges, exposed or not and where cutouts occur, the edges shall be completely sealed to prevent moisture absorption. Cutouts for pipes shall be round.
4. Meet the following performance requirements: Submit compliance data from the manufacturer prior to fabrication.
 - a. Screw holding face: 371 lbs.
 - b. Modulus of rupture: 2400 psi
 - c. Modulus of elasticity: 450,000 psi
 - d. Internal bond: 90 psi
 - e. Surface hardware: 90 psi

B. Edging: Flat edge design for cabinet body in color matched laminate or PVC. Color as selected by architect.

C. Plastic Laminate: High pressure decorative laminate surfacing material meeting the minimum NEMA Standards for abrasion resistance, heat resistance, stain resistance, moisture resistance, dimensional stability and general rules for fabrication and installation.

1. Plastic laminate materials shall be as selected by the Architect from full product line of national manufacturers such as Formica, Wilsonart, Pionite, Nevamar, Arborite, or an approved equal.
2. Exposed horizontal work surfaces: NEMA GP50, PF (Post-forming) satin surface.
3. Exposed vertical work surfaces: NEMA GP 28 laminate.
4. Semi exposed surfaces: 10 mil polyester laminate in conformance to ASTM D1300, factory bonded at 200 psi at 300°F, minimum. Color shall be manufacturers white.
5. Backing sheet: NEMA BK20 and shall be used where laminate covered work is not restrained from warping or twisting by the method of attachment or by supports. Minimum standard of AWI Custom work shall apply.
6. Bonding adhesive: Water resistant type and as recommended by the approved plastic laminate manufacturer. Plastic laminate shall be applied to the core in the shop, using commercial methods, application and presses.
7. Sealant used for sealing particle board or plywood edges shall be HYBOND 80 by Pierce Stevens Corporation, Safecoat Seal by Dwell Smart, or an approved equal

D. Assembly adhesives used in assembly, installation and other applications, shall be one of the following or an approved equal:

1. HYBOND 80
2. HYBOND WHITE
3. CANPLAST 100

E. Provide hardware as follows: This is not intended to be a complete listing, but as a guide to establish quality:

1. Hinges shall be cast steel cup and hinge concealed hinges #75M5550 by BLUM
 - a. Hinges shall have independent three-way adjustment of doors.
 - b. One pair of hinges per door of 30" or less, one- and one-half pair of hinges per door of 48" and one hinge for every 12" of door over 48".

- c. Each hinge shall be removable by means of a clip mechanism lever attached to the hinge.
 - d. Hinges shall be mounted into corresponding hinge plates.
 - e. Hinges shall have 125 ° free movement of swing and be self-closing within two inches of close.
 - f. Hinges shall have a lifetime warranty against defects from workmanship and materials.
 - g. Hinges shall be installed into door panels by means of a pre-drilled hole and press fitted into panel substrate.
2. Pulls for all doors and drawer fronts shall be manufacturers standard bent wire pull, brushed chrome finish, three-inch centers. Nomenclature for this ABP865-26D by AMEROCK, Yale Locks, or an approved equal.
 3. Drawer slides shall be side mounted, bottom supported, 4-point suspension slides with nylon roller bearing and epoxy coating.
 4. All file drawers shall have either Pendaflex, Decor, file followers, or an approved equal.
 5. All shelf clips shall be BLUM nylon covered steel pin (5mm) that will mount into pre-drilled end panels for a support of at least 250 lbs; Yale, or an approved equal.
 6. Locks, noted on drawings, shall be cam tumbler by NATIONAL LOCK, Yale, or an approved equal.
 7. Clothes rods and mounting flanges shall be Knappe-Voght #770 and #734, Hardware Decor, or an approved equal.
 8. Optional sliding doors are mounted on steel tracks and use ball bearing sheaves mounted in the doors.
 9. Grommets shall be spring loaded closure type in assorted sizes.

PART 9 - CONSTRUCTION

- A. All cabinets shall be of 3/4" thick MCP by Domtar, 3/4" thick solid wood by Wellborn or an approved equal, finished ends and dowel pinned to tops, bottoms or backs, shall be laminated with plastic laminate and edged with matching PVC.

1. End panels shall consist of a single panel of MCP drilled and dowel pinned to tops, bottoms or braces by way of fluted hardwood dowel pins nested in white glue.
 2. All cabinet boxes shall be case clamped for a minimum of seven minutes in a Holzer case clamp to insure squareness.
 3. End panels shall be drilled for shelves, bottoms, tops and braces using the 32mm drilling system. All components will be drilled in corresponding patterns.
 4. End panels shall be rabbited at the rear for acceptance of 3/8" thick MCP back. The back will be mounted using mechanical fasteners. The back shall be removable.
 5. End panels shall have integral toe kicks and shall have a front of 3/4" MCP mechanically fastened to the end panels.
- B. Doors shall be of 11/16" thick laminated panel products with the front face laminated in the architect's color selection. The semi-exposed side shall be covered by white HPL plastic laminate. The edges shall be covered by PVC or self-edged.
- C. Drawers shall be constructed of 1/2" thick MCP, rabbited, glued and mechanically fastened for a strong bond. Bottoms shall be of 3/8" thick MCP mechanically fastened to the drawer box frame. Top edges shall be covered in white PVC edging. Drawer fronts are same construction as doors. Drawer fronts shall be removable from drawer box for easy alignment. Drawers shall have epoxy coated, nylon roller bearing, side mounted, bottom supported slides by BLUM.
- D. Shelves shall be of 3/4" thick MCP and edged with matching PVC edging. Shelves shall not be constructed over 42" in length.
- E. Braces shall be of 3/4" thick MCP and shall span the width of the cabinet box. Braces shall be edged on visible sides with PVC edging. On sink or range base cabinets the front brace shall be mounted vertically and shall be laminated to match the cabinet exterior.
- F. Backs shall be of 3/8" thick MCP and be rabbited in and mechanically fastened to the end panels.
- G. Wall cabinets shall be of 3/4" thick MCP and shall be dowel pinned in the same manner as the bases. Wall backs are 3/8" thick rabbited and mechanically fastened to end panels.

- H. Finished backs shall be of 3/4" MCP laminated with plastic laminate on face and edged with PVC.
- I. Top supports shall be of 3/4" MCP laminated on both sides and edged with PVC or plastic laminate.

PART 10 - COUNTERTOPS

- A. Countertops and backsplash shall be custom made with square, self-edge and shall be constructed of 3/4" thick medium density fiberboard (MDF) or 45# density particleboard (CS 236-66: Type 1, Grade B, Class 2) covered on all exposed surfaces with horizontal grade 10/HGS, .050" thickness, high pressure laminate as manufactured by a nationally known laminate company.
 - 1. Colors and patterns of plastic laminate shall be as selected by the Architect from full product line of national manufacturers such as Formica, Wilsonart, Pionite, Nevamar and Arborite, or an approved equal.
 - 2. Provide cutouts properly sized and located in tops for sinks and rims by others.
 - 3. Provide end splash, flush with all edges of countertop, where countertop abuts wall surfaces.

PART 11 - BRACING

Where countertops have no casework below for support, bracing or "cleats" shall be constructed 1½" x 1½" x length and covered by GP 28 plastic laminate on all exposed sides. These cleats shall be mounted at walls with mechanical fasteners to support the weight of the countertop.

PART 12 - WINDOW STOOLS

Plastic laminated window stools shall be 22mm moisture-resistant chipboard, Class E1, according to DIN EN 312/5, finished on top, bottom and sides with horizontal grade (HP) high pressure laminate as manufactured by a nationally known laminate company, using moisture-resistant adhesives. Provide sealant to back exposed edge of window stools, and caulk continuously between window and the laminate stool.

Colors and patterns of plastic laminate shall be as selected by the Architect from full product line of national manufacturers such as Formica, Wilsonart, Pionite, Nevamar and Arborite, or an approved equal.

PART 13 - COORDINATION

- B. Coordinate work of this section with related work of other sections as necessary to obtain proper installation of all items.
- C. Verify site dimensions of cabinet location in buildings prior to fabrication.
- D. Do not install casework until all concrete, masonry and plaster work is dry.

PART 14 - INSTALLATION

- A. Installation shall consist of assembling to form complete units, placing, leveling, scribing, trimming and anchoring.
 - 1. Filler between wall and casework shall not exceed 1" unless noted otherwise and shall be recessed 1/16" + from the face of casework.
 - 2. Plastic-laminate covered ceiling enclosures shall be flush with the face of the doors and 1/8" proud on the sides of exposed ends or backs.
- B. Fasten items to building construction as detailed or as otherwise required to provide a secure, permanent installation.
- C. Where fastening spacings or sizes are not shown, use spacings and sizes of bolts, screws, etc., which will develop the full strength of the members being fastened. Thus, failure due to over stress must occur in the members before occurring in the fastenings.
 - 1. Fastening to concrete shall be by anchor bolts embedded in masonry or by self-drilling masonry anchor.
 - 2. Fastening to masonry shall be of similar manner.
 - 3. Fastening to plaster or drywall construction shall be into wood studs or blocking placed there early in the construction. Toggle bolts may be used only in such cases where no blocking can be found, but fasteners must still penetrate solid wall supports for a secure installation.

PART 15 - PROTECTION

Upon installation of casework and countertops, all installed materials shall be covered with appropriate protection from further construction. The General Contractor will be responsible for repairing or replacing any product damaged by subsequent construction and finish work, with no additional cost to the Owner.

End of Section

Division VII – Thermal and Moisture Protection

SECTION 07 17 1
BENTONITE PANEL WATERPROOFING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

The general provision of the Contract, including General and Supplementary Conditions and General Requirements, apply to the work specified in this section.

1.2 DESCRIPTION OF WORK

The extent of Geotextile/Bentonite Clay waterproofing membrane is shown on the drawing and/or as specified herein.

1.3 RELATED SECTIONS

- A. Section 03 10 00 – Concrete Forming and Accessories
- B. Section 03 20 00 – Concrete Reinforcing
- C. Section 03 30 00 – Cast-In-Place Concrete
- D. Section 04 22 00 – CMU - Concrete Unit Masonry
- E. Section 31 23 00 – Excavation and Fill
- F. Section 31 20 00 – Earth Moving
- G. Section 31 40 00 – Shoring and Underpinning
- H. Section 31 50 00 – Excavation Support and Protection
- I. Section 31 60 00 – Special Foundations and Load-Bearing Elements

1.4 REFERENCE STANDARDS

- A. ASTM D751 Standard Test Methods for Coated Fabrics
- B. ASTM D903 Standard Test Method for Peel or Stripping Strength of Adhesive Bonds
- C. ASTM D1970 Standard Specification for Self-Adhering Polymer Modified Bituminous Sheet Materials Used as Steep Roofing Underlayment for Ice Dam Protection (Low Temperature Flexibility)
- D. ASTM D4632 Standard Test Method for Grab Breaking Load and Elongation of Geotextiles
- E. ASTM D5261 Standard Test Method for Measuring Mass per Unit Area of Geotextiles
- F. ASTM D5887 Standard Test Method for Measurement of Index Flux Through Saturated Geosynthetic Clay Liner Specimens Using a Flexible Wall Permeameter
- G. ASTM D5890 Standard Test Method for Swell Index of Clay Mineral Component of Geosynthetic Clay Liners
- H. ASTM D5891 Standard Test Method for Fluid Loss of Clay Component of Geosynthetic Clay Liners
- I. ASTM D5993 Standard Test Method for Measuring Mass per Unit Area of Geosynthetic Clay Liners
- J. ASTM D4643 Standard Test Method for Determination of Water Content of Soil and Rock by Microwave Oven Heating
- K. ASTM D6243 Standard Test Method for Determining the Internal and Interface Shear Strength of Geosynthetic Clay Liner by the Direct Shear Method

- L. ASTM D6496 Standard Test Method for Determining Average Bonding Peel Strength Between Top and Bottom Layers of Needle-Punched Geosynthetic Clay Liners
- M. ASTM D6768 Standard Test Method for Tensile Strength of Geosynthetic Clay Liners

1.5 QUALITY ASSURANCE

- A. Manufacturer: Provide Geotextile/Bentonite Clay waterproofing membrane produced by a manufacturer with a minimum of 5 years experience in the waterproofing industry.
- B. Installer: A firm with a minimum of 2 years experience in installing bentonite clay or other related waterproofing products.
- C. MiraCLAY Waterproofing System must be installed by a Carlisle Coatings & Waterproofing Inc. Approved Applicator in compliance with shop drawings approved by Carlisle Coatings & Waterproofing Inc. There must be no deviations made from Carlisle's specifications or the approved drawings without the prior approval from Carlisle Coatings & Waterproofing Inc.
- D. The project Geotechnical Report and Environmental Study shall be provided to Carlisle Coatings & Waterproofing Inc. for review and approval at time of Approved Applicator's bid.
- E. A pre-installation meeting should be coordinated by the General Contractor and attended by an Owner's Representative, the Waterproofing Consultant, the waterproofing applicator and membrane manufacturer's representative. Any trade having relevant or adjacent work to the Blindsided System before, during and after installation should also be present and properly represented by a Project Manager and Job Foreman. These trades include but are not limited to the Foundation Contractor, the Concrete Contractor, the Steel Reinforcement Contractor, the Mechanical Contractor, the Electrical Contractor and the Plumbing Contractor. The purpose of this meeting is to discuss the necessity of ensuring proper waterproofing membrane protection during all phases of installation and to review other applicable requirements or unusual field conditions.
- F. Upon request by the Approved Applicator, an inspection will be conducted by a Carlisle Coatings & Waterproofing Inc. representative to ensure that the waterproofing membrane has been installed according to Carlisle Coatings & Waterproofing Inc. specifications and details. This inspection shall be coordinated such that access to the membrane is not impaired.
- G. An in-progress inspection may be scheduled after the initial inspection (after the membrane installation is completed) to ensure proper protection procedures are being followed to prevent possible damage to the membrane during the installation of above membrane components.

1.6 SUBMITTALS

- A. General: Submit in accordance with Section 01 33 00.
- B. Product Data: Submit manufacturer's product literature and installation instructions.
- C. Subcontractor's approval by manufacturer: Submit document stating manufacturer's acceptance of subcontractor as an Approved Applicator for the specified materials.
- D. Water Sample Test Result: A water sample (2 liters) is required on projects that have ground water and should be submitted to the waterproofing manufacturer to test for contamination and compatibility with waterproofing membrane. Submit to architect a letter of compatibility recommending which formulation to use.
- E. Warranties: Submit sample warranties identifying the terms and conditions stated in Section 1.7

1.7 WARRANTY

- A. Upon completion and acceptance of the work required by this section, the manufacturer will issue a warranty agreeing to promptly replace defective materials for a period of 5 years.
- B. The formation or presence of mold or fungi in a building is dependent upon a broad range of factors including, but not limited to, the presence of spores and nutrient sources, moisture, temperatures, climatic conditions, relative humidity, and heating/ventilating systems and their maintenance and operating capabilities. These factors are beyond the control of Carlisle and Carlisle shall not be responsible for any claims, repairs, restoration, or damages relating to the presence of any irritants, contaminants, vapors, fumes, molds, fungi, bacteria, spores, mycotoxins, or the like in any building or in the air, land, or water serving the building.

1.8 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Deliver materials in original manufacturer's packaging and store materials in strict accordance with manufacturer's instructions.
- B. Remove and replace products that have been prematurely exposed to moisture.

1.9 PROJECT CONDITIONS

- A. Coordination between various trades is essential to avoid unnecessary traffic to prevent damage to the membrane. Heavily traveled areas must be protected by placing temporary protection courses to prevent damage to the membrane.
- B. Coordinate waterproofing work with other trades. The applicator shall have sole right of access to the specified areas for the time needed to complete the application.
- C. Protect adjoining surfaces not to be waterproofed against damage or soiling. Protect plants, vegetation and animals which might be affected by waterproofing operations.
- D. Wear applicable protective clothing and respiratory protection gear.
- E. Maintain work area in a neat and orderly condition, removing empty containers, rags, and rubbish daily from the site.

PART 2 - PRODUCTS

2.1 WATERPROOFING SYSTEM

- A. Provide products manufactured and supplied by Carlisle Coatings & Waterproofing Inc., 900 Hensley Lane, Wylie Texas 75098, phone (800) 527-7098, fax (972) 442-0076.
- B. The components of this system are to be products of Carlisle Coatings & Waterproofing Inc. The installation, performance or integrity of products by others is not the responsibility of Carlisle Coatings & Waterproofing Inc. and is expressly disclaimed by the warranty.

2.2 MEMBRANE

- A. Bentonite panel sheet membrane: Shall be CCW MiraCLAY Bentonite Clay Waterproofing Membrane
- B. Bentonite panel sheet membrane for saltwater and contaminated groundwater: Shall be CCW MiraCLAY EF Bentonite Clay Waterproofing Membrane

2.3 RELATED ACCESSORY PRODUCTS

- A. Sealant: Shall be CCW MiraCLAY Sealant used for detailing at terminations and penetrations, to fill minor voids in concrete, and as a fillet in angle changes
- B. Granules: Shall be CCW MiraCLAY Granules used for horizontal to vertical transitions and for detailing at seams and slab penetrations
- C. Pre-formed, high-impact resistant, heavy-duty thermoplastic tie-back cover: Shall be CCW Tie-Back Cover for protecting the MiraCLAY integrity at soil retention tie-back systems
- D. Swellable Sealant: Shall be MiraSTOP SS for use in non-moving joints to create watertight concrete joints and as an adhesive for CCW MiraSTOP waterstop strips
- E. Pre-formed Bentonite hydrophilic waterstop strip: Shall be CCW MiraSTOP BW for use in non-moving joints to create watertight concrete joints
- F. Pre-formed Non-Bentonite hydrophilic waterstop strip: Shall be CCW MiraSTOP NBW for use in non-moving joints to create watertight concrete joints
- G. Injectable waterstop (grout tube): Shall be MiraSTOP IW for use as an injectable waterstop for use in non-moving joints to create watertight concrete joints
- H. Chemical grout: Shall be MiraSTOP CG-F and for use with the MiraSTOP IW
- I. Miscellaneous products: accessory products approved by Carlisle Coatings & Waterproofing Inc.
- J. Membrane to Substrate Fasteners: Fasteners, of the type and length suitable for the substrate, shall be used in conjunction with washers, of at least 1" diameter to attach the bentonite membrane to the substrate.
- K. Membrane to Membrane Fasteners: Mechanically fasten membrane sheets together with a box stapler or similar device for horizontal applications.
- L. The Geotextile/Bentonite membrane shall consist of geotextile panels of sodium bentonite clay sandwiched between two layers of needle-punched woven and non-woven polypropylene fabrics.
- M. Drainage Composite: Shall be CCW MiraDRAIN as recommended by the manufacturer for each condition
- N. Perimeter Drainage System: Shall be CCW MiraDRAIN HC

2.4 PHYSICAL PROPERTIES FOR MiraCLAY

Property	Method	Unit	Value
Thickness	-	In.	0.25
Bentonite Mass/Unit Area	ASTM D5993	lb/ft ² MARV (kg/m ² MARV)	0.893 (0.123)
Nonwoven	ASTM D5261	oz/yd ² MARV (g/m ² MARV)	6.0 (200)
Woven	ASTM D5261	oz/yd ² MARV (g/m ² MARV)	3.1 (105)
Swell Index, Minimum	ASTM D5890	-	24 ml (2 g)
Moisture Content	ASTM D4643	%, maximum	12
Fluid Loss	ASTM D5891	ml, maximum	18
Tensile Strength	ASTM D6768	lb/in MARV (kN/m MARV)	30 (5)
Peel Strength	ASTM D6496	lbs/in MARV (N/m MARV)	3.5 (610)
Permeability, Maximum	ASTM D5887	m/s	5 x 10 ⁻⁹
Index Flux, Maximum	ASTM D5887	m ³ /m ² /s	1 x 10 ⁻⁸
Internal Shear Strength	ASTM D6243	psf (kPa)	500 (24)
Elongation	ASTM D4632	%	150
Low Temperature Low Temperature	ASTM D1970	@ -25°F (-32°C)	Unaffected
Hydrostatic Head Pressure	ASTM D751	ft (meter)	228 (69.49)
Adhesion to Concrete	ASTM D903	lb/in (kg/cm)	17.7 (8)

*@ 12% moisture content

PART 3 - EXECUTION

3.1 INSPECTION

- A. Examine substrate and condition under which waterproofing will be installed. Do not proceed with the work until unsatisfactory conditions have been corrected.

3.2 SURFACE PREPARATION

- A. The substrate must be relatively even without noticeable high spots or depressions, relatively smooth, free of protrusions, debris, sharp edges or foreign materials and must be free of accumulated water, ice and snow. Earth, crushed stone, or soil shall be compacted to a minimum of 85% modified Proctor.
- B. Before any waterproofing work is started the waterproofing applicator shall thoroughly examine all surfaces for any deficiencies. Should any deficiencies exist, the architect, owner, or general contractor shall be notified in writing and corrections made.
- C. All surface preparation shall be performed in accordance with Carlisle-CCW application instructions which include but are not limited to:
 - 1. Subbase/Grade Substrates (concrete, earth, or crushed stone)
 - i. Concrete working slab/mud slab/rat slab must be relatively even without noticeable high spots or depressions, relatively smooth, free of protrusions, debris, sharp edges, or foreign materials.
 - a. Honeycombing, voids and aggregate pockets exceeding 1" in diameter or have a depth greater than $\frac{3}{4}$ " should be filled with a non-shrink cementitious grout.
 - ii. Earth and stone substrates should be compacted to a minimum 85% modified Proctor.
 - a. Crushed stone should not be larger than $\frac{3}{4}$ " (18 mm) in size.
 - 2. Support of Excavation, S.O.E. (Wood Lagging, Concrete Caissons, Sheet Piling, Shotcrete, etc.)
 - i. All soil retention substrates shall be relatively smooth and even.
 - ii. Gaps or voids greater than 1.0 in. (25mm) shall be filled or covered with CCW approved material.
 - iii. Remove projections greater than $\frac{3}{4}$ " (20 mm).
 - iv. CCW MiraDRAIN Composites by Carlisle Coatings and Waterproofing is an acceptable substrate and is installed before the MiraCLAY.
 - a. Install CCW MiraDRAIN with the fabric side facing the soil retention system.
 - 3. Concrete Foundation Wall:
 - i. The substrate must be properly prepared to receive the MiraCLAY waterproofing membrane.
 - ii. All honeycombs, form-tie cavities and indentations should be filled with MiraCLAY Sealant or filled with latex Portland Cement.
 - iii. Substrate must be smooth and uniform removing any protrusions over $\frac{1}{2}$ " (12 mm) from the surface.
 - iv. Apply CCW MiraCLAY Sealant to all construction joints at a minimum of $\frac{1}{4}$ " (7 mm) thickness and a 3" (8 cm) minimum width.
 - v. Footings must be free of soil, rocks or debris to provide a suitable substrate to receive the MiraCLAY waterproofing membrane.

3.3 INSTALLATION

- A. Underslab Application: (Structural concrete slab shall be reinforced and have a minimum thickness of 4" (10 cm)).
1. Install CCW MiraCLAY with the white non-woven side up, facing the installer.
 2. Overlap edges a minimum of 4" (10 cm).
 3. Protect CCW MiraCLAY from damage caused by rebar chairs with sharp edges or points by placing a patch of CCW MiraCLAY under the rebar chair.
 4. Staple joints often enough to prevent excessive movement.
 5. Pour CCW MiraCLAY Granules or trowel CCW MiraCLAY Sealant around all penetrations and press in "cut-to-fit" collars of CCW MiraCLAY.
 6. Extend the installation of CCW MiraCLAY 12" (31 cm) up or beyond the perimeter slab forms.
 7. Inspect and repair any damaged material before concrete pour.
- B. Pre-Applied (i.e. Blindside) Application for Foundation Wall against S.O.E.:
1. Install MiraCLAY with the white non-woven side facing the installer.
 2. Secure the MiraCLAY into position with fasteners and 1" (25 mm) washers.
 - i. Use the appropriate fasteners for the type of substrate used to receive the MiraCLAY.
 3. Install succeeding courses of MiraCLAY by overlapping the previous course a minimum of 4" (100 mm).
 - i. Install in shingle fashion so that the upper roll of MiraCLAY overlaps the lower roll.
 - ii. Stagger the seams a minimum of 24" (600 mm).
 4. Fasten membrane once every 18" (45 cm) on seams or as required to prevent blousing.
 5. Extend waterproofing membrane to 6" below grade and fasten membrane to the substrate to maintain constant compression using a 1/8" x 1" (3 x 25 mm) minimum termination bar.
 6. Embed the top edge of MiraCLAY and termination bar with a thick bead of CCW MiraCLAY Sealant 2" (50 mm) wide by 1/2" (12 mm) thick
- C. Concrete Foundation Wall Application (i.e. post-applied):
1. The MiraCLAY waterproofing membrane should be installed with the white non-woven side facing the applicator.
 2. Create a cant at any vertical to horizontal transition by applying a 1 1/2" (39 mm) to 2" (50 mm) of CCW MiraCLAY Granules or CCW MiraCLAY Sealant along that junction.
 3. At the base of the foundation wall where the vertical wall meets the horizontal footing, install MiraCLAY in a horizontal manner extending out onto the footing a minimum of 12" (300 mm).
 4. Fasten the MiraCLAY in place with concrete fasteners and 1" (25 mm) washers.
 5. Install succeeding courses of MiraCLAY by overlapping the previous course a minimum of 4" (100 mm).
 - i. Install in shingle fashion so that the upper roll of MiraCLAY overlaps the lower roll.
 - ii. Stagger the seams a minimum of 12" (300 mm).
 6. Fasten membrane once every 18" (45 cm) to 3' (90 cm) on seams or as required to prevent blousing.
 7. At grade line, terminate MiraCLAY with a rigid termination bar or fasten 12" (300 mm) on center.
 - i. Embed the top edge of MiraCLAY and termination bar with a thick bead of MiraCLAY sealant 2" (50 mm) wide by 1/2" (12

- mm) thick.
- 8. Backfill must be compactible soils free of construction debris
 - i. Backfill should be placed in 6-12" lifts
 - ii. Each lift should be uniformly compacted to a minimum 85% modified Proctor.
- D. Detail Conditions
 - 1. For standard installation details, follow the MiraCLAY detail drawings.
 - 2. For non-standard installation instructions, contact your local Carlisle Coatings & Waterproofing representative

3.4 PROTECTION AND DRAINAGE

- A. Prevent geotextile/bentonite clay waterproofing membrane from hydrating before being covered with overburden.
 - 1. When threat of rain is imminent or backfill is not immediate, geotextile/bentonite clay waterproofing membrane should be covered with polyethylene sheeting.
- B. Protect waterproofing as per manufacturer's recommendations until concrete or backfill placement.
- C. For underslab applications, inspect waterproofing for damage after steel reinforcement placement and just prior to concrete placement.
- D. Repair waterproofing as per manufacturer's recommendations
- E. Protect the geotextile/bentonite clay waterproofing membrane with CCW MiraDRAIN Drainage Composite.
- F. Install the CCW MiraDRAIN Drainage Composite according to the detailed drawings for the specific installation requirements of the project.

SECTION 07200 - BUILDING INSULATION

PART 1 - SCOPE

- A. This Section includes all labor, materials, equipment and related items required to complete the work of building insulation as shown on the drawings and as specified.

PART 2 - SUBMITTALS

- A. Certificates of Compliance with applicable Federal Specifications shall be submitted to the architect for approval prior to delivery of any building insulation to the project. "R" values of insulation proposed to be furnished shall be included in certifications.
- B. Samples in duplicate of each type of building insulation shall be submitted to the architect for approval if requested.

PART 3 - MATERIALS

- A. Batt insulation shall be semi-rigid, spun glass fiber blankets, R-21.
 - 1. Non-exposed blankets shall be enclosed on one side with strong asphalted paper vapor barrier. Blankets shall be as wide as required to fit into stud, by longest available lengths.
 - 2. Attic R-49.
- B. Sound attenuation blankets for areas where noted shall comply with requirements of ASTM C665-84, Type I. Same shall be 3" "Thermofiber", as manufactured by United States Gypsum; 3" "Thermal-Acoustical Batts", as manufactured by Johns-Manville; 3½" "Noise Barrier Batt Insulation", as manufactured by Owens/Corning; or an approved equal.

PART 4 - INSTALLATION

- A. Batt insulation shall be installed in stud, in strict accordance with manufacturer's installation instructions, securely fastened to framing members by nailing or stapling, with paper vapor barriers to inside face of stud. Insulation shall have full coverage in spaces involved, with tightly fitted butt joints where necessary and free from voids.
 - 1. Install insulation to the outside of any water piping occurring in exterior walls. In these cases, no insulation shall occur between water piping and wall finish.

- B. Install Vapor Retarder (DuPont Tyvek[®] stucco wrap water-resistant barrier or approved equal) on the outside face of the exterior sheathing.

END OF SECTION

SECTION 07212 - BOARD INSULATION

PART 1 - GENERAL

1.01 Work Included

- A. Board insulation at foundation wall.

1.02 Related Work

- A. Section 04330 - Reinforcement Unit Masonry System

1.03 References

- A. FS HH-I-524 - Insulation Board, Thermal (Polystyrene).

1.04 System Description

- A. Materials of this Section shall provide a continuous thermal barrier at building exterior wall.

PART 2 - PRODUCTS

2.01 Acceptable Insulation Manufacturers

- A. Styrofoam Brand
- B. AMOCO
- C. Foamular - R
- D. Substitutions: Under provisions of Section 01600, 01630.

2.02 Insulation Materials

- A. Insulation Extruded Cellular Polystyrene; thermal resistance "R" per inch of 5.0; minimum compressive strength of 30 psi water absorption by volume in accordance with ANSI/ASTM D2842 0.3 percent square.

2.03 Acceptable Adhesive Manufacturers

- A. Max Bond, by H.B. Fuller Company
- B. Liquid Nails, LN 601, Macco Adhesives
- C. Foam Adhesive by Franklin Int.

2.04 Adhesive Materials

- A. Adhesive Type recommended by insulation manufacturer for application.

PART 3 - EXECUTION

3.01 Preparation

- A. Verify substrate and adjacent materials and insulation boards are dry and ready to receive insulation and adhesive.
- B. Verify substrate surface is flat, free of honeycomb, fins, irregularities, materials that will impede adhesive bond.
- C. Verify insulation boards are unbroken, free of damage.

3.02 Installation - Perimeter Insulation

End of Section

SECTION 07270 - FIRESTOPPING

PART 1 - GENERAL

1.01 DESCRIPTION

- A. Provide all material, labor, equipment and services necessary to provide firestopping as follows:
 - 1. Through-penetration firestopping in fire rated construction.
 - 2. Construction-gas firestopping at connections in the same or different materials in fire rated construction.
 - 3. Construction-gap firestopping occurring within fire rated wall, floor or floor-ceiling assemblies.
 - 4. Construction-gap firestopping occurring at the top of fire rated walls.
 - 5. Through-penetration smoke-stopping in smoke partitions.
 - 6. Construction-gap smoke-stopping in smoke partitions.
- B. Firestopping specified in other Sections of these specifications:
 - 1. Plumbing Penetrations: Section 15
 - 2. Fire dampers and manufactured devices: Section 15
 - 3. Raceway seals and manufactured electrical devices: Section 16
- C. Alternates: Refer to "Description of Alternates" pages for description of alternates affecting work of this Section.

1.02 REFERENCES

- A. Underwriters Laboratories
 - 1. U.L. Fire Resistant Directory
 - a. Through-penetration firestop devices (XHCR)
 - b. Fire resistance ratings (BXUV)
 - c. Through-penetration firestop systems (XHEZ)
 - d. Fill, void or cavity material (XHHW)
- B. American Society for Testing and Materials Standards:
 - 1. ASTM E814-88: Standard Test Method for Fire Tests of Through-Penetration Firestops.

1.03 DEFINITIONS

- A. Assembly: Particular arrangement of materials specific to given type of construction described or detailed in referenced documents.
- B. Barriers: Time rated fire walls, smoke barrier walls, time rated ceiling/floor assemblies and structural floors.
- C. Firestopping: Methods and materials applied in penetrations and unprotected openings to limit spread of heat, fire, gasses and smoke.
- D. Penetration: Opening or foreign material passing through or into barrier or structural floor such that full thickness of rated materials is not obtained.
- E. Construction Gaps: Gaps between adjacent sections of walls, exterior walls, at wall tops between top of wall and ceiling, and structural floors or roof decks; and gaps between adjacent sections of structural floors.
- F. System: Specific products and applications, classified and numbered by Underwriters Laboratories, Inc., to close specific barrier penetrations.
- G. Sleeve: Metal fabrication or pipe section extending through thickness of barrier and used to permanently guard penetration. Sleeves are described as part of penetrating system in other sections and may or may not be required.

1.04 SYSTEM DESCRIPTION

- A. Design Requirements:
 - 1. Fire-rated construction: Maintain barrier and structural floor fire resistance ratings including resistance to cold smoke at all penetrations, connections with other surfaces or types of -construction, at separations required to permit building movement and sound or vibration absorption, and at other construction gaps.
 - 2. Smoke barrier construction: Maintain barrier and structural floor resistance to cold smoke at all penetrations, connections with other surfaces and types of construction and at all separations required to permit building movement and sound or vibration absorption, and at other construction gaps.

1.05 SUBMITTALS

- A. Comply with all requirement of Section 01300, Submittals.

1.06 QUALITY ASSURANCE

- A. Installer's qualifications: Firm experienced in installation or application of systems similar in complexity to those required for this Project, plus the following:
 - 1. Acceptable to or licensed by manufacturer, State or local authority where applicable.

2. At least two (2) years' experience with systems.
 3. Successfully completed at least five (5) comparable scale projects using this system.
- B. Local and State regulatory requirements: Submit forms or acceptance for proposed assemblies not conforming to specific UL Firestop System numbers, or UL classified devices.
- C. Materials shall have been tested to provide fire rating at least equal to that of the construction.

1.07 DELIVERY, STORAGE AND HANDLING

- A. Packing and shipping:
1. Deliver products in original unopened packaging with legible manufacturer's identification.
 2. Coordinate delivery with scheduled installation date, allow minimum storage at site.
- B. Storage and protection: Store materials in a clean, dry, ventilated location. Protect from soiling, abuse, moisture and freezing when required. Follow manufacturer's instructions.

1.08 PROJECT CONDITIONS

- A. Existing conditions:
1. Verify existing conditions and substrates before starting work. Correct unsatisfactory conditions before proceeding.
 2. Proceed with installation only after penetrations of the substrate and supporting brackets have been installed.
- B. Environmental requirements:
1. Furnish adequate ventilation if using solvent.
 2. Furnish forced air ventilation during installation if required by manufacturer.
 3. Keep flammable materials away from sparks or flame.
 4. Provide masking and drop cloths to prevent contamination of adjacent surfaces by firestopping materials.
 5. Comply with manufacturing recommendations for temperature and humidity conditions before, during and after installation of firestopping.

1.09 GUARANTEE

- A. Submit copies of written guarantee agreeing to repair or replace joint sealers which fail in joint adhesions, co-adhesion, abrasion resistance, weather resistance, extrusion resistance, migration resistance, stain resistance, or general durability or appear to deteriorate in any other manner not clearly specified by submitted manufacturer's data as an inherent quality of the material for the exposure indicated. The guarantee period shall be one (1) year from date of substantial completion.

PART 2 - PRODUCTS

2.01 THROUGH-PENETRATION STOPPING OF FIRE-RATED CONSTRUCTION

- A. Systems or devices listed in the U.L. Fire Resistance Directory under categories XHCR and XHEZ may be used, providing that it conforms to the construction type, penetrant type, annual space requirements and fire rating involved in each separate instance, and that the system is symmetrical for wall applications. Systems or devices must be asbestos-free.
 - 1. Additional requirements: Withstand the passage of cold smoke either as an inherent property of the system, or by the use of a separate product included as a part of the U.L. system or device, and designed to perform this function.
 - 2. Acceptable manufacturers and products: Those listed in the U.L. Fire Resistance directory for the U.L. System involved and as further defined in the Systems And Applications Schedule.
 - 3. All firestopping products must be from a single manufacturer. All Trades shall use products from the same manufacturer.

2.02 CONSTRUCTION-GAP FIRESTOPPING OF FIRE-RATED CONSTRUCTION

- A. Firestopping at construction gaps between edges of floor slabs and exterior wall construction.
- B. Firestopping at construction gaps between tops of partitions and underside of structural systems.
- C. Firestopping at construction gaps between tops of partitions and underside of ceiling or ceiling assembly.
- D. Firestopping of control joints in fire-rated masonry partitions.
- E. Firestopping expansion joints.
- F. Acceptable manufacturers and products: Those listed in the U.L. Fire Resistance Directory for the U.L. System involved and as further defined in the Systems and Applications Schedule.

2.03 SMOKE-STOPPING AT SMOKE PARTITIONS

- A. Through-penetration smoke-stopping: Any system complying with the requirements for through-penetration Firestopping in fire-rated construction, as specified in The Systems and Applications Schedule is acceptable, provided that the system includes the specified smoke seal or will provide a smoke seal. The length of time of the fire resistance may be disregarded.
- B. Construction-gap smoke-stopping: Any system complying with the requirements for construction-gap Firestopping in fire-rated construction, as specified in the Systems and Applications Schedule is acceptable, provided that the system includes the specified smoke seal or will provide a smoke seal. The length of time of the fire resistance may be disregarded.

2.04 ACCESSORIES

- A. Fill, void or cavity materials: As classified under category XHHW in the U.L. Fire Resistance Directory.
- B. Forming materials: As classified under category XHKU in the U.L. Fire Resistance Directory.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Verification of conditions: Examine areas and conditions under which work is to be performed and identify conditions detrimental to proper or timely completion.
 - 1. Verify barrier penetrations are properly sized and in suitable condition for application of materials.
 - 2. Do not proceed until unsatisfactory conditions have been corrected.

3.02 CLEANING SURFACES

- A. Clean surfaces to be in contact with penetration seal materials, of dirt, grease, oil, loose materials, rust or other substances that may affect proper fitting, adhesion or the required fire resistance.

3.03 INSTALLATION

- A. Install penetration seal materials in accordance with printed instructions of the U.L. Fire Resistance Directory and in accordance with manufacturer's instructions.
- B. Seal holes or voids made by penetrations to ensure an effective smoke barrier.
- C. Where floor openings without penetrating items are more than 4" in width and subject to traffic or loading, install firestopping materials capable of supporting same loading as floor.

- D. Protect materials from damage on surfaces subject top traffic.
- E. Place firestopping in annular space around fire dampers before installation of damper's anchoring flanges which are installed in accordance with fire damper manufacturer's recommendations.
- F. Where large openings are created in walls or floors to permit installation of pipes, ducts, cable tray, bus duct or other items, close unused portions of opening with firestopping material tested for the application. See U.L. Fire Resistance Directory.
- G. Install smoke stopping as specified for firestopping.
- H. Where rated walls are constructed with horizontally continuous air space, double width masonry, or double stud frame construction, provide vertical, 12" wide fiber dams for full thickness and height of air cavity at maximum 15' intervals.

3.04 FIELD QUALITY CONTROL

- A. Examine penetration sealed areas to ensure proper installation before concealing or enclosing areas.
- B. Keep areas of work accessible until inspection by applicable code authorities.
- C. Perform under this Section, patching and repairing of firestopping cause by cutting or penetration by other Trades.

3.05 ADJUSTING AND CLEANING

- A. Clean up spills of liquid components.
- B. Neatly cut and trim materials as required.
- C. Remove equipment, materials and debris, leaving area in undamaged, clean condition.

END OF SECTION

**SECTION 07631
FLASHING, SHEET METAL, GUTTERS, DOWNSPOUTS AND ROOFING
SPECIALTIES**

PART 1 - GENERAL

1.01 DESCRIPTION

- A. Provide all flashing and sheet metal work including prefinished formed gutters, downspouts, coping, fascia, soffits, and flashing detailed, specified or otherwise required.
- B. Related Work: The following list of related work is specified in other Sections of these specifications:
 - 1. Section 06100: Rough Carpentry
 - 2. Section 07610: Metal Roofing
 - 3. Section 07900: Sealants
 - 4. Section 08520: Aluminum Windows
- C. Verify roof material and provide flashing and sheet metal required for a correct installation.

1.02 DELIVERY, STORAGE AND HANDLING

- A. Materials shall be stored off-the-ground protected from the weather.

1.03 WARRANTY

- A. Guarantee work for two (2) years from date of acceptance by Owner. All defects including leaks occurring during guarantee period shall be corrected without cost to the Owner.
- B. Guarantee Kynar 500 finish for 20 years covering face, chalking and film integrity.

1.04 SUBMITTALS

- A. Submit shop drawings showing complete details of all items involved. Details shall be drawn at not less than 3" = 1'0" scale and shall be fully dimensioned.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Provide flashing, sheet metal and roofing specialties in sizes and profiles detailed and specified.
- B. Provide prefinished steel gutters and downspouts either factory or shop formed to sizes

and shaped indicated on the drawings. Form from 24 gauge G-90 galvanized steel. Provide hangers at 3'0" o.c. maximum. Coverplates shall be provided at expansion joints. Provide expansion joints at locations shown on the drawings. If not shown, provide at 50'0" on center maximum. Downspouts to be corrugated of sizes indicated on the drawings. Provide 1½" wide anchor brackets at 8'0" maximum. Anchor to masonry with 1/4" galvanized expansion screws and shields. Seal all joints to make watertight. Finish to be Kynar 500. Color to match existing gutters and downspouts from standard and premium colors. Metal to be by roofing manufacturer.

- C. Provide Berridge prefinished "Flush Seam Panel" 24 gauge steel fascia and soffit panels formed as detailed on the drawings. Furnish complete system with formed panels, clips, drips and closure panels. All exposed surfaces shall be prefinished by Kynar 500 coating system. All material shall be by the Metal Roofing Manufacturer. All systems shall be formed, anchored and sealed to make watertight. Color to be selected by the Architect.
- D. All exposed metal flashing shall be of 24 gauge G-90 galvanized prefinished steel of same manufacturer and finish as metal roofing.
- E. Flashing at all exterior door and window heads external louvers and through-wall flashing as detailed on the drawings or as required, shall be Copperseal, constructed of 3 oz. copper coated with asphalt compound both sides by York Manufacturing, Inc., or equal. Flashing at door and window openings shall extend 6" beyond end of lintels. Provide weep holes at 16" o.c. Provide 1/4" drip beyond edge of lintels.

PART 3 - EXECUTION

3.01 INSPECTION

- A. Inspect substrate prior to installing this work. Notify Architect in writing of deficiencies. Do not start work until all deficiencies are corrected.

3.02 PREPARATION

- A. Coordinate work with all Trades in contact with roofing.
- B. Substrate shall be clean, dry and free of irregularities.

3.03 INSTALLATION

- A. Install all items in accordance with drawings, specifications and manufacturer's recommendations.

END OF SECTON

SECTION 07900 - JOINT SEALERS

PART 1 - SCOPE

- A. This Section includes all labor, materials, equipment, and related items required for the work of caulking as shown on the Drawings and as specified herein. Work under this Section includes but is not necessarily restricted to the following:
 - 1. Caulking of exterior or interior expansion or control joints in concrete or masonry.
 - 2. Other joints, exterior or interior, in the building construction shown, specified, or required to be caulked.

PART 2 - SUBMITTAL

- A. Contractor shall submit to the Architect, in duplicate, for approval the following items prior to furnishing any materials at the job site.
 - 1. Sample cards of all exposed caulking and sealant for color approval. Unless otherwise directed, apply samples in minimum 3" runs on cards.
 - 2. One lineal foot of each type of backer material proposed.

PART 3 - PRODUCT HANDLING

- A. Deliver caulking, and related accessories to the job site in factory sealed, unopened containers bearing manufacturer's name and product designation.
- B. Store materials in unopened containers, following manufacturer's recommendations for storage temperature and shelf life.
- C. Follow manufacturer's recommendation for handling products containing toxic substances. Keep flammable materials away from heat, sparks, and open flames. Use recommended solvents and cleaning agents for cleaning tools and equipment.

PART 4 - ENVIRONMENTAL CONDITIONS

- A. Schedule caulking operations so that working joints are most likely to be normal size. Apply materials within manufacturer's recommended surface and ambient temperature range.

PART 5 - PROTECTION

- A. Use masking tape where practicable to control lap of materials onto adjacent surfaces or to facilitate tooling. Remove tape immediately after caulking operation.

PART 6 - MATERIALS

- A. General. All caulking, primers, and accessories shall be non-staining to adjacent exposed materials. Products having similar application and usage shall be of the same manufacturer and type. Unless otherwise specified, colors shall be selected from approved manufacturer's standard color sections. Use gun consistency compounds unless otherwise required by job conditions.
- B. Exterior caulking shall be a one or two-component polysulfide base, elastic, synthetic rubber compound, conforming to Federal Spec. TT-S-00230, and shall be "Sonolastic" as manufactured by the Sonneborn Building Products, Inc., "Synthacalk" as manufactured by the Pecora Chemical Corp., or "Rubber Calk 500" as manufactured by the Products Research & Chemical Corp or an approved equal.
 - 1. Colors shall be from manufacturer's standards as selected by the Architect.
- C. Interior caulking for general use shall be a one-component acrylic latex compound, and shall be "Sonolac" as manufactured by the Sonneborn Building Products, Inc. "AC-20" as manufactured by the Pecora Chemical Corp., or "Latex Caulk" as manufactured by DAP, Inc.
- D. Primers shall be as manufactured and recommended for each substrate by the manufacturer of each caulking compound used in the work.
- E. Backer materials shall be as recommended for and compatible with each caulking used, and shall be as follows unless otherwise required to meet specific job conditions.
 - 1. Backer rod for use in all joints requiring backer for caulking shall be a soft, closed cell polyethylene foam meeting requirements of AASHO Specifications M153-54, Type I and III, and shall be as manufactured by the Dow Corning Corp., Sonneborn Building Products, Inc., or Williams Products, Inc.
- F. Release material, where required, shall be polyethylene film.

PART 7 - MIXING

- A. Job mix multi-component sealants with suitable power operated equipment, following specific directions of sealant manufacturer.
- B. Base and accelerator components of multi-part sealants shall have batch control numbers clearly indicated on containers. Control numbers for mixed components shall be identical.

PART 8 - CONDITION OF SURFACES

- A. Inspect all surfaces to receive caulking materials, and report all defects. Starting work implies acceptance of surfaces as satisfactory. Verify that joints and spaces to be caulked are of proper width.

- B. Concrete surfaces shall be thoroughly cured.
- C. Apply no caulking materials in contact with surfaces contaminated with oil, grease, bituminous materials, form release agents, bond breakers, deleterious curing compounds, water repellents, and other special surface treatments. Aluminum surfaces shall be free of lacquer. Costs incurred by removal of such contaminants shall be borne by the trades responsible for their presence.

PART 9 - PREPARATION

- A. Thoroughly clean all joints, removing all foreign matter such as dirt, dust, moisture, frost, rust, paint, lacquer, and protective coatings. Blow all joints free of loose particles.
- B. Use no cleaning solvents which leave residue. Wipe joints free of solvent using clean, dry white cloths or white lint less paper. Do not permit solvent to air dry.
- C. Follow manufacturer's directions for products and surfaces.

PART 10 - INSTALLATION

- A. Unless otherwise required by these specifications, install materials in strict accordance with manufacturer's specifications and recommendations, using approved equipment.
- B. Usage of various materials shall be as specified under Article 6 above.
- C. Prime surfaces as recommended by the manufacturer's immediately prior to caulking or sealing. Make preliminary tests to ensure that primers will not stain exposed materials or deteriorate backer materials.
- D. Unless otherwise required by caulking manufacturer's specifications and recommendations, use backer material to control caulking and sealant depth as follows (depths measured at bond face).
 - 1. Polysulfide and Polyurethane Sealants. For joints up to 1/2" wide and less, make depth equal to width but not less than 1/4". Joints over 1/2" wide shall be 3/8" deep.
 - 2. Acrylic Sealant. For joints 1/2" wide and less, make depth equal to width but not less than 1/4". Joints over 1/2" wide shall be 3/8" deep.
 - 3. Do not twist or stretch preformed backer materials during installation.
- E. At joints subject to movement, where required by nature of backer material used or where sealant contacts back of joint, use release material between backer material or back of joint and sealer to confine adhesion to surfaces of materials being joined. Follow manufacturer's recommendation exactly.

- F. Neatly tool joints to slightly concave surface using tooling agent recommended by sealant manufacturers. Repair any air pockets exposed by tooling. Tool so as to compress material and improve adhesion to surfaces joined.

PART 11 - PATCHING

- A. Patch or replace defective or damaged sealants as directed by the Architect. Be responsible for damage to adjacent surfaces caused by caulking and sealing operations.

PART 12 - CLEANING

- A. Clean adjacent surfaces soiled by caulking and sealing operations. Remove wet material before it "sets". Follow manufacturer's recommendations for cleaning procedures. Cleaning agents shall not stain or be injurious to exposed surfaces nor shall they be potentially dangerous to glass and metal surfaces due to wash-off by rain.

END OF SECTION

Division VIII – Doors and Windows

SECTION 08100 - METAL DOORS AND FRAMES

PART 1 - RELATED DOCUMENTS

- A. General provisions of Contract, General and Special Conditions, and General Requirements apply to this Section.

PART 2 - DESCRIPTION OF WORK

- A. Provide labor, materials, equipment, and services necessary for proper and complete installation of all hollow metal work.
- B. Include all view windows and side lights indicated on Drawings.
- C. Work Specified in Other Sections.
 - 1. Finish Hardware is specified in another Division 8 Section.

PART 3 - LABEL CONSTRUCTION

Where Label Construction is indicated in Door and Frame Schedule, materials and construction of doors and frames shall be in accordance with and bear indicated resistive rating label of Underwriters' Laboratories, Inc.

PART 4 - SUBMITTALS

Submit Shop Drawings for all work, indicating materials, uses, gauges, details of construction, connections to other work, fastenings, and anchors, to Architect for his review. Do not start fabrication until these Drawings are approved.

PART 5 - MATERIALS

- A. Manufacturers offering products complying with requirements include:
 - Steelcraft Mfg. Co.
 - Republic Steel Corporation
- B. Materials used shall be of best quality of their respective kinds.
- C. Steel in general shall be cold rolled stretcher level, prime quality steel, of U.S. Standard gauge as specified under the various headings.
- D. Doors, frames and framed openings exposed to the exterior shall be fabricated of zinc coated steel in the gauges scheduled. The steel shall be hot dipped so as to provide a ductile coating, tightly adherent to the base steel. The zinc coating shall be an A60 coating in accordance with ASTM specification A525 (.6 oz. of zinc per sq. ft. of steel total coverage.)

PART 6 - HOLLOW METAL STEEL DOORS, POLYURETHANE CORE

- A. Physical Properties:
 - “R” Factor: 11.1
 - “U” Factor: .09
 - Compression Strength: 3600 P.S.F.
- B. Doors shall be equal to those manufactured by The Steelcraft Manufacturing Company, Cincinnati, Ohio, and designated as:
 - LF-18 (1-3/4", 18 guage steel)
- C. Doors shall be fabricated of:
 - 1. Cold rolled steel, interior.
 - 2. Galvanized steel with a zinc coating of .6 ozs. per square foot total, exterior.
- D. Door shall be flush with edge seams filled and ground smooth.
- E. Doors shall have 1/8" bevel in 2" on hinge and ground smooth.
- F. Doors shall have vertical mechanical interlocking seams on hinge and lock edges.
- G. Doors shall be provided with top and bottom inverted 14 gage steel channels spot welded within the door.
- H. Doors shall be mortised and adequately reinforced for all hardware.
 - 1. Mortised hardware reinforcements shall be drilled and tapped at the factory.
 - 2. Surface applied hardware shall be field drilled by others.
- I. Doors shall be reinforced internally with a 14 guage steel reinforcement for surface closers when specified.
- J. Out swinging exterior doors shall be provided with top caps for protection against weather and with a polyurethane core.
- K. Doors shall be phosphatized and receive one coat of baked on prime paint.

PART 7 - FRAMES

- A. Fabricate frames of 16 ga. steel. Manufacturers offering products complying with the requirements include:
 - Steelcraft Mfg. Co.
 - Republic Steel Corp.
 - Fenestra, Inc.
- B. All frames shall have welded and mitered corners, equivalent to Steelcraft Type D-16. (Issue A).

- C. Frames in stud walls can be KD frames.
- D. Provide suitable anchors for jambs as required by wall construction. Provide a minimum of six (6) jamb anchors and two (2) base anchors per frame. Provide anchors as required for labeled frames.
- E. Reinforcing channels, where called for, shall be 12 gauge reinforcing channel in head.

PART 8 - HARDWARE REINFORCEMENTS

- A. Accurately mortise, reinforce, drill, and tap at factory all work to receive hardware, except do drilling and tapping for door checks and brackets at building.
- B. Reinforcements shall be of ample size and thickness to stiffen work against strain of service required. Reinforcements for locks and escutcheons shall be box type with spring lead contacts for lock cases.
- C. Provide cover boxes in back of all hardware cutouts in combination type frames.

PART 9 - FINISH

- A. All steel hollow metal work shall be phosphatized and receive one coat baked on prime coat.
- B. Each coat shall be baked on and sanded smooth.

PART 10 - INSTALLATION

- A. Set frames in their proper locations, plumb and true and securely braced in position.
- B. Receive, store and protect and be responsible for all doors to be installed hereunder. Report immediately to Contractor shortages, damage, improper preparation, defective finishes and warped doors. Do not install any material not perfect in every respect.
- C. Inspect openings and frames to receive doors. Report damage or discrepancy affecting proper installation of units to Contractor, and have corrective work done in a suitable and satisfactory manner.
- D. Install doors in openings as indicated on Drawings in conformance with shop drawings and hardware schedule. Install doors so they hang plumb and true, with proper clearances using items of hardware scheduled for openings.
- E. Accurately set all frames and thoroughly and rigidly anchor and fasten in place in building construction. Weld drywall anchors to frames.
- F. Check frames before and after walls are constructed to see that they are properly erected.

End of Section

SECTION 08211 - FLUSH WOOD DOORS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

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

1.02 SUMMARY

- A. This Section includes the following:

1. Solid core doors with wood veneer faces.
2. Factory fitting flush wood doors to frames and factory matching for hardware.
3. Glazing stops and preparation of flush doors to receive glazing; glazing specified elsewhere.

- B. Related Sections: The following Sections contain requirements that relate to this Section:

1. Architectural Woodwork: Division 6.
2. Metal Door Frames: Elsewhere in Division 8.
3. Door Hardware: Elsewhere in Division 8.
4. Glass and Glazing: Elsewhere in Division 8.
5. Field Finishing of Wood Doors: Section 09900 - Painting.

1.03 SUBMITTALS

- A. General: Submit each item in this Article according to the Conditions of the Contract and Division 1 Specification Sections.
- B. Product data for each type of door, including details of core and edge construction, trim for openings and louvers, and factory-finishing specifications.
- C. Shop drawings indicating location and size of each door, elevation of each kind of door, details of construction, location and extent of hardware blocking, fire ratings, requirements for veneer matching and factory finishing and other pertinent data.
 1. For factory-machined doors, indicate dimensions and locations of cutouts for locksets and other cutouts adjacent to light and louver openings.
- D. Samples for verification in the form and size indicated below:
 1. Corner sections of doors approximately 12 inches (300 mm) square with door faces and edging representing the typical range of color and grain for each species of veneer and solid lumber required.
 2. Louvers consisting of blade and frame, 6 inches (150 mm) long, for each material and finish specified.
 3. Frames for light openings, 6 inches (150 mm) long, for each materials, type, and finish required.

1.04 QUALITY ASSURANCE

- A. Quality Standard: Comply with the following standard:
 - 1. AWI Quality Standard: "Architectural Woodwork Quality Standards: of the Architectural Woodwork Institute for grade of door, core, construction, finish, and other requirements.
- B. Fire-Rated Wood Doors: Provide wood doors that comply with NFPA 80; are identical in materials and construction to units tested in door and frame assemblies per ASTM E 152; and are labeled and listed by UL, Warnock Hersey, or another testing and inspection agency acceptable to authorities having jurisdiction.
 - 1. Oversized, Fire-Rated Wood Doors: For door assemblies exceeding sizes of tested assemblies, provide manufacturer's certificate stating that doors conform to all standard construction requirements of tested and labeled fire-door assemblies except for size.
 - 2. Temperature Rise Rating: At stairwell enclosures, provide doors that have a temperature rise rating of 450 deg F (250 deg C) maximum in 30 minutes of fire exposure.
- C. Single-Source Responsibility: Obtain doors from one source and by a single manufacturer.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Protect doors during transit, storage, and handling to prevent damage, soiling, and deterioration. Comply with requirements of referenced standard and manufacturer's instructions.
- B. Identify each door with individual opening numbers as designated on shop drawings, using temporary, removable, or concealed markings.

1.06 PROJECT CONDITIONS

- A. Conditioning: Do not deliver or install doors until conditions for temperature and relative humidity have been stabilized and will be maintained in storage and installation areas during the remainder of the construction period to comply with the following requirements applicable to Project's geographical location:
 - 1. AWI quality standard Section 100-S-11 "Relative Humidity and Moisture Content."

1.07 WARRANTY

- A. General Warranty: Door manufacturer's warranty specified in this Article shall not deprive the Owner of other rights the Owner may have under other provisions of the Contract Documents and shall be in addition to, and run concurrent with, other warranties made by the Contractor under requirements of the Contract Documents.

B. Door Manufacturer's Warranty: Submit written agreement on door manufacturer's standard form signed by manufacturer, Installer, and Contractor, agreeing to repair or replace defective doors that have warped (bow, cup, or twist) more than 1/4 inch (6.35 mm) in a 42-by-84-inch (1067-by-2134-mm) section or that show telegraphing of core construction in face veneers exceeding 0.01 inch in a 3-inch (0.25 mm in a 75-mm) span, or do not conform to tolerance limitations of referenced quality standards.

1. Warranty shall be in effect during the following period of time after date of Substantial Completion.

a. Solid Core Interior Doors: Life of installation.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

A. Manufacturer: Subject to compliance with requirements, provide doors by one of the following:

1. Solid Core Doors:

- a. Algoma Hardwoods, Inc.
- b. Eggers Industries, Architectural Door Division
- c. Fenestra Corporation
- d. Graham Manufacturing Corp.
- e. Mohawk Flush Doors, Inc.
- f. V-T Industries, Inc.
- g. Weyerhaeuser Co.

2.02 INTERIOR FLUSH WOOD DOORS

A. Solid Core Doors for Transparent Finish: Comply with the following requirements:

1. Faces: See Finish Schedule
2. Grade: Premium
3. Construction: 5 or 7 plies
4. Core: Particleboard core
5. Bonding: Stiles and rails bonded to core, then entire unit abrasive planed before veneering.

B. Fire-Rated Solid Core Doors: Comply with the following requirements:

1. Faces and Grade: Provide faces and grade to match non-fire-rated doors in same area of building, unless otherwise indicated.
2. Construction: Manufacturer's standard core construction as required to provide fire-resistance rating indicated.

3. **Blocking:** Provide composite blocking designed to maintain fire resistance of door but with improved screw-holding capability of same thickness as core and with minimum dimensions as follows:
 - a. 5-inch (125-mm) top rail blocking
 - b. 5-inch (125-mm) bottom rail blocking
 - c. 5-by-18-inch (125-by-450-mm) lock blocks
 - d. 5-inch (125-mm) midrail blocking.
4. **Edge Construction:** Provide manufacturer's standard laminated-edge construction for improved screw-holding capability and split resistance as compared to edges composed of a single layer of treated lumber.
5. **Pairs:** Provide fire-rated pairs with fire-retardant stiles that are labeled and listed for kinds of applications indicated without formed-steel edges and astragals.

2.03 LIGHT FRAMES

- A. Wood-Veneered Beads for Light Openings in Fire Doors.

2.04 FABRICATION

- A. Fabricate flush wood doors to comply with following requirements:
 1. In sizes indicated for job-site fitting:
 - a. Comply with clearance requirements of referenced quality standard for fitting. Comply with requirements of NFPA 80 for fire-resistance-rated doors.
 - b. Coordinate measurements of hardware mortises in metal frames to verify dimensions and alignment before proceeding with factory machining.
 - c. **Metal Astragals:** Pre-matching astragals and formed-steel edges for hardware for pairs of fire-rated doors.
- B. **Openings:** Cut and trim openings through doors to comply with applicable requirements of referenced standards for kind(s) of door(s) required.
 1. **Light Openings:** Trim openings with moldings of material and profile indicated.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Examine installed door frames prior to hanging door:
 1. Verify that frames comply with indicated requirements for type, size, location, and swing characteristics and have been installed with plumb jambs and level heads.
 2. Reject doors with defects.
- B. Do not proceed with installation until unsatisfactory conditions have been corrected.

3.02 INSTALLATION

- A. Hardware: For installation see Division 8 Section "Finish Hardware."
- B. Manufacturer's Instructions: Install wood doors to comply with manufacturer's instructions and referenced quality standard and as indicated.
 - 1. Install fire-rated doors in corresponding fire-rated frames according to requirements of NFPA 80.
- C. Job-Fit Doors: Align and fit doors in frames with uniform clearances and bevels as indicated below; do not trim stiles and rails in excess of limits set by manufacturer or permitted with fire-rated doors. Machine doors for hardware. Seal cut surfaces after fitting and machining.
 - 1. Fitting Clearances for Non-Fire-Rated Doors: Provide 1/8 inch (3.2 mm) at jambs and heads, 1/16 inch (1.6 mm) per leaf at meeting stiles for pairs of doors, and 1/8 inch (3.2 mm) from bottom of door to top of decorative floor finish or covering. Where threshold is shown or scheduled, provide 1/4-inch (6.4 mm) clearance from bottom of door to top of threshold.
 - 2. Fitting Clearances for Fire-Rated Doors: Comply with NFPA 80.
 - 3. Bevel non-fire-rated doors 1/8 inch in 2 inches (3-1/2 degrees) at lock and hinge edges.
 - 4. Bevel fire-rated doors 1/8 inch in 2 inches (3-1/2 degrees) on lock edge; trim stiles and rails only to extent permitted by labeling agency.
- D. Field-Finished Doors: Refer to Division 9, Section 09900 - Painting, for finishing requirements.

3.03 ADJUSTING AND PROTECTION

- A. Operation: Rehang or replace doors damaged during installation.
- B. Finished Doors: Refinish or replace doors damaged during installation.
- C. Protect doors as recommended by door manufacturer to ensure that wood doors will be without damage or deterioration at the time of Substantial Completion.

End of Section

SECTION 08410 - ALUMINUM WINDOWS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

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

1.02 DESCRIPTION OF WORK

- A. Extent of aluminum windows is shown on drawings and schedules.
- B. Types of aluminum windows required include the following:
 - 1. Exterior and Interior
- C. Glazing: Refer to "Glass and Glazing" section of Division 8 for glazing requirements for aluminum entrances, curtain wall and windows, including doors.
- D. Sealant around perimeter of aluminum frames is specified elsewhere in Division 7 section.
- E. Comply with provisions of Section 01028 - Modification Requirements.

1.03 SYSTEM PERFORMANCES

- A. General: Provide exterior windows assemblies that have been designed and fabricated to comply with requirements for system performance characteristics listed below as demonstrated by testing manufacturer's corresponding stock systems according to test methods designated.
- B. Thermal Movement: Allow for expansion and contraction resulting from ambient temperature range of 120°F (49°C).
- C. Wind Loading: Provide capacity to withstand loading indicated below, tested per ASTM E 330.
 - 1. Uniform pressure of 30 psf inward and 30 psf outward.
- D. Transmission Characteristics of Fixed Framing: Comply with requirements indicated below for transmission characteristics and test methods.
 - 1. Air and Water Leakages: Air infiltration of not more than 0.06 CFM per sq. ft. of

fixed area per ASTM E 283 and no uncontrolled water penetration per ASTM E 331 at pressure differential of 8.0 psf (excluding operable door edges).

- E. Transmission Characteristics of Entrances: Provide entrance doors with jamb and head frames which comply with requirements indicated below for transmission characteristics and test methods.
 - 1. Air Leakage: Air infiltration per linear foot of perimeter crack of not more than 0.50 CFM for single doors and 1.0 CFM for pairs of doors per ASTM E 283 at pressure differential of 1.567 psf.

1.04 QUALITY ASSURANCE

- A. Drawings are based on one manufacturer's standard aluminum entrance, curtain wall and windows system. Another standard system of a similar and equivalent nature will be acceptable when differences do not materially detract from design concept or intended performances, as judged solely by Architect.

1.05 SUBMITTALS

- A. Product Data: Submit manufacturer's specifications, standard details, and installation recommendations for components of aluminum entrances and curtain wall and windows required for Project, including test reports certifying that products have been tested and comply with performance requirements.
- B. Shop Drawings: Submit shop drawings for fabrication and installation of aluminum entrances and curtain wall and windows, including elevations, detail sections of typical composite members, hardware mounting heights, anchorages, reinforcement, expansion provisions, and glazing.

1.06 SPECIAL PROJECT WARRANTY

- A. Provide written warranty signed by Manufacturer, Installer, and Contractor agreeing to replace aluminum entrances, curtain walls and windows which fail in materials or workmanship within 3 years of acceptance. Failure of materials or workmanship includes excessive leakage or air infiltration, excessive deflections, faulty operation of entrances, deterioration of finish or construction in excess of normal weathering, and defects in hardware, weatherstripping, and other components of the work.

PART 2 - PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products which may be incorporated in the work include, but are not limited to, the following:
 - 1. YKK AP America
 - 2. Kawneer Company, Inc.

3. PPG Industries, Inc.
4. Tubelite Div., Indal Inc.
5. Amarlite/Arco Metals Co.

2.02 MATERIALS AND ACCESSORIES

- A. Aluminum Members: Alloy and temper recommended by manufacturer for strength, corrosion resistance, and application of required finish; ASTM B 221 for extrusions, ASTM B 209 for sheet/plate.
- B. Fasteners: Aluminum, non-magnetic stainless steel, or other materials warranted by manufacturer to be noncorrosive and compatible with aluminum components.
 1. Do not use exposed fasteners except where unavoidable for application of hardware. Match finish of adjoining metal.
 2. Provide Phillips flat-head machine screws for exposed fasteners.
- C. Brackets and Reinforcements: Manufacturer's high-strength aluminum units where feasible; otherwise, nonmagnetic stainless steel or hot-dip galvanized steel complying with ASTM A 386.
- D. Concrete/Masonry Inserts: Cast iron, malleable iron, or hot-dip galvanized steel complying with ASTM A 386.
- E. Bituminous Coatings: Cold-applied asphalt mastic complying with SSPC-PS 12, compounded for 30-mil thickness per coat.
- F. Compression Weatherstripping: Manufacturer's standard replaceable stripping of either molded neoprene gaskets complying with ASTM D 2000 or molded PVC gaskets complying with ASTM D 2287. Weatherstripping shall be equal to Kawneer Sealair Weathering System which shall include head and jamb, astragal, and bottom weatherstripping.
- G. Glazing Materials: Provide manufacturers standard EDPM glazing gaskets.
- H. Sealant: Provide all sealant necessary within aluminum assemblies. Perimeter sealant around frames shall be included under Section 07900.

2.03 FABRICATION

- A. General - Sizes and Profiles: Required sizes for frame units, including profile requirements, are indicated on drawings.
 1. Details shown are based upon standard details by manufacturer indicated. Similar details by other manufacturers listed will be acceptable, provided they comply with other requirements, including profile limitations.
- B. Prefabrication: To greatest extent possible, complete fabrication, assembly, finishing,

hardware application, and other work before shipment to project site. Disassemble components only as necessary for shipment and installation.

1. Do not drill and tap for surface-mounted hardware items until time of installation at project site.
 2. Perform fabrication operations, including cutting, fitting, forming, drilling, and grinding of metal work in manner which prevents damage to exposed finish surfaces. For hardware, perform these operations prior to application of finishes.
- C. Reinforcing: Install reinforcing as necessary for performance requirements; separate dissimilar metals with bituminous paint or other separator which will prevent corrosion.
- D. Continuity: Maintain accurate relation of planes and angles, with hairline fit of contacting members.
- E. Fasteners: Conceal fasteners wherever possible.
- F. Weatherstripping: For exterior windows, provide compression weatherstripping against fixed stops.

2.04 ALUMINUM WINDOWS

- A. All exterior windows: YKK Model YES 45TU System (2" x 4½") for 1" glazing, thermally broken or equal.
1. YES 40FS interior aluminum frame, 1¾" x 4" non-insulated.

2.05 FINISH

- A. All exposed aluminum surfaces shall be free of scratches and other serious blemishes.
1. Finish shall be YKK standard YB5N, dark bronze.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Comply with manufacturer's instructions and recommendations for installation of aluminum entrances, curtain wall and windows.
- B. Drill and tap frames and doors and apply surface-mounted hardware items, complying with hardware manufacturer's instructions and template requirements. Use concealed fasteners wherever possible.
- C. Set sill members and other members in bed of sealant to provide weathertight

construction.

- D. Refer to "Glass and Glazing" section of Division 8 for their installation of glass shown to be glazed into doors and framing.

3.02 ADJUST AND CLEAN

- A. Adjust operating hardware to function properly, without binding, and to provide tight fit at contact points and weatherstripping.
- B. Clean completed system, inside and out, promptly after erection and installation of glass and sealants. Remove excess glazing and sealants, dirt, and other substances from aluminum surfaces.
- C. Institute protective measures and other precautions required to assure that aluminum entrances and curtain wall and windows will be without damage or deterioration other than normal weathering at time of acceptance.

END OF SECTION

SPECIFICATION 08710

PART 1 – GENERAL

1.0 Related Documents

Drawings and general provisions of contract and Division 1 specification sections, apply to work of this section

1.01 SUMMARY

A. Section Includes:

1. Door Hardware.
2. Storefront and Entrance Door Hardware.
3. Installation of Finish Hardware.

B. Related Sections:

1. Section 06200 - Finish Carpentry
2. Section 07900 - Joint Sealers – exterior thresholds
3. Section 08100 – Metal Doors and Frames
4. Section 08200 - Wood and Plastic Doors
5. Section 08400 – Entrances and Storefronts

C. Specific Omissions: Hardware for the following is specified or indicated elsewhere.

1. Windows.
2. Cabinets, including open wall shelving and locks.
3. Signs, except where scheduled.
4. Toilet accessories, including grab bars.
5. Folding Partitions, except cylinders where detailed.
6. Sliding aluminum doors, except cylinders where detailed.
7. Access doors and panels, except cylinders where detailed.

1.02 REFERENCES

- A. Use date of standard in effect as of BID date.
- B. American National Standards Institute – ANSI 156.18 – Materials and Finishes.
- C. ICC/ANSI A117.0 – 1998 – Specifications for making buildings and facilities usable by physically handicapped people.
- D. ADA – Americans with Disabilities Act of 1990.
- E. BHMA – Builders Hardware Manufacturers Association.
- F. DHI – Door and Hardware Institute
- G. NFPA – National Fire Protection Association
 1. NFPA 80 – Fire Doors and Windows
 2. NFPA 101 – Life Safety Code
 3. NFPA 105 – Smoke and Draft Control Door Assemblies
 4. NFPA 252 – Fire Tests of Door Assemblies

1.03 SUBMITTALS

ARCHITECT'S HARDWARE SCHEDULE:

Architect's hardware schedule is by hardware set number. Refer to drawings for designation of hardware set number applicable to each opening. Certain additional items of hardware and/or hardware accessories specified herein shall be finished and noted on the hardware schedule.

SUPPLIER'S HARDWARE SCHEDULE

A complete hardware schedule, indicating type, number, location, and finish shall be submitted to architect for approval, together with such samples as may be required for review. Opening numbers shall be same as used in contract documents. Schedule shall be prepared according to Door and Hardware Institute recommendations (schedule and sequence format) and shall include degree of door closer installation.

Supplier's hardware schedule will be reviewed by architect for type, quality, finish, and for function (other than hand). Contractor shall be responsible for checking schedule for correct hand of locksets and for supplying quantity of items required by contract documents.

Provide supplementary or revised hardware schedules if deemed necessary by architect.

Do not ship or deliver hardware to job prior to review of hardware schedules by architect.

Hardware schedule shall be submitted in the following format. Hardware schedules submitted to architect for review not in this format will be rejected:

HARDWARE SET 1

1 Sgl Door #001 Exterior from Corridor RHR 90 deg
Each leaf 3'0 x 7'0 x HMF x NLWD

Item, quantity, manufacturer's #, size, product type, finish, and product information

3 ea Hinge	BB1191 NRP 4.5 x 4.5	26D	HA
1 ea Cylinder	951 x GG MK	26D	FA
1 ea Exit Device	25R NL-OP	626	FA
Etc.			

1.04 QUALITY ASSURANCE

All hardware shall be furnished by an established Builders Hardware firm who maintains and operates an office, display, and stock in this area, and who is a regular authorized distributor of the lock they propose to furnish. All hardware schedules submitted for approval shall carry the signature and seal of a certified Architectural Hardware Consultant.

1.05 PROJECT CONDITIONS

Delivery storage and handling: Hardware supplier shall receive and check all hardware at his warehouse. Drop shipments to the jobsite from various manufacturers will not be permitted. All hardware shall be in its original packaging and plainly labeled and numbered to agree with the numbers and as listed in the hardware schedule. The contractor shall submit his schedules for approval to the architect before proceeding with any work. When required, hardware supplier shall deliver hardware and/or hardware templates to the various door manufacturers. The general contractor shall provide storage facilities for the finish hardware after delivery to the job site.

1.06 ITEMS NOT INCLUDED

Hardware for metal windows, toilet partitions, cabinets, access panels, etc. is not included in this section. See other sections for hardware to be furnished by others.

PART 2 – PRODUCTS

2.01 MANUFACTURERS

Numbers given in this schedule are of the following manufacturers.

<u>PRODUCTS</u>	<u>MFG. SPECIFIED</u>	<u>APPROVED EQUAL</u>
Hinges	Ives	Hager, Bommer
Locks	Falcon	Schlage, Best
Exit Devices	Falcon	Von Duprin, Precision
Closers	LCN	Corbin-Russwin, Sargent
Trim/Auxiliary	Ives	Hager, Rockwood
Weather Strip	NGP	Pemko, Hager

2.02 HARDWARE FINISHES

Exterior Aluminum Doors to have Bronze Hardware 10B or Equal

INTERIOR:

US 32D	(630)	Hinges, Locks, Pivots, Bolts
US 32D	(630)	Push/Pulls, Exit Devices, Stops
US 26D	(626)	Locksets, flushbolts
Sprayed Aluminum		Door Closers
Aluminum		Thresholds

2.03 HINGES

Ball Bearing Hinges shall be five-knuckle construction. Hinges for exterior doors shall be stainless steel with non-removable pins, in the finish specified. Oil impregnated bearings are not an acceptable substitute for ball bearings. All hinges shall be 4 1/2" x 4 1/2", unless otherwise specified.

2.04 LOCKSETS

Furnish locksets and cylinders by same manufacturer. Cylinders shall be provided with small format interchangeable cores keyed to the owner's specifications. All lever locks shall be mortise or bored type as indicated. Lock bodies and lock trim shall be by the same manufacturer. Backset on all lever locks and deadlocks shall be 2 3/4" or 2 3/8" as required. All deadlocks shall have 1" throw bolts and be equipped with armor fronts. Trim for locksets shall be as indicated in the hardware sets. Locksets shall be ANSI/BHMA A156.2 series 4000 Grade 1 Cylindrical lock as scheduled.

2.05 EXIT DEVICES

Characteristics:

- a. Tested to be in accordance with ANSI A156.3, 1994, Grade 1. All exit devices to be heavy duty, with one-piece removable covers. The housing shall be manufactured from extruded aluminum without exposed screws or rivets.
 - b. Exit Devices shall be "UL" listed for Life Safety. All exit devices for fire-rated door openings shall have "UL" labels for "Fire Exit Hardware". All exit devices shall conform to NFPA 80 and NFPA 101 requirements.
 - c. All series exit devices shall be "touchpad" (modern) types, incorporating a hydraulic fluid damper, which decelerates the touchpad on its return stroke and eliminates noise associated with the exit device operation.
- All exit devices shall be non-handed. The touchpad shall extend a minimum of 1/2 of the door width and shall be a minimum of 2-3/16" in height. Plastic touch pads shall not be acceptable. The touchpad height shall exceed height of mechanism case or rail assembly to eliminate "Pinch Points". If the touchpad height does not exceed the height of the mechanism case or rail assembly,

provide a factory installed insert / filler on the top and bottom of the touchpad along the mechanism case and rail assembly; to prevent "Pinch Points".

- d. All latch bolts to be the deadlocking type. Latch bolts shall have a self-lubricating coating to reduce wear. Plated or plastic coated latch bolts shall not be acceptable.
- e. All metal end caps to be standard with all exit devices.
- f. Exit device strikes, where surface applied, shall be a roller type and have an anti-slip mounting plate.
- g. All outside exit device trim shall be forged brass, full escutcheon. The pull shall have a grip that is 6 ¼' CTC and project 2 11/16".
- h. The exit device end caps shall be secured with three (3) screws to a truss bracket.
- i. The "touchpad" exit devices shall be patterned punched to designate code requirements; where required.
- j. All exit devices shall be made of brass, bronze, stainless steel, or aluminum material, plated to the standard architectural finishes to match the balance of the door hardware.
- k. Electric Latch retract options will require Power Supply from the same manufacturer.

2.06 CLOSERS

Door closers shall be full rack and pinion type. Closers shall be surface mounted. Equip closers with (2) two key operated regulating valves for individual control of both closing and latching speeds. Regulating valves shall be accessible from top of closer only and shall be completely unobtrusive. Closer shall have minimum of 15% door closing power adjustment and adjustable back check. Enclose closer in a cover of plastic. Closers on all exterior out-swinging doors and others as scheduled shall be parallel arm installation. Closer bodies and/or closer feet to be mounted on surface of door shall be supplied with sex bolts.

2.07 PUSH AND PULL UNITS

Push plates and pulls shall be solid stainless steel with a satin finish. Minimum thickness is .050; size and design are indicated in Hardware Sets.

2.08 PROTECTIVE PLATES

Kick, Armor, and Mop plates shall be height listed in schedule and width of 2" less than door width, or 1" less than door width of each leaf on pairs of doors. Plates shall be minimum thickness .050 stainless steel unless otherwise indicated.

2.09 THRESHOLDS

Provide (aluminum) thresholds where scheduled, with machine screws and lead expansion shields.

2.10 DOOR STOP

Provide door stops wherever necessary to prevent door or hardware from striking any adjacent partition or obstruction. Provide wall type whenever possible. All door stops and holders mounted on concrete floor or masonry walls shall have machine screws and lead expansion shields.

2.11 SILENCERS

Provide GJ-64 silencers for all hollow metal frames. Single doors shall have three (3) silencers. Double doors shall have two (2) silencers.

2.12 KEYING

Key locks to owner's specification. Obtain owners approval and signature on final approved keying. Perform all keying at lock factory, and register key data there. Deliver all master keys to Owner. No master keys shall be delivered to any other person.

PART 3 – EXECUTION

3.01 APPLICATION

INSTALLATION: Work shall be done by the **Hardware Supplier**, using skilled and experienced craftsman trained in the trade of installing finish hardware. Mortised items shall be neatly set in and made flush with door or frame surface. Manufacturer's instructions and recommendations shall be strictly followed.

FASTENERS: Hinges, pivots, locks, and exit devices shall be installed with proper sex bolts, wood or machine screws as supplied by the manufacturer. Surface closers shall be mounted to door with sex bolts. Door pulls shall be installed on doors with thru-bolts as supplied by manufacturer.

3.02 HARDWARE SETS

Hardware Set 1 Tag # 01, 02, 05

Cont. Hinge	112XY Bronze
Conc VR Exit	25CNL-OP 643e
Offset Pull	8190-2 643e
Mortise Cylinder	C987 643e
Closer	1450 Top Jamb bronze
Threshold	By Aluminum Door provider
Weather Strip	By Aluminum Door provider
Door Sweep	By Aluminum Door provider
Permanent Core	C607 606

Hardware Set 2 Tag 06, 19

Cont. Hinge	112XY Bronze
Push/Pull Combo	9190 33 x 12 643e
Closer	1450 Top Jamb bronze
Threshold	By Aluminum Door provider
Weather Strip	By Aluminum Door provider
Door Sweep	By Aluminum Door provider

Hardware Set 3 Tag # 03, 25

Hinges	5BB1 4 ½ x 4 ½ NRP 630
Rim Exit	25RNL
Mortise Cylinder	C987
Closer	40450A Cush
Threshold	425EV
Weather Strip	160VA
Door Sweep	97V
Permanent Core	C607

Hardware Set 4 Tag # 04

Hinges	5BB1 4 ½ x 4 ½ NRP 630
Storeroom Lock	T581
Latch Guard	BLP107
Closer	4050AH Cush
Threshold	425EV
Weather Strip	160VA
Door Sweep	97V
Permanent Core	C607

Hardware Set 5 Tag #07, 10, 14

Hinge	5BB1 4 ½ x 4 ½
Office Lockset	T511 BD Dane
Kick Plate	8400 B-CS 8" x 2" LTDW
Wall Stop	407CVX
Permanent Core	C607

Hardware Set 6 Tag #08, 09, 13

Hinge	5BB1 4 ½ x 4 ½
Passage Latch	T101S Dane
Overhead Holder	450 H
Kick Plate	8400 B-CS 8" x 2" LTDW

Hardware Set 7 Tag #11

Hinge	5BB1 4 ½ x 4 ½
Privacy Indicator	MA311 DGM
Closer	1450 R w/PA
Kick Plate	8400 B-CS 8" x 2" LTDW
Wall Stop	407CVX

Hardware Set 8 Tag #12

Hinge	5BB1 HW 4 ½ x 4 ½
Office Lockset	T511 BD Dane
Closer Hold-open	1450 H Reg
Kick Plate	8400 B-CS 8" x 2" LTDW
Permanent Core	C607

Hardware Set 9 Tag #15, 21, 23

Hinges	5BB1 4 ½ x 4 ½
Storeroom Lockset	T581 BD Dane
Closer	1450 R w/PA
Kick Plate	8400 B-CS 8" x 2" LTDW
Wall Stop	407CVX
Permanent Core	C607

Hardware Set 10 Tag #16, 17

Hinges	5BB1 4 ½ x 4 ½
Push Plate	8200 8x16
Offset Pull	8190-0 630
Closer	1450 R w/PA
Kick Plate	8400 B-CS 8" x 2" LTDW
Wall Stop	407CVX

Hardware Set 11 Tag #20

Hinges	5BB1 4 ½ x 4 ½
Classroom Lockset	T561 BD Dane
Closer w/ stop	1450 Cush
Kick Plate	8400 B-CS 8" x 2" LTDW
Permanent Core	C607

Hardware Set 12 Tag #22

Hinges	5BB1 4 ½ x 4 ½
Flush Bolts Top only	FB358
Storeroom Lockset	T581 BD Dane
Closer	1450 R w/PA
Coordinator	3092
Kick Plate	8400 B-CS 8" x 1" LTDW
Permanent Core	C607

End of Schedule

SECTION 08800 - GLASS AND GLAZING

PART 1 - SCOPE

- A. This Section includes all labor, materials, equipment and related items required for the work of glass and glazing as shown on the Drawings and specified herein.

PART 2 - SUBMITTALS

- A. The Contractor shall submit to the Architect for approval prior to furnishing materials at the job site, in five (5) copies, manufacturer's specifications, application and performance data, etc. for all glass and glazing materials, except miscellaneous accessories specified hereunder.
- B. Samples. The Contractor shall submit if requested to the Architect for approval prior to furnishing materials at the job site, duplicate samples of the following:
 - 1. Glass of each type, not less than 3" x 5".
 - 2. Glazing compound, one (1) cartridge.

PART 3 - CODES AND STANDARDS

- A. All glazing compounds and methods of glazing shall be in accordance with applicable portions of the Flat Glass Marketing Association's "Glazing Manual", latest edition.
- B. All safety glazing shall meet requirements of the Kentucky Department of Housing, Buildings, and Construction and appropriate Kentucky Revised Statutes.

PART 4 - PRODUCT HANDLING

- A. Glass shall be delivered to the job and shall be stored on end and under cover. Glass shall be properly crated, packaged, and protected from damage. Glazing compounds shall be delivered in manufacturer's sealed containers, with attached labels properly identifying the types.

PART 5 - MATERIALS

- A. Glass for installation in aluminum windows shall be of sizes shown, see elevations.
 - 1. Warranty. Each unit shall be guaranteed by the manufacturer not to develop, under normal conditions, material obstruction of vision as a result of film formation on the internal glass surfaces caused by failure of the hermetic seal other than through glass breakage for a period of ten (10) years.

- B. Compound for glazing in openings other than those which are dry-glazed shall be non-staining, one-part polysulfide base sealant, and shall be PRC "Rubber Caulk 5000", Pecora "Synthacalk GC-9", or DAP "Flexiseal". Color of compound shall be manufacturer's standard as selected by the Architect.
- C. Miscellaneous Items. Provide neoprene spacers, setting blocks, clips, and all accessories required for the work of glazing.
- D. Other material shall be as specified hereinafter.

PART 6 - GLAZING

A. General Requirements:

1. Glazing shall be done in a weathertight and waterproof manner. No glazing work shall be done when the temperature is below 40 degree F.
2. Glazing surfaces shall be extremely clean, dry and completely dust free before commencing application of glazing materials.
3. Remove glazing beads completely, perform glazing operations and set back in correct location. Do not mar beads, screws and the like.
4. Glazing shall be done at the building after windows, frames, doors, etc. are installed.
5. Remove excess glazing compound from glass and other adjacent surfaces to prevent permanent stains or other damage.

- B. Aluminum entrance doors and fixed window frames shall be glazed in strict accordance with entrance manufacturer's instructions and details for these operations.

PART 7 - CLEANING

- A. At completion, remove dirt, stains, etc. from glass. Wash and polish glass inside and outside surfaces. Exercise care so as not scratch or damage glass. Do not use acid solution or water containing caustic soaps. Leave work in perfect condition as approved by the Architect.

End of Section

Division IX – Finishes

SECTION 09260 - GYPSUM BOARD

PART 1 - GENERAL

1.01 SUMMARY

- A. Related Documents: Provisions established in General and Supplementary Conditions of the Contract, Division 1 General Requirements, and the Drawings are collectively applicable to this Section.
- B. Section Includes:
 - 1. Interior metal stud wall framing studs, 20 gauge material thickness.
 - 2. Furred wall framing.
 - 3. Metal channel ceiling framing.
 - 4. Gypsum board.
 - 5. Cementitious backer board.
 - 6. Taped and sanded joint treatment.

1.02 SUBMITTALS

- A. Submit under provisions of Section 01330.
- B. Product Data: Provide data on metal framing, gypsum board, joint tape and joint compound.
- C. Submit manufacturer's installation instructions for each product proposed for use.

1.03 QUALITY ASSURANCE

- A. Perform Work in accordance with ASTM C 840, GA-201, GA-216 and GA-600.

1.04 DELIVERY, STORAGE, HANDLING

- A. Deliver, store, handle, and protect products in conformance with manufacturer's instructions and in accordance with Section 01600.
- B. Store inside building, on sleepers, and out of water.

1.05 QUALIFICATIONS

- A. Applicator: Company specializing in performing the work of this section with minimum of 3 years documented experience.

1.06 REGULATORY REQUIREMENTS

- A. Conform to applicable code for fire rated assemblies.
- B. Refer to Drawings for details and references to UL and GA assemblies.

PART 2 - PRODUCTS

2.01 MANUFACTURERS - GYPSUM BOARD

- A. Acceptable Manufacturers: Subject to compliance with requirements indicated, provide products of one of the following:
 - 1. U. S. Gypsum.
 - 2. Georgia-Pacific Gypsum, LLC.
 - 3. National Gypsum.
 - 4. Domtar Gypsum Co.
 - 5. Republic Gypsum Co.
- B. Substitutions: Under provisions of Section 01600.
- C. Specific product references are these of U.S. Gypsum Company unless noted otherwise as a standard of quality.

2.02 GYPSUM BOARD MATERIALS

- A. Fire Rated Gypsum Board: ASTM C 36; fire resistive type X or C, UL rated; 48 inch by 5/8 inch thick, maximum permissible length; ends square cut, tapered and beveled edges.
- B. Moisture Resistant Gypsum Board: ASTM C 630; 48 by 5/8-inch thick, type X or C (fire-rated), maximum permissible length ends square cut, tapered edges.
- C. Gypsum Backing Board: ASTM C 442; fire rated type 'X'; 5/8-inch thick; V-grooved edges, ends square cut, maximum permissible length.
- D. Exterior Gypsum Sheathing shall be Fiberglass, Mat-Faced Gypsum Sheathing, Type X, Densglass Fireguard Sheathing, or equal.

2.03 MANUFACTURERS - FRAMING SYSTEMS

- A. Acceptable Manufacturers: Subject to compliance with requirements indicated, provide products of one of the following:
 - 1. Clark Steel Framing Systems, Inc., Hinckley, OH.
 - 2. Consolidated Systems, Inc., Columbia, SC
 - 3. Dale/Incor Industries, Dearborn, MI.
 - 4. Delta Metal Products, Dallas, TX.
 - 5. Dietrich Industries, Inc., Hutchins, TX.

6. Knorr Steel Framing Systems. Salem, OR.
7. The Steel Network Inc., Raleigh, NC.
8. Unimast, Inc., Houston, TX
9. Western Metal, Riverside, CA.

B. Substitutions: Under provisions of Section 01600.

2.04 FRAMING MATERIALS

- A. Studs and Tracks: ASTM C 645; galvanized sheet steel, gage as indicated on Drawings, 'ST' series shape, depths as indicated on Drawings. Provide with floor and ceiling runners, 'C' shaped galvanized, 1-1/4 inch leg.
- B. Shaft Wall Studs: Galvanized finish, length and depth as required, gage as recommended by manufacturer for heights encountered to maintain a maximum deflection of L/240 with 5 pound horizontal loading.
- C. Furring, Framing and Accessories: Provide in conformance with ASTM C 645, GA-216, and GA-600 and as follows:
 1. Cold Rolled Channels: 3/4inch, 1-1/2 inch and 2 inches, 16 gage, prime painted.
 2. Furring Channels: 7/8 inch deep x 1-1/4 inch face, 25 gage, galvanized.
 3. Resilient Furring: 7/8 inch deep x 1-1/4 inch face, 25 gage, galvanized with one leg attached only.
- D. Fasteners: ASTM C 514 for nails and C 1002 for screws as follows:
 1. Inserts, clips, bolts, nails or other screws as recommended by manufacturer, of type and size to suit application and to rigidly secure materials in place.
 2. Self-drilling, self-tapping bugle head screws for use with power drive tool.
 3. Metal Framing to Structure: Power driven screw fasteners to withstand 190 pound single shear resistance and 200 pound bearing force when drive through structural head or base and without exceeding allowable design stress in runner, fastener, or structural support.
 4. Metal to Metal: 3/8 inch, Type S or S-12, pan head screws.
 5. Gypsum Board to Sheet Metal Application: Type S screws.
 6. Gypsum Board to Gypsum Board Application: Type G screws.

7. Vertical Deflection Connection (required under all steel beams where the top metal track is tied into the steel beam): Provide VertiClip® or VertiTrack™ deflection-accommodating anchorage devices, by The Steel Network Inc. Products shall conform to the following material properties and performance criteria:
 - a. Code Criteria:
 1. Meet required head of wall connection criteria as required by applicable referenced code for cyclic wall movement.
 - b. Material Composition: Meeting ASTM A653/A, SS grade 50, class 1, 50 ksi minimum yield strength, 65 ksi minimum tensile strength, G-60 hot dipped galvanized coating.
 - c. Material Thickness: 0.036 inch thick for VertiClip SLD series.
 - d. Clips shall be designed for positive attachment to structure and stud web using step-bushing technology to provide frictionless vertical movement.
 - e. Provide clips with attached bushing and screw of the series, size, and configuration as recommended by manufacturer.
 - f. Friction-fit deep-leg track assemblies and tracks relying on steel flexure to perform are unacceptable.
 - g. Substitutions: Must comply with the following:
 1. Meets ASTM A653/A, SS Grade 50, class 1 50 ksi minimum yield strength, 65 ksi minimum tensile strength, G-60 hot dipped galvanized coating.
 2. Certified for use in UL 2079-approved assemblies for cyclic movement.
 3. Structural testing performed per AISI requirements.

2.05 ACCESSORIES

- A. U. S. Gypsum Company products specified below as a standard of quality, unless noted otherwise.
 1. Acoustical Insulation: Refer to Section 07210.
 2. Acoustical Sealant and Tape: Non-hardening, non- skinning, for use in conjunction with gypsum board; manufactured by Tremco, Pecora, or USG.
 3. Corner Beads: Metal, equal to USG Durabead No. 103, galvanized.

4. Casing Beads: Equal to USG No. 200-A, galvanized.
5. Control Joint: Equal to USG No. 093, galvanized.
6. Hanger Wire: Annealed galvanized wire, of gauges indicated (or required to suit application) to rigidly support ceiling components in place.

B. Joint Treatment and Texture Materials

1. Joint Tape:
 - a. ASTM C 475 or FS SS-J-570, Type II, perforated tape.
 - b. Joint compound:
 1. ASTM C 475 or FS SS-J-570, Type I.
 2. Acceptable Product:
 - i) Taping compound: USG Durabond Joint Compound Taping.
 - ii) Topping: USG Joint Compound-All Purpose.

C. Reveal Moldings

1. Extruded aluminum, 6063 T5 alloy, clear anodized unless otherwise noted, in profiles as indicated on the Drawings, as made by Pittcon or Fry Reglet.

PART 3 - EXECUTION

3.01 INSPECTION

- A. Verify that site conditions are ready to receive work and opening dimensions are as indicated on shop drawings and instructed by the manufacturer.
- B. Beginning of installation means acceptance of existing substrate.

3.02 METAL STUD INSTALLATION

- A. Follow recommendations of U.S. Gypsum Co., "Gypsum Construction Handbook".
- B. Install studding in accordance with ASTM C 754, GA-201, GA- 216, and GA-600.
- C. Metal Stud Spacing: 16 inches on center, unless otherwise noted in schedule or on Drawings. Locate studs maximum of 2 inches from door frames, abutting partitions, corners, and other construction features.

- D. Stud to Structure: Refer to Drawings for indication of partitions extending stud framing through the ceiling to the structure above. Provide vertical deflection accommodating devices where each stud connects to structural members above.
- E. Stud to Ceiling: Refer to Drawings for indication of partitions extending to finished ceiling only and for partitions extending through the ceiling to the structure above.
- F. Door Opening Framing: Install double studs at door frame jambs. Install stud tracks on each side of opening, at frame head height, and between studs and adjacent studs.
- G. Blocking: Screw wood blocking to studs. Bolt or screw steel channels to studs. Install blocking for support of plumbing fixtures, toilet partitions, wall cabinets, shelving, toilet accessories, and hardware.
- H. Coordinate installation of bucks, anchors, blocking, electrical and mechanical work placed in or behind partition framing.
- I. Stud Connections: Secure studs to runners with screws at door and window frames, partition intersections and corners. Where required for additional height, splice studs by nesting a minimum lap of 18 inches and attach flanges together with 2 screws in each flange. Prevent structural loading of stud systems.
- J. Restroom Chase Wall Studs: Position double row of studs vertically in runners so that studs are opposite each other in pairs with flanges pointed in same direction. Space at 16 inches on center unless otherwise noted. Anchor each stud to runner flanges with screws. Cross brace between rows of studs with wallboard, 12 inches by chase width, screw attached to stud webs at quarter points in partition height, with 1 inch screws spaced 8" off center in each stud web.
- K. Seismic Requirements: Provide lateral bracing and other measures in accordance with seismic requirements of applicable codes and regulations.

3.03 WALL FURRING INSTALLATION

- A. Erect wall furring for direct attachment to concrete block and concrete walls.
- B. Erect furring channels vertically. Secure in place on alternate channel flanges at maximum 24 inches on center.
- C. Space furring channels maximum 16 inches off center, not more than 4 inches from floor, ceiling lines and abutting walls.
- D. Erect free-standing metal stud framing tight to concrete and concrete masonry walls, attached by adjustable furring brackets in accordance with manufacturer's instructions.

3.04 FURRING FOR FIRE RATINGS

- A. Install furring as required for fire resistance ratings indicated.

3.05 SHAFT WALL INSTALLATION

- A. Shaftwall Framing: In accordance with manufacturer's installation instructions. Space studs at 16 inches on center. Cut so that studs are no more than 1/2 inch shorter than rough opening.

3.06 CEILING FRAMING INSTALLATION

- A. Install in accordance with ASTM C 754, GA-201, GA-216, and GA-600 and manufacturer's instructions.
- B. Coordinate location of hangers with other work. Use 9 gage wire for single layer wall board, and 8 gage wire for double layer. Space at maximum 48 inches on center each way, unless ceiling framing occurs at more frequent intervals.
- C. Install ceiling framing independent of walls, columns, and above-ceiling work. Locate members within 6 inches of walls. Unless shown otherwise, use 1-1/2 inch cold-rolled channels, 2 inch on double layer board, at 48 inches off center main framing with furring channels at 24 inches on center, 16 inches on center for double layer board.
- D. Reinforce openings in ceiling suspension system which interrupt main carrying channels or furring channels, with lateral channel bracing. Extend bracing minimum 24 inches past each end of openings.
- E. Laterally brace entire suspension system.

3.07 ACOUSTICAL ACCESSORIES INSTALLATION

- A. Install resilient channels at maximum 24 inches on center. Locate joints over framing members.
- B. Place acoustical insulation in partitions tight within spaces, around cut openings, behind and around electrical and mechanical items within or behind partitions, and tight to items passing through partitions.
- C. Install acoustical sealant at wall perimeter of designated partitions as follows:
 - 1. Metal Framing: Two beads at contact area at intersecting walls, floors and ceilings.
 - 2. Base Layer Gypsum Board: One bead.
 - 3. Seal penetrations of partitions by conduit, pipe, ductwork, rough-in boxes, and access door frames.

3.08 GYPSUM BOARD INSTALLATION

- A. Install gypsum board in accordance with GA 201, GA 216, GA-600 and U.S.G. "Gypsum Construction Handbook".
- B. Erect interior board horizontally if space is small so as to avoid end butt joint; otherwise install gypsum board vertically, with ends and edges occurring over firm bearing. Stagger end joints to occur at different locations on opposite sides of wall. Apply board to suspended ceilings with long dimension at right angles to framing.
- C. Erect exterior gypsum sheathing horizontally, with edges butted tight and ends occurring over firm bearing. Abut boards without forcing. Neatly fit ends and edges of boards and make cuts and penetrations so that paper facing and gypsum core are not damaged.
- D. Use screws when fastening gypsum board to metal furring or framing and nails to wood studding. Stagger fasteners opposite each other on adjacent ends and edges. Space fasteners as recommended in U.S.G., "Gypsum Construction Handbook". Do not attach gypsum board to top track on partitions extending from floor to structure above.
- E. Treat cut edges and holes in moisture resistant gypsum board and exterior gypsum ceiling board with sealant.
- F. Place control joints at changes in back-up material, at maximum 20'-0" off center in exterior walls, and at maximum 30'-0" off center at interior partitions. In ceilings, install at maximum 30'-0" off center each way. Provide fire resistant protections behind control joints in fire rated assemblies.
- G. Place corner beads at external corners. Use longest practical length. Place edge trim where gypsum board abuts dissimilar materials.
- H. On fire rated assemblies, seal penetrations and make air-tight. Refer to Section 07840 for firestopping requirements and materials.
- I. Thicken partitions to eliminate wall surface jogs for the full length of the wall within a room to conceal structural members, pipes, panels, specialty items, and accessories.
- J. Coordinate door and other frame thicknesses as required.

3.09 JOINT TREATMENT

- A. Tape, fill, and sand exposed joints, edges, and corners to produce surface ready to receive finishes. The intent is to provide the highest quality of joint treatment work consistent with commercial construction. Leave surfaces smooth, uniform, and free of fins, depressions, ridges, cracks, and other imperfections.
- B. Feather coats onto adjoining surfaces so that camber is maximum 1/32 inch.

C. Levels of Finish:

1. Comply with GA-214; italicized commentary is excluded; replace words "may" and "should" with "shall."
2. Locations to receive Level 4 finish: Areas to be painted.
3. Locations to receive Level 3 finish: Areas to receive moisture resistant gypsum board used as a tile substrate.
4. Locations to receive Level 2 finish: Fire-rated, sound-rated, and smoke-rated assemblies in ceiling plenums and concealed areas.
5. Locations to receive Level 1 finish: Non-fire-rated, non-sound-rated, and non-smoke-rated assemblies in ceiling plenums and concealed areas.

3.10 TOLERANCES

- A. Maximum Variation from True Flatness: 1/8 inch in 10 feet in any direction.

END OF SECTION

SECTION 09300 - CERAMIC TILE

PART 1 - GENERAL

1.01 Description

- A. Provide porcelain tile at restrooms as shown on drawings and as specified herein.
- B. Work includes preparation of surfaces to receive ceramic tile, setting bed, grout and expansion joint sealant.

1.02 Quality Assurance

- A. Tile shall be standard grade, conforming to ANSI A137.1 standards and supplied in grade-sealed containers.
- B. Manufacturer mortars, grouts and adhesives shall contain hallmarks certifying compliance with reference standards and be types recommended by Tile Manufacturer for application shown.
- C. Installation shall be in accordance with Tile Council of America (TCA) Installation Handbook, latest edition.

1.03 Submittals

- A. Submit color samples of tile and grout for products specified.
- B. Submit manufacturer's recommended maintenance guidelines.

1.04 Product Delivery, Storage and Handling

- A. Deliver materials in Manufacturers' unopened, original standard containers with grade seals unbroken and labels intact.
- B. Store under cover.

1.05 Job Conditions

- A. Maintain environmental conditions and protect work during and after installation to comply with referenced standards and manufacturer's printed recommendations.
- B. Protect adjoining surfaces.

1.06 References

- A. ANSI A101.1: Installation of Ceramic Tile with Portland Cement.
- B. ANSI A108.4: Installation of Ceramic Tile with Water-Resistant Organic Adhesives.
- C. ANSI A108.5: Installation of Ceramic Tile Installed with Dry Set Portland Cement Mortar or Latex-Portland Cement Mortar.
- D. ASTM C-150.
- E. Tile Council of America, Inc., Handbook for Ceramic Tile, latest edition.

PART 2 - PRODUCTS

2.01 Materials

- A. Tile materials: Sizes, colors and finishes of specified tiles shall be as indicated on floor tile patterns, details and finish schedule as provided in contract documents on Architectural Drawings/Finish Schedule.
- B. Adhesive Materials: TEC/H.B. Fuller Company, Full Flex Universal Latex-Modified Thin Set Mortar (TA-391 white) to be used on floors and walls with unglazed porcelain products.
- C. Grouting Materials: TEC/H.B. Fuller Company, AccuColor XT premixed, stain-resistant grout to be used on floors with porcelain product. Sanded or Unsanded as required by tile type. Color to be selected by Architect.
- D. Grout Sealer: TEC/H.B. Fuller Company, Silicone Grout Sealer (TA-210) applied as recommended by the manufacturer.
- E. Specialty items:
 - 1. Cove - Schluter "Dilex" - AHKA, clear anodized aluminum. Used only where tiled walls meet tile floors.
 - 2. Expansion joints - Schluter "Dilex" - BUS-100. Color to match grout. Spacing of expansion joints as recommended by TCA Handbook.

PART 3 - EXECUTION

3.01 Inspection

- A. Before starting installation, inspect surfaces scheduled to receive ceramic tile. Variations of surfaces to be tiled should fall within maximum variations shown below:

	<u>Walls</u>	<u>Floors</u>
Dry Set Mortar	1/8" in 8'	1/8" in 10'
Epoxy	1/8" in 8'	1/8" in 10'
Organic Adhesive	1/8" in 8'	1/8" in 3'

Report all unacceptable surfaces to the Architect, and do not tile such surfaces until they are leveled to meet the above requirements.

3.02 Preparation

- A. Where subfloors or wall surfaces require filling or building up to produce satisfactory level surfaces, do so in an approved manner with an underlay material approved for use over surfaces affected. High spots shall be ground off or otherwise removed and leveled to provide satisfactory conditions for tile installation.
- B. Clean surfaces of grease, oil, wax, curing compounds, dirt and foreign matter before proceeding with installation. Surface must be completely dry.
- C. Layout and install expansion joints as recommended by TCA "Handbook for Ceramic Tile Installation".

3.03 Installation

- A. Unless otherwise directed, do not begin work until other trades, including painting, have been completed.
- B. Ceramic tile shall be installed, grouted and cleaned in accordance with applicable ANSI standards for setting method specified.
- C. Smooth all exposed cut edges. Fit tile carefully against trim, penetrations and built-in accessories and fixtures.
- D. Grout in accordance with Manufacturer's specifications.
- E. Install sealant in expansion joints after tile is clean and thoroughly dry.

- F. Lay all tile square with room axis, starting at center of room, or in accordance with tile patterns indicated on architectural plans.
- G. Whenever tiled floors change or adjoin other flooring materials, provide appropriate transition strips as scheduled below:

<u>Surface</u>	<u>Transition Strips</u>
Tile to tile	Marble threshold
Tile to V.C.T.	Vinyl beveled edge strip
Tile to sheet vinyl	Vinyl beveled edge strip
Tile to carpet	Vinyl beveled edge strip or built-up floor with butted edges

3.04 Cleaning and Protection

- A. After tile has been set and grouted, thoroughly clean tile work with a neutral cleaner in accordance with Manufacturer's recommendations.
- B. Remove all foreign matter, excess materials or tools from area.
- C. After cleaning, protect floor with non-staining paper covering and prohibit foot and wheel traffic from using newly tiled floors for at least 3 days.
- D. Contractor shall be responsible for removing and replacing any defective materials, unacceptable tiling conditions or tiles damaged by construction as recommended by the Architect at no additional cost to the Owner.
- E. At the completion of work, the Contractor shall provide the Owner with one (1) unopened carton of tiles of the same lot as used in the project.

END OF SECTION

SECTION 09511 - SUSPENDED ACOUSTICAL CEILINGS

PART 1 - GENERAL

1.01 Work Included

- A. Suspended metal grid ceiling system.
- B. Acoustical tile panels.

1.02 Related Work

- A. Air diffusion devices in ceiling system.
- B. Light fixtures in ceiling system.

1.03 References

- A. ASTM C635 - Metal Suspension Systems for Acoustical Tile and Lay-in Panel Ceilings.
- B. ASTM C636 - Installation of Metal Ceiling Suspension Systems for Acoustical Tile and Lay-in Panels.
- C. UL - Underwriter's Laboratories System Ratings.

1.04 Quality Assurance

- A. Manufacturer: Company specializing in the manufacture of ceiling suspension system and ceiling tile panels, three years minimum experience.
- B. Installer: Company shall have experience installing the approved manufacturer.

1.05 Regulatory Requirements

- A. Conform to applicable code for fire rated assembly where required.

1.06 Submittals

- A. Submit shop drawings and product data for review.
- B. Indicate on shop drawings, grid layout and related dimensioning, junctions with other work or ceiling finishes, interrelation of mechanical and electrical items related to system.
- C. Provide product data on metal grid system components, and acoustic units.

1.07 Environmental Requirements

- A. Maintain uniform temperature of minimum 60 degree F (16 degrees C), and humidity of 20 to 40 percent prior to, during, and after installation.

1.08 Sequencing/Scheduling

- A. Do not install acoustical ceilings until building is enclosed, sufficient heat is provided, dust generating activities have terminated and overhead work is completed, tested, and approved.
- B. Schedule installation of acoustic units after interior work is dry.

1.09 Extra Stock

- A. Provide one carton [of each type used] extra tile panels to Owner.

PART 2 - PRODUCTS

2.01 Manufacturer - Suspension System

- A. Suspension system shall be from the same manufacturer as acoustic units.

2.02 Suspension System

- A. Armstrong "15/16" Prelude ML" exposed tee system for square lay-in units, or an approved equal.
- B. Grid Finish: White
- C. Support Channels and Hangers: Size and type to suit application, to rigidly secure acoustic ceiling system including integral mechanical electrical components with maximum deflection of 1/360.

2.03 Acoustic Units

- A. Armstrong "Fine Fissured" #1713, 24"x24"x3/4", square lay-in, color: white, Certain Teed, or approved equal.
Specifications:
 - 1. Composition: Wet-formed mineral fiber
 - 2. Light Reflectance:0.85
 - 3. NRC :0.55

- 4. CAC33
- 5. Classification: ASTM E1264, Type III, Form 2, Pattern CE
- 6. Fire Resistance: Class A

B. Armstrong "Ultima" #1910LEC, 24"x24"x3/4", square lay-in, color: white (WH), Certain Teed, or approved equal.

Specifications:

- 1. Composition: Wet-formed mineral fiber
- 2. Light Reflectance: 87%
- 3. NRC :0.75
- 7. CAC35
- 8. Classification: ASTM E1264, Type A, Form A2.2, Pattern E
- 9. Fire Resistance: Class A

PART 3 - EXECUTION

3.01 Inspection

- A. Verify that existing conditions are ready to receive work.
- B. Verify that layout of hangers will not interfere with other work.
- C. Beginning of installation means acceptance of existing conditions.

3.02 Installation

- A. Install system in accordance with ASTM C636 manufacturer's instructions and as supplemented in this Section.
- B. Install system capable of supporting imposed loads to a deflection of 1/360 maximum.
- C. Install after major above ceiling work is complete. Coordinate the location of hangers with other work.
- D. Supply hangers or inserts for installation of mechanical and electrical if metal deck is not supplied with hanger tabs, coordinate the installation of hanger clips during steel deck erection. Provide additional hangers and inserts as required.

- E. Hang system independent of walls, columns, ducts, pipes and conduit. Where carrying members are spliced, avoid visible displacement of face plane of adjacent members.
- F. Where ducts or other equipment prevent the regular spacing of hangers, reinforce the nearest affected hangers (and related carrying channels) to span the extra distance.
- G. Center system on room axis leaving equal border units, unless otherwise directed by reflected ceiling plan.
- H. Do not support components on main runners or cross runners if weight causes total dead load to exceed deflection capability.
- I. Do not eccentrically load systems, or produce rotation of runners.
- J. Install edge molding at intersection of ceiling and vertical surfaces, using longest practical lengths. Miter corners. Provide edge moldings at junctions with other interruptions.
- K. Form expansion joints as required.
- L. Fit acoustic units in place, free from damaged edges or other defects detrimental to appearance and function.
- M. Install acoustic units level, in uniform plane, and free from twist, warp and dents.

3.03 Tolerances

- A. Variation from flat and level surface: 1/8 inch in 10 ft.

End of Section

SECTION 09650 - RESILIENT FLOORING

PART 1 - GENERAL

1.01 SUMMARY

- A. Extent of resilient flooring and accessories as shown on Drawings and Specified herein.

Work includes:

1. Vinyl Cove Base
2. Luxury Vinyl Tile/Plank
3. Transition Strips
4. Adhesives

1.02 SUBMITTALS

- A. Product Data: Submit manufacturer=s technical data and installation instructions for resilient flooring and accessories in accordance with Section 01300.
- B. Samples: Submit, for verification purposes, samples of each type, color and pattern of resilient flooring and accessory required, indicating full range of color/pattern variation.
- C. Maintenance Instructions: Submit copies of manufacturer=s recommended maintenance practices for each type of resilient flooring required to Owner.

1.03 QUALITY ASSURANCE

- A. Comply with governing codes and regulations. Provide products of standard quality of manufacturers as specified. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer=s instructions.

PART 2 - PRODUCTS

2.01 MATERIALS

Refer to Finish Schedule on Drawings for styles and colors of specified materials.

- A. Vinyl Cove Base, 4_ high x _≅ gauge set-on type, as manufactured by Tarkett or approved equal, and furnished in 120' long rolls meeting the requirements of ASTM F1861, Type TV, Group 1 and ASTM E-648/NFPA 253, Class 1.
- B. Luxury Vinyl Tile/Plank shall be glue-down resilient planks, 3.0-4.0mm thickness with minimum 20 mil wear layer, Class III printed vinyl, ASTM E648 – Class 1, meeting ADA requirements for slip resistance.

- C. Resilient Edge Strips: ADA compliant, homogeneous vinyl or rubber transition strips as required where change of flooring types occur. Color to match flooring or as selected by Architect from standard colors available.
- D. Adhesives: Waterproof, stabilized type as recommended by flooring manufacturer to suit material and substrate conditions.
- F. Concrete Slab Primer: Non-staining type as recommended by flooring manufacturer.
- G. Leveling Compound: As recommended by flooring manufacturer.

PART 3 - EXECUTION

3.01 INSPECTION

- A. Make a thorough examination of surfaces to receive resilient flooring. If surfaces are defective and will not permit a proper finished installation, immediately notify the Architect in writing, or assume responsibility for and rectify any resulting unsatisfactory condition.
- B. Inspect floor for holes, cracks and smoothness. Test for dryness. Do not proceed with laying until subfloors are dry and smooth, holes and cracks filled.

3.02 PROJECT CONDITIONS

- A. Substrate Conditions: The installer shall verify in writing to the Owner, a minimum of 30 days prior to scheduled resilient flooring installation, the following substrate conditions:
 - 1. Moisture: Initial emission rate, as tested with a calcium chloride test kit.
 - 2. Alkalinity: pH range of 6-8. Must not exceed pH of 10.
- B. Install resilient flooring and accessories after they have the same temperature as the space and after other finishing operations, including painting, have been completed. Moisture content and alkalinity level of concrete slabs, as well as environmental conditions, must be within limits recommended by manufacturer of products being installed.

3.03 PREPARATION AND INSTALLATION

- A. Broom clean or vacuum surfaces to be covered, and inspect subfloor. Start of flooring installation indicates acceptance of subfloor conditions and full responsibility for completed work.
- B. Accessories: Apply resilient base to walls, columns, pilasters, casework and other

permanent fixtures in rooms or areas where base is required. Install base in lengths as long as practicable, with preformed corner units or fabricated from base materials with mitered or coped inside corners. Tightly bond base to backing throughout length of each piece, with continuous contact at horizontal and vertical surfaces.

1. On masonry surfaces or other similar irregular surfaces, fill voids along top edge of resilient wall base with manufacturer=s recommended adhesive filler material.
2. Place resilient edge strips tightly butted to flooring and secure with adhesive. Install edging strips at edges of flooring which would otherwise be exposed.

3.05 CLEANING AND PROTECTION

- A. Immediately upon completion of the resilient flooring remove any excess adhesive or other surface blemishes, using neutral type cleaners as recommended by flooring manufacturer.
 1. Do not wash or machine scrub linoleum for at least 3-5 days after installation.
 2. Do not strip factory finish from linoleum sheet flooring per Manufacturer recommendations.
- B. Protect installed flooring with heavy Kraft paper or other covering.
- C. Finishing: After completion of project and just prior to final inspection of work, thoroughly clean all floors and accessories.

End of Section

SECTION 09900 - PAINTING

PART 1 - GENERAL

1.1 DESCRIPTION OF WORK

- A. Extent of painting work is shown on drawings and schedules, and as herein specified.
- B. The work includes painting and finishing of interior and exterior exposed items and surfaces throughout Project, except as otherwise indicated.
 - 1. Surface preparation, priming, and coats of paint specified are in addition to shop-priming and surface treatment specified under other sections of work.
- C. "Paint" as used herein means all coating systems materials, including primers, emulsions, enamels, stains, sealers and fillers, and other applied materials whether used as prime, intermediate, or finish coats.
- D. Surfaces to be Painted: Except where natural finish of material is specifically noted as a surface not to be painted, paint exposed surfaces whether or not colors as designated in "schedules". Where items or surfaces are not specifically mentioned, paint the same as similar adjacent materials or areas. If color or finish is not designated, Architect will select these from standard colors or finishes available.
- E. Do not paint over any code-required labels such as Underwriters Laboratories and Factory Mutual, or any equipment identification, performance rating, name, or nomenclature plates.

1.2 QUALITY ASSURANCE

- A. Single Source Responsibility: Provide primers and other undercoat paint produced by same manufacturer as finish coats. Use only thinners approved by paint manufacturer on published product data pages, and use only within recommended limits.
- B. Coordination of Work: Review other sections of these specifications in which prime paints are to be provided to ensure compatibility of total coatings system for various substrates. Upon request from other trades, furnish information or characteristics of finish materials provided for use, to ensure compatible prime coats are used. Test existing surfaces scheduled to receive new paint or epoxy coating to insure compatibility of new primer and paint system.
- C. Employ only experienced and competent mechanics.
- D. Field Quality Control: Prepare and finish a sample area or room as directed. Finish in accordance with specification requirements for Architect's approval of materials, color and workmanship. Approved area or room shall serve as Project Standard.

1.3 SUBMITTALS

- A. Product Data: Submit manufacturer's technical information including paint label analysis and application instructions for each material proposed for use.
- B. Provide Owner at completion of job, one gallon of paint of each color selected. Provide original unopened labeled containers with color sample and list of room numbers where used.

1.4 DELIVERY AND STORAGE

- A. Deliver materials to job site in original, new, and unopened packages and containers bearing manufacturer's name and label, and following information:
 - 1. Name or title of material.
 - 2. Federal Specification number, if applicable.
 - 3. Manufacturer's stock number and date of manufacturer.
 - 4. Manufacturer's name.
 - 5. Contents by volume, for major pigment and vehicle constituents.
 - 6. Thinning instructions.
 - 7. Application instructions.
 - 8. Color name and number.
- B. Store materials not in actual use in tightly covered containers. Maintain containers used in storage of paint in a clean condition, free of foreign materials and residue.
 - 1. Protect from freezing where necessary. Keep storage area neat and orderly. Remove oily rags and waste daily. Take all precautions to ensure that workmen and work areas are adequately protected from fire hazards and health hazards resulting from handling, mixing, and application of paints.

1.5 JOB CONDITIONS

- A. Coordinate with other trades to insure adequate ventilation and dust-free environment during application and drying of paint.
- B. Maintain temperature and humidity within Manufacturer's recommended tolerances.
- C. Do not apply paint in snow, rain, fog, or mist; or when humidity exceeds 85%; or to damp or wet surfaces; unless otherwise permitted by paint manufacturer's printed instructions.
 - 1. Painting may be continued during inclement weather if areas and surfaces to be painted are enclosed and heated within temperature limits specified by paint manufacturer during application and drying periods.
- D. Painting Contractor shall provide stand mounted, high intensity, portable lighting for their use during painting to provide adequate illumination.

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

- A. Manufacturer: Subject to compliance with requirements, provide paint products of one of the following:
 - 1. Benjamin Moore
 - 2. The Sherwin-Williams Company
 - 3. PPG
 - 4. Calhoun Farrell

2.2 MATERIALS

- A. Material Quality: Provide best quality grade of various types of coatings as regularly manufactured by acceptable paint materials manufacturers. Materials not displaying manufacturer's identification as a standard, best-grade product will not be acceptable.
 - 1. Proprietary names used to designate colors or materials are not intended to imply that products of named manufacturers are required to exclusion of equivalent products of other manufacturers.

PART 3 - EXECUTION

3.1 INSPECTION

- A. Applicator must examine areas and conditions under which painting work is to be applied and notify Contractor in writing of conditions detrimental to proper and timely completion of work. Do not proceed with work until unsatisfactory conditions have been corrected in a manner acceptable to Applicator.
- B. Starting of painting work will be construed as Applicator's acceptance of surfaces and conditions within any particular area.
- C. Do not paint over dirt, rust, scale, grease, moisture, scuffed surfaces, or conditions otherwise detrimental to formation of a durable paint film.

3.2 SURFACE PREPARATION

- A. General: Perform preparation and cleaning procedures in accordance with paint manufacturer's instructions and as herein specified, for each particular substrate condition.
 - 1. Provide barrier coats over incompatible primers or remove and re-prime as required. Notify Architect in writing of any anticipated problems in using the specified coating systems with substrates primed by others.
 - 2. Remove hardware, hardware accessories, machined surfaces, plates, lighting fixtures, and similar items in place and not to be finish-painted, or provide surface-applied protection prior to surface preparation and painting operations. Remove, if necessary, for complete painting of items and adjacent surfaces. Following completion of painting of each space or area, reinstall removed items.

3. Clean surfaces to be painted before applying paint or surface treatments. Remove oil and grease in accordance with SSPC SP-1, prior to mechanical cleaning. Program cleaning and painting so that contaminants from cleaning process will not fall onto wet, newly-painted surfaces.
- B. Cementitious Materials: Prepare cementitious surfaces of concrete, concrete block, to be painted by removing efflorescence, chalk, dust, dirt, grease, oils in accordance with ASTM D 4258/D 4259/D 4261 (CMV).
1. Determine alkalinity and moisture content of surfaces to be painted by performing ASTM D 4262. If surfaces are found to be sufficiently alkaline to cause blistering and burning of finish paint, correct this condition before application of paint. Do not paint over surfaces where moisture content exceeds that permitted in manufacturer's printed directions.
- C. Wood: Clean wood surfaces to be painted of dirt, oil, or other foreign substances with scrapers, mineral spirits, and sandpaper, as required. Sandpaper smooth those finished surfaces exposed to view, and dust off. Scrape and clean small, dry, seasoned knots and apply a thin coat of white shellac or other recommended knot sealer, before application of priming coat. After priming, fill holes and imperfections in finish surfaces with putty or plastic wood-filler. Sandpaper smooth when dried.
1. Prime, stain, or seal wood required to be job-painted immediately upon delivery to job. Prime edges, ends, faces, undersides, and backsides of such wood, including cabinets, counters, cases, paneling.
 2. When transparent finish is required, use spar varnish for back-priming.
 3. Seal tops, bottoms, and cut-outs of unprimed wood doors with a heavy coat of varnish or equivalent sealer immediately upon delivery to job.
- D. Ferrous Metals: Clean ferrous surfaces which are not galvanized or shop-coated of oil, grease, dirt, loose mill scale, and other foreign substances by solvent or mechanical cleaning in accordance with SSPC SP-1.
1. Touch up shop-applied prime coats wherever damaged or bare, where required by other sections of these specifications.
 - a. Clean and touch-up with same type shop primer.
- E. Galvanized Surfaces: Clean free of oil and surface contaminants with non-petroleum based solvent such as Benjamin Moore Oil & Grease Emulsifer V600 or Great Lakes Laboratories "Clean N' Etch".
- 3.3 MATERIALS PREPARATION

- A. Mix and prepare painting materials in accordance with manufacturer's directions.
- B. Maintain containers used in mixing and application of paint in a clean condition, free of foreign materials and residue.

- C. Stir materials before application to produce a mixture of uniform density, and stir as required during application. Do not stir surface film into material. Remove film and, if necessary, strain material before using.

3.4 APPLICATION

- A. General: Apply paint in accordance with manufacturer's directions. Use applicators and techniques best suited for substrate and type of material being applied.
 - 1. Paint colors, surface treatments, and finishes are indicated in "Schedules" of the Contract Documents.
 - 2. Provide finish coats which are compatible with prime paints used.
 - 3. Apply additional coats when undercoats, stains, or other conditions show through final coat of paint, until paint film is of uniform finish, color, and appearance. Give special attention to ensure that surfaces, including edges, corners, crevices, welds, and exposed fasteners receive a dry film thickness equivalent to that of flat surfaces. Dry film thickness will be measured according to SSPC PA-2.
 - 4. Paint surfaces behind movable equipment and furniture same as similar exposed surfaces. Paint surfaces behind permanently fixed equipment or furniture with prime coat only before final installation of equipment.
 - 5. Paint interior surfaces of ducts, where visible through registers or grilles, with a flat non-specular black paint or primer such as Insl-X Aqua-Lock AQ-0420
 - 6. Paint back sides of access panels, and removable or hinged covers to match exposed surfaces.
 - 7. Finish exterior doors on tops, bottoms, and side edges same as exterior faces unless otherwise indicated.
 - 8. Sand lightly between each succeeding enamel or varnish coat.
 - 9. Omit first coat (primer) on metal surfaces which have been shop-primed and touch-up painted unless otherwise indicated.
- B. Scheduling Painting: Apply first-coat material to surfaces that have been cleaned, pretreated, or otherwise prepared for painting as soon as practicable after preparation and before subsequent surface deterioration.
 - 1. Allow sufficient time between successive coatings to permit proper drying. Do not recoat until paint has dried to where it feels firm, does not deform or feel sticky under moderate thumb pressure, and application of another coat of paint does not cause lifting or loss of adhesion of the undercoat.

- C. Minimum Coating Thickness: Apply materials at not less than manufacturer's recommended spreading rate to establish a total dry film thickness as indicated or, if not indicated, as recommended by coating manufacturer. Dry film thickness will be measured according to SSPC PA-2.
- D. Mechanical and Electrical Work: Painting of mechanical and electrical work is limited to those items exposed in mechanical equipment rooms and in occupied spaces, and exposed exterior work that is not factory finish painted.
- E. Prime Coats: Apply prime coat of material which is required to be painted or finished, and which has not been prime coated by others.
 - 1. Re-coat primed and sealed surfaces where there is evidence of suction spots or unsealed areas in first coat, to assure a finish coat with no burn-through or other defects due to insufficient sealing.
- F. Pigmented (Opaque) Finishes: Completely cover to provide an opaque, smooth surface of uniform finish, color, appearance, and coverage. Cloudiness, spotting, holidays, laps, brush marks, runs, sags, ropiness, or other surface imperfections will not be acceptable.
- G. Transparent (Clear) Finishes: Use multiple coats to produce glass-smooth surface film of even luster. Provide a finish free of laps, cloudiness, color irregularity, runs, brush marks, orange peel, nail holes, or other surface imperfections.
 - 1. Provide satin finish for final coats unless otherwise indicated.
- H. Completed Work: Match approved samples for color, texture and coverage. Remove, refinish or repaint work not in compliance with specified requirements.

3.5 CLEAN-UP AND PROTECTION

- A. Clean-Up: During progress of work, remove from site discarded paint materials, rubbish, cans, and rags at end of each work day.
 - 1. Upon completion of painting work, clean window glass and other paint-spattered surfaces. Remove spattered paint by proper methods of washing and scraping, using care not to scratch or otherwise damage finished surfaces.
- B. Protection: Protect work of other trades, whether to be painted or not, against damage by painting and finishing work. Correct any damage by cleaning, repairing or replacing, and repainting, as acceptable to Architect.
 - 1. Provide "Wet Paint" signs as required to protect newly-painted finishes. Remove temporary protective wrappings provided by others for protection of their work, after completion of painting operations.

2. At the completion of work of other trades, touch up and restore all damaged or defaced painted surfaces.

3.6 ADJUST AND CLEAN

- A. Clean surfaces of spills, splatters, drips and stains from painting application.
- B. Replace and adjust finish hardware, accessories, fixtures and similar items removed from work.
- C. Touch-up damaged paint surface prior to acceptance of building by the Owner. Mix or thin touch-up paint as recommended by the Manufacturer and blend into existing paint.

3.7 PAINT SYSTEMS

- A. Paints listed are those of Benjamin Moore unless noted otherwise.
Painting subcontractor wishing to use other products must submit their “or equal” for review during the bidding process. Please note that *colors have been selected*.
- B. Exterior Coating Systems:
 1. Ferrous Metals
Primer: Benjamin Moore Corotech Waterborne Bonding Primer V175 @ 1.5-2 mils dft
1st Coat: Benjamin Moore High Performance Acrylic DTM HP28 @ 1.8-2.5 mils dft
2nd Coat: Benjamin Moore High Performance Acrylic DTM HP28 @ 1.8-2.5 mils dft
 - a. Typical Applications: Overhead doors and frames, steel doors and frames, piping, pipe railing, miscellaneous metals.
 2. Zinc Coated Metals
Primer: Benjamin Moore Corotech Waterborne Bonding Primer V175 @ 1.5-2 mils dft
1st Coat: Benjamin Moore Command Waterborne Acrylic Urethane V390 @ 1.5-2 mils dft
2nd Coat: Benjamin Moore Command Waterborne Acrylic Urethane V390 @ 1.5-2 mils dft
 3. Concrete Block
Provide clean and dulled surface for application of new paint as recommended by paint manufacturer.
1st Coat: Benjamin Moore Ultra Spec Block Filler 571 @ 8.5-11.3 mils dft
2nd Coat: Benjamin Moore Ultra Spec Low Luster N455 @ 1.3-1.8 mils dft
3rd Coat: Benjamin Moore Ultra Spec Low Luster N455 @ 1.3-1.8 mils dft

C. Interior Coating Systems:

1. Interior Ferrous Metal: Door Frames, Miscellaneous Metals: 2 coats of an all purpose industrial enamel, over a fast drying, rust inhibitive alkyd enamel.

1st Coat: Benjamin Moore High Performance Universal Metal Primer V132

2nd Coat: Benjamin Moore High Performance Alkyd Urethane Enamel V200 @ 2.0-2.2 mils dft per coat

3rd Coat: Benjamin Moore High Performance Alkyd Urethane Enamel V200 @ 2.0-2.2 mils dft per coat

2. Interior Gypsum Drywall (semi-gloss): 2 coats of an interior waterborne acrylic semi-gloss, durable and non-yellowing, over an interior vinyl acrylic latex wall primer.

1st Coat: Benjamin Moore Multi-Purpose Primer 067 @ 1.3-1.6 mils dft

2nd Coat: Benjamin Moore Super Hide Zero Semi-Gloss 358 @ 1.2-1.5 mils dft

3rd Coat: Benjamin Moore Super Hide Zero Semi-Gloss 358 @ 1.2-1.5 mils dft

3. Interior Gypsum Drywall (flat): 2 coats of an interior latex flat, durable and non-yellowing, over an interior latex wall primer.

Primer: Benjamin Moore Multi-Purpose Primer 067 @ 1.3-1.6 mils dft

1st Coat: Benjamin Moore Super Hide Zero Flat 355 @ 1.1-1.5 mils dft

2nd Coat: Benjamin Moore Super Hide Zero Flat 355 @ 1.1-1.5 mils dft

4. Interior Gypsum Drywall (eggshell): 2 coats of an interior latex eggshell, durable and non-yellowing, over an interior latex wall primer.

Primer: Benjamin Moore Multi-Purpose Primer 067 @ 1.3-1.6 mils dft

1st Coat: Benjamin Moore Super Hide Zero Eggshell 357 @ 1.3-1.6 mils dft

2nd Coat: Benjamin Moore Super Hide Zero Eggshell 357 @ 1.3-1.6 mils dft

5. Galvanized Metal: 2 coats of an interior waterborne acrylic semi-gloss, durable and non yellowing

Primer: Benjamin Moore High Performance Waterborne Bonding Primer V175 @1.5-2 mils dft

1st Coat: Benjamin Moore High Performance Acrylic DTM HP29 @ 1.8-2.5 mils dft

2nd Coat: Benjamin Moore High Performance Acrylic DTM HP29 @ 1.8-2.5 mils dft

6. Aluminum: 2 coats of an interior waterborne acrylic semi-gloss, durable and non yellowing.

Primer: Benjamin Moore High Performance Waterborne Bonding Primer V175 @1.5-2 mils dft

1st Coat: Benjamin Moore High Performance Acrylic DTM HP29 @ 1.8-2.5 mils dft

2nd Coat: Benjamin Moore High Performance Acrylic DTM HP29 @ 1.8-2.5 mils dft

7. Wood-Closed Grain: Stained: 2 coats of a satin waterborne polyurethane over an interior oil based stain.
 - 1st Coat: Old Masters Wiping Stain 11XXX
 - 2nd Coat: Benjamin Moore Stays Clear Acrylic Polyurethane Low Luster W423
 - 3rd Coat: Benjamin Moore Stays Clear Acrylic Polyurethane Low Luster W423

8. Concrete Floors (Unpolished)
 - 1 application of Prosoco "Consolideck LS/CS" @ 300 - 800 sq.ft./gallon, using low pressure spray-on method as directed by manufacturer.
 - Note: New concrete must cure long enough to walk on before application. Do not use concrete curing compound where product is specified. Blanket-cure ONLY.

9. Exposed Structural Steel: 2 coats of a semi-gloss waterborne dryfall
 - 1st Coat: Benjamin Moore High Performance Acrylic Metal Primer V110 @ 1.4-3 mils
 - 2nd Coat: Benjamin Moore Semi Gloss Dry Fall 397 @ 1.4-1.8 mils dft
 - 3rd Coat: Benjamin Moore Semi Gloss Dry Fall 397 @ 1.4-1.8 mils dft

END OF SECTION

Division X

SECTION 10155 - TOILET COMPARTMENTS

PART 1 - GENERAL

1.01 WORK INCLUDED

- A. Metal partitions for toilets.
- B. Urinal Screens
- C. Attachment hardware.

1.02 RELATED WORK

- A. Section 10800 - Toilet and Bath Accessories: Toilet accessories.

1.03 REFERENCES

- A. ASTM A424 - Steel Sheets for Porcelain Enameling.
- B. FS RR-P-1352 - Partitions, Metal Toilet, Complete.
- C. ASTM A526 - Steel Sheet, Zinc-Coated (Galvanized) by the Hot-Dip Process, Commercial Quality.
- D. ASTM A167 - Stainless and Heat Resisting Chromium-Nickel Steel, Plate, Sheet and Strip.

1.04 SUBMITTALS

- A. Submit shop drawings and product data, along with manufacturer's descriptive literature, installation instructions and appropriate color selection charts.
- B. Clearly indicate partition layouts, swing of doors, elevations, anchorage and mounting details, panel construction, components hardware, finishes and all relevant dimensions.

PART 2 - PRODUCTS

2.01 METAL TOILET COMPARTMENTS

- A. Acceptable Manufacturers
 - 1. Flush-Metal Partition Corp.
 - 2. Metpar
 - 3. Sanymetal
 - 4. Approved Equal
- B. Type
 - 1. Provide floor-mounted, overhead-braced toilet partitions with anti-grip headrail.
 - 2. Provide pilaster-type floor-supported urinal screens.
 - 3. Provide end stalls to meet ADA requirements.

C. Materials

1. 1" thick, of two sheets galvanized steel, honeycomb core, welded edges and corners.
2. Finish: Baked enamel. Color to be selected by Architect.
3. Attachments, Screws and Bolts: Stainless steel, tamper-proof type, heavy duty extruded aluminum brackets.
4. Hardware: Chrome-plated non-ferrous cast pivot hinges, gravity type, adjustable for door closing positioning; nylon bearings; concealed, thumb-turn door latch; door strike and keeper with rubber bumper; chrome plated coat hook and bumper.

D. Fabrication

1. Fabricate partitions in accordance with FS RR-P-1352
2. Doors and Panels: 1" or 1-1/4" x 58" high, 24" wide doors at standard stalls, 34" wide doors at handicap stalls.
3. Provide internal reinforcement where necessary for attachment of hardware and fittings. Mark locations of reinforcement for partition-mounted washroom accessories.

PART 3 - EXECUTION

3.01 PREPARATION

- A. Examine site conditions to which work is to be applied. Report discrepancies to Architect/Engineer in writing.
- B. Take site dimensions affecting this work.
- C. Ensure correct spacing of plumbing fixtures.
- D. Ensure correct location or built-in framing, anchorage, and bracing, where required.

3.02 INSTALLATION

- A. Install partitions secure, plumb, level, and square.
- B. Leave 1/2 inch space between wall and panels and between wall and end plasters.
- C. Attach panel brackets securely to walls using anchor devices as required by manufacturer.
- D. Attach panels and pilasters to bracket with through sleeve tamperproof bolts and nuts.
- E. Anchor urinal screen panels to walls with two panel brackets and vertical upright to floor.
- F. Provide for adjustment of floor variations.

- G. Equip each door with hinges, one door latch, and one coat hook and bumper.
- H. Install door strike keeper and door bumper on each pilaster in alignment with door latch.
- I. Adjust and align hardware to uniform clearance at vertical edges of doors not exceeding ¼".
- J. Adjust hinges to locate doors in partial open position when unlatched, except that out-swing doors shall return to closed position.

3.03 CLEANING

- A. Damaged, scratched or marred defective materials will be rejected, and shall be replaced with new materials.
- B. Remove protective maskings. Clean surfaces free of oil and imperfections.

End of Section

SECTION 10426 - IDENTIFYING DEVICES

PART 1 - GENERAL

1.01 DESCRIPTION

- A. Furnish and install all signage and identifying devices and handicap parking signs where shown or scheduled on the Drawings and specified herein.
- B. This section includes the installation of such devices in locations as indicated on plans, or where not shown, as required to meet requirements of the Americans with Disability Act of 1990 (ADA).

1.02 SUBMITTALS

- B. Manufacturer's Data: Submit manufacturer's descriptive literature and specifications, including color samples of material for selection, as applicable for approval.
- B. Submit shop drawings listing sign styles, lettering and locations, and overall dimensions of each sign.

1.03 REFERENCES

- A. American National Standards Institute (ANSI): A117.1 - 1992 Accessible Signage Standards (4.28 Signage)
- B. American Society for Testing and Materials (ASTM).
- C. Americans with Disabilities Act Accessibility Guideline (ADAAG): 4.30 Signage
- D. California Title 24 Accessible Signage Standards (3105)

1.04 DELIVERY, STORAGE & HANDLING

- A. Deliver components correctly packaged to prevent damage.
- B. Store in secure areas, out of weather and protected from work of other trades.

1.05 WARRANTY

- A. Provide Manufacturer's standard one year limited warranty covering manufacturing defects.

PART 2 - PRODUCTS

2.01 HANDICAP PARKING SIGNS

- A. Furnished for installation under work of Section 02700, one (1) manufacturer's standard aluminum sign plate for identification of handicapped parking spaces. Plates shall be of size and layout shown on the Drawings and shall be similar to Model PHP75 as manufactured by the Supersine Company, Tactile Signage, Inc., or an approved equal.

2.02 TACTILE SIGNAGE

- A. Tactile signage stating “EXIT” and complying with ICC/ANSI A117.1, shall be installed adjacent to the latch side of the door, 48" minimum/60" maximum above the finished floor to center of sign.

Sign shall be 4"x4" unless space is restricted, then 2"x8" sign shall be used.

Locate at doors #1, 2, 3, 5, 6, and 25.



2.03 INTERIOR ROOM SIGNAGE

- A. Style: Signs shall be single-faced, Lettering Specialists, Inc. - Tactile Signage, Inc., or an approved equal, radiused corners, beveled edge with decorative reveal around the perimeter; Optima semi-bold style, color as selected by Architect. Schedule shall be as furnished by the Architect/Owner. Composition shall be a design similar to manufacturers standards and meeting all requirements of Americans with Disabilities Act (ADA). Signs shall be mounted with double-faced tape as furnished by the manufacturer.
- B. Pictograms: Pictograms (where required) shall be accompanied by the equivalent verbal description placed directly below the pictogram. The border dimensions of the pictogram shall be 6 inches minimum in height. Pictograms, like non-permanent text, may be recessed.
- C. Mounting Location and Height: Signs shall be installed on the wall adjacent to the latch side of the door. Where there is no wall space to the latch side of the door, including at double leaf doors, signs shall be placed on the nearest adjacent wall. Mounting height shall be 60 inches above the finished floor to the centerline of the sign.

D. SCHEDULE:

Types:

<u>Room No.</u>	<u>Description</u>	<u>Qty.</u>	<u>Sign Type</u>
106	Toilet (w/ADA Symbol)	1	C
112	Women (w/ADA Symbol)	1	A
111	Men (w/ADA Symbol)	1	B



A



B



C

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Before installing signs, verify that mounting surfaces are completely finished and ready for installation. Inspect surface to be sure it is clean and free from contaminants that may adversely affect mounting system adhesion.
- B. Do not install signs until surfaces are acceptable. Notify Architect if there are any questions as to suitability of installation surfaces or installation locations.

3.02 INSTALLATION

- A. Install signs in accordance with manufacturer's instructions and in accordance with ADA guidelines for location and as indicated in schedules.
- B. Install after doors are installed and after doors and walls are finished.
- C. Assure signs are installed level.
- D. Mounting Location and Height: Signs shall be installed on the wall adjacent to the latch side of the door. Where there is no wall space to the latch side of the door, including at double leaf doors, signs shall be placed on the nearest adjacent wall. Mounting height shall be 60 inches above the finished floor to the centerline of the sign.

3.03 CLEANING AND PROTECTION

- A. At completion of the installation, clean soiled sign surfaces in accordance with the manufacturer's instructions. Protect units from damage until acceptance by the Owner.

END OF SECTION

SECTION 10522 - FIRE EXTINGUISHERS AND ACCESSORIES

PART 1 - GENERAL

1.01 Work Included

- A. Fire extinguishers
- B. Cabinets and wall mounting brackets

1.02 References

- A. NFPA 10 Portable Fire Extinguishers.

1.03 Quality Assurance

- A. Conform to NFPA 10 requirements for extinguishers.

1.04 Submittals

- A. Submit product data.
- B. Submit manufacturer's installation instruction.

1.05 Operation and Maintenance Data

- A. Submit manufacturer's operation and maintenance data.
- B. Include test, refill or recharge schedules, procedures, and re-certification requirements.

1.06 Environmental Requirements

- A. Do not install extinguishers when ambient temperatures may cause freezing.

PART 2 - PRODUCTS

2.01 Acceptable Manufacturers

- A. Larsen
- B. J.L. Industries
- C. Modern Metal Products.
- D. Substitutions: Reviewed equal.

2.02 Extinguishers

- A. Fire Extinguishers #1-#4 shall be Larsen Model MP10, 10 lbs., U.L. Rating 4A-60B:C.
- B. For location of extinguishers, see Floor Plan.

2.03 Cabinets/Accessories

- A. Fire Extinguishers #1 and #2 shall be mounted in a semi-recessed cabinet, Larsen Model 2409-6R, non fire-rated cabinet, clear anodized aluminum with Vertical Duo, partial glass door and 2½" rolled edge.
- B. Fire Extinguishers #3 and #4 shall be mounted on manufacturer's standard wall bracket.

PART 3 - EXECUTION

3.01 Installation

- A. Install fire extinguishers 36" a.f.f. or as required by NFPA 10. Top of cabinet mounted at 60" a.f.f.
- B. Secure rigidly in place in accordance with manufacturer's instructions.

End of Section

SECTION 10800 - TOILET ROOM ACCESSORIES

PART 1 - GENERAL

1.01 Work Included

- A. Toilet room accessories.

1.02 Related Work

- A. Wall blocking required to secure accessories
- B. Glazing/caulking
- C. Toilet compartments
- D. Gypsum wallboard systems
- E. Plumbing fixtures
- F. Countertops

1.03 References (including but not limited to)

- A. ANSI A117 - 1986 Specifications for Making Buildings and Facilities Accessible to and Usable by Physically Handicapped People.
- B. UBC - Chapters 5 and 33 Requirements for Handicapped.
- C. Title 24, California Code of Regulations, Parts 2, 3, and 5.
- D. ADA, Accessibility Guidelines for Buildings and Facilities, Federal Register Volume 56, Number 144, Rules and Regulations.
- E. Fair Housing Amendments Act of 1988, Accessibility Guidelines, Federal Register Volume 56, Number 44.
- F. Southern Building Code.

1.04 Quality Assurance

A. Manufacturer

1. Model numbers for toilet room accessories manufactured by Bradley Corp. Washroom accessories are listed to establish a standard of quality for design, function, materials, workmanship and appearance. Other manufacturers may be submitted for evaluation by the architect by following the conditions of the substitutions clause. Other accepted manufacturers include the following or an approved equal:
 - a. ASI
 - b. Bobrick
2. Accessories shall be the products of a single manufacturer. Accessories with tumbler locks shall be keyed alike with the exception of coin boxes in vending equipment.

B. Regulatory requirements

1. Operation of accessories shall comply with guidelines set forth by the American Disabilities Act, Title III. Documentation and samples to be provided to the architect upon request.

1.05 Submittals

A. Comply with requirements of Section regarding submittals.

B. Manufacturer's Data

1. Provide required number copies of:
 - a. Product data sheets.
 - b. Installation instructions.
 - c. Service and parts manual.

1.06 Product Delivery, Storage, and Handling

A. Deliver items in manufacturer's original unopened protective packaging.

B. Store materials in original protective packaging to prevent physical damage, or wetting.

C. Handle so as to prevent damage to accessories.

1.07 Warranty

A. Furnish one year guarantee against defects in material and workmanship on all accessories. In addition to the above the following shall apply:

1. Welded stainless steel framed mirrors shall have a fifteen year guarantee against silver spoilage.

PART 2 - PRODUCTS

2.01 Schedule:

A. Grab Bars of sizes as shown on plans, #812-001, heavy-duty stainless steel with sanitary safety grip finish, concealed mounting kits to be included.

B. Mirror 30" x 42", #7802-30 x 42, angle framed mirror, 1/4" tempered glass.

C. Mirror 24" x 42", #7802-24 x 42, angle framed mirror, 1/4" tempered glass

D. Toilet Tissue Dispenser, #5084, surface mounted, single roll, stainless steel with satin finish.

E. Paper Towel Dispenser, Model 250-15, surface-mounted, stainless steel.

- F. Shower Curtain Rod, #9538, 1” diameter, concealed mounting, satin finish stainless steel. Sizes as shown on interior elevations.

202 Materials (if applicable to items in contract)

- A. All cabinets shall be constructed of 18-8, type 304 stainless steel.
- B. All waste receptacle shall be constructed of 18-8, type 304 stainless steel or rigid molded leak-proof plastic.
- C. Waste receptacles or cabinets manufactured of type 400 stainless steel are not acceptable.
- D. All tumbler locks to be fastened to accessories with lock nuts. Fastening locks to units with spring clip is not acceptable.

PART 3 - EXECUTION

301 Inspection

- A. Check wall opening for dimensions, plumbness of blocking or frames that would affect installation of recessed accessories. For surface mounted accessories check condition of wall and confirm installation of backing within wall.
- B. Verify spacing of plumbing fixtures and toilet compartments that affect installation of toilet room accessories.

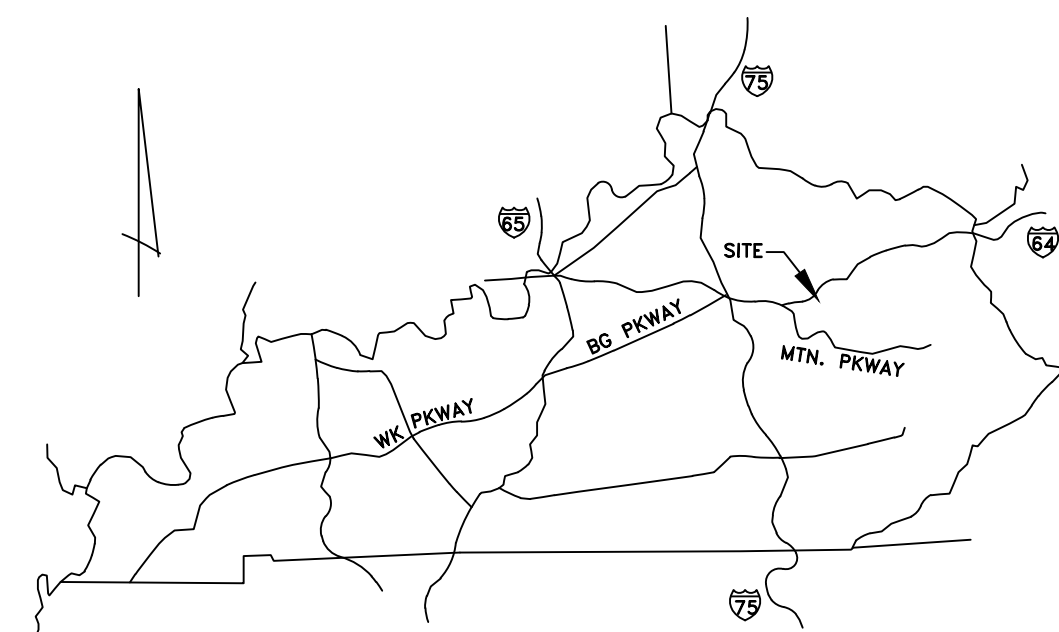
End of Section

MONTGOMERY COUNTY SENIOR CITIZENS CENTER

MT. STERLING, KENTUCKY
CDBG #21-014

SCHEDULE OF DRAWINGS

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SITE LAYOUT.....	C-2
CIVIL GRADING.....	C-3
STORM AND EROSION CONTROL.....	C-4
SITE DETAILS.....	D-1
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ELECTRICAL LIGHTING PLAN.....	E-1
ELECTRICAL POWER, SIGNAL & SYSTEMS PLAN.....	E-2
ELECTRICAL SITE UTILITY PLAN.....	E-3
ELECTRICAL PANEL SCHEDULES.....	E-4



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CODE INFORMATION:

Building Code: 2018 Kentucky Building Code, Third Edition

Project: Montgomery County Senior Center

Project Site Address: Corner of East Locust St., and South Wilson Alley, Mt. Sterling, KY 40353

Brief Description: Senior Citizens Center, Brick exterior with wood and metal stud framing, wood roof trusses, with asphalt shingle roof. Large Gathering area, Kitchen area, and Fitness Room and Offices.

Use Group: ASSEMBLY A-3

Heights and Areas: Table 504.3 Allowable Building Height in Feet above grade plane

Table 504.3 Construction Type V-B not sprinkled 40 feet allowed. 18.5 feet actual height.

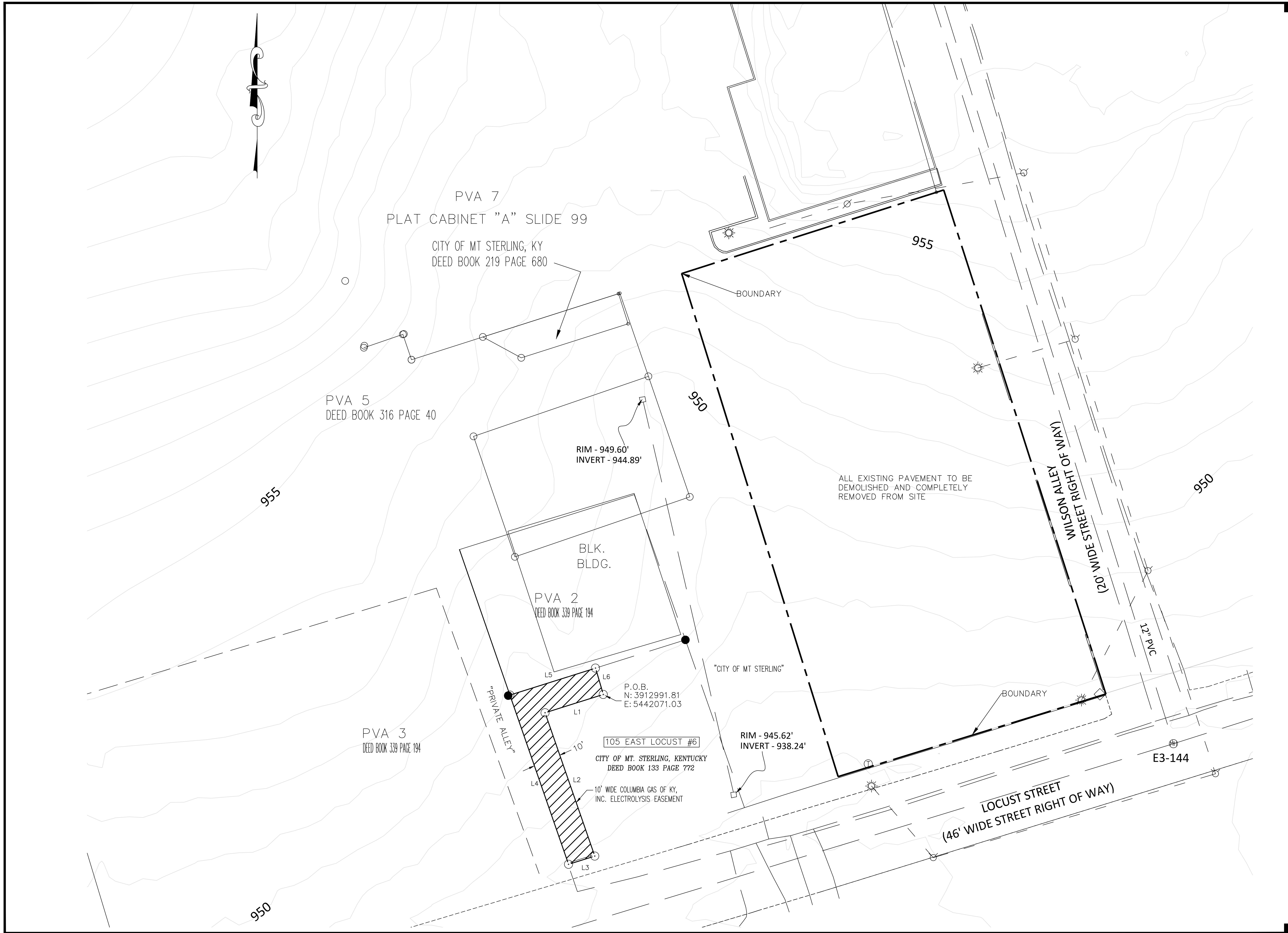
Table 504.4 Allowable number of stories above grade plane 1 stories allowed. 1 story actual.

Table 506.2 Allowable Area Factor Type V-B 6,000 SF. Area modification area increase due

to frontage. open area increase 3,000 sf. total area allowable 9,000 sf. 6,300 sf actual.

DATE: DECEMBER 2024

SET NO.



EXISTING CONDITIONS AND DEMOLITION
 MONTGOMERY CO. SENIOR CENTER
 MT. STERLING, KENTUCKY

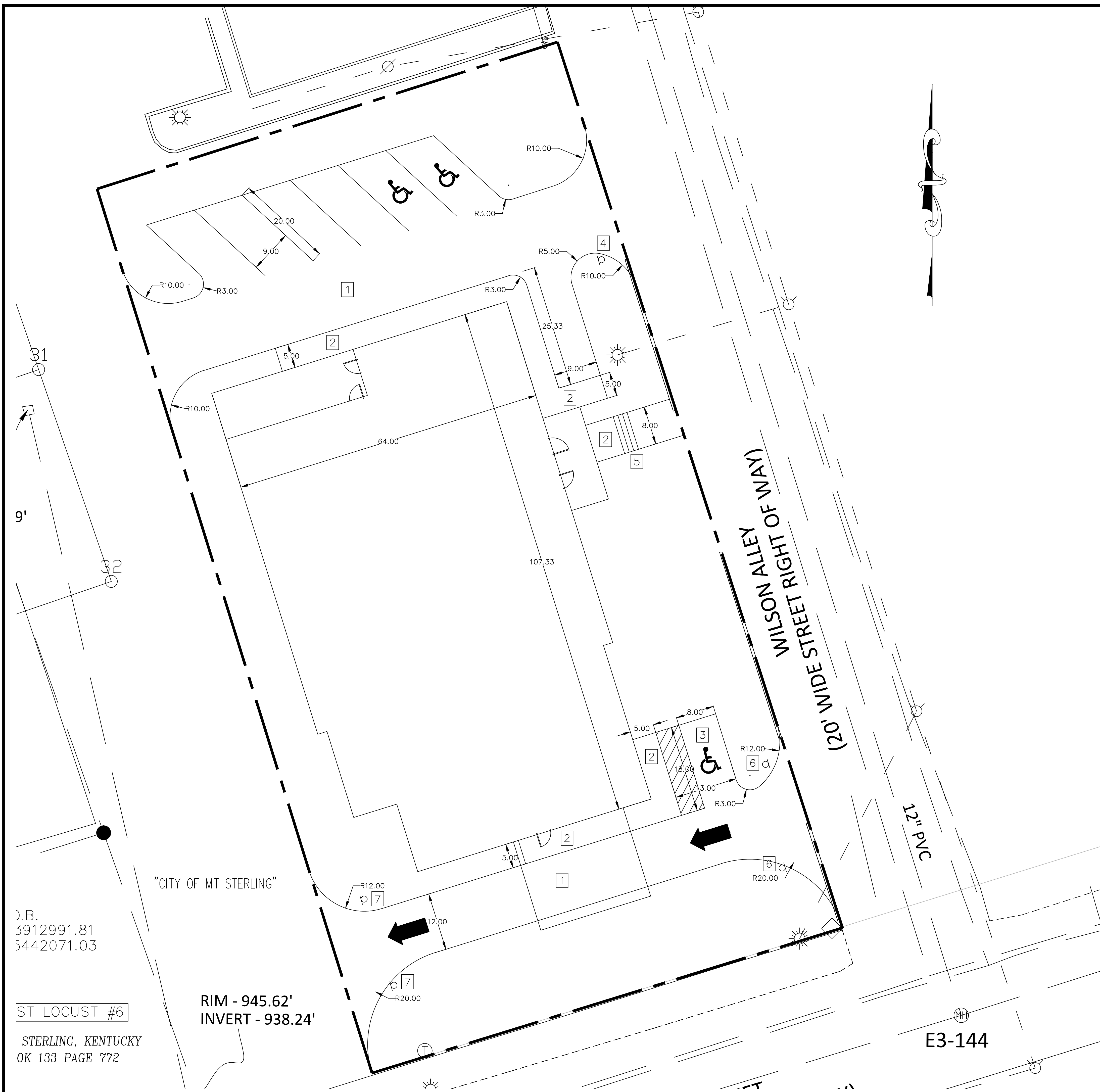
DATE	REVISION	BY

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	MSE	CRH	GAR	GAR	SEPTEMBER 2024	1" = 15'

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DRAWING NO.	C-1
SHEET OF	



TAG NOTES

- 1 PAVEMENT SEE SHEET D-1 DETAIL A
- 2 CONCRETE WALK SEE SHEET D-1 DETAIL B
- 3 HANDICAP PARKING SEE SHEET D-1 DETAIL C
- 4 STOP SIGN SEE SHEET D-1 DETAIL D
- 5 CONCRETE STEPS SEE SHEET D-1 DETAIL E
- 6 ONE-WAY SIGN
- 7 DO NOT ENTER SIGN

J.B.
3912991.81
3442071.03

ST LOCUST #6

STERLING, KENTUCKY
OK 133 PAGE 772

RIM - 945.62'
INVERT - 938.24'

E3-144



SITE LAYOUT
MONTGOMERY CO. SENIOR CENTER
MT. STERLING, KENTUCKY

DATE	REVISION	BY
9-20-24	TWO ADDITIONAL HANDICAP PARKING	
9-20-24	PARKING EXTENDED TO 20'	

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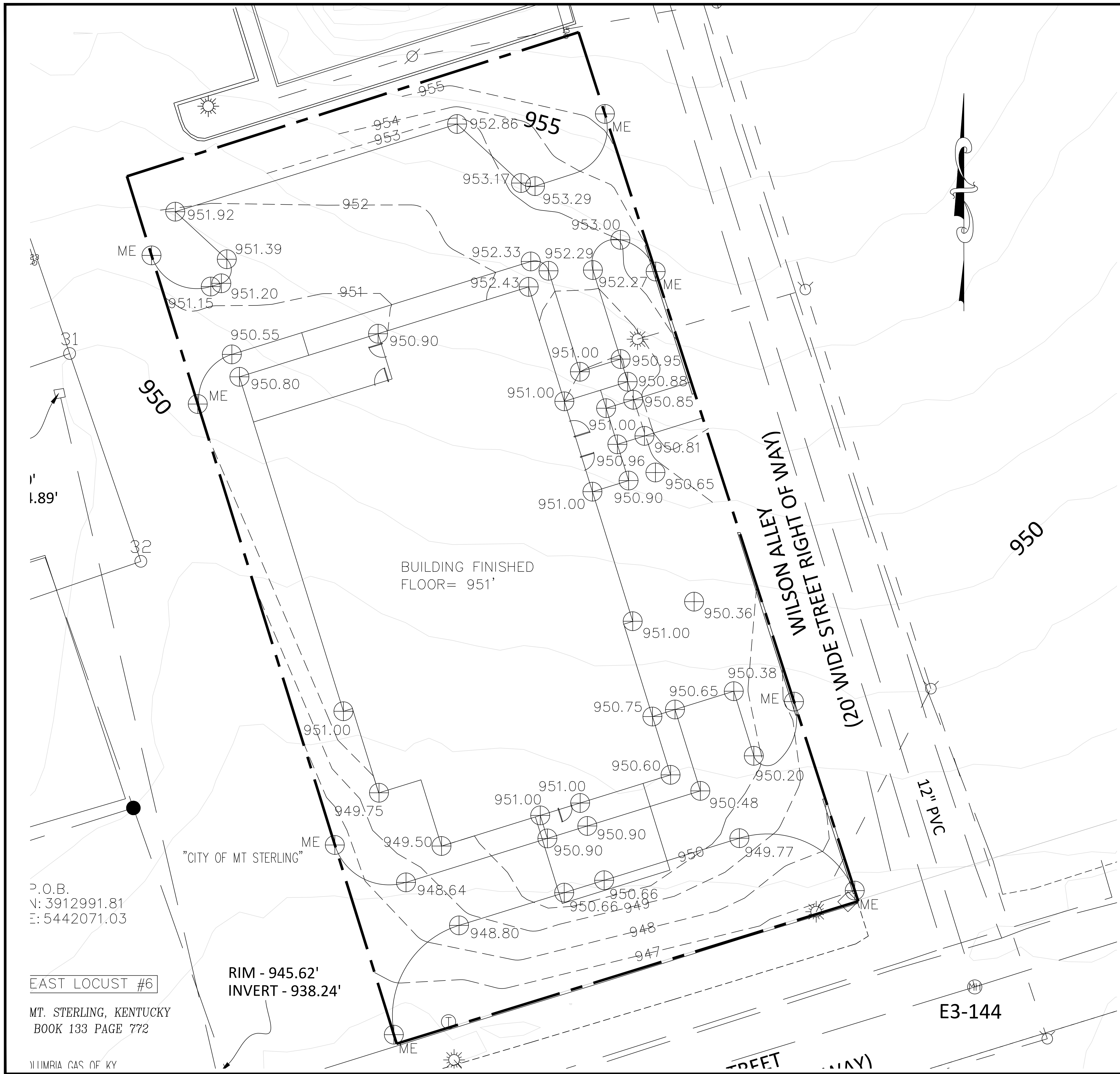
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	MSE	CRH	GAR	SEPTEMBER 2024	1"=10'

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DRAWING NO.
C-2
SHEET OF



D.O.B.
 V: 3912991.81
 E: 5442071.03

EAST LOCUST #6
 MT. STERLING, KENTUCKY
 BOOK 133 PAGE 772

WIMBRIA GAS OF KY

RIM - 945.62'
 INVERT - 938.24'

TAG NOTES

ALL SPOT ELEVATION ARE FINISHED GRADE
 ME = MATCH EXISTING GRADE



GRADING
 MONTGOMERY CO. SENIOR CENTER
 MT. STERLING, KENTUCKY

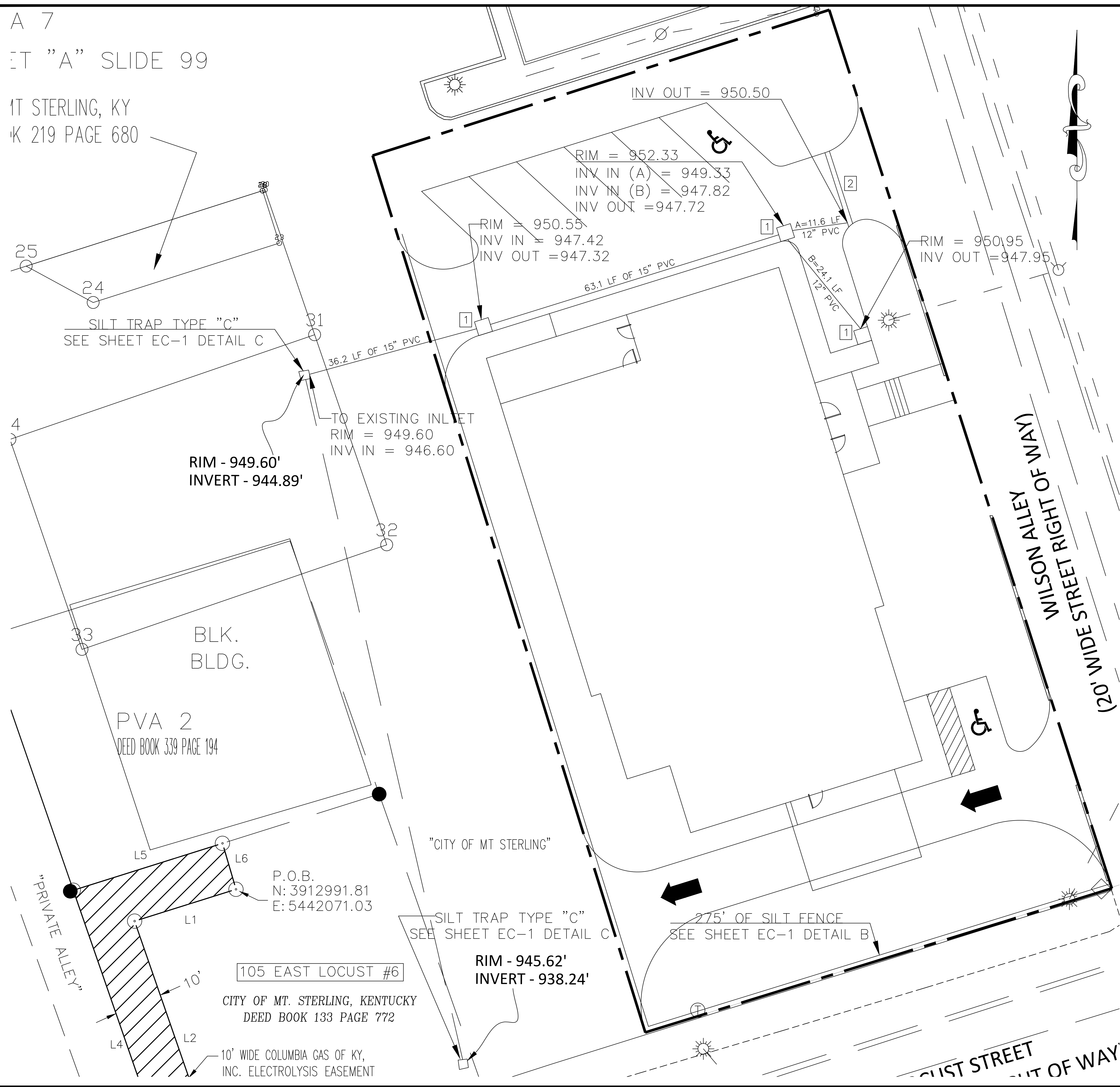
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	CRH			
	GAR			
	GAR	SEPTEMBER 2024		
		SCALE	1"=10'	

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DRAWING NO.
 C-3
 SHEET OF

A 7
 DET "A" SLIDE 99

MT STERLING, KY
 WK 219 PAGE 680



TAG NOTES

- 1 INLET SEE SHEET D-1 DETAIL F
- 2 INLET SEE SHEET D-1 DETAIL G



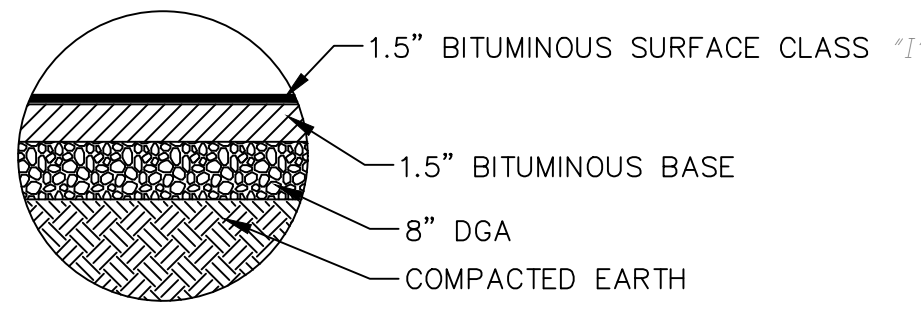
STORM SEWER AND EROSION CONTROL
 MONTGOMERY CO. SENIOR CENTER
 MT. STERLING, KENTUCKY

PROJECT NO.	DESIGNED BY	DATE	REVISION	BY
MSE-2024-001	MSE	SEPTEMBER 2024		
	CRH			
	GAR			
	GAR			

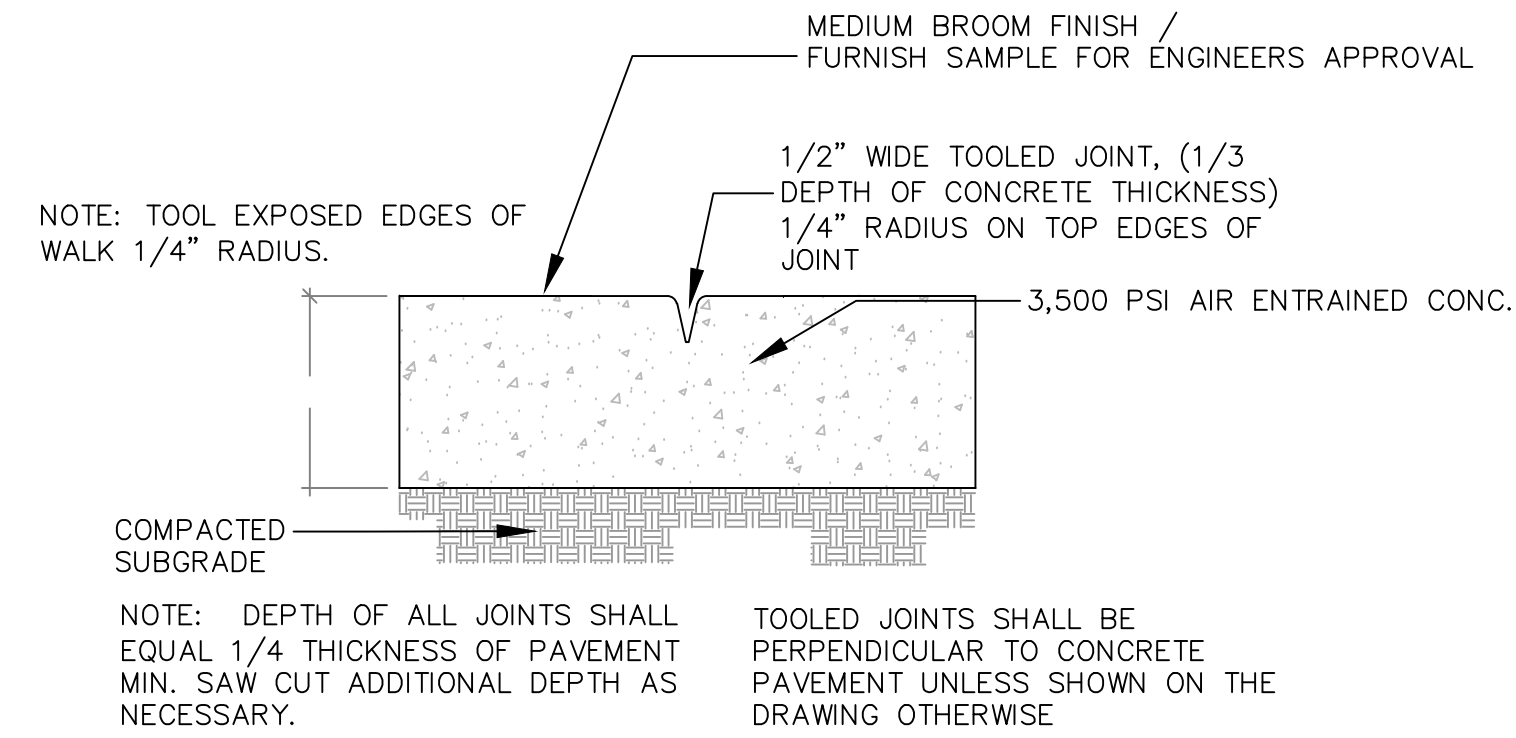
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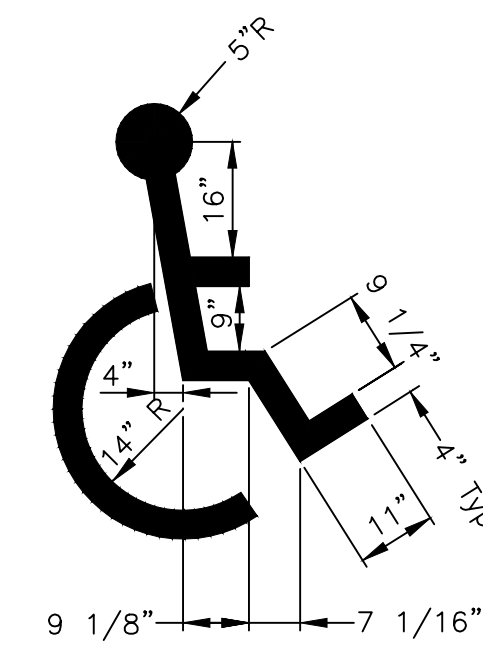
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 C-4
 SHEET OF



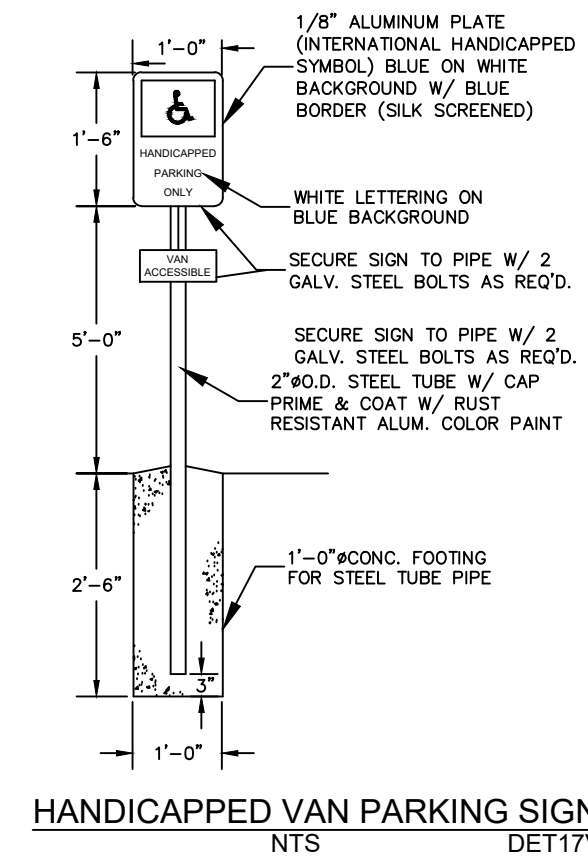
A
C-2 LIGHT DUTY PAVEMENT
NTS



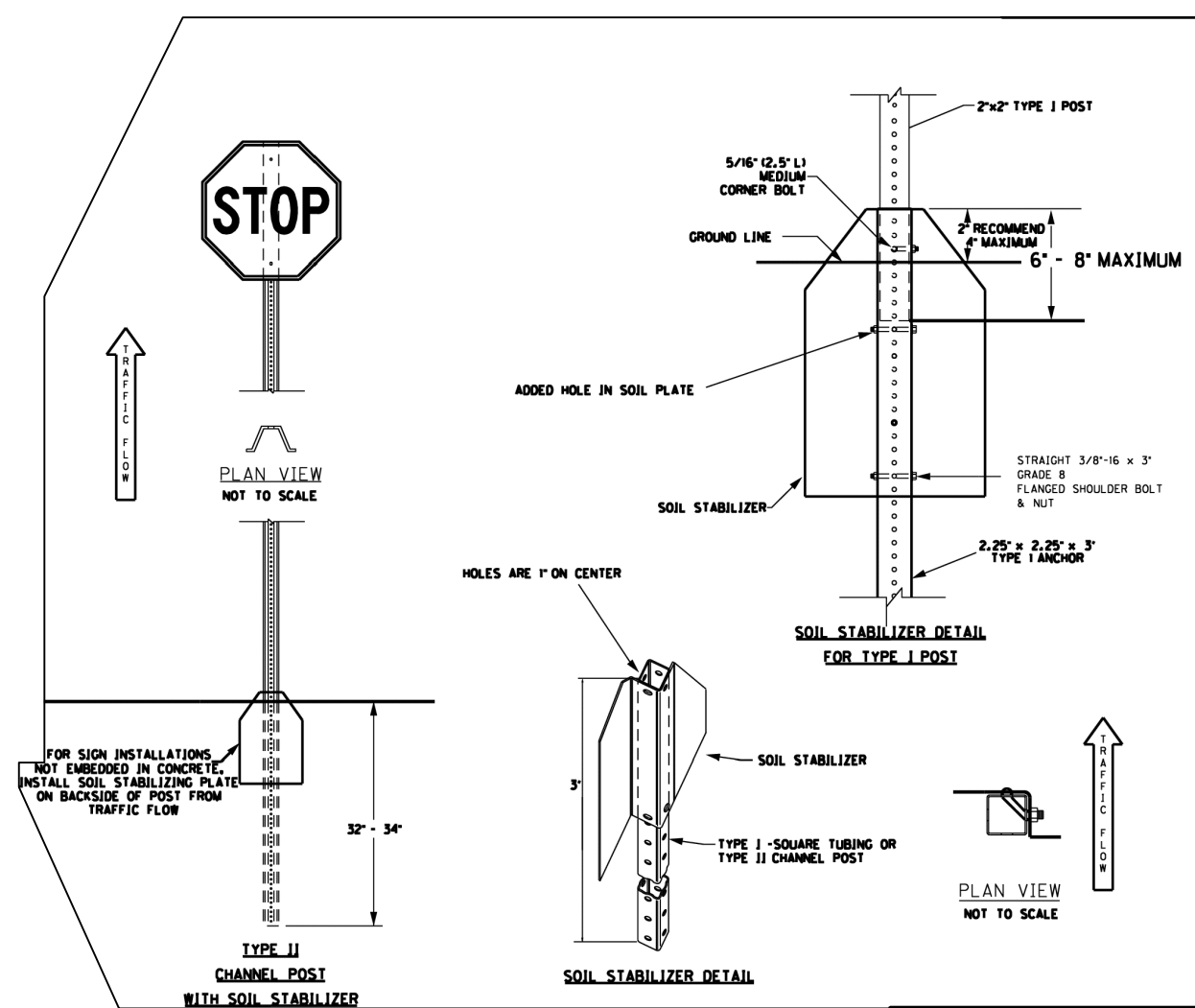
B
C-2 CONCRETE WALK / TOOLED CONTROL JOINT
NTS



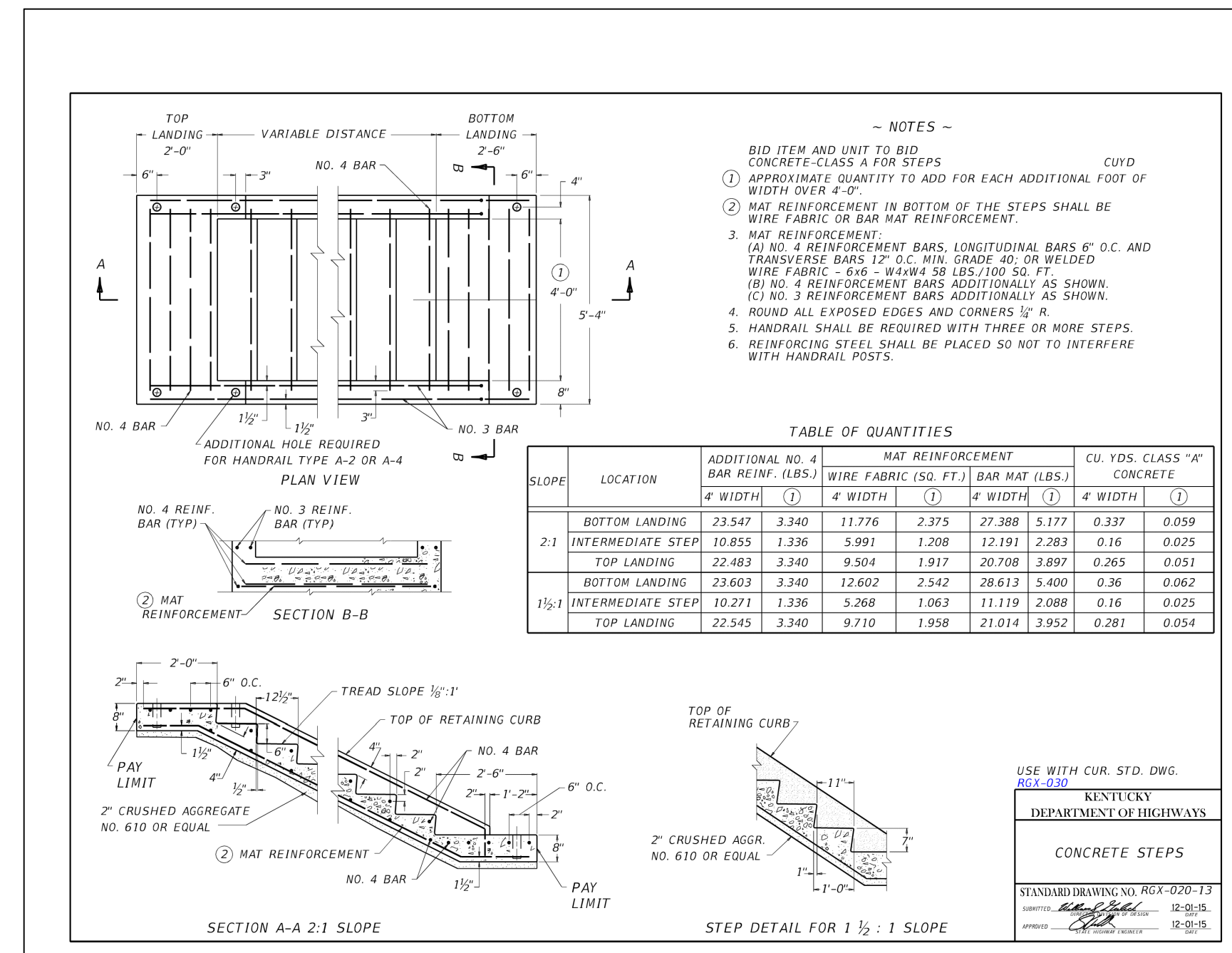
C
C-2 HANDICAP ACCESSIBILITY PAVEMENT MARKING
NTS



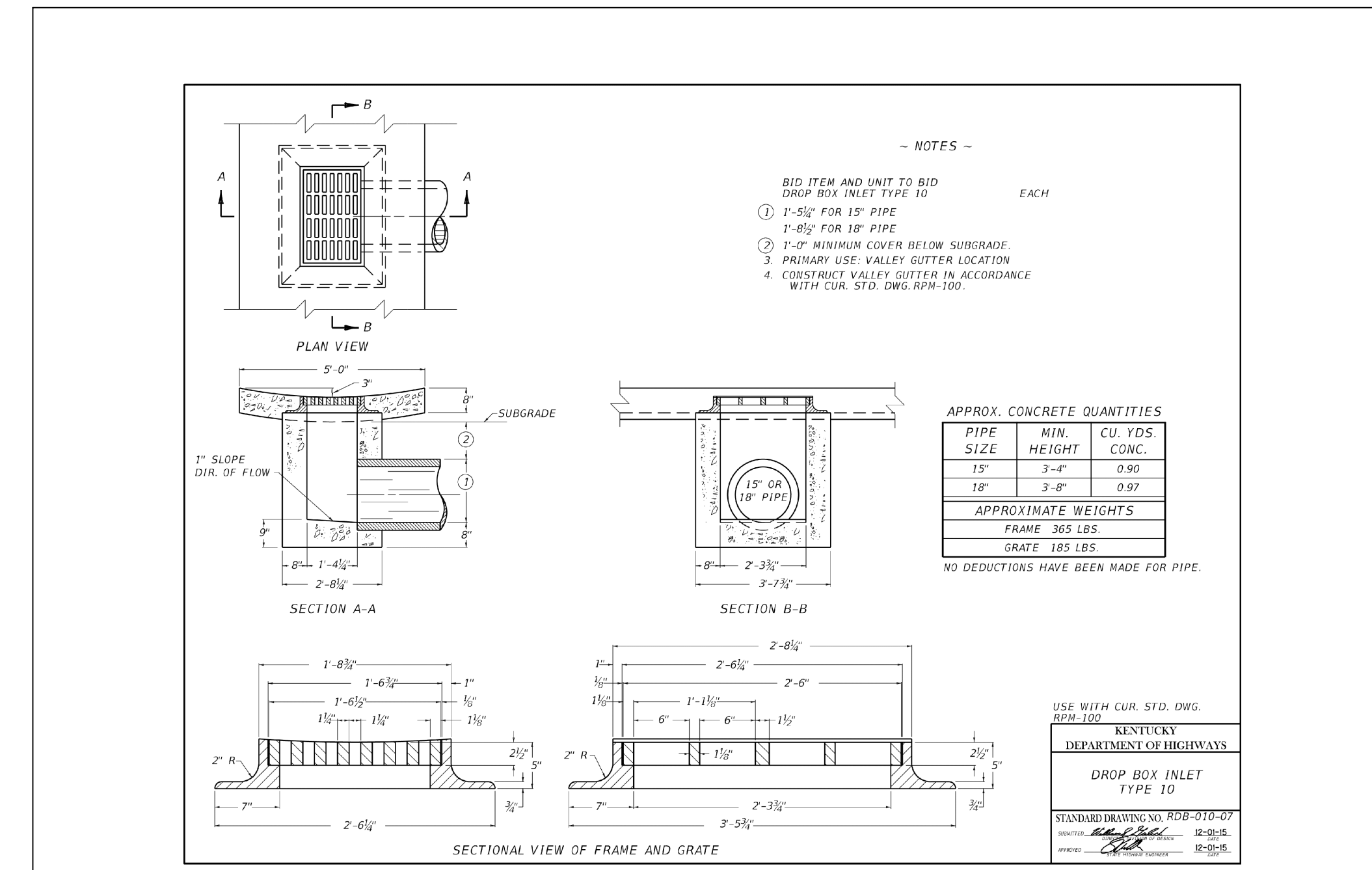
C
C-2 HANDICAPPED VAN PARKING SIGN
NTS



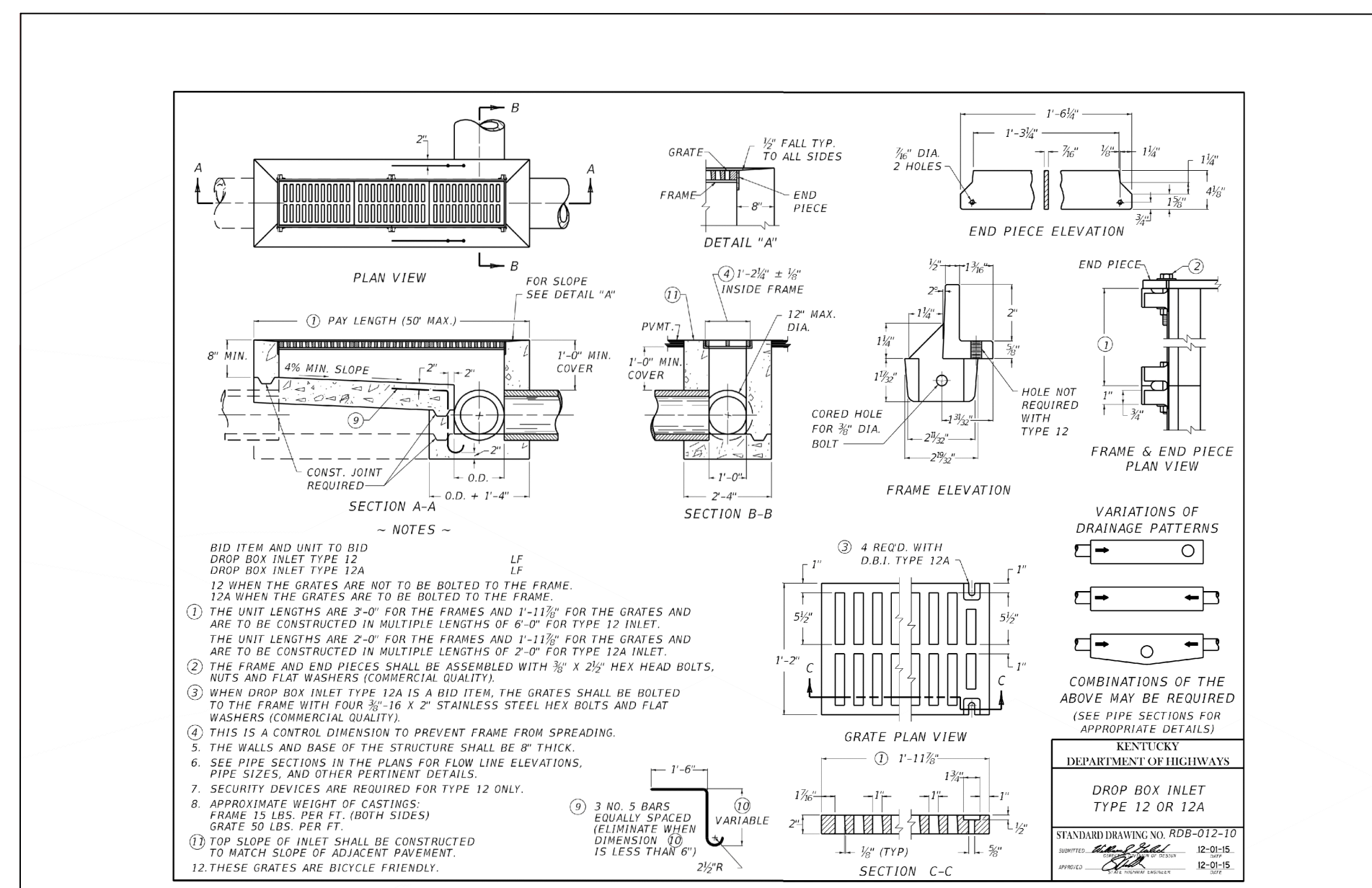
D
C-2 STOP SIGN
NTS



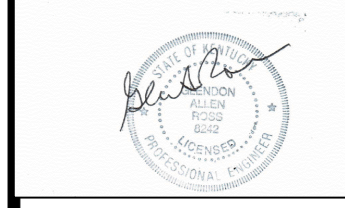
E
C-2 2:1 SLOPE CONCRETE STEPS
NTS



F
C-2 TYPE 10 INLET
NTS



G
C-2 TYPE 12A INLET
NTS



DETAILS
MONTGOMERY CO. SENIOR CENTER
MT. STERLING, KENTUCKY

DATE	REVISION	BY
9-20-24	DRAINAGE DETAILS ADDED	

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	CHECKED BY	GAR
	DATE	SEPTEMBER 2024
	SCALE	

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EROSION CONTROL NOTES:

THE EROSION CONTROL MEASURES NOTED BELOW ARE MINIMUMS AND DO NOT RELIEVE THE CONTRACTOR FROM THE RESPONSIBILITY FOR COMPLIANCE WITH ANY AND ALL U.S. EPA, KENTUCKY DIVISION OF WATER AND/OR LOCAL REQUIREMENTS.

CONTRACTOR SHALL ESTABLISH EROSION CONTROL MEASURES BEFORE DISTURBING SITE.

ALL EROSION CONTROL DEVICES SHALL BE PROPERLY MAINTAINED DURING ALL PHASES OF CONSTRUCTION UNTIL THE COMPLETION OF ALL CONSTRUCTION ACTIVITIES AND ALL DISTURBED AREAS HAVE BEEN STABILIZED.

ADDITIONAL CONTROL DEVICES MAY BE REQUIRED DURING CONSTRUCTION, IN ORDER TO CONTROL EROSION AND/OR OFFSITE SEDIMENTATION. ALL TEMPORARY CONTROL DEVICES SHALL BE REMOVED ONCE CONSTRUCTION IS COMPLETED AND THE SITE IS STABILIZED.

IT IS THE CONTRACTOR'S RESPONSIBILITY TO PREVENT EROSION ONTO ADJACENT PROPERTY. ANY REMEDIAL MEASURES REQUIRED TO CORRECT DAMAGE CREATED BY EROSION SHALL BE AT THE CONTRACTOR'S EXPENSE.

TOPSOIL STOCKPILES THAT ARE NOT BEING UTILIZED FOR A PERIOD OF 14 DAYS TO BE SURROUNDED BY SILT FENCES, RE-SEEDED AND PLACED WHERE SOIL EROSION WOULD GO TO THE SEDIMENT BASIN.

SILT FENCES TO BE CLEANED OUT WHEN THEY BECOME ONE-THIRD FULL.

WHEN SEASONAL CONDITIONS PROHIBIT THE APPLICATION OF TEMPORARY OR PERMANENT SEEDING, NON-VEGETATIVE SOIL STABILIZATION PRACTICES SUCH AS MULCHING AND MATTING SHALL BE USED, UNTIL SUCH TIME AS CONDITIONS PERMIT.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING ALL STORM SEWERS CLEANED OF SILT AND DEBRIS AND FUNCTIONING PROPERLY.

ALL SEDIMENT CONTROL MEASURES SHALL BE INSPECTED AT LEAST ONCE EVERY SEVEN DAYS AND AFTER ANY STORM EVENT OF GREATER THAN 0.5 INCHES OF PRECIPITATION DURING ANY 24-HOUR PERIOD. A FIELD LOG OF INSPECTIONS SHALL BE MADE AND A COPY GIVEN TO THE OWNER.

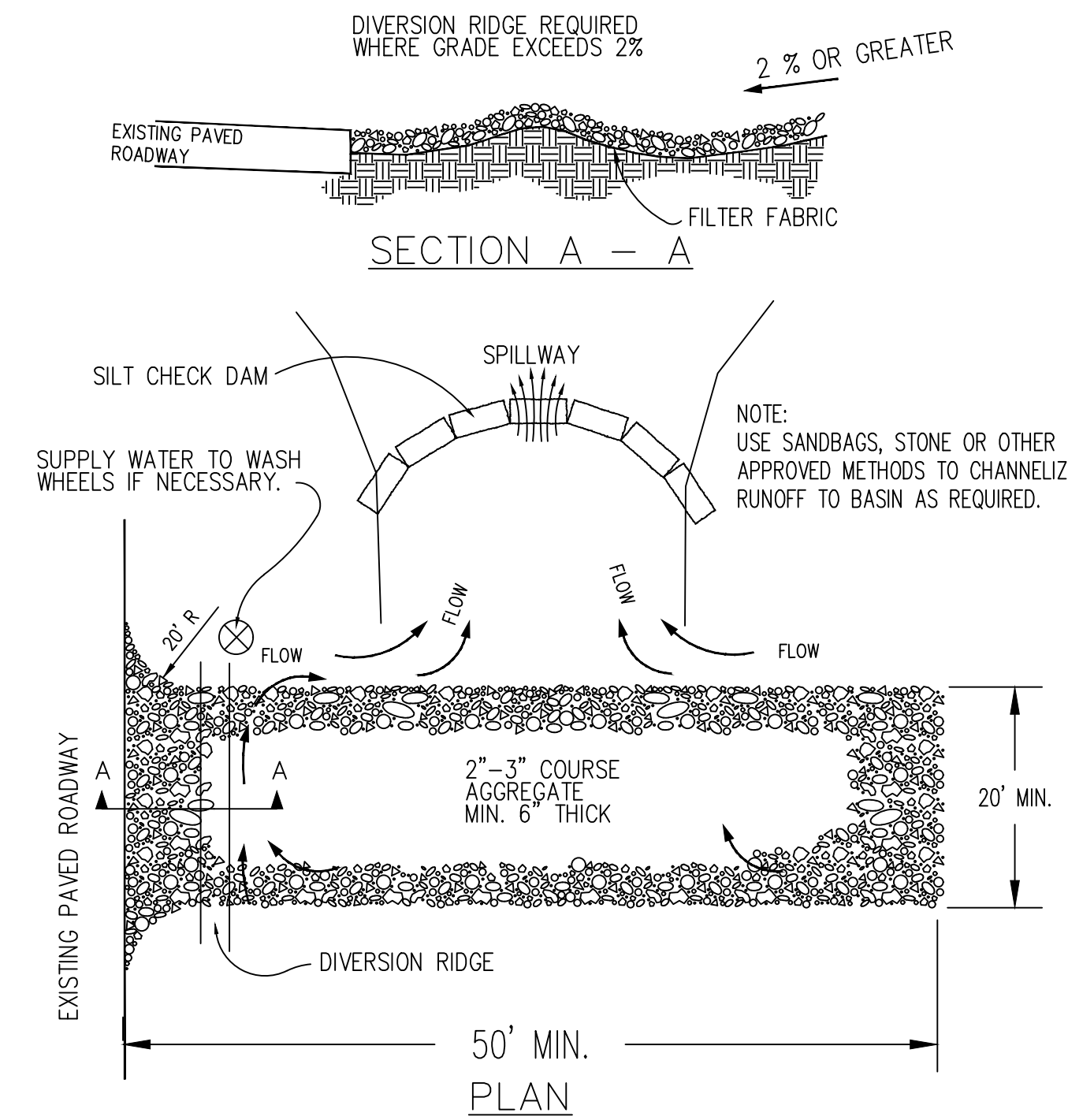
ALL SEDIMENT CONTROL FEATURES SHALL BE MAINTAINED UNTIL FINAL SOIL STABILIZATION HAS BEEN OBTAINED.

CONTRACTOR SHALL PROVIDE A CONCRETE WASHOUT STRUCTURE OR AREA UPSTREAM OF THE DETENTION BASIN IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL REQUIREMENTS. THE LOCATION OF THE CONCRETE WASHOUT STRUCTURE/AREA SHALL BE APPROVED BY THE ENGINEER AND DESIGNATED ON THE SWPPP.

STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICAL IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT NO MORE THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PART OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED UNLESS THAT ACTIVITY IN THAT PORTION OF THE SITE WILL RESUME WITHIN 21 DAYS.

THE CONTRACTOR MUST TAKE NECESSARY ACTION TO MINIMIZE TRACKING OF MUD ONTO PAVED ROADWAY FROM CONSTRUCTION AREAS. THE CONTRACTOR SHALL DAILY REMOVE MUD/SOIL FROM PAVEMENT, AS MAY BE REQUIRED.

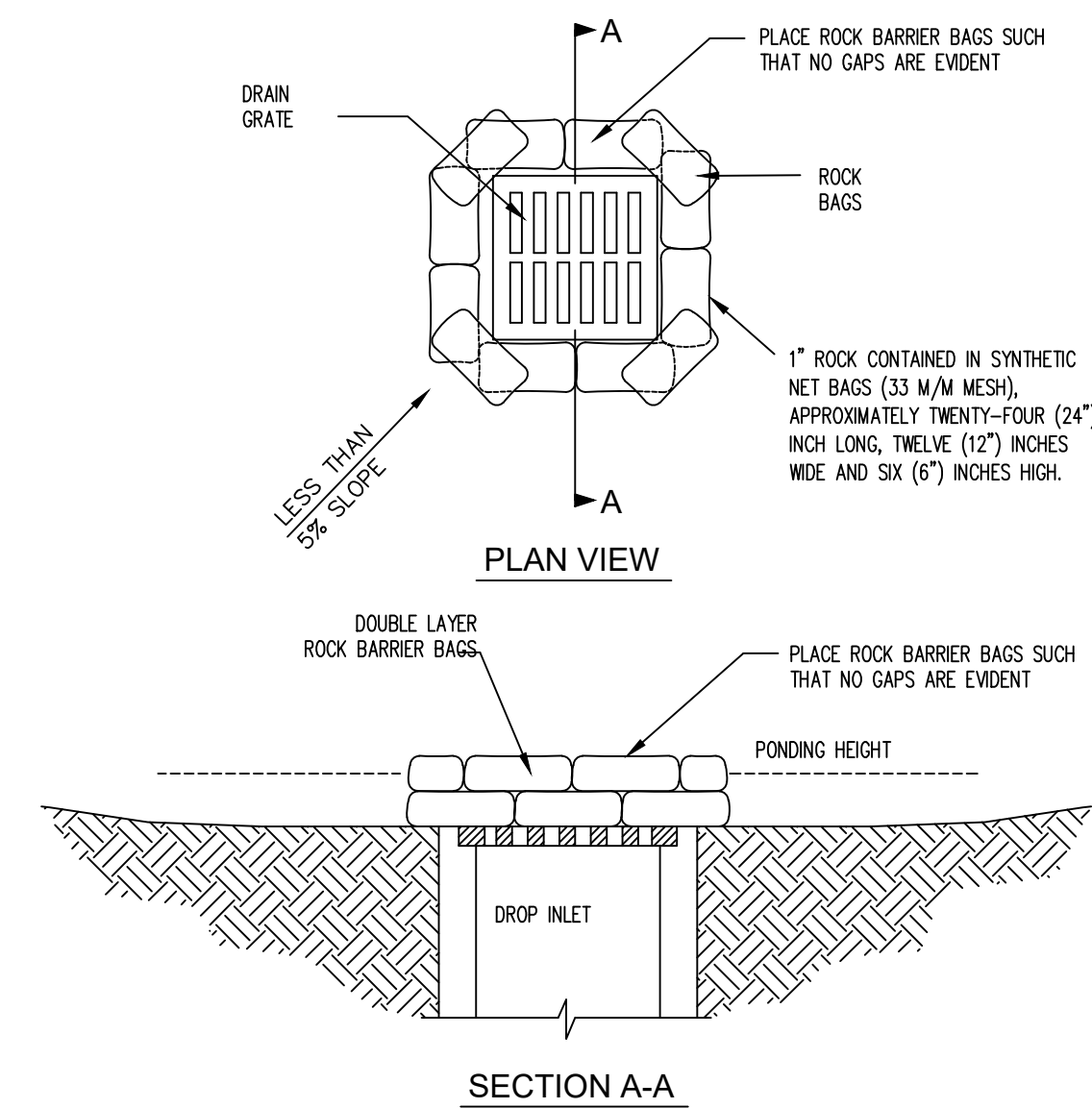
THE CONTRACTOR SHALL LIMIT ACCESS TO THE SITE TO THE CONSTRUCTION ENTRANCES. THE LOCATION OF THE CONSTRUCTION ENTRANCES SHALL BE APPROVED BY THE ENGINEER AND DESIGNATED ON THE SWPPP. THE CONTRACTOR SHALL INSTALL STONE SURFACE AT THE LOCATION WHERE CONSTRUCTION TRAFFIC LEAVES AND ENTERS THE SITE. THESE ACCESS POINTS SHALL BE MIN. 20' WIDE, 50' LONG, 0.5' DEEP AND USE NO. 7 STONE OVER GEOTEXTILE FABRIC (SEE DETAILS THIS SHEET). THE CONTRACTOR IS RESPONSIBLE FOR KEEPING STREETS AND PARKING AREAS FREE FROM MUD, DIRT, DEBRIS, AND ROCK. DUST SHALL BE KEPT TO A MINIMUM BY UTILIZING SPRINKLING, CALCIUM CHLORIDE, VEGETATIVE COVER, SPRAY ON ADHESIVES OR OTHER APPROVED METHODS. THIS ENTRANCE SHALL BE MAINTAINED UNTIL THE PERMANENT ENTRANCE HAS BEEN CONSTRUCTED.



TEMPORARY GRAVEL CONSTRUCTION ENTRANCE/EXIT
N.T.S. FILE: ENTRANCE

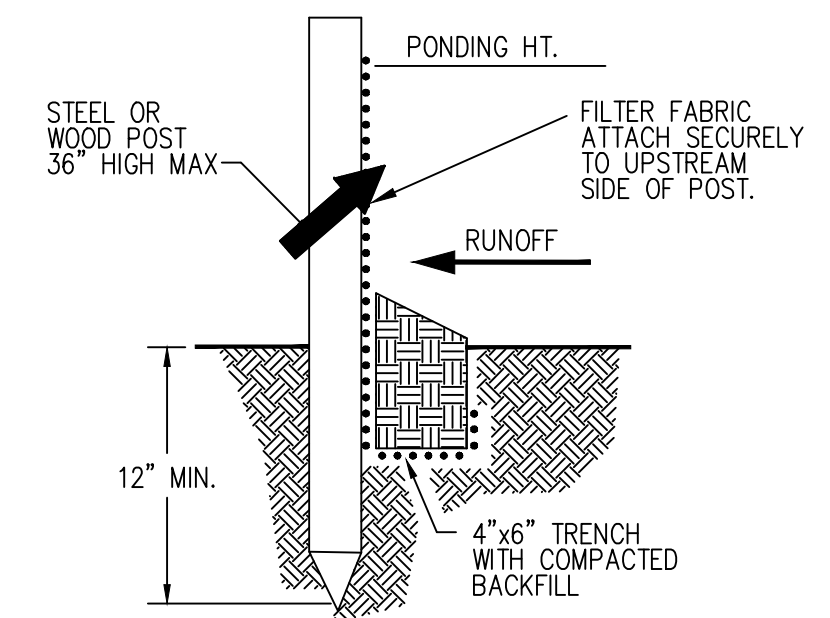
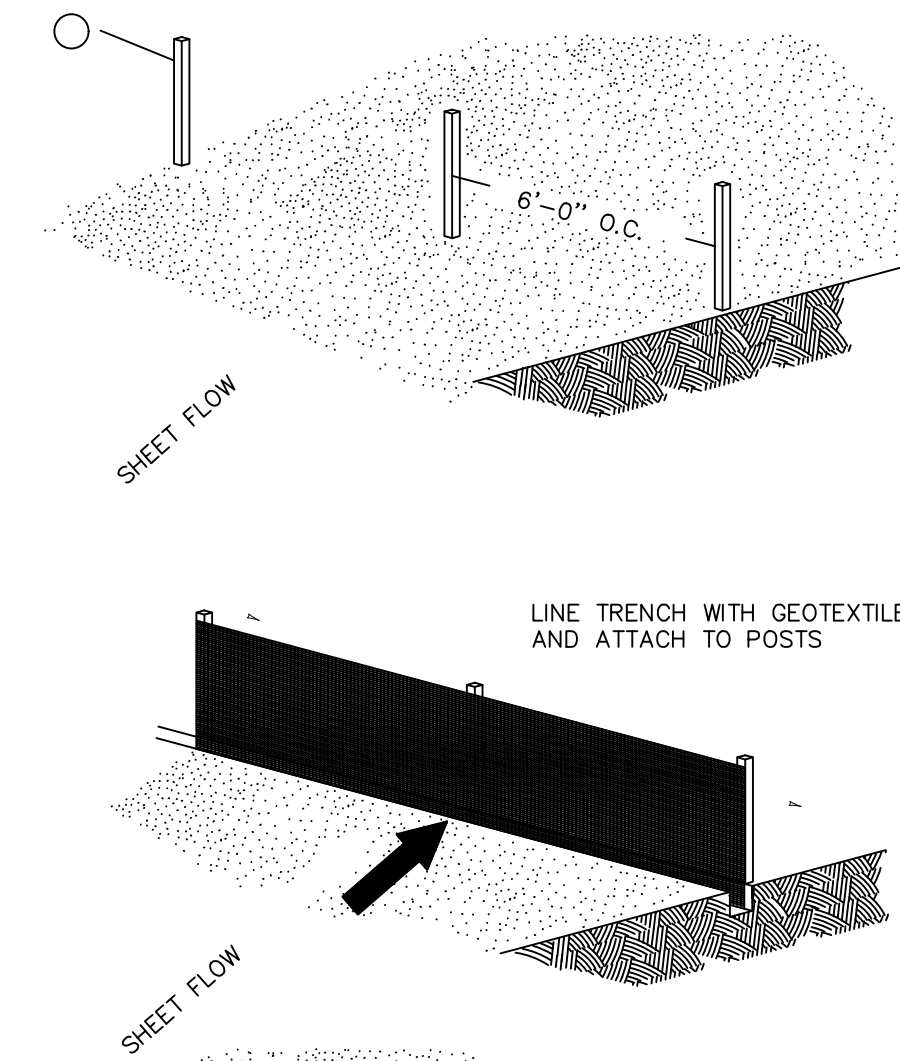
NOTES:
1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.

A
C-4
CONSTRUCTION ENTRANCE
NTS

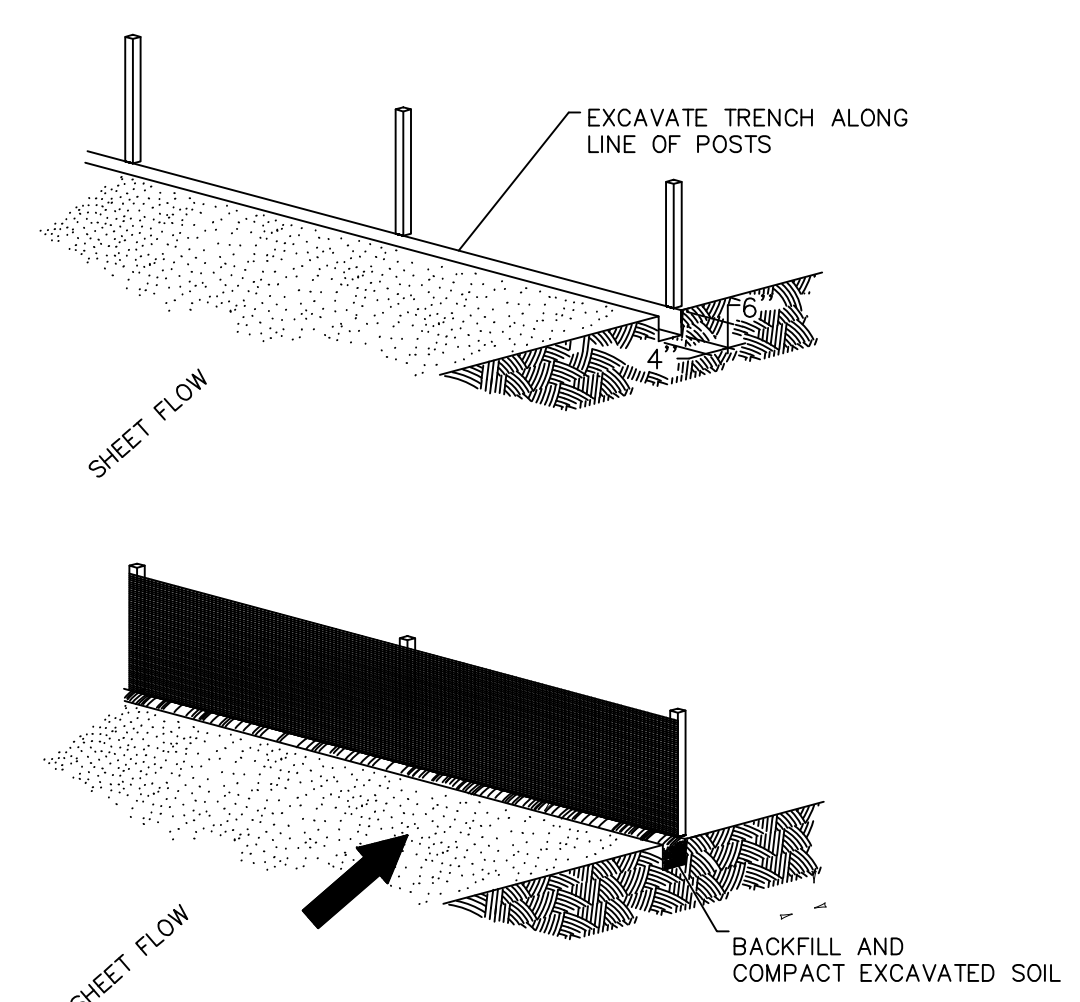


DROP BOX INLET PROTECTION NOTE:
ALL INLET & OUTLET PROTECTION TO BE IN CONFORMANCE WITH THE KENTUCKY EROSION PREVENTION AND SEDIMENT CONTROL FIELD GUIDE

C
C-4
SILT TRAP TYPE "C"
NTS



B
C-4
SILT FENCE
NTS



SEE STANDARD SPECIFICATIONS FOR POST SIZE, GEOTEXTILE FABRIC, WIRE STAPLES AND ALL OTHER PERTINENT INFORMATION.
POSTS MAY BE WOODEN OR METAL T-SECTION.
POSTS SHALL BE SET 1'-4" DEEP.
4. INSPECT AND REPAIR FENCE AFTER EACH STORM EVENT AND REMOVE SEDIMENT WHEN NECESSARY.
5. REMOVED SEDIMENT SHALL BE DEPOSITED TO AN AREA THAT WILL NOT CONTRIBUTE SEDIMENT OFF-SITE AND CAN BE PERMANENTLY STABILIZED.
6. SILT FENCE SHALL BE PLACED ON SLOPE CONTOURS TO MAXIMIZE PONDING EFFICIENCY.



DETAILS
MONTGOMERY CO. SENIOR CENTER
MT. STERLING, KENTUCKY

DATE	REVISION	BY

DESIGN DOCUMENTS: THE USER SHALL BE RESPONSIBLE FOR VERIFYING THE ACCURACY OF THE INFORMATION CONTAINED HEREIN AND FOR OBTAINING NECESSARY PERMITS AND APPROVALS FROM ALL AFFECTED AGENCIES.
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	MSE	CRH	GAR	GAR	SEPTEMBER 2024	

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DRAWING NO.
EC-1
SHEET OF

STRUCTURAL QUALITY ASSURANCE PLAN

GENERAL

THE NEW STRUCTURE TO BE CONSTRUCTED IS ASSIGNED BY THE KENTUCKY BUILDING CODE, 2018 EDITION, TO SEISMIC USE GROUP AND SEISMIC DESIGN AS SPECIFIED. AS SUCH, THE BUILDING CODE MANDATES SPECIAL INSPECTION (SECTION 1704), SPECIAL INSPECTIONS FOR WIND RESISTANCE (SECTION 1705.11), SPECIAL INSPECTIONS FOR SEISMIC RESISTANCE (SECTION 1705.12), STRUCTURAL OBSERVATION FOR SEISMIC RESISTANCE (SECTION 1704.6.1) AND STRUCTURAL OBSERVATIONS FOR WIND REQUIREMENTS (SECTION 1704.6.2), STRUCTURAL QUALITY ASSURANCE PLAN SPECIFICALLY IDENTIFIES THE RESPONSIBILITIES OF THE CONTRACTOR AND THE SPECIAL INSPECTOR IN PERFORMING THE REQUIRED TESTING AND INSPECTION OF THE STRUCTURAL WORK.

CONTRACTOR RESPONSIBILITIES

In accordance with Section 1704.4 of the Building Code, the Contractor shall submit to the Building Official and the Architect a written statement of responsibility that contains the following:

- 1) Acknowledgment of awareness of the special requirements contained within this Structural Quality Assurance Plan.
 - 2) Acknowledgment that control shall be exercised to obtain conformance with the construction documents approved by the Building Official.
 - 3) Procedures for exercising control with the Contractor's organization, the method and frequency of reporting, and the distribution of reports.
 - 4) Identification and qualifications of the person(s) exercising such control and their position(s) in the organization.
- The Structural Testing / Inspection Agency that is to act as the Special Inspector will be hired by the Owner.

Contractor shall pay for any additional structural testing/inspection required for work or materials not complying with the Construction Documents due to negligence or nonconformance and shall pay for any additional structural testing/inspection required for his convenience.

The Contractor is responsible to ensure that the Special Inspector is present for all work requiring special inspection. Any work that requires special inspection and is performed without the Special Inspector being present is subject to being demolished and reconstructed.

The Contractor has the following responsibilities to the Special Inspector:

- 1) Provide copy of Construction Documents to the Special Inspector.
- 2) Notify the Special Inspector sufficiently in advance of operations to allow assignment of personnel and scheduling of tests.
- 3) Cooperate with Special Inspector and provide access to work.
- 4) Provide samples of materials to be tested in required quantities.
- 5) Provide storage space for the Special Inspector's exclusive use, such as for storing and curing concrete testing samples.
- 6) Provide labor to assist the Special Inspector in performing tests/inspections.

SPECIAL INSPECTOR RESPONSIBILITIES

The Special Inspector shall maintain records of inspections in accordance with Section 1704.2.4 and shall distribute these records to the Architect and Structural Engineer on a weekly basis. At the conclusion of the project, the Special Inspector shall submit a written statement that the special inspections during construction have complied with this Structural Quality Assurance Plan and that any discrepancies noted during construction have been corrected.

SOILS

The Special Inspector shall perform the following:

- 1) Verify structural fill complies with specifications and the geotechnical report.
- 2) Perform field density tests to verify compaction of structural fill. As a minimum, perform one test per lift for every 2500 square feet of fill placed.
- 3) Confirm all footings bear on earth & any shallow rock to be undercut a minimum of 24" below bottom of footing elevation, back fill per geotech. report

CAST-IN-PLACE CONCRETE

The Contractor shall perform the following:

1. Establish concrete mix design proportions per ACI 318, Chapter 5. Submit 5 copies (minimum) of the concrete mix designs. Include the following:
 - a. Type and quantities of materials
 - b. Slump
 - c. Air content
 - d. Fresh unit weight
 - e. Aggregates sieve analysis
 - f. Design compressive strength
 - g. Location of placement in structure
 - h. Method of placement
 - i. Method of curing
 - j. Seven-day and 28-day compressive strengths

2. Submit a certification from each manufacturer or supplier stating that materials meet the requirements of the specified ASTM and ACI standards.

3. Submit certification that the ready-mixed concrete plant complies with the requirements of the National Ready Mix Concrete Association.

The Special Inspector shall perform the following:

1. Verify quantity, location, and placement of reinforcing steel prior to concrete placement.
2. Examine concrete in truck to verify that concrete appears properly mixed.
3. Perform a slump test as deemed necessary for each concrete load. Record if water or admixtures are added to the concrete at the job site. Perform additional slump tests after job site adjustments.
4. Mold four specimens per set for compressive strength testing; one set for each 50 cubic yards (or portion thereof) of each mix design in any one day. For each set set molded, record:
 - a. Slump
 - b. Air content
 - c. Unit weight
 - d. Temperature, ambient and concrete
 - e. Location of placement
 - f. Any pertinent information, such as addition of water, addition of admixtures, etc.

5. Perform one 7-day and two 28-day compressive strength tests. (Use one as a spare to be broken as directed by the Structural Engineer if compressive strengths do not appear adequate.)

6. Reports of compressive strength tests shall contain the project identification name and number, date of concrete placement, concrete design compressive strength, location of concrete placement in structure, concrete mix proportions and materials, compressive breaking strength and type of break.

NON-SHRINK GROUT UNDER STEEL BASE PLATES

The Special Inspector shall perform the following:

1. Compressive strength tests per ASTM C109.
2. Number of Tests: One test for each ten bags of grout used or minimum of one test for each day of grouting.
3. Cube Size: 2-inch x 2-inch.
4. Test Schedule: One cube at 3 days, two cubes at 7 days, three cubes at 28 days.

CONCRETE MASONRY

Contractor shall perform the following:

1. Submit a certification from each manufacturer or supplier stating that the following materials comply with the specified ASTM or ACI Standards:
 - a. Concrete masonry units.
 - b. Mortar materials: Portland cement, hydrated lime, and aggregates.
 - c. Grout materials: Portland cement and aggregates.
 - d. Joint reinforcement steel.
 - e. Reinforcing steel.
2. For reinforcing steel used in concrete masonry walls, submit certified mill test reports.

Special Inspector shall perform the following:

1. Verify compressive strength of concrete masonry units, mortar, and coarse grout for every 5,000 sq. ft. of surface area (or portion thereof) as follows:
 - a. Three (3) concrete masonry units shall be tested in accordance with ASTM C140.
 - b. Six (6) mortar cube specimens shall be tested, three (3) at 7-days and three (3) at 28-days.

WOOD CONSTRUCTION

1. Check all wood framing layout and confirm compliance with plans, specs, and shop drawings.

2. Visually inspect truss layout and anchorage and confirm compliance with plans, specs, and shop drawings.

3. Visually inspect all roof and wall sheathing attachments and confirm compliance with plans, specs, and shop drawings.

SPECIAL INSPECTIONS PER CHAPTER 17 OF THE KENTUCKY BUILDING CODE

SECTION	ITEM	REQUIRED?		REMARKS
		YES	NO	
1704.2.5	FABRICATORS	X	—	FABRICATION OF WOOD TRUSSES PER SECTION 1704.2.5
1704.3.2	STRUCTURAL OBSERVATION FOR SEISMIC REQUIREMENTS	—	X	SEISMIC DESIGN CATEGORY "B"
1704.3.3	STRUCTURAL OBSERVATION FOR WIND REQUIREMENTS	—	X	Vasd = 89mph.
1705.2	STEEL	X	—	PER AISC 360 & TABLE 1705.2.2
1705.3	CONCRETE	X	—	PER TABLE 1705.3
1705.4	MASONRY	X	—	LEVEL B TMS 402/ACI 530/ASCE 5
1705.5	WOOD	X	—	PER SECTION 1704.2.5
1705.6	SOILS	X	—	PER TABLE 1705.6
1705.7	DRIVEN DEEP FOUNDATIONS	—	X	NONE
1705.8	CAST IN PLACE DEEP FOUNDATIONS	—	X	NONE
1705.9	HELICAL PILE FOUNDATIONS	—	X	NONE
1705.11.1	WIND - STRUCTURAL WOOD	—	X	Vasd = 89mph.
1705.11.2	WIND - COLD FORMED STEEL FRAMING	—	X	NONE
1705.11.3	WIND - WIND RESISTING COMPONENTS	—	X	NONE
1705.12.1	SEISMIC - STRUCTURAL STEEL	—	X	SEISMIC DESIGN CATEGORY "B"
1705.12.2	SEISMIC - STRUCTURAL WOOD	—	X	PER SECTION 1705.12.2
1705.12.3	SEISMIC - COLD FORMED STEEL FRAMING	—	X	SEISMIC DESIGN CATEGORY "B"
1705.12.4	DESIGNATED SEISMIC SYSTEMS	—	X	SEISMIC DESIGN CATEGORY "B"
1705.12.5	SEISMIC - ARCHITECTURAL COMPONENTS - INTERIOR/EXTERIOR NON-LOAD BEARING WALLS AND VENEER IN STRUCTURES	—	X	SEISMIC DESIGN CATEGORY "B"
1705.12.6	SEISMIC - MECHANICAL AND ELECTRICAL COMPONENTS	—	X	SEISMIC DESIGN CATEGORY "B"
1705.12.7	SEISMIC - STORAGE RACKS AND ACCESS FLOORS	—	X	NONE
1705.14	SPRAYED FIREPROOFING	—	X	NONE
1705.15	FIREPROOFING	—	X	NONE
1705.16	E.I.F.S.	—	X	NONE
1705.17	FIRE RESISTANT PENETRATIONS & JOINTS	—	X	NONE
1705.18	SMOKE CONTROL	—	X	NONE

GENERAL NOTES:

CONCRETE:

1. All concrete shall conform and be designed, mixed, placed, tested, and cured in accordance with the provisions of the ACI Manual of Concrete Practice, (current edition). Special care shall be taken in curing floors, stairs, walls, and other exposed surfaces in accordance with the specifications.
2. All concrete shall develop 3,500 PSI compressive strength in 28 days.
3. Dropping the concrete in excess of 10 feet, depositing in a large quantity at any point and running or working it along the forms, or any method tending to cause segregation or separation of the aggregates will not be permitted.

REINFORCEMENT STEEL:

4. Reinforcement steel shall have a minimum yield strength of 60,000 PSI and conform with material specifications for reinforcing bars, ASTM A615 thru A617; see manual of standard practice, Concrete Reinforcing Steel Institute.
5. Welded wire fabric shall conform to ASTM A185.
6. All rebars shall be securely tied and held in place with a minimum concrete protection cover to all steel as follows:
 - Walls, Columns, Beams, and Pilasters — 1 1/2"
 - Slabs — 3/4"
 - Footings — 3"
7. Reinforcing steel bends shall be made as per diagram, and/or in accordance with A.C.I. Code.
8. Lap all splices as specifically called for, but at least 38 bar diameters for bars less than or equal to #6, and 48 bar diameters, for bars greater than #6, (always 12 in. minimum) unless noted otherwise. Lap all splices in masonry reinforcement a minimum of 48 bar diameters.

STRUCTURAL STEEL:

9. All structural steel, except wide flange beams and columns, shall conform to ASTM A36 standard, as outlined in the AISC "Manual of Steel Construction", which contains the specifications for the design, fabrication, and erecting of structural steel buildings, and the "Code of Standard Practices", latest edition. Tube columns shall conform to ASTM A500 Grade B. Wide flange beams and columns and WT shapes shall conform to ASTM A992.
10. All bolts for structural steel joint fasteners shall be 3/4" high strength structural bolts, ASTM A325, Torque Control (Tension Set), unless otherwise noted.
11. All structural steel shall be fabricated and erected in accordance with the latest OSHA regulations regarding steel erection.

FOUNDATION DESIGN:

12. Foundations were designed using a maximum earth bearing pressure of 3,000 PSF. This value shall be field verified.

SHALLOW FOUNDATIONS ON SOIL:

13. Any soils can lose strength if they become wet, so the foundation sub grades must be protected from exposure to water. Foundation construction the following procedures.
 - A. For soils that will remain exposed overnight or for an extended period of time, place a "lean" concrete mud-mat over the bearing areas. The concrete should be at least 4 inches thick. Flowable fill concrete or low-strength concrete is suitable for this cover, as conditions allow.

- B. Disturbed soil must be removed prior to foundation concrete placement.
- C. Foundation bearing conditions must be benchmarked level.
- D. Areas loosened by excavation operations must be recompacted prior to reinforcing steel placement.
- E. Loose soil, debris, and excess surface water must be removed from the bearing surface prior to concrete placement.
- F. The Special Inspector shall observe all foundation excavations and provide recommendations for treatment of any unsuitable conditions encountered.
- G. The bearing conditions of foundation soils (stiff or better residual soil) shall be checked by means of portable dynamic cone penetration (DCP) testing at the direction of the special inspector.

GRADE SUPPORTED FLOOR SLABS

14. The following features are required as part of grade support slab construction:
 - A. Keep the crushed stone moist, but not wet, immediately prior to slab concrete placement to minimize curling of the slab due to differential curing conditions between the top and bottom of the slab.
 - B. The Special Inspector shall review the actual subgrade conditions prior to slab construction and to make recommendations for any unsuitable conditions encountered.
 - C. Slab subgrade conditions are also considered earthwork areas; thus, the recommendations contained in the Earthwork section of the report apply.

NOTE TO CONTRACTOR:

The contractor shall coordinate the Structural Drawings with the Architectural, Mechanical, and Electrical Drawings and make certain all pipes, sleeves, ducts, inserts, and openings are located and in place before each concrete pour. The Contractor shall verify all dimensions shown on the Structural Drawings with dimensions shown on the Architectural Drawings.

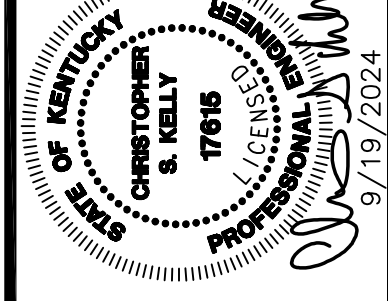
The Contractor shall check and approve, with reasonable promptness, shop drawings and schedules for coordination of details, sizes, fitting tolerances, and dimensions. The Contractor shall stamp or sign these drawings and schedules with his approval and then submit them to the Architect for review.

OCCUPANCY CATEGORY	II
IMPORTANCE FACTOR	1.0
S _s	0.193
S ₁	0.083
SITE CLASS	C
S _w	0.167
S _u	0.083
SEISMIC DESIGN CATEGORY	B
BASIC SEISMIC-FORCE RESISTING SYSTEM	LIGHT-FRAMED WALLS SHEATHED WITH WOOD STRUCTURAL PANELS RATED FOR SHEAR RESISTANCE
DESIGN BASE SHEAR	0.0244W
SEISMIC RESPONSE COEFFICIENT (C _s)	0.0244
RESPONSE MODIFICATION FACTOR	6.5
ANALYSIS PROCEDURE	ELFP

GROUND SNOW LOAD (P _g)	15 PSF
FLAT ROOF SNOW LOAD (P _f)	10.9 PSF
IMPORTANCE FACTOR (I _s)	1.0
THERMAL FACTOR (C _t)	1.1
SNOW EXPOSURE FACTOR (C _e)	0.90

ROOF	20 PSF
SLAB ON GRADE	100 PSF

ULTIMATE DESIGN WIND SPEED (V _{ult})	115 MPH	
NOMINAL DESIGN WIND SPEED (V _{nom})	89 MPH	
RISK CATEGORY	II	
WIND EXPOSURE CATEGORY	B	
INTERNAL PRESSURE COEFFICIENT	+/- 0.18	
COMPONENTS AND CLADDING [H<30 FT]		
ROOF 0 TO 7 DEGREES	EXPOSURE B	EXPOSURE C
INTERIOR ZONE	9.7 -23.8	13.5 -33.3
END ZONE	9.7 -39.9	13.5 -55.8
CORNER ZONE	9.7 -60.1	13.5 -84.1
ROOF >7 TO 27 DEGREES		
INTERIOR ZONE	13.7 -21.8	19.1 -30.5
END ZONE	13.7 -37.9	19.1 -50.0
CORNER ZONE	13.7 -56.0	19.1 -78.4
INTERIOR ZONE	21.8 -23.8	30.5 -33.3
END ZONE	21.8 -27.8	30.5 -38.9
CORNER ZONE	21.8 -27.8	30.5 -38.9
WALLS		
INTERIOR ZONE	23.8 -25.8	33.3 -36.1
END ZONE	23.8 -31.9	33.3 -44.6



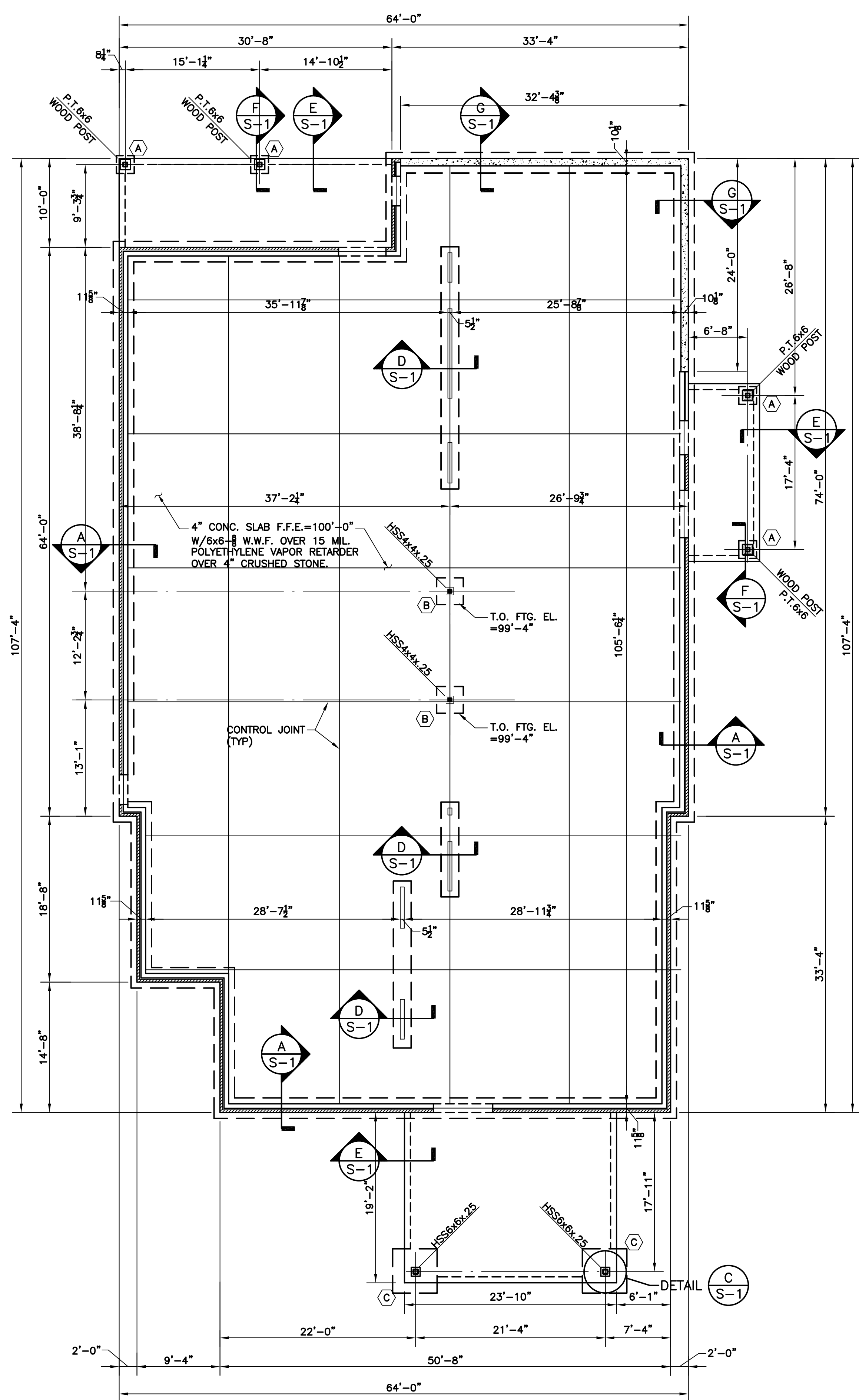
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**MONTGOMERY COUNTY
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 MT. STERLING, KENTUCKY**

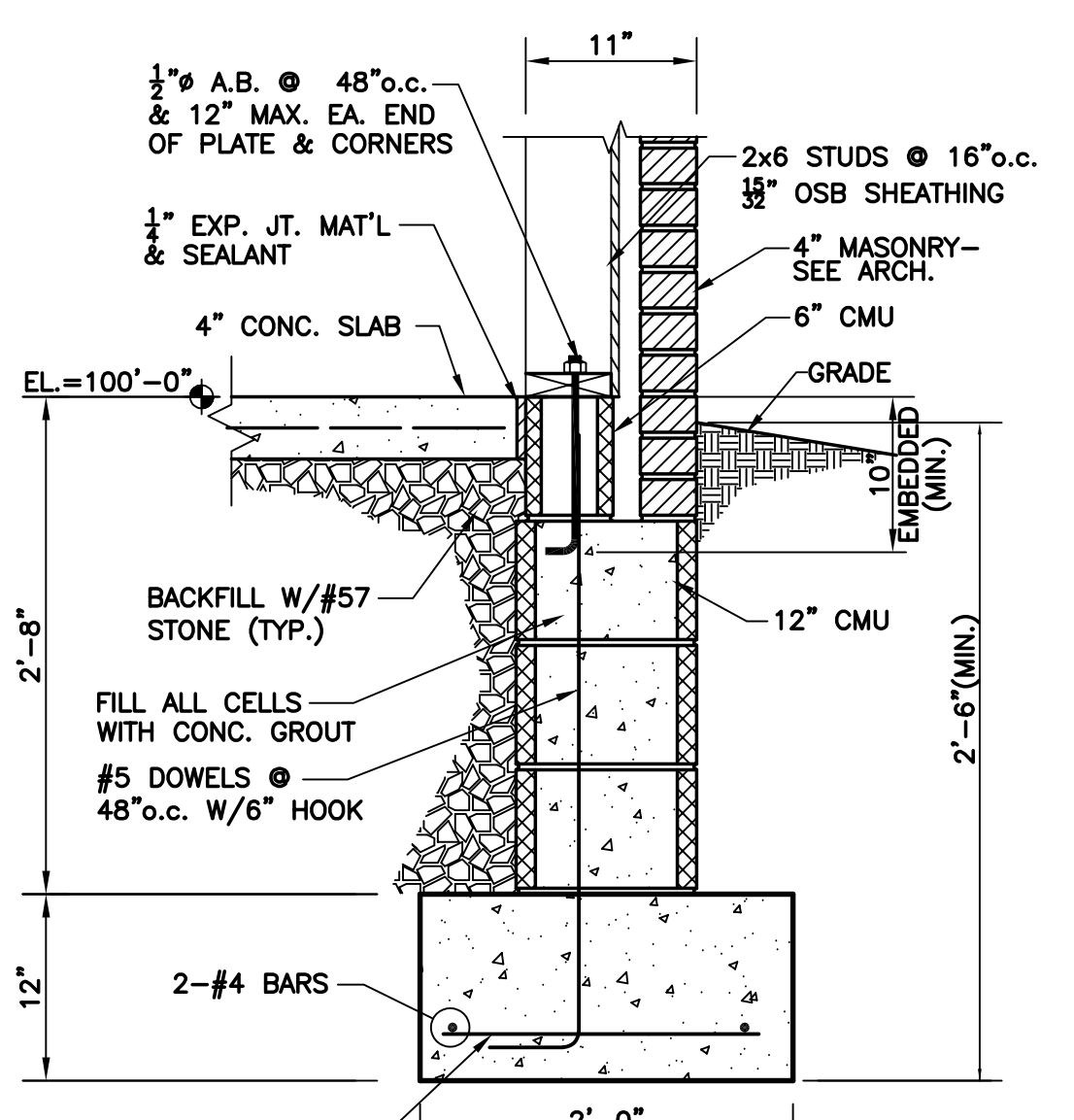
DATE	REVISION	BY

PROJECT NO. 5061-09
 DESIGNED BY: CSK
 DRAWN BY: SRT/jp24/64
 CHECKED BY: CSK
 REVIEWED BY: CSK
 DATE: 11-19-2024
 SCALE: AS SHOWN

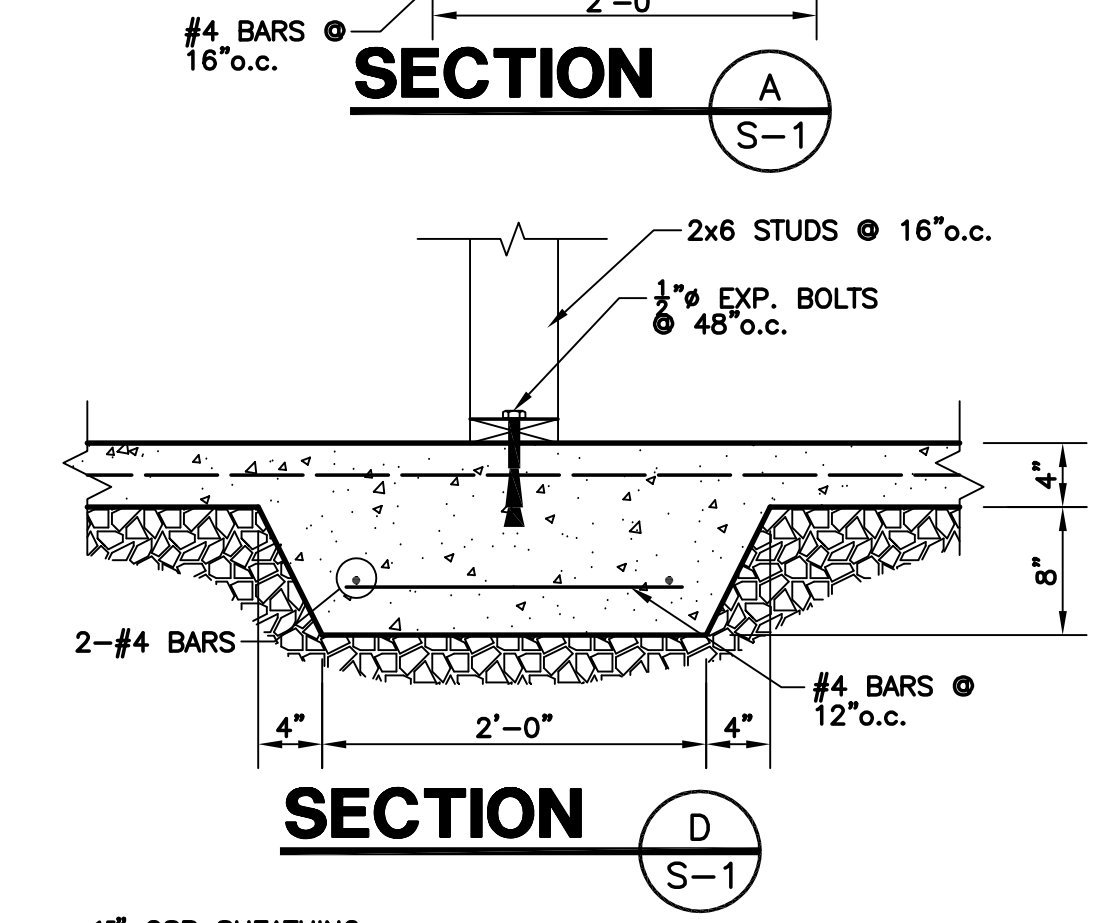
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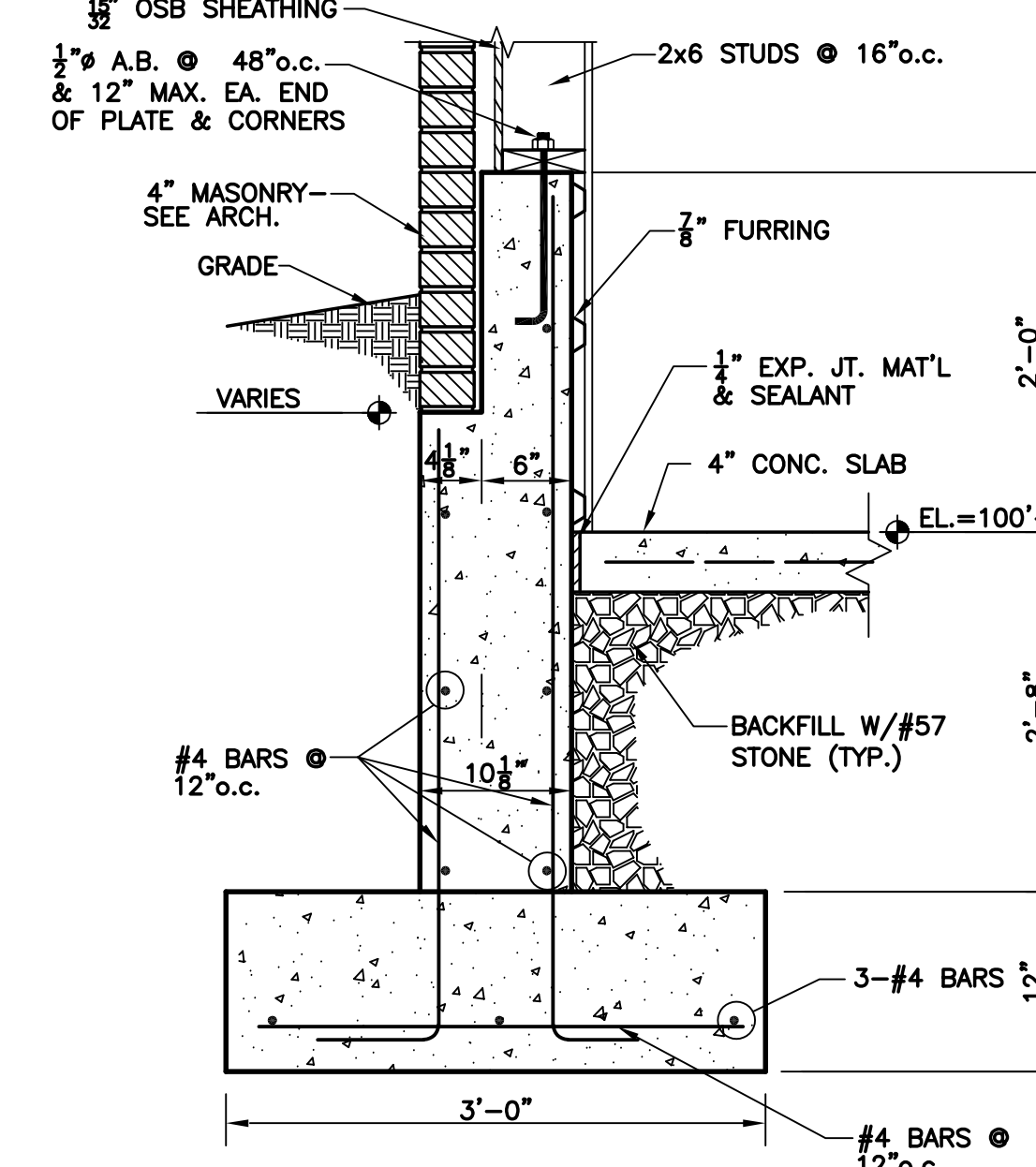
FOUNDATION PLAN



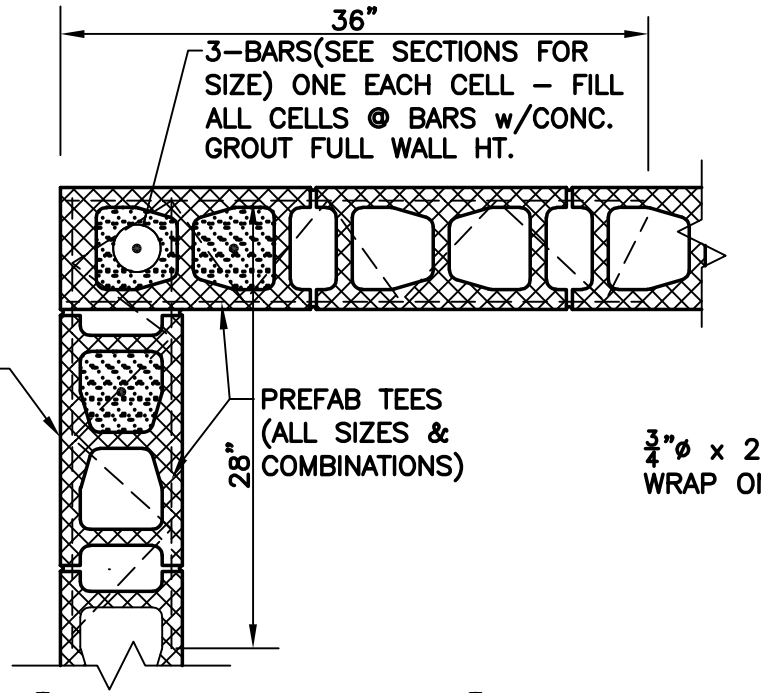
SECTION A
(TYPICAL EXTERIOR DOOR OPENING)



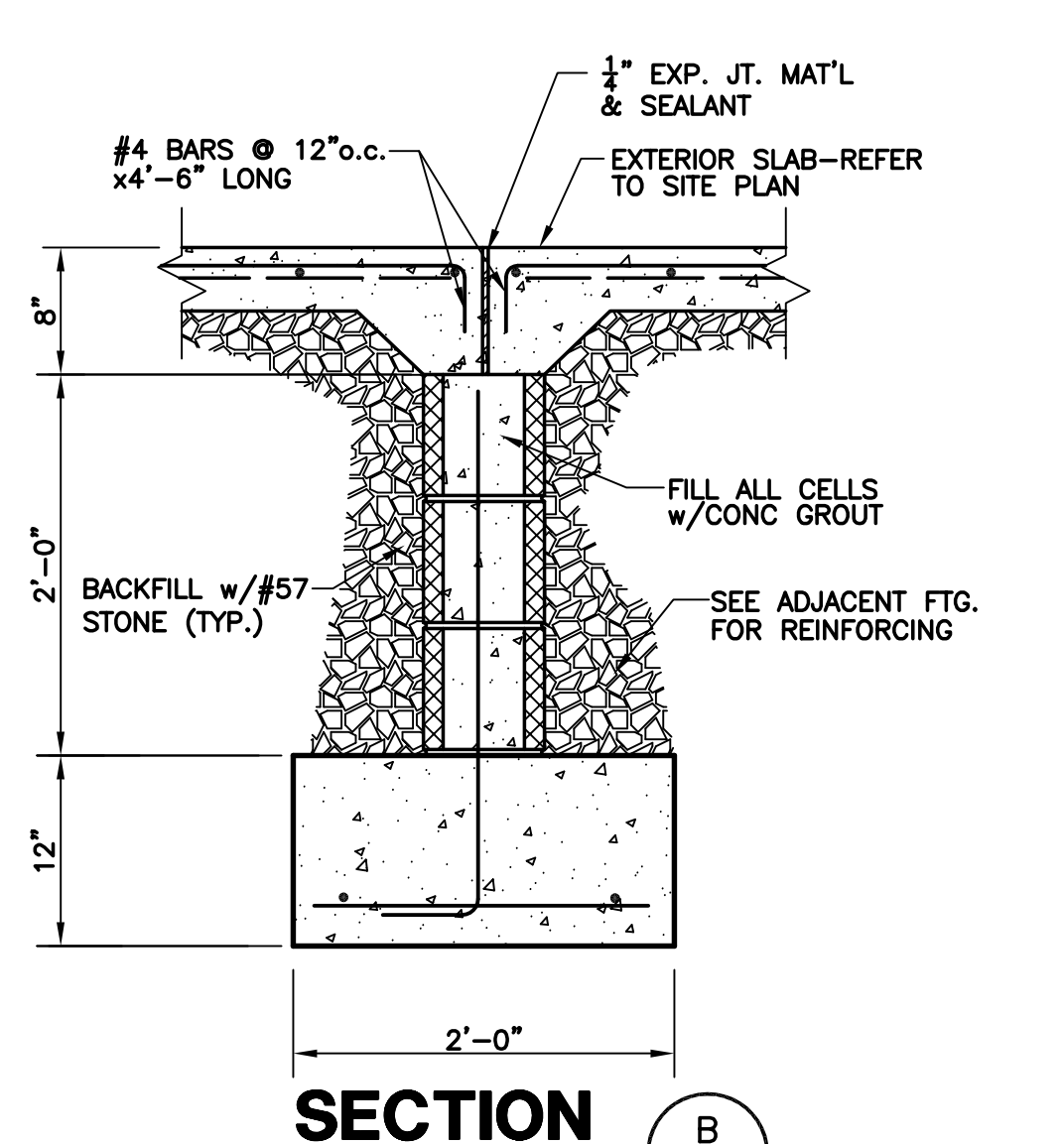
SECTION D



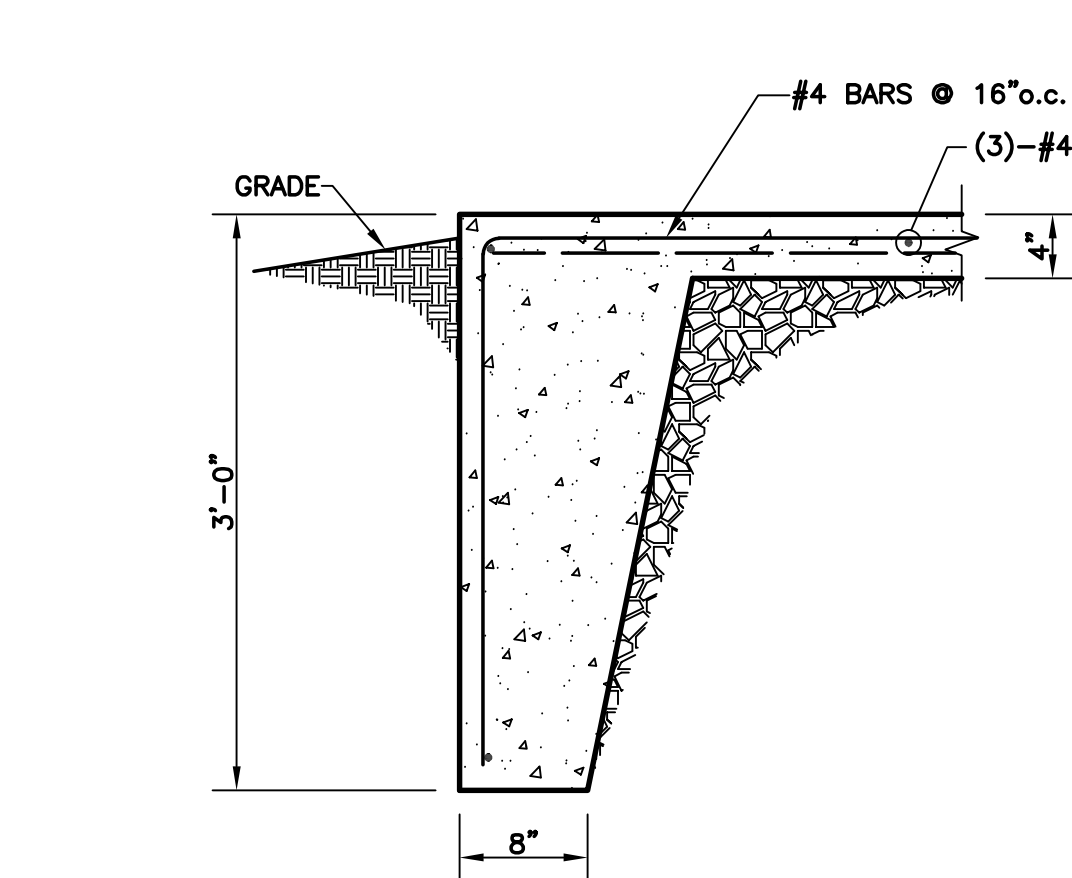
SECTION G



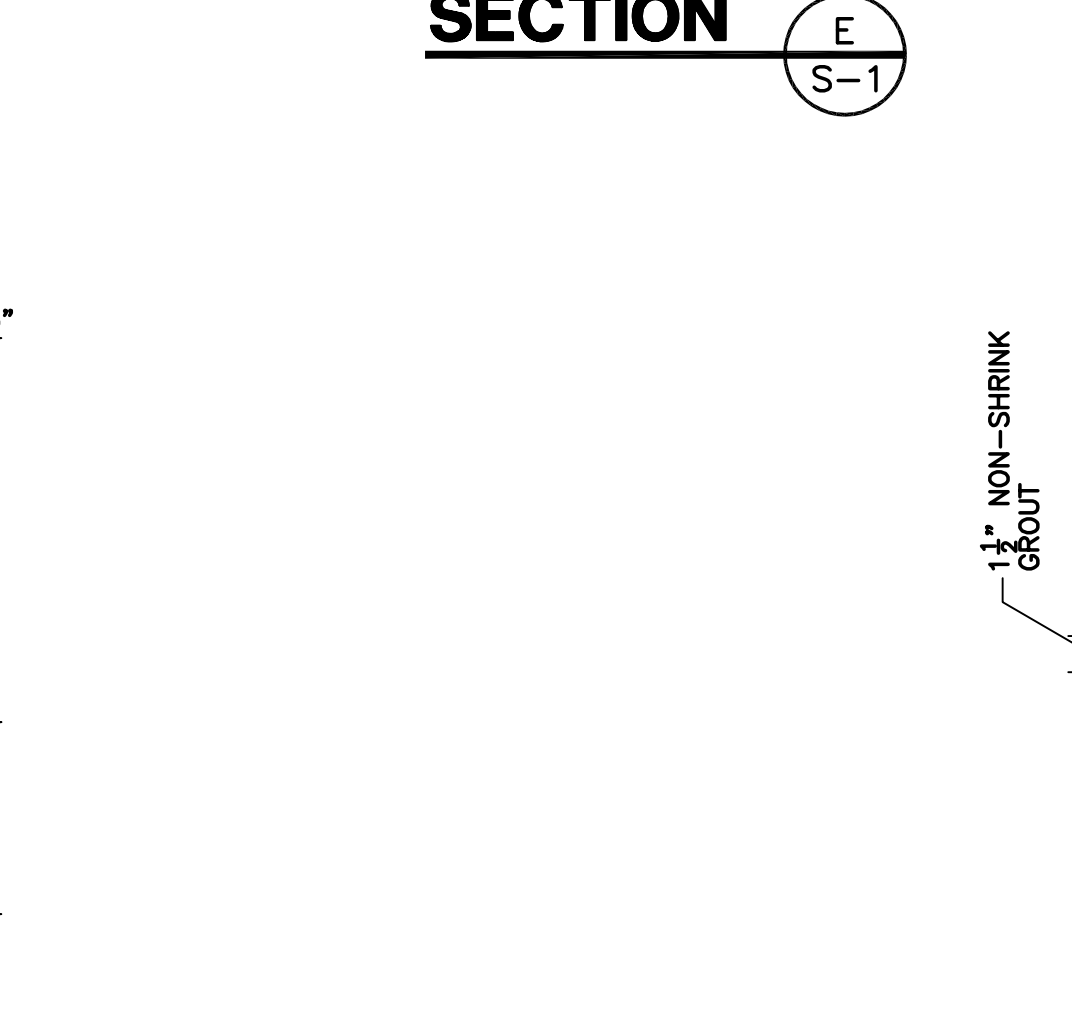
TYPICAL EXTERIOR MASONRY CORNER REINFORCEMENT DETAIL



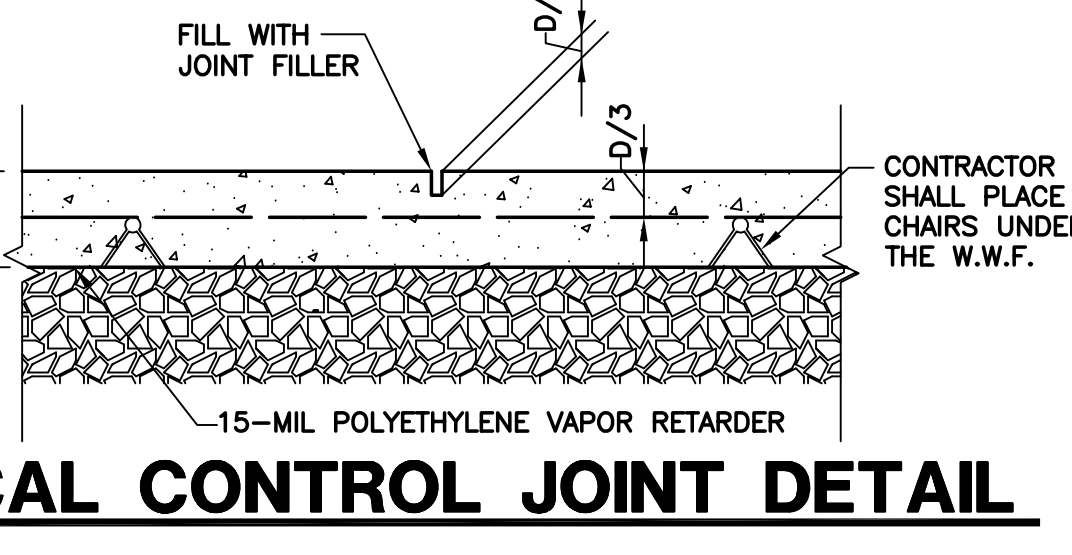
SECTION B
(TYPICAL EXTERIOR DOOR OPENING)



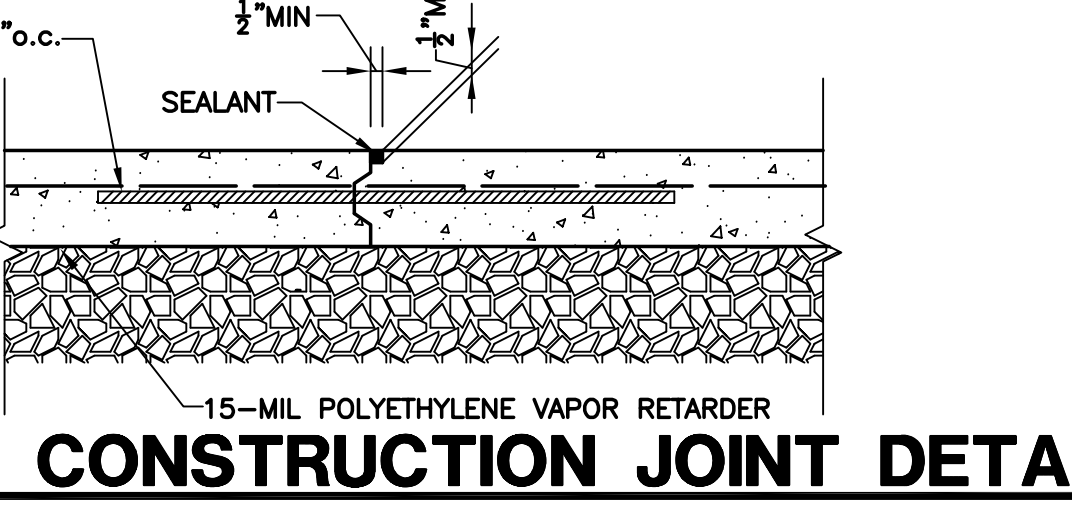
SECTION E



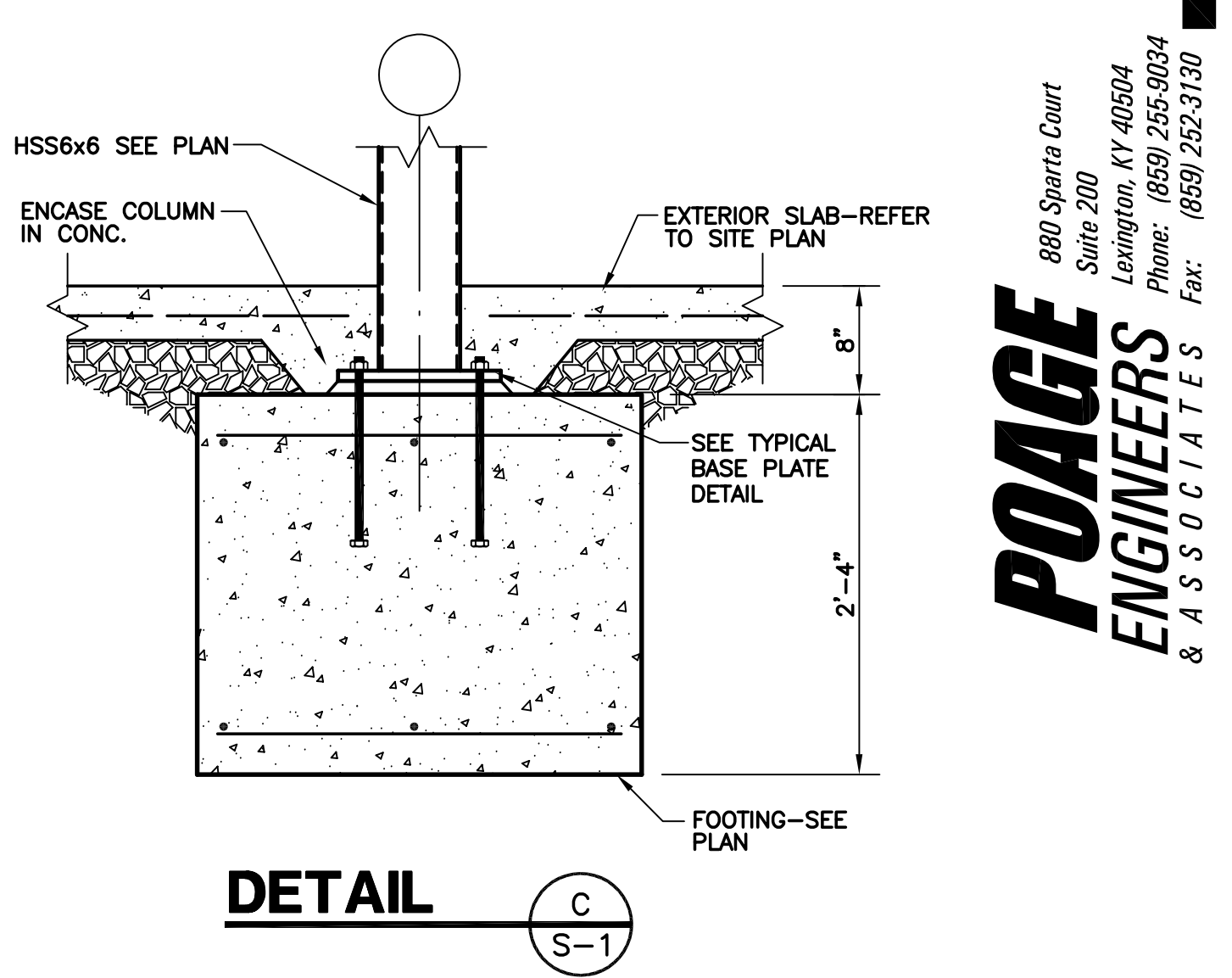
SECTION F



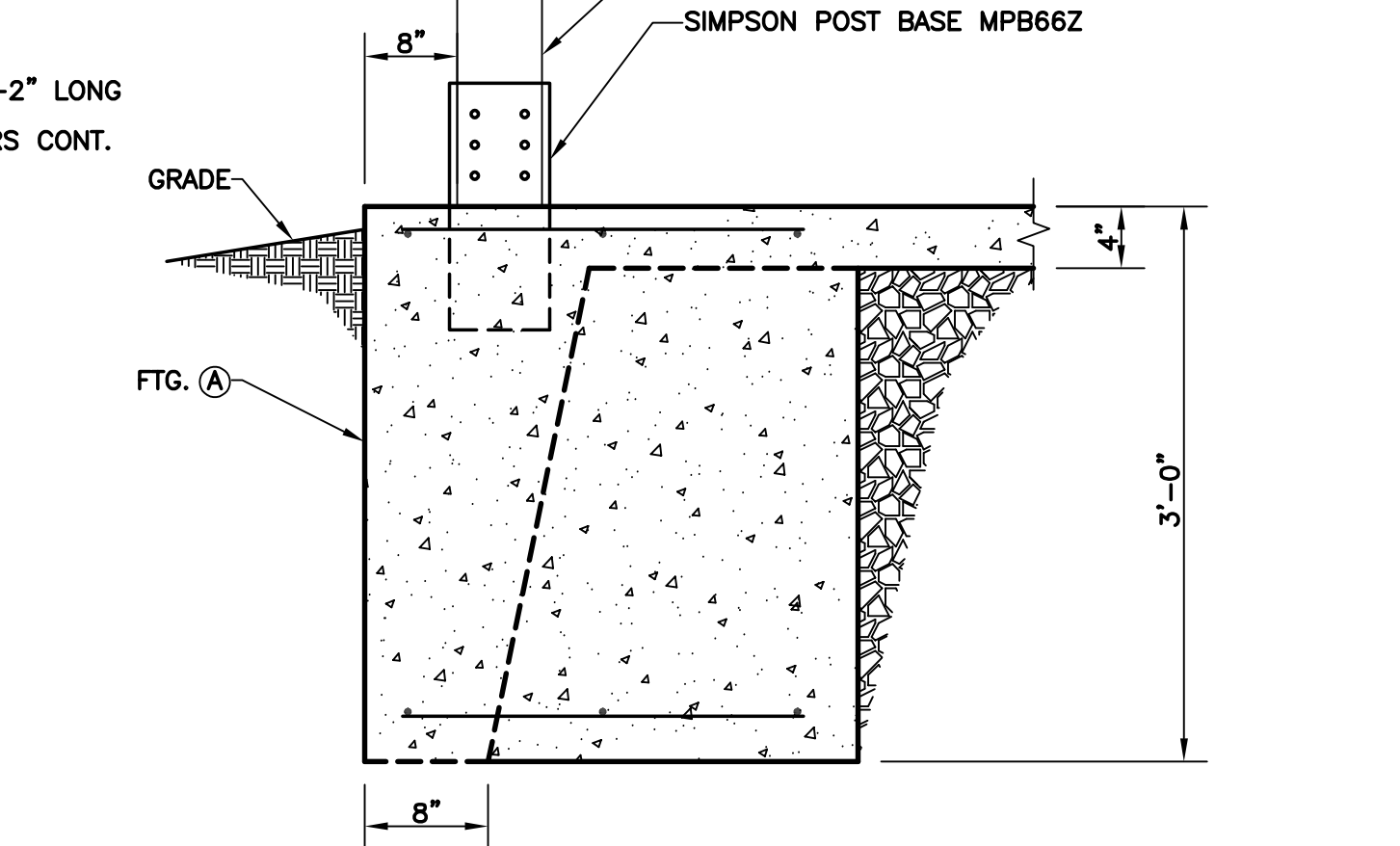
TYPICAL CONTROL JOINT DETAIL



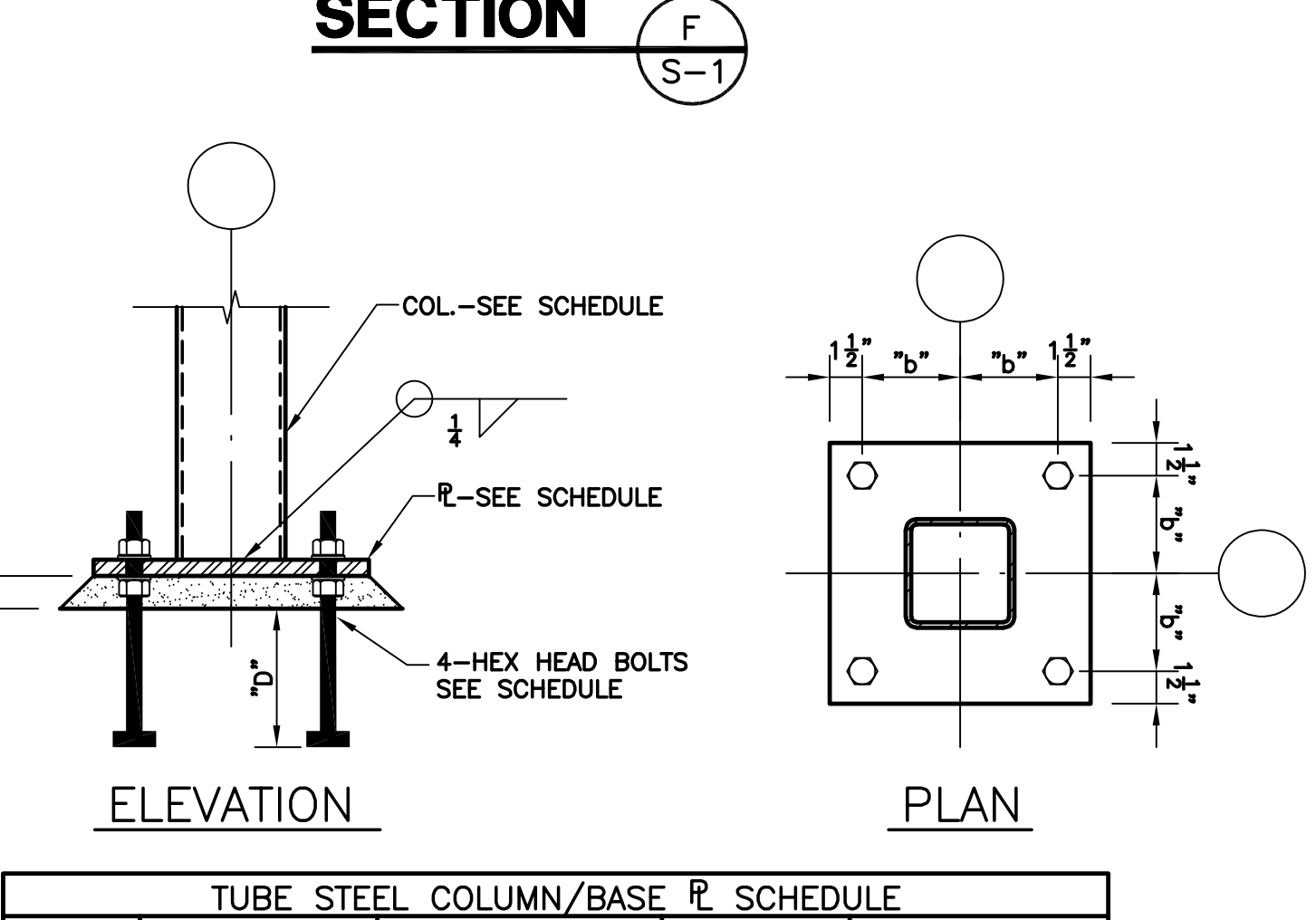
TYPICAL CONSTRUCTION JOINT DETAIL



DETAIL C



SECTION



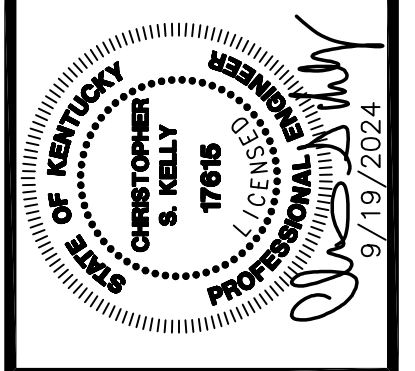
TYPICAL BASE PLATE DETAIL

TUBE STEEL COLUMN/BASE PLATE SCHEDULE			
COLUMN	PLATE SIZE	BOLT SPACING "b"	BOLT Ø EMBED DEPTH "D"
HSS6x6	3/4"x12x12"	4 1/2"	9"
HSS4x4	1/2"x10x10"	3 1/2"	12"

- NOTES:**
- CONTRACTOR SHALL COORDINATE FLOOR DRAINS AND ELECTRICAL CONDUITS WITH MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS NOT SHOWN ON THE STRUCTURAL DRAWINGS.
 - ALL DIMENSIONS SHOWN ARE TO FOUNDATION WALL.
 - REFER TO ARCHITECTURAL DRAWINGS FOR LOCATIONS OF ALL INTERIOR NONLOAD-BEARING WALLS NOT LOCATED ON STRUCTURAL DRAWINGS.

FOOTING SCHEDULE		
MARK	FOOTING SIZE	REINFORCING STEEL
(A)	2'-0"x2'-0"x36"	3-#5 BARS EACH WAY TOP & BOTTOM
(B)	3'-0"x3'-0"x12"	4-#5 BARS EACH WAY
(C)	5'-0"x5'-0"x28"	6-#5 BARS EACH WAY TOP & BOTTOM

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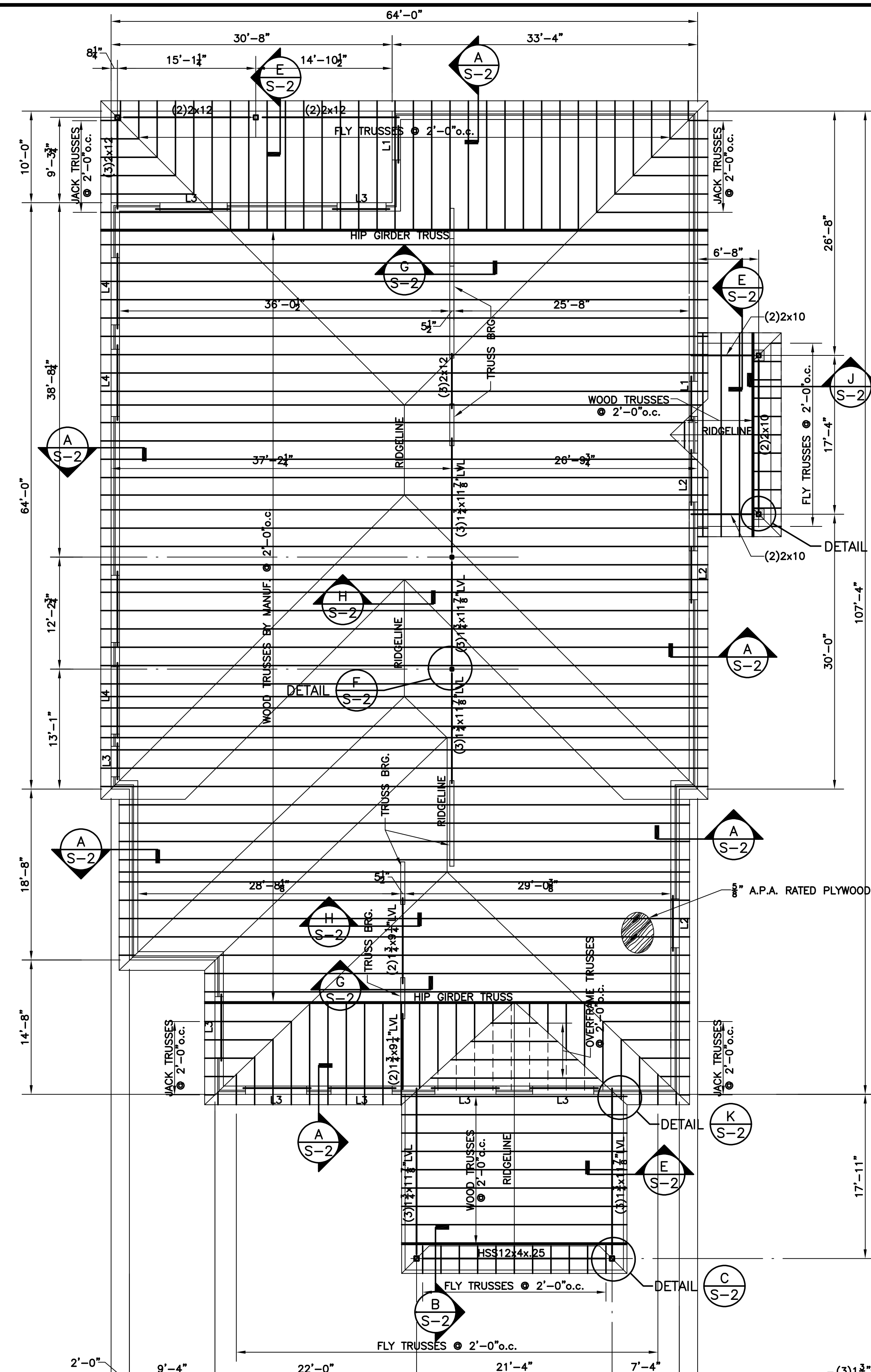
MONTGOMERY COUNTY SENIOR CITIZENS CENTER
MT. STERLING, KENTUCKY

DATE	REVISION	BY
14-19-2024 <td> <td> </td></td>	<td> </td>	

PROJECT NO. 5067-09
DESIGNED BY: CJK
DRAWN BY: SRT/p24/64
CHECKED BY: CJK
REVIEWED BY:
DATE: 14-19-2024
SCALE:

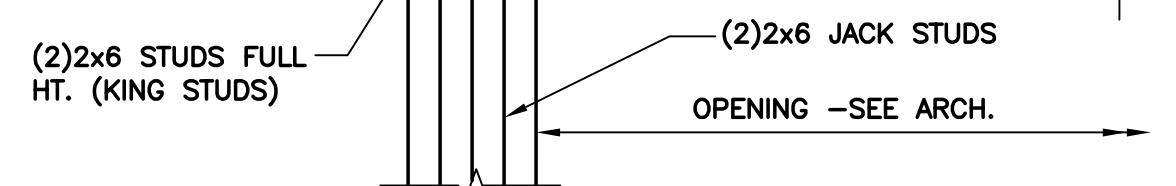
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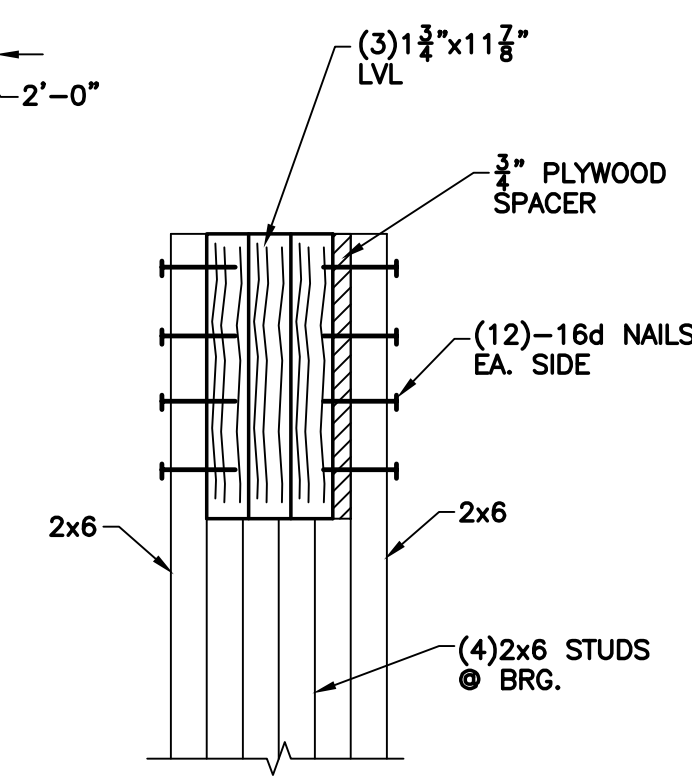


ROOF FRAMING PLAN

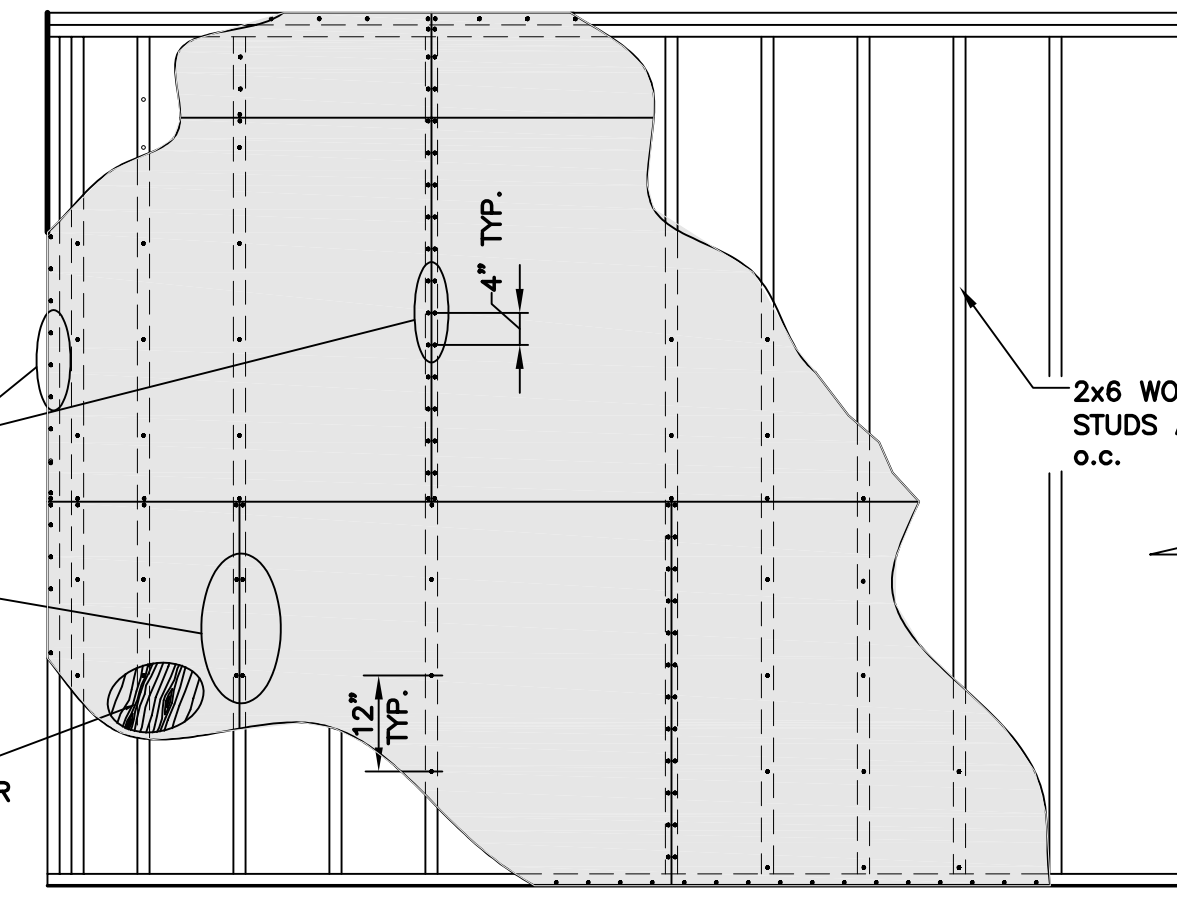
- L1 - (3)2x8 & L3 1/2 x 3 1/2 x 4 1/2"
- L2 - (3)2x10 & L4 3 1/2 x 4 1/2"
- L3 - (3)2x10 & L5 3 1/2 x 3 1/2"
- L4 - (3)2x12 & L5 3 1/2 x 3 1/2"



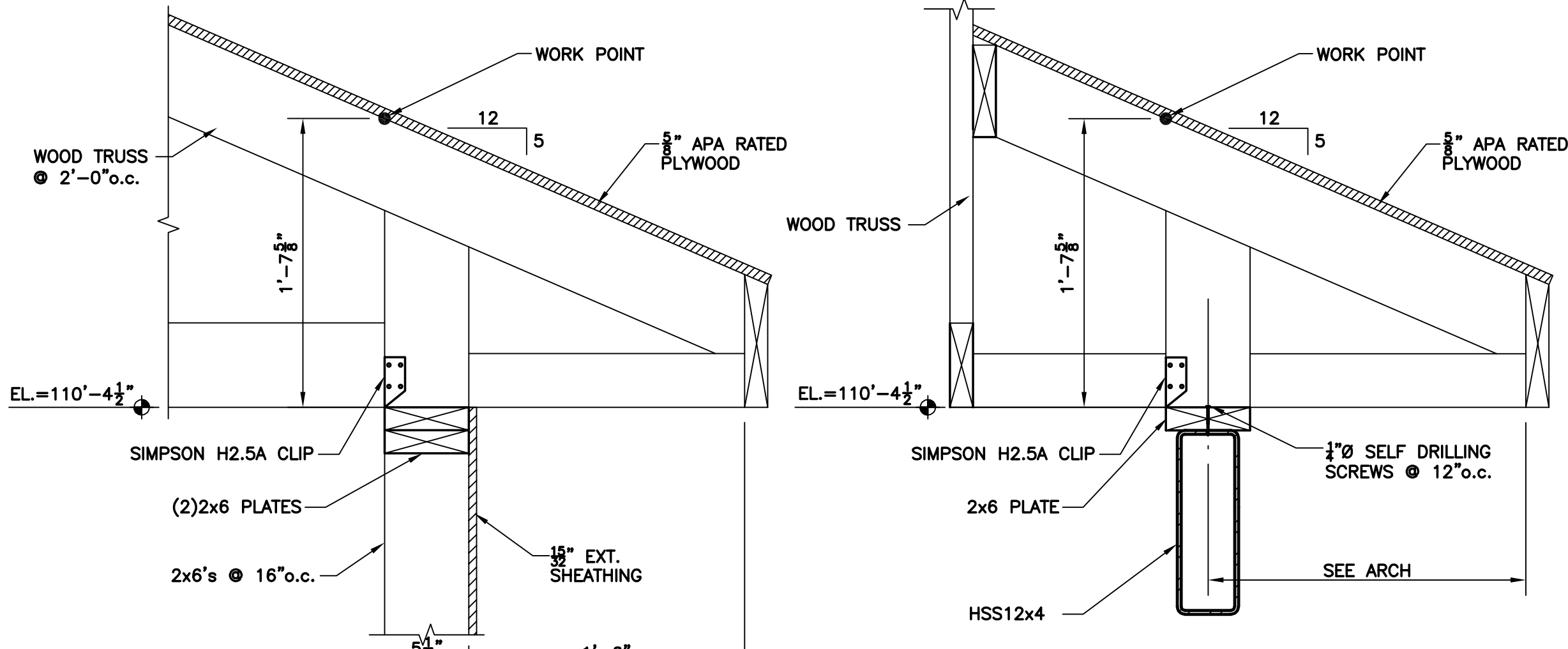
**TYPICAL WINDOW / DOOR
OPENING DETAIL**



SECTION K

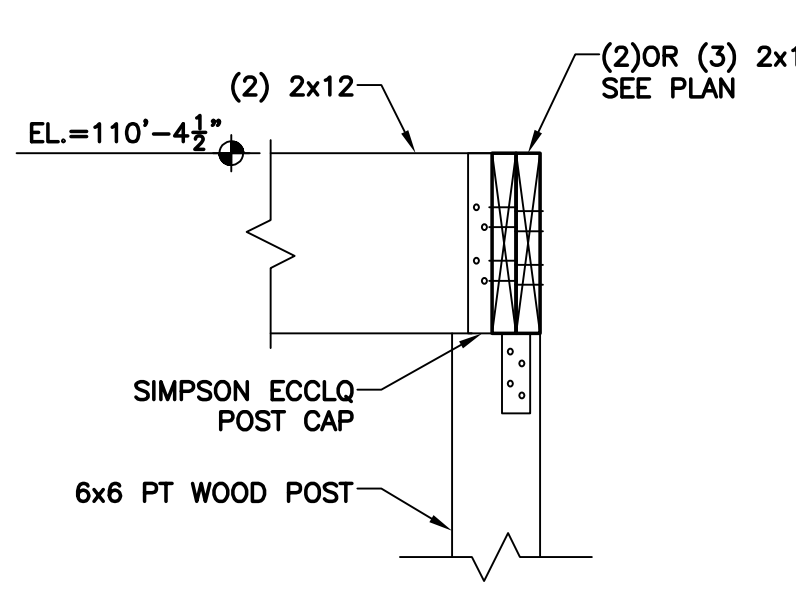


**TYP. EXTERIOR WALL
SHEATHING ATTACHMENT**

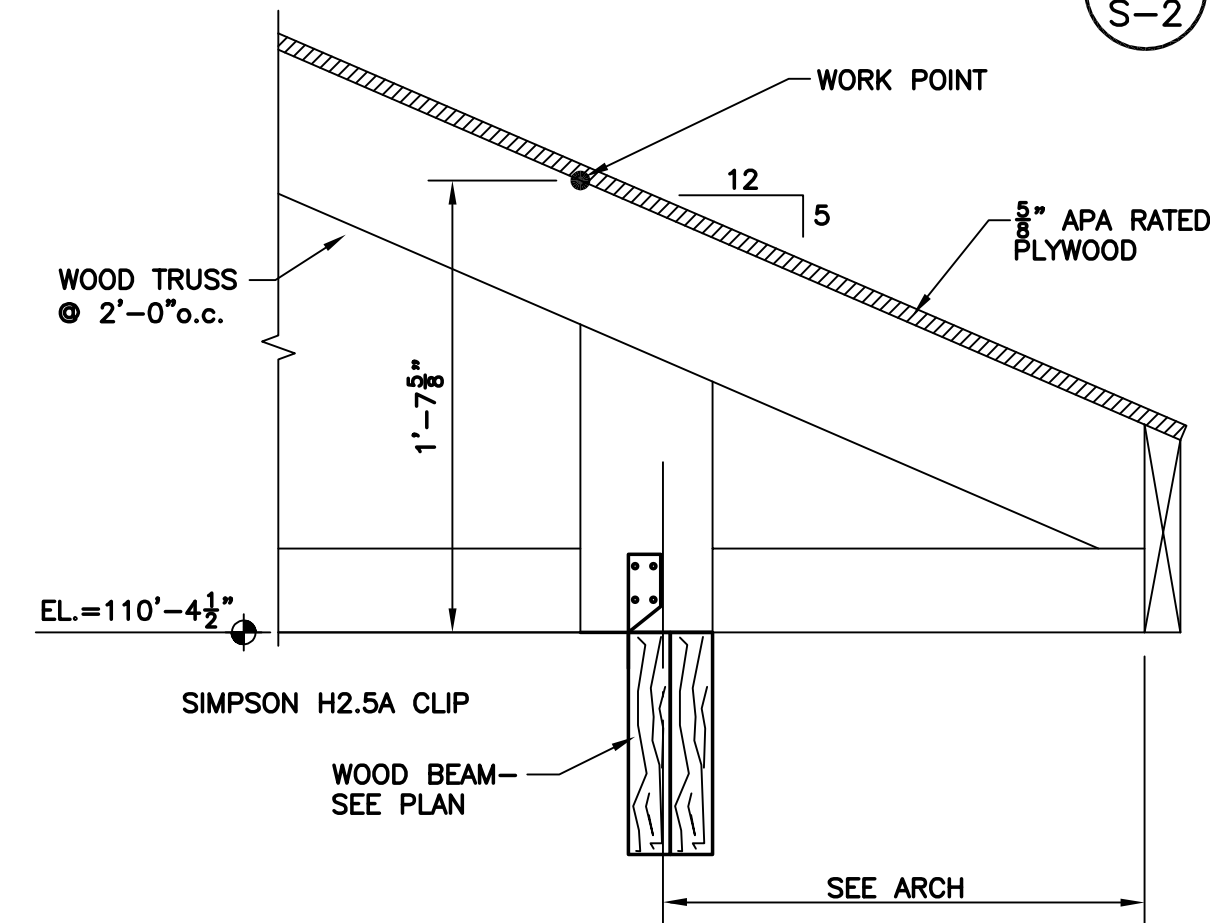


SECTION A

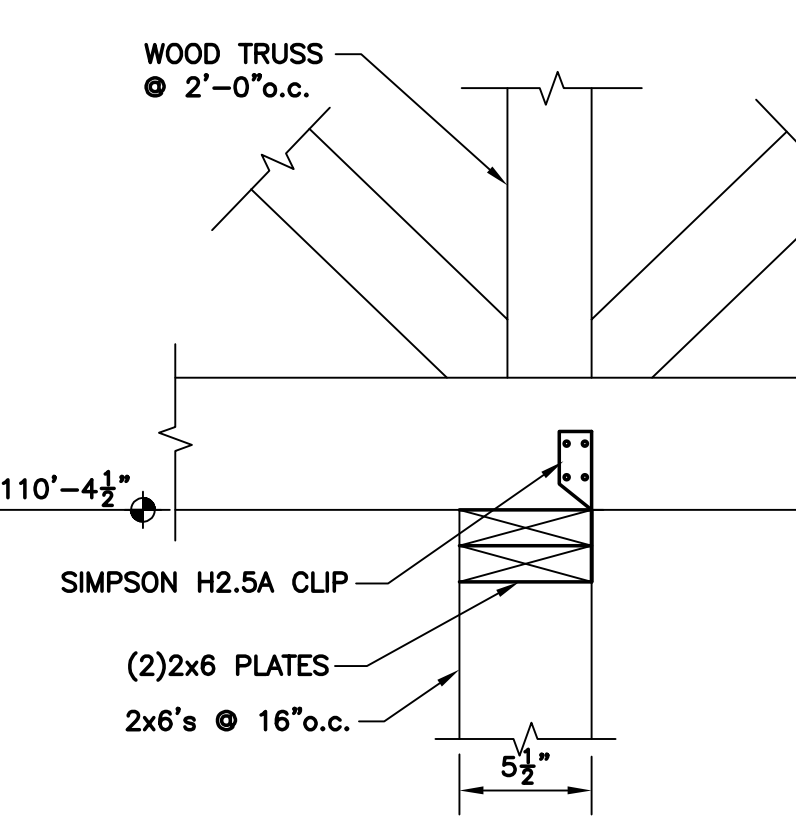
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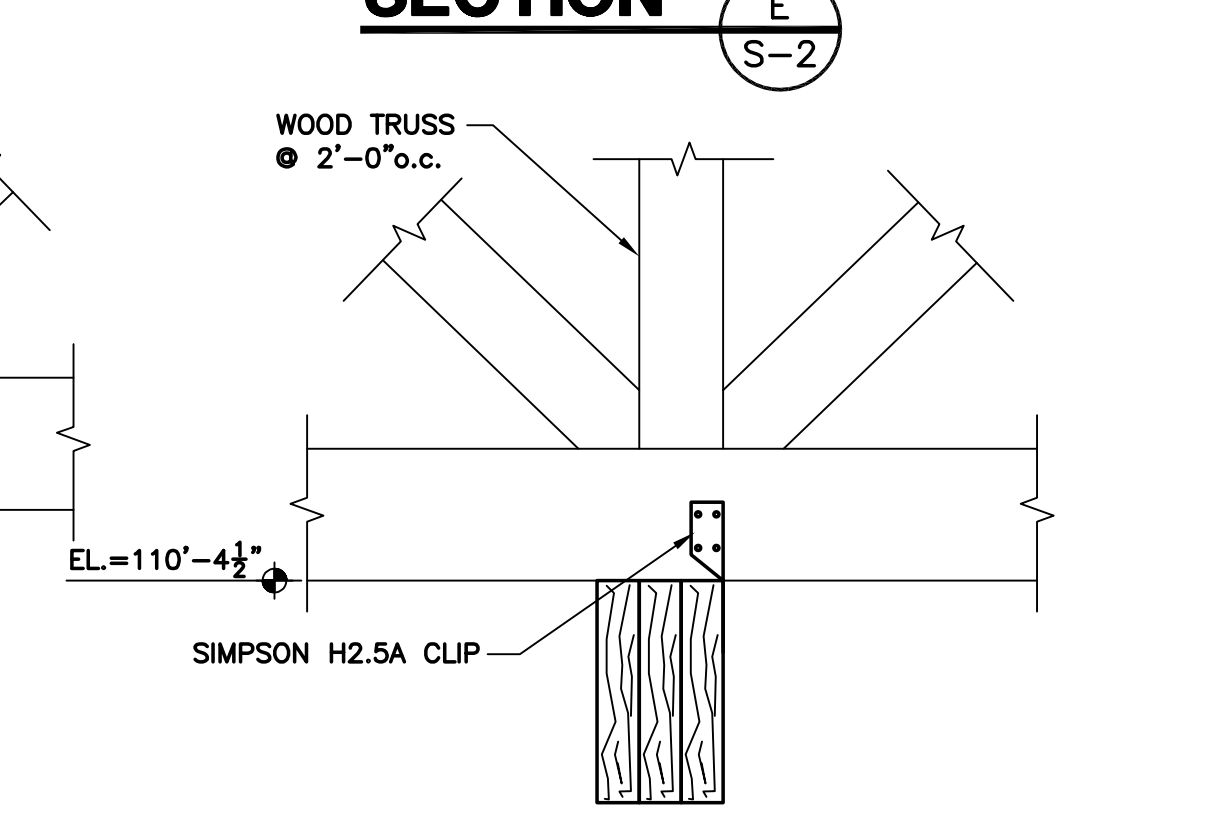
DETAIL D



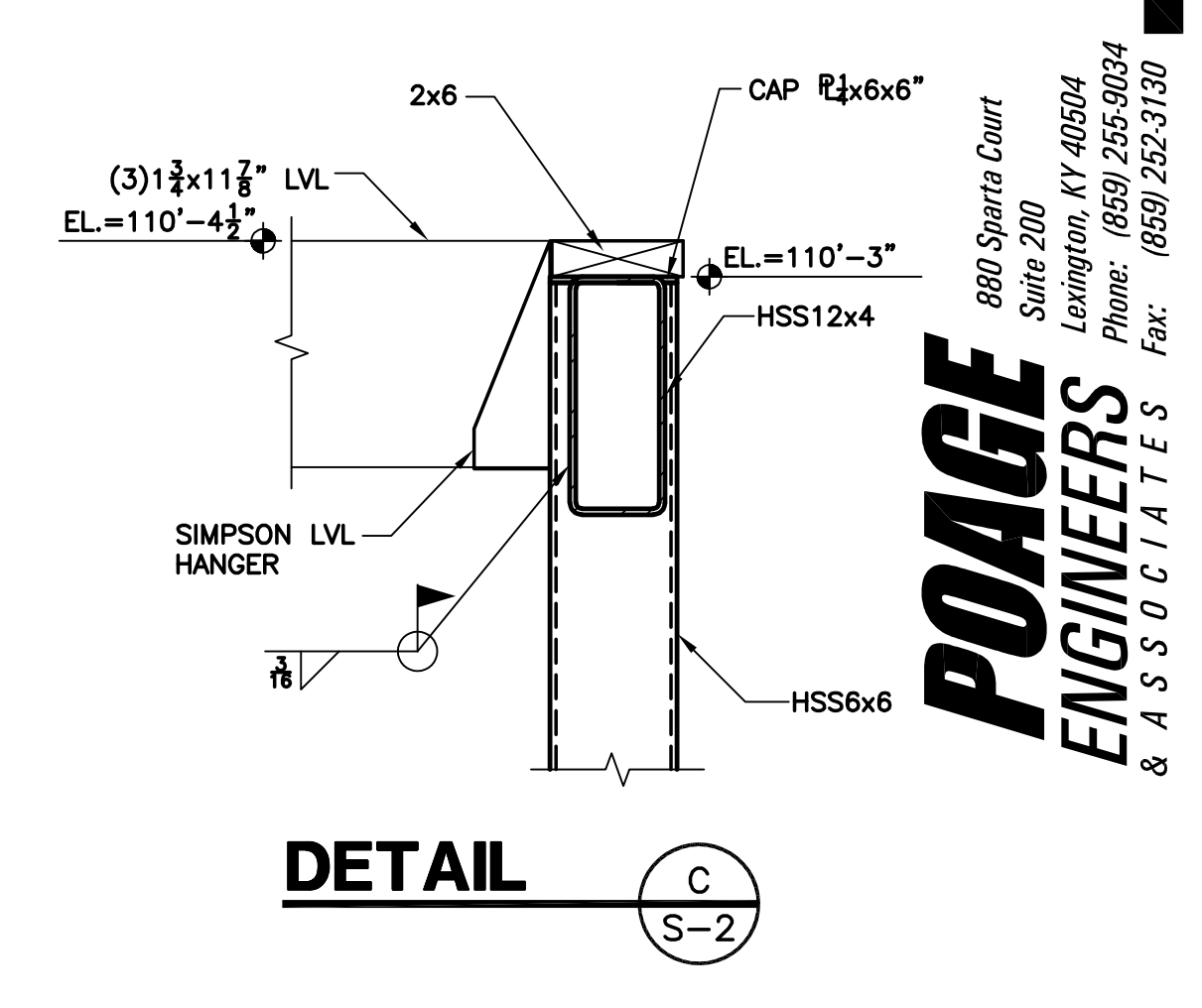
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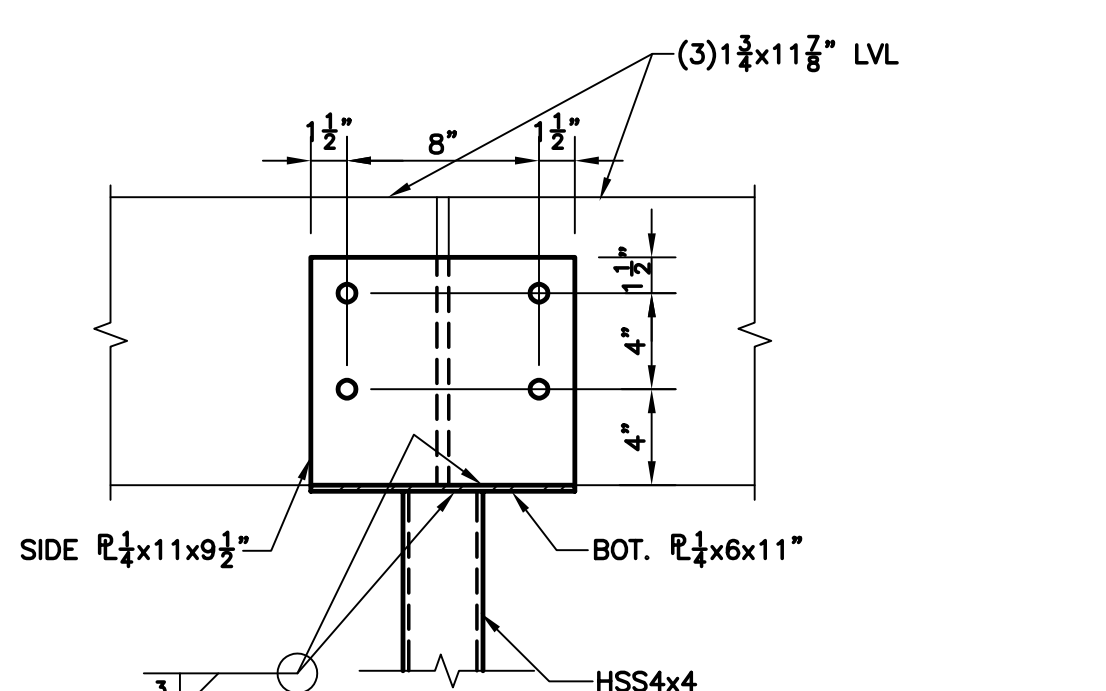
SECTION G



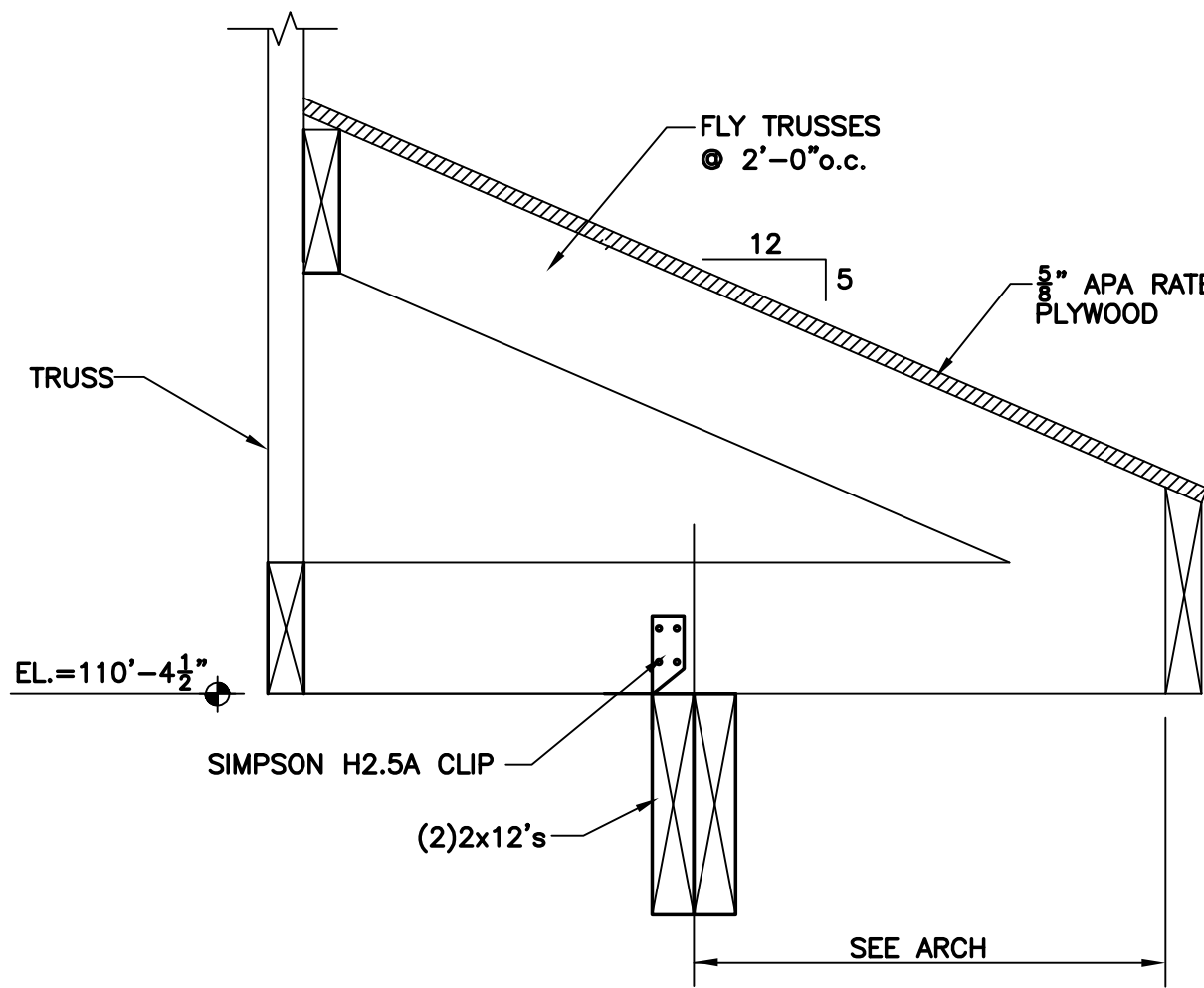
SECTION H



DETAIL C



DETAIL F



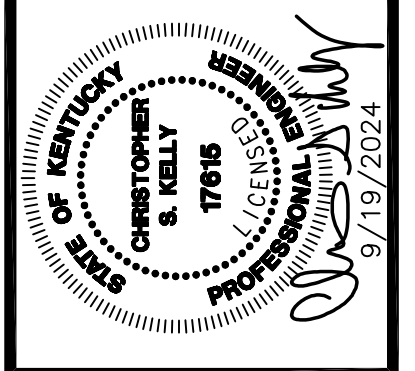
SECTION J

- NOTES:**
- 1) ALL ROOF TRUSSES TO BE @ 24" o.c. (MAX)
 - 2) ALL TRUSSES SHALL BE ATTACHED TO PLATE (OR LVL) USING SIMPSON H2.5A TRUSS ANCHORS EA. END.

- NOTES:**
- 1) ALL ROOF SHEATHING SHALL BE 5/8" SQUARE EDGE EXTERIOR SHEATHING W/"H" CLIPS ATTACHED W/8d NAILS @ 6" o.c. ALL EDGES AND 12" (MAX) AT INTERMEDIATE SUPPORTS (TYP. U.N.O.)
 - 2) ALL EXTERIOR WALL SHEATHING SHALL BE 15/32 APA RATED EXTERIOR SHEATHING ATTACHED PER TYPICAL SHEAR PANEL NAILING DETAIL.
 - 3) ALL WOOD BEAMS SHALL HAVE PLYWOOD SPACERS AS REQUIRED TO PROVIDE BEAM WIDTH TO MATCH STUD WALL WIDTH.
 - 4) ALL WOOD TRUSSES SHALL BE SPACED @ 2'-0" o.c. (TYP. U.N.O.)
 - 5) ALL TRUSSES SHALL BE ATTACHED TO PLATE (OR LVL) USING SIMPSON H2.5A TRUSS ANCHORS EA. END.

TRUSS NOTES:

- 1. Lumber Specifications:
Top and bottom chords to be No. 2 (2x4 minimum) Southern Pine minimum.
Web members to be No. 2 Southern Pine minimum. (2x4 minimum)
- 2. Provide 2x4 cross bracing or bridging at all 1/3 points of the truss span for the bottom chord.
All wood truss bracing shall conform to the Truss Plate Institute HIB-(latest edition).
- 3. The erection and handling of the wood trusses must follow the Truss Plate Institute HIB-(latest edition).
- 4. Truss gusset plates shall be steel, either nailed or press-in, complying with the standards of the Truss Plate Institute HIB-(latest edition).
- 5. The structural design of the wood trusses shall be based on the design loads shown. Should truss design or design loads vary from that shown, comply with local design codes. The Contractor shall submit truss shop drawings, including structural calculations, signed and sealed by a Structural Engineer, licensed to practice in Kentucky, for review.
- 6. Design loads for wood trusses are as follows:
TOP CHORD
Dead load = 15 PSF
Live load = 20 PSF
Wind load = (per KBC)
BOTTOM CHORD
Dead load = 10 PSF



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**MONTGOMERY COUNTY
SENIOR CITIZENS CENTER
MT. STERLING, KENTUCKY**

DATE	REVISION	BY

PROJECT NO. 5067-05
DESIGNED BY: CJK
DRAWN BY: SRT/p24/64
CHECKED BY: CJK
REVIEWED BY: CJK
DATE: 11-19-2024
SCALE: 1/8" = 1'-0"

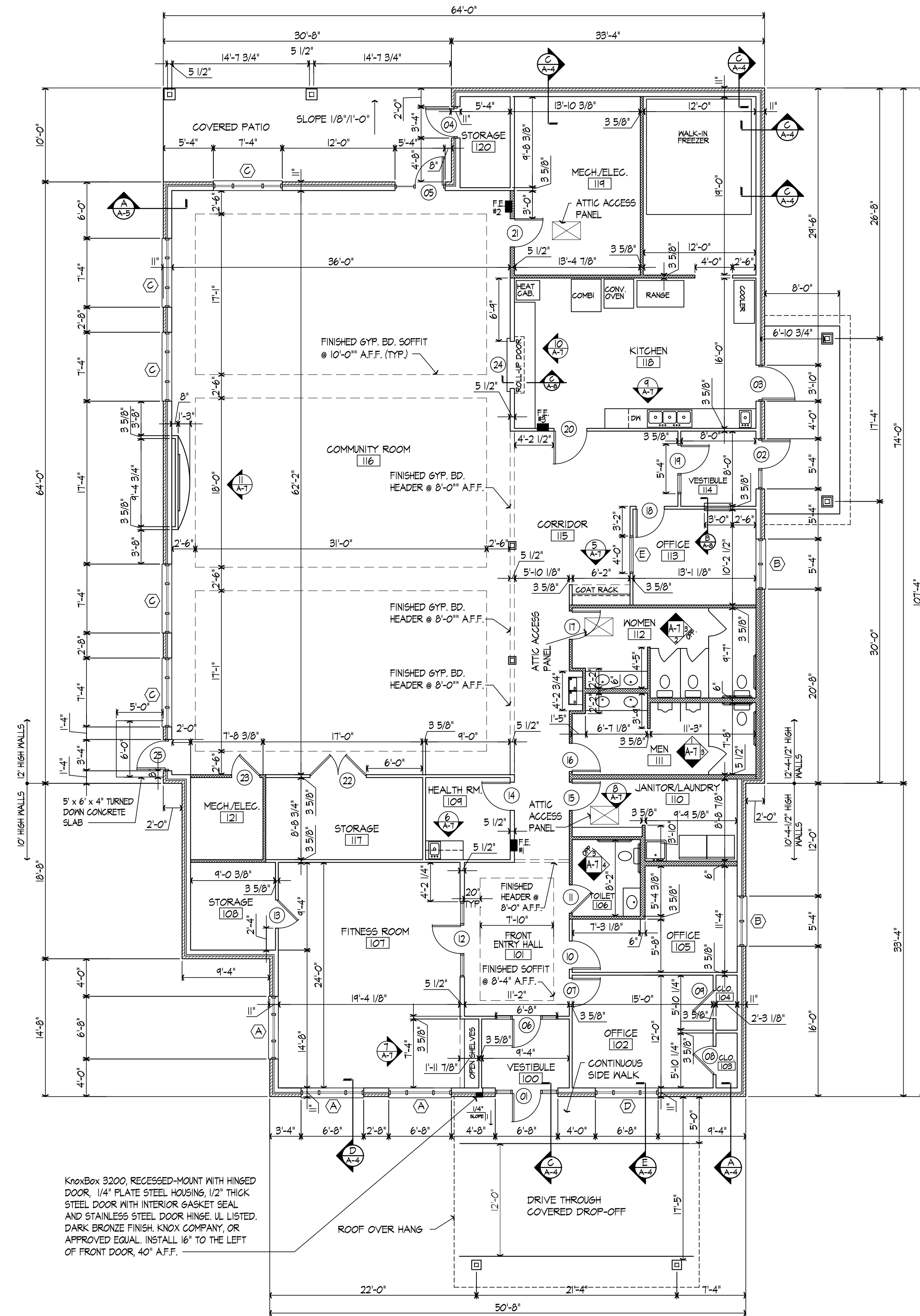
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MONTGOMERY COUNTY SENIOR CITIZENS CENTER

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KnoxBox 3200, RECESSED-MOUNT WITH HINGED DOOR, 1/4" PLATE STEEL HOUSING, 1/2" THICK STEEL DOOR WITH INTERIOR GASKET SEAL AND STAINLESS STEEL DOOR HINGE UL LISTED, DARK BRONZE FINISH, KNOX COMPANY, OR APPROVED EQUAL. INSTALL 16" TO THE LEFT OF FRONT DOOR, 40" A.F.F.

APPROXIMATE AREA OF HABITABLE SPACE EXCLUDING EXTERIOR COVERED SPACES: 6,242 SQUARE FEET.
451.00 FINISH FLOOR

FLOOR PLAN
SCALE: 1/8"=1'-0"

OCCUPANCY CLASSIFICATION A-3

- WALL TYPES**
- ALL INTERIOR METAL STUDS WALLS SHALL BE 20 GA. GYN STUDS, 1-3/8" FLANGE 3/8" RETURN @ 16" O.C. FULL HEIGHT TO MATCH EXTERIOR WOOD STUD WALLS W/ 5/8" F.G. GYP. BOARD CONTINUOUS TO BOTTOM OF TRUSSES. SEE FLOOR PLAN FOR SPECIFIC SIZE.
 - LOAD BEARING WALL SHALL BE 2x6 WOOD STUD NO. 2 @ 16" O.C.
 - ALL EXTERIOR WALLS SHALL BE 2x6x10" OR 2x6x12" #2 MIN. WOOD STUDS, 16" O.C., WITH WOOD BLOCKING, SEE BUILDING SECTIONS.
 - 3/2" SOUND BATTS, CONTINUOUS TO TOP OF WALLS, TYPICAL ALL WALLS SURROUNDING RESTROOMS
 - *ALL TRUSSES TO RECEIVE (2) LAYERS 5/8" F.G. GYPSUM BOARD @ BOTTOM CHORD OF ROOF TRUSSES. ACOUSTICAL CEILING TO BE SUSPENDED BELOW THE GYPSUM BOARD CEILING (SEE WALL SECTIONS).
 - 3/2" SOUND BATTS, CONTINUOUS TO TOP OF WALLS, TYPICAL ALL WALLS SURROUNDING RESTROOMS AND MECH ROOMS.
 - ==== INDICATES FINISHED GYPSUM BOARD HEADER, 1'-0" A.F.F., TO PROVIDE BREAKS FOR ACOUSTICAL CLG. GRIDS.
 - *COORDINATE ACTUAL PLACEMENT OF ATTIC ACCESS PANELS WITH OTHER MECH., ELEC. AND PLUMBING ITEMS.
 - FE = FIRE EXTINGUISHER

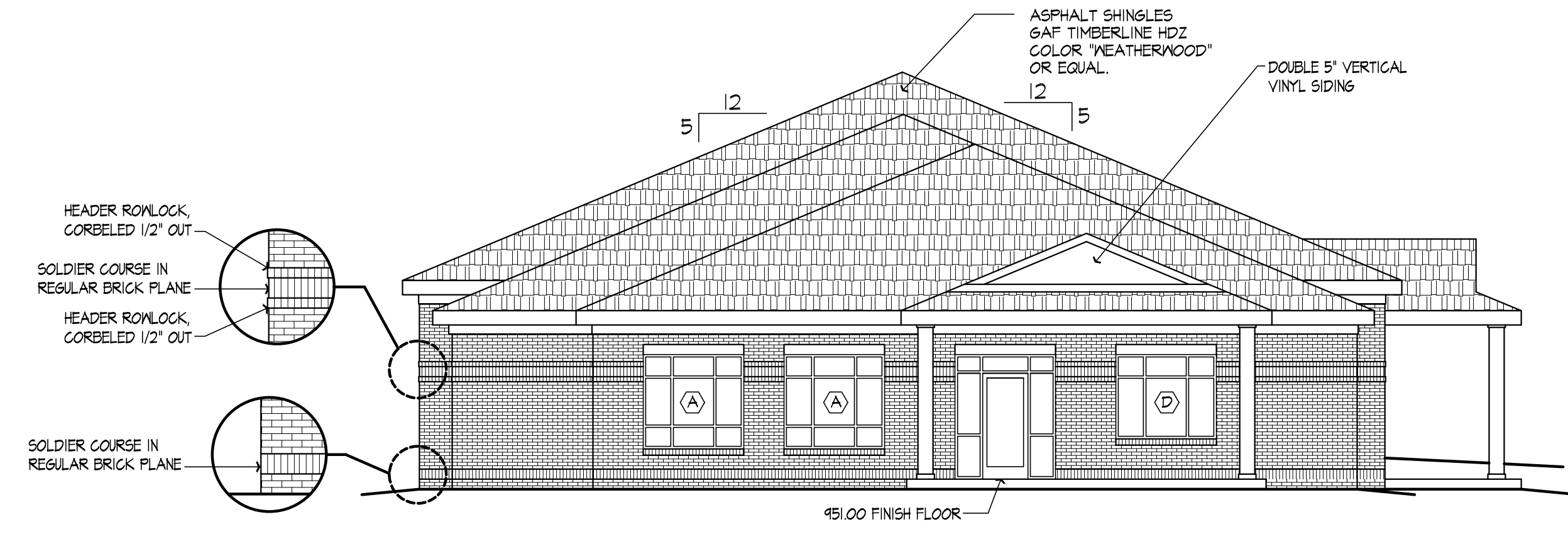
DATE	REVISION	BY

PROJECT NO.	50671-03
DESIGNED BY	BLL/MSF
DRAWN BY	BLL
CHECKED BY	MSF
REVIEWED BY	
DATE	DECEMBER 2024
SCALE	AS NOTED

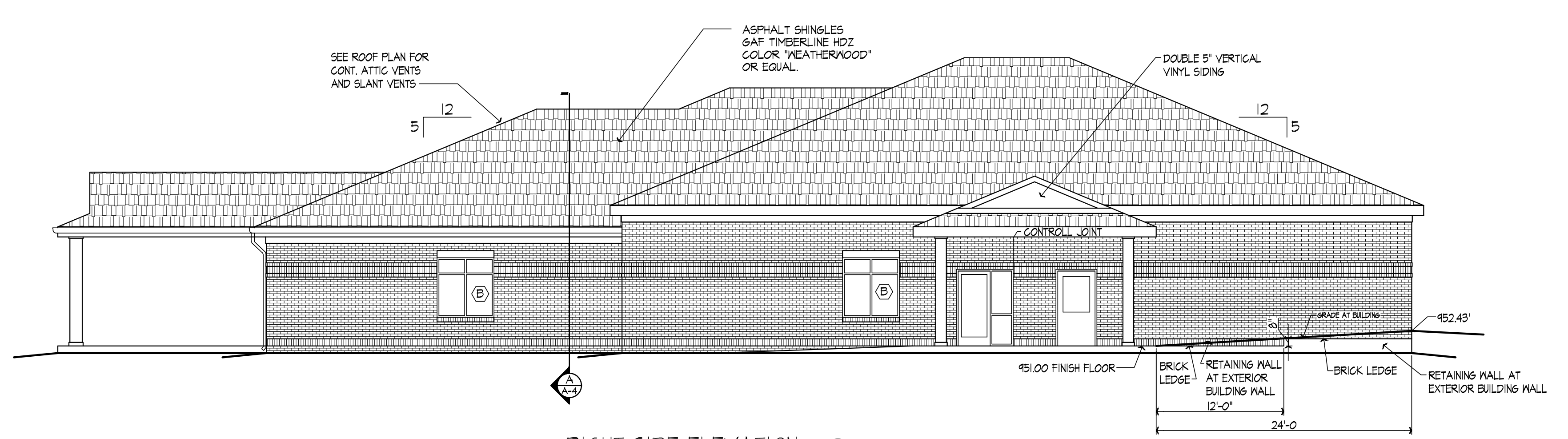
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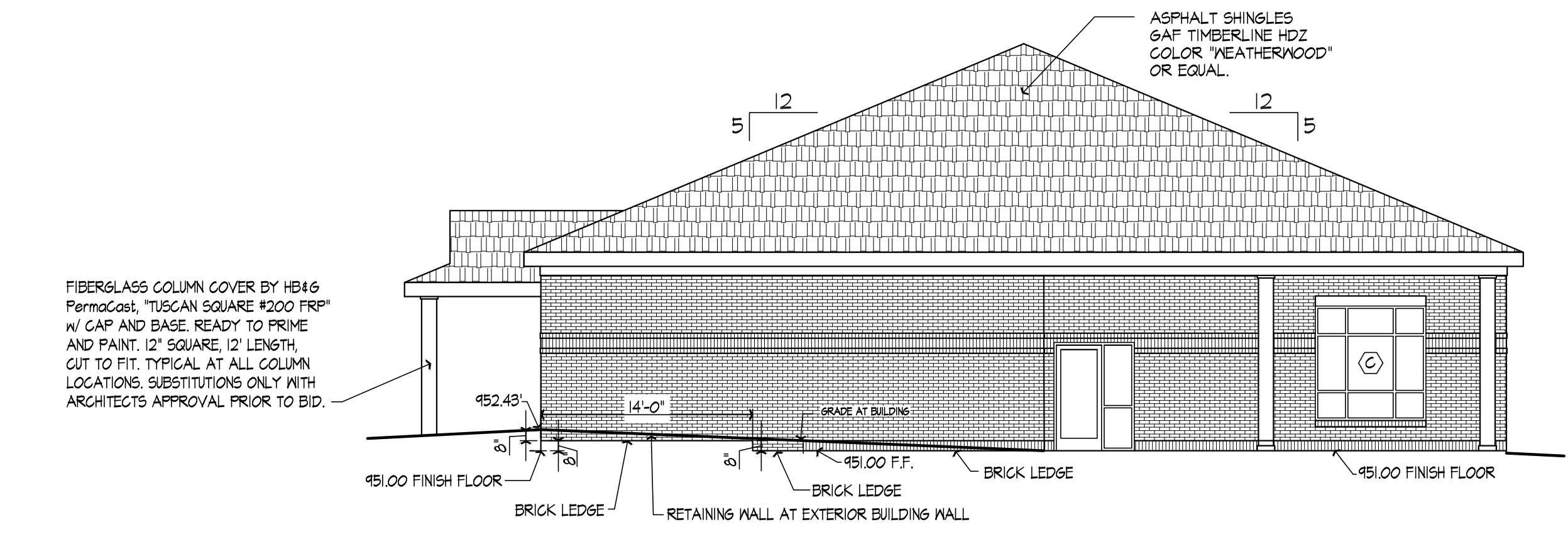
EXTERIOR ELEVATIONS



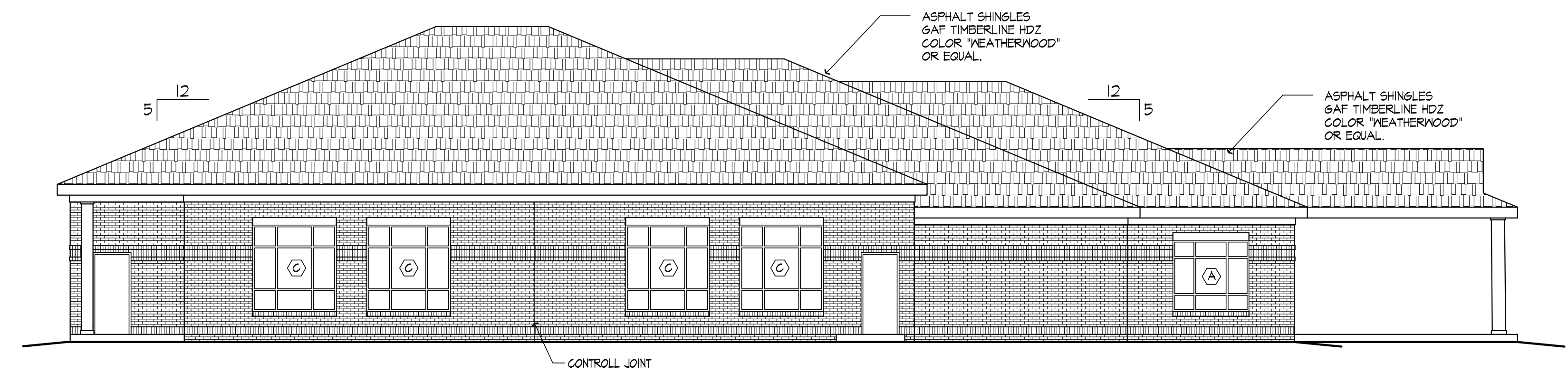
FRONT ELEVATION
SCALE: 1/8"=1'-0"



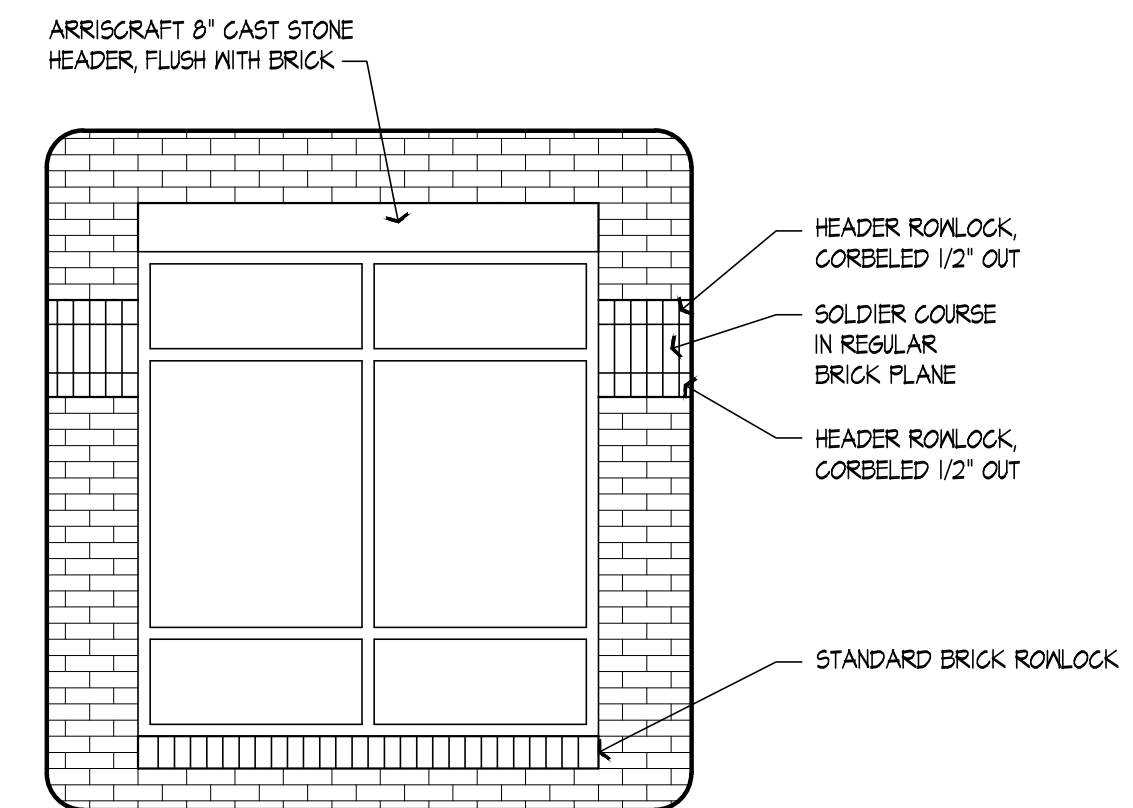
RIGHT SIDE ELEVATION
SCALE: 1/8"=1'-0"



REAR ELEVATION
SCALE: 1/8"=1'-0"



LEFT SIDE ELEVATION
SCALE: 1/8"=1'-0"



BRICK DETAIL @ WINDOWS

EXTERIOR FINISHES:

- ALL GUTTERS, DOWNSPOUTS, PRE-FINISHED VINYL-COATED ALUM. EXTERIOR TRIM, VINYL SOFFITS AND ASSOCIATED TRIM SHALL BE THE COLOR "MIST" BY GEORGIA-PACIFIC OR EQUAL
- VINYL SIDING SHALL BE "DOUBLE 5" VERTICAL SIDING IN COLOR "MIST" BY GEORGIA-PACIFIC OR EQUAL
- FIBERGLASS COLUMN COVERS TO BE PRIMED AND PAINTED W/ BENJAMIN MOORE #172 ALASKAN SKIES
- ALL WINDOW AND DOOR GLAZING SHALL BE SOLEXIA (2) GLASS WITH SOLARBAN 60 (3) BY PPG
- ALL ALUMINUM WINDOWS AND DOOR FRAMES TO BE DARK BRONZE
- HOLLOW METAL DOORS AND FRAMES PAINTED TO MATCH "DARK BRONZE" ALUMINUM DOORS
- BRICK SHALL BE GLEN GERY BRICK "OYSTER POINT", MODULAR WITH Flamingo BRICKMENT "SW - SOFT WHITE" MORTAR
- WINDOW HEADERS SHALL BE ARRISCRRAFT CAST STONE MASONRY UNITS, COLOR "OAK RIDGE"



**MONTGOMERY COUNTY
SENIOR CITIZENS CENTER**
MT. STERLING, KENTUCKY

DATE	REVISION	BY

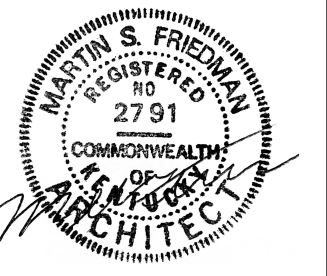
PROJECT NO. 5067-03
DESIGNED BY: BLL/MSF
DRAWN BY: BLL
CHECKED BY: MSF
REVIEWED BY: MSF
DATE: DECEMBER 2024
SCALE: AS NOTED

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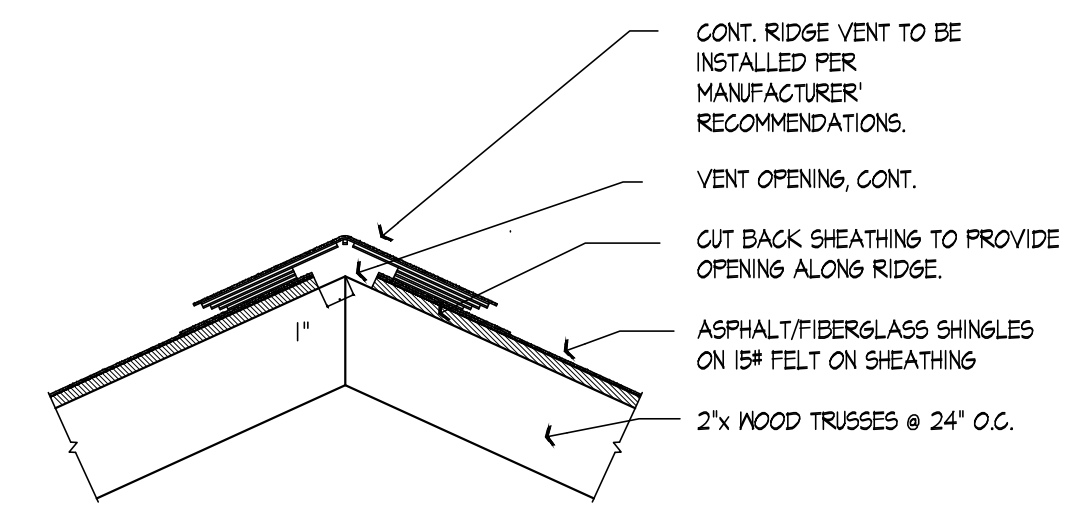
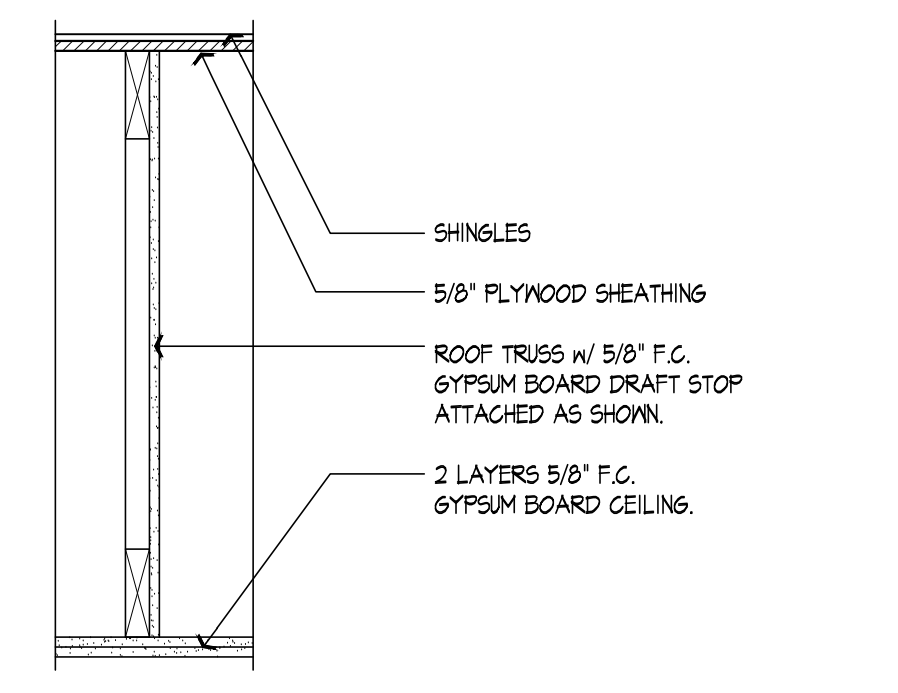
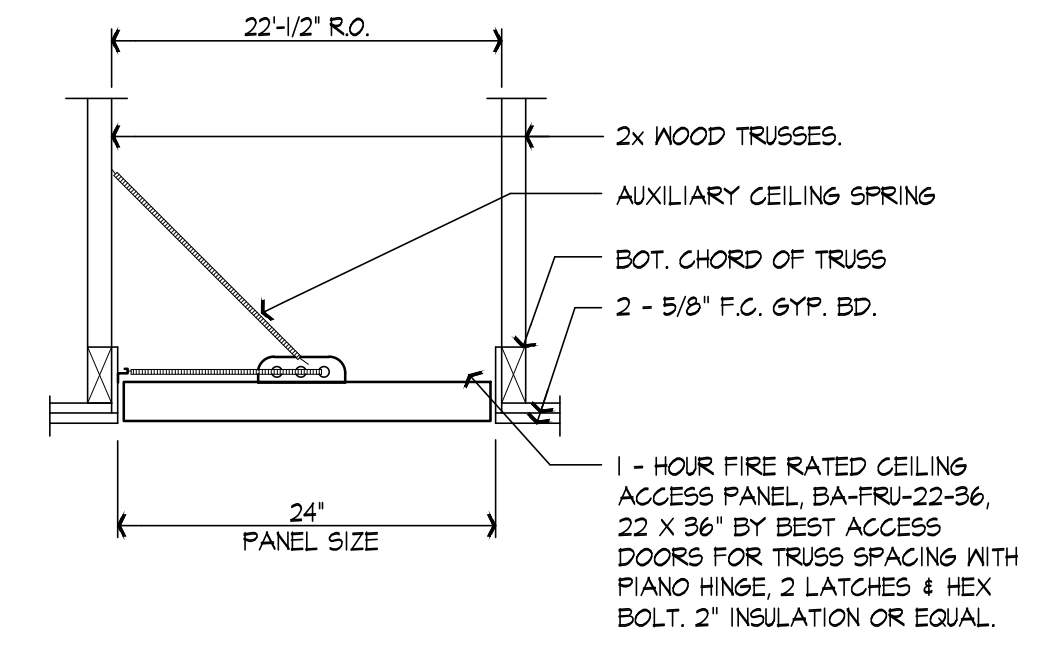
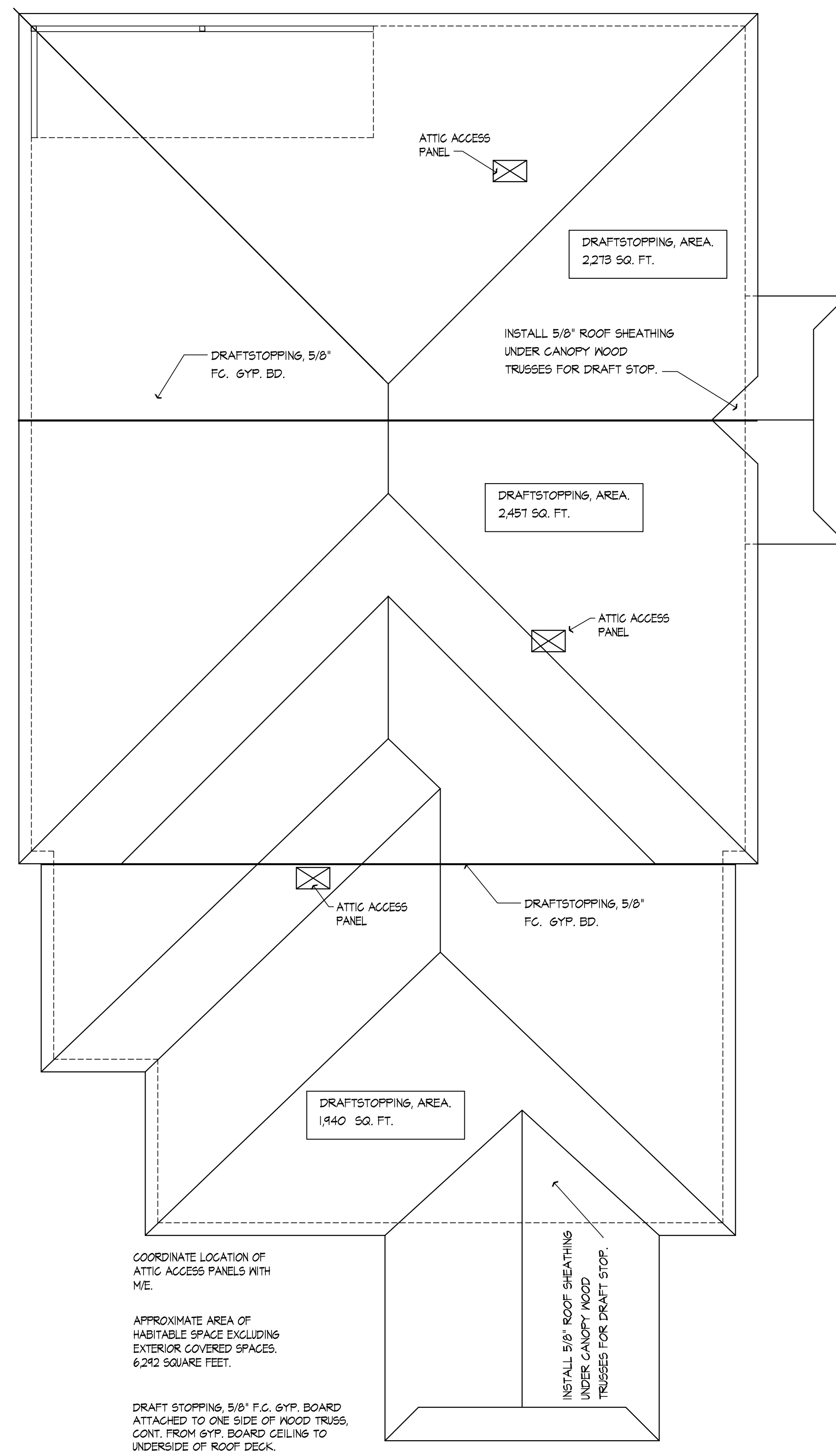
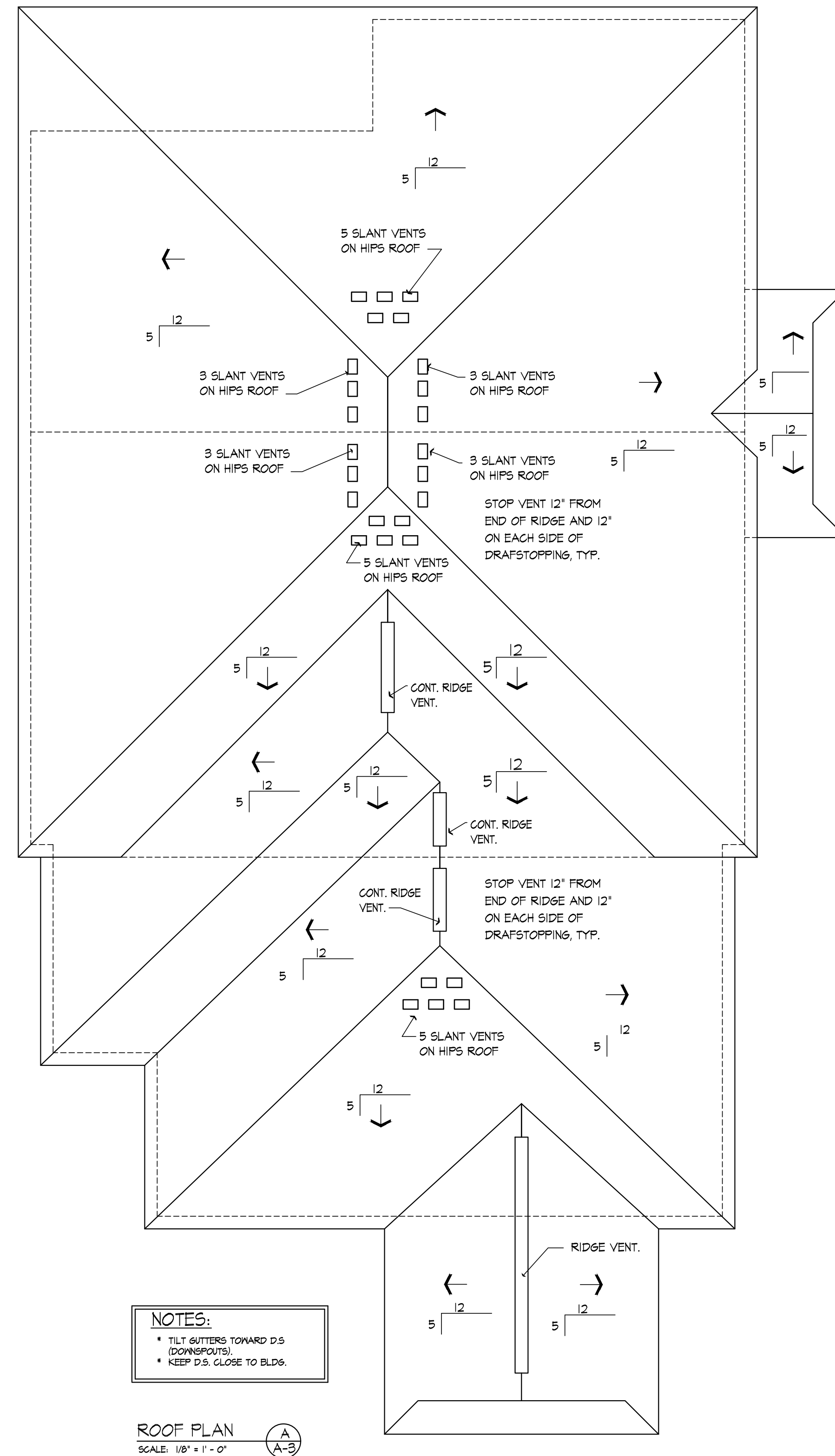
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SENIOR CITIZENS CENTER**
MT. STERLING, KENTUCKY



DATE	REVISION	BY

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DRAWN BY BLL
CHECKED BY MSF
REVIEWED BY
DATE DECEMBER 2024
SCALE AS NOTED

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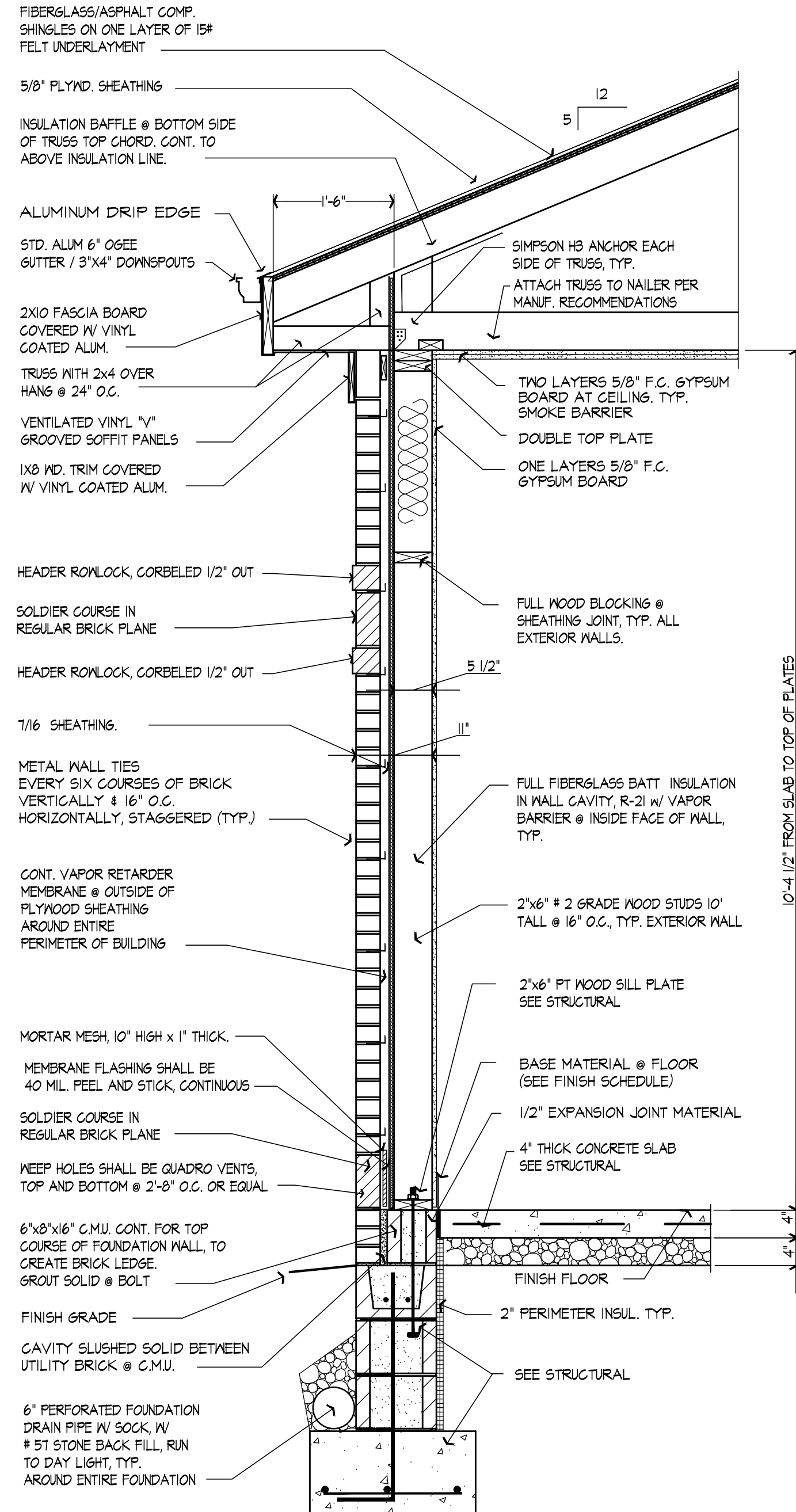
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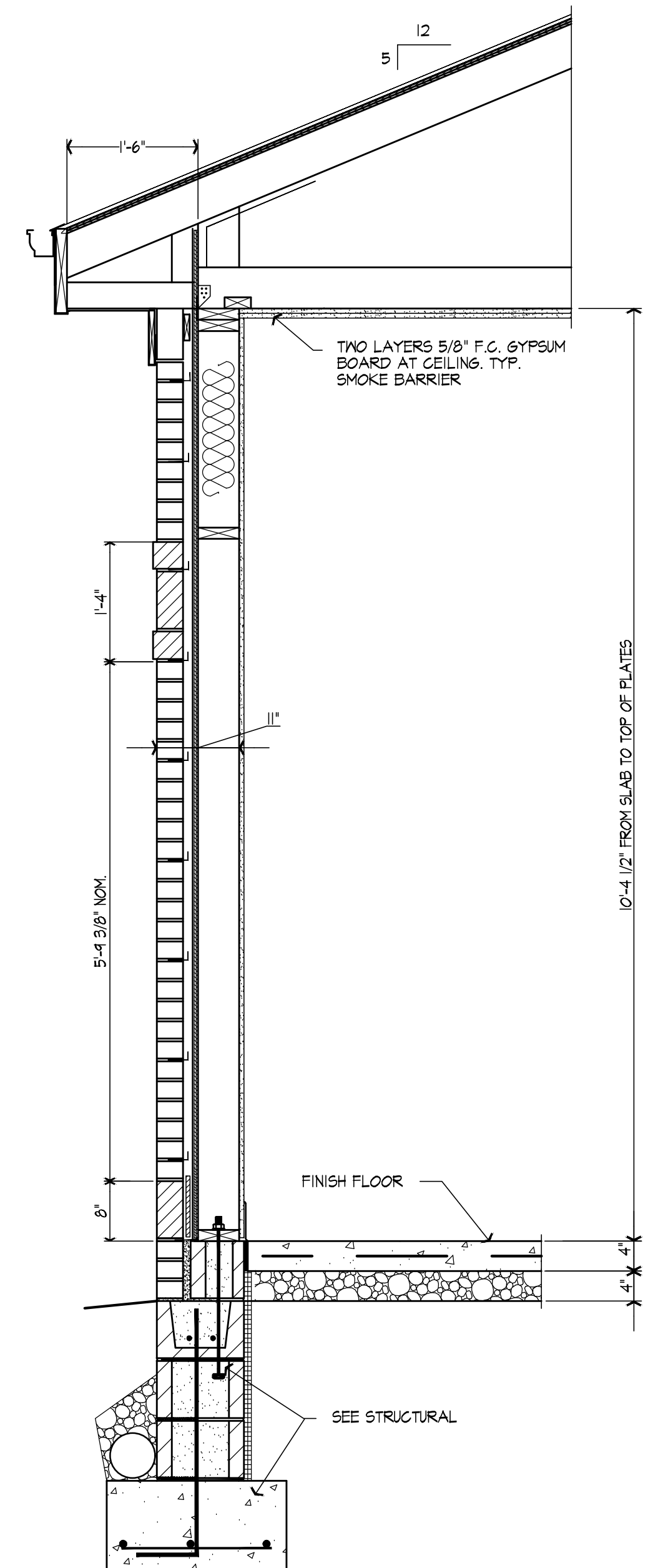
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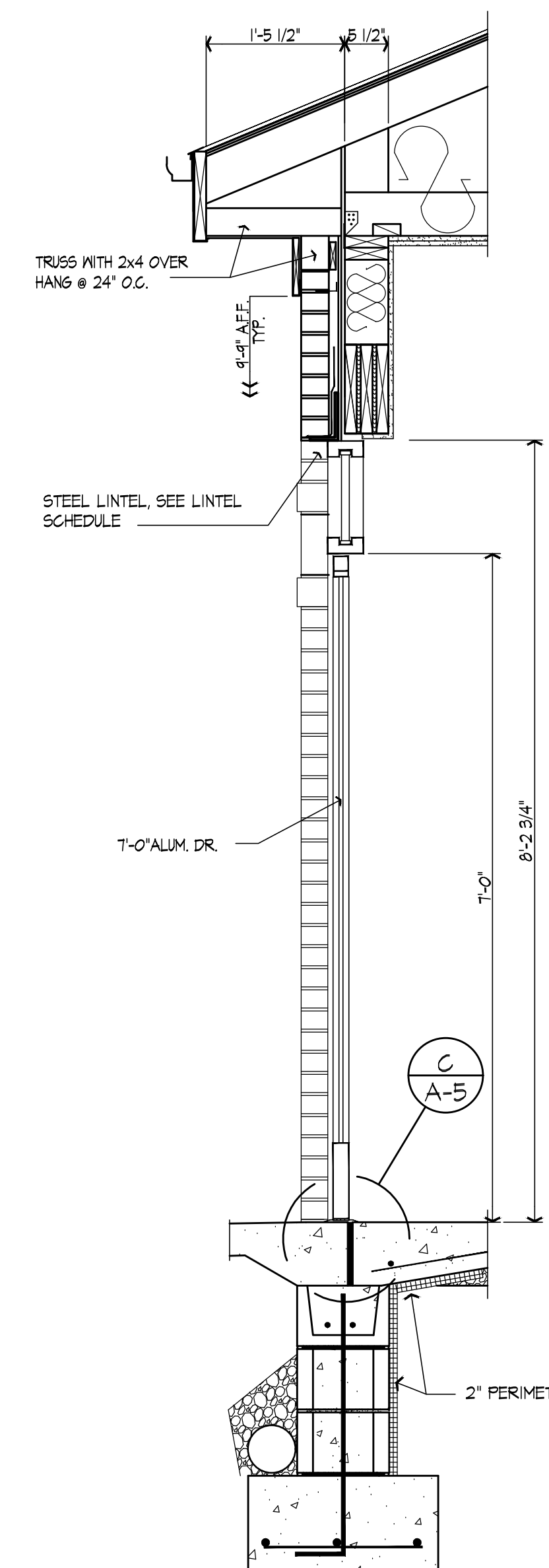
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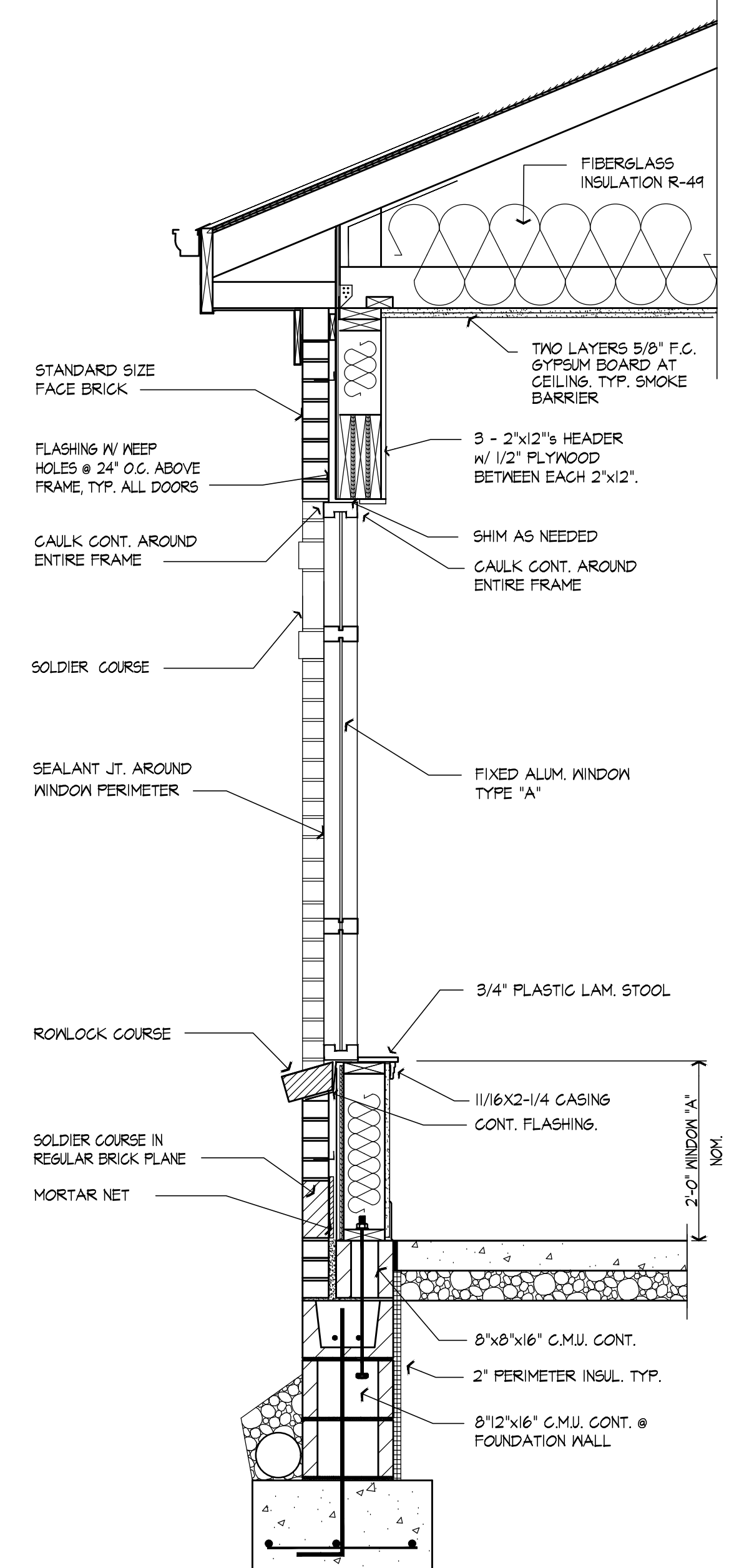
WALL SECTION, TYP. A A-4
SCALE: 3/4" = 1' - 0"



WALL SECTION, TYP. B B-4
SCALE: 3/4" = 1' - 0"



FRONT DOOR, 10'-4-1/2" WALL
WALL SECTION, TYP. C A-5
SCALE: 3/4" = 1' - 0"



FRONT WINDOW, 10'-4-1/2" WALL
WALL SECTION, TYP. D A-4
SCALE: 3/4" = 1' - 0"

DATE	REVISION	BY

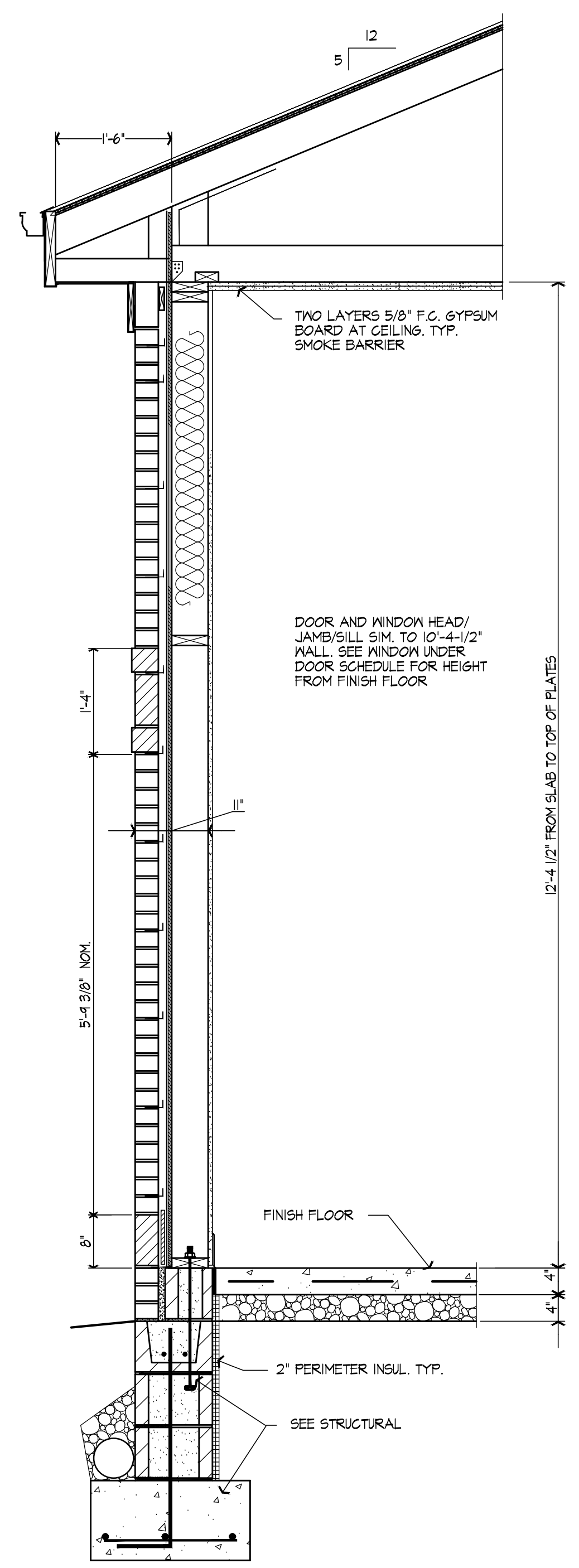
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DESIGNED BY MSF/BLL
DRAWN BY MSF
CHECKED BY MSF
REVIEWED BY MSF
DATE DECEMBER 2024
SCALE AS NOTED

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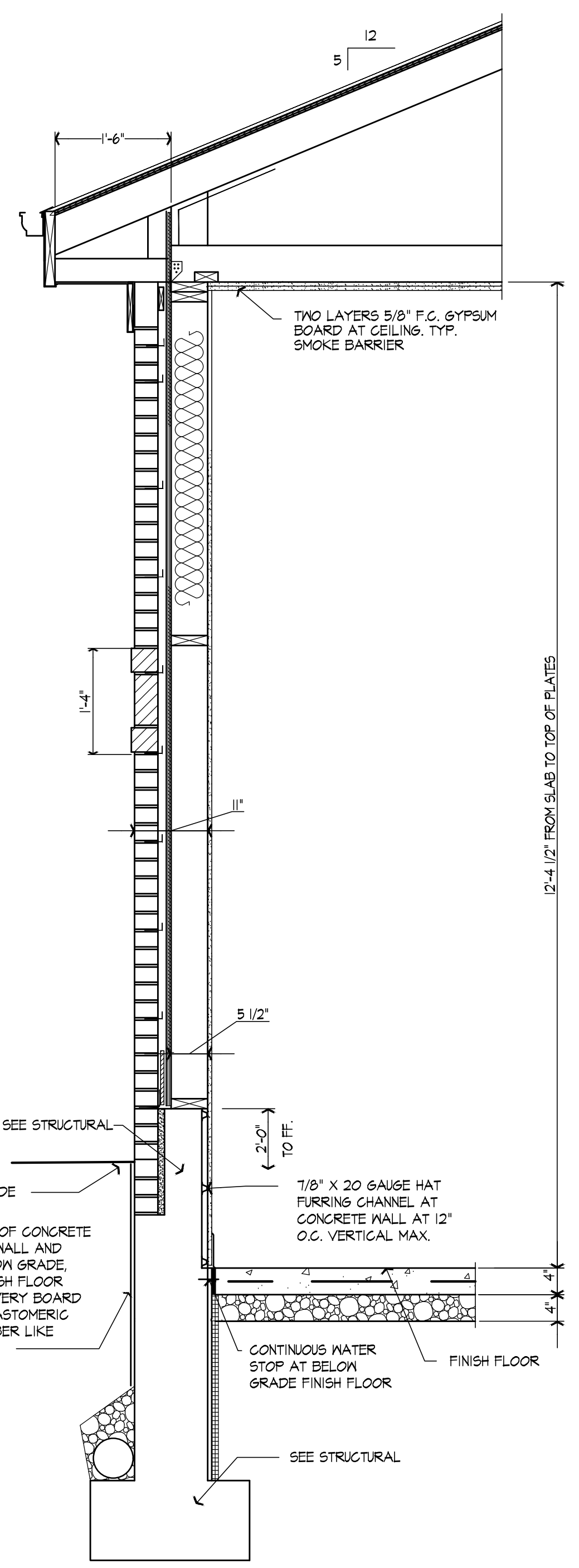
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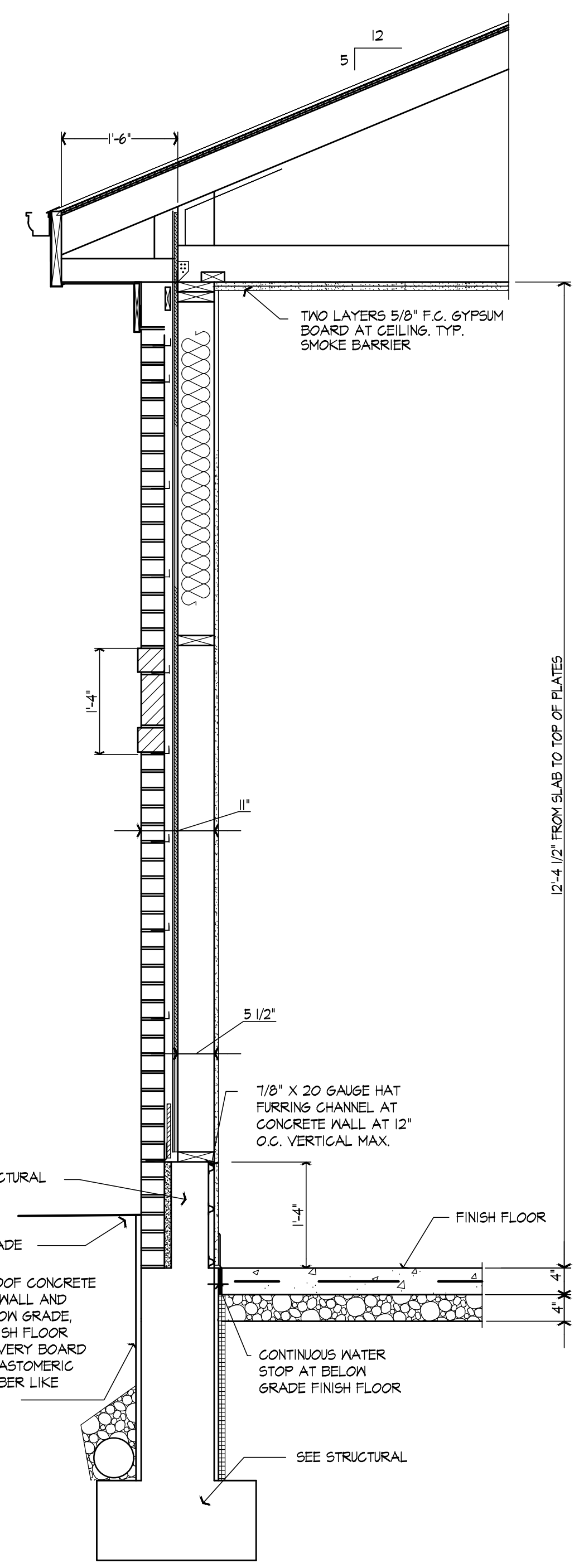
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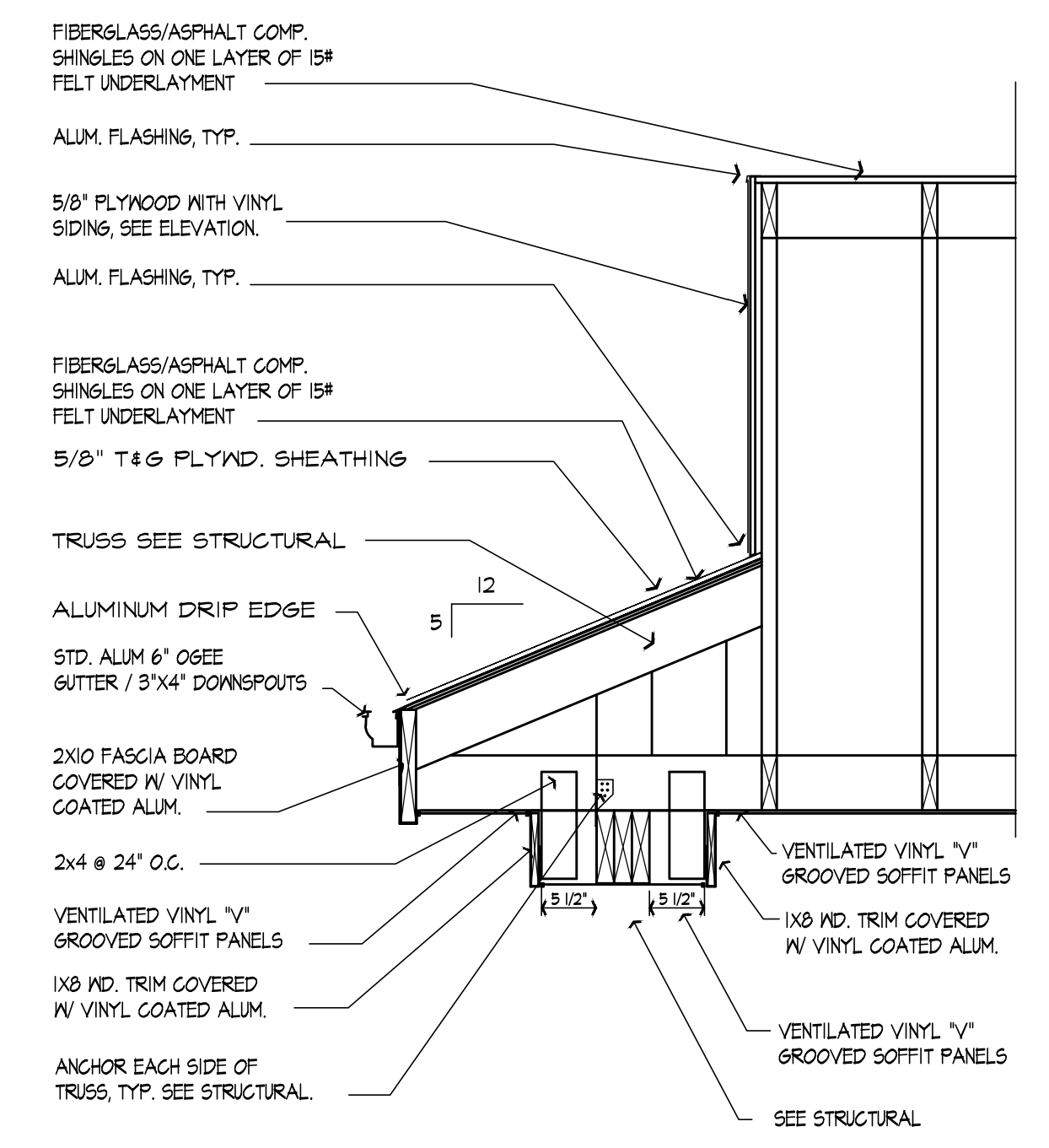
12'-4-1/2" WALL
WALL SECTION, TYP.
SCALE: 3/4" = 1' - 0"



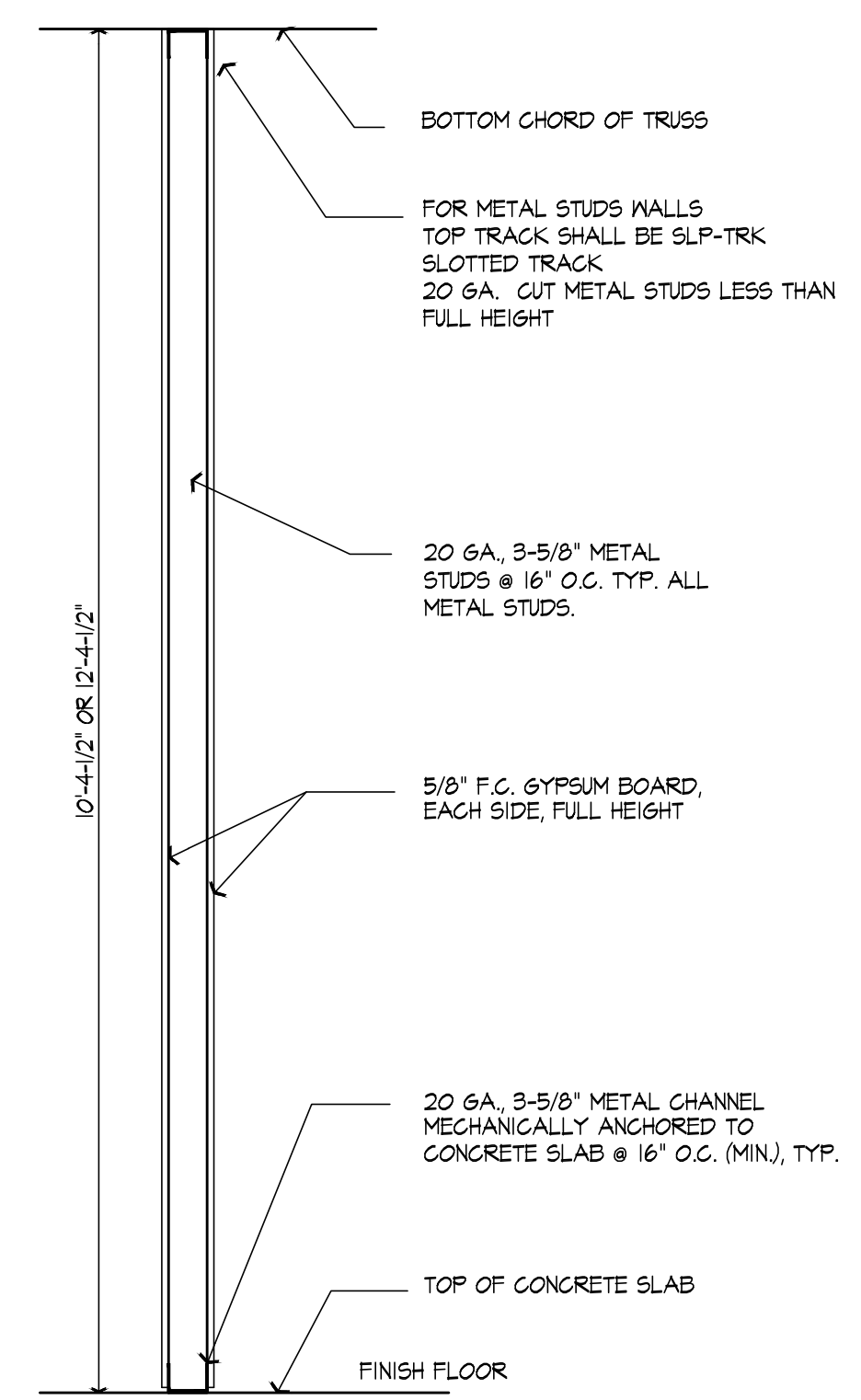
12'-4-1/2" WALL
WALL SECTION, TYP. (B)
SCALE: 3/4" = 1' - 0" (A-5)



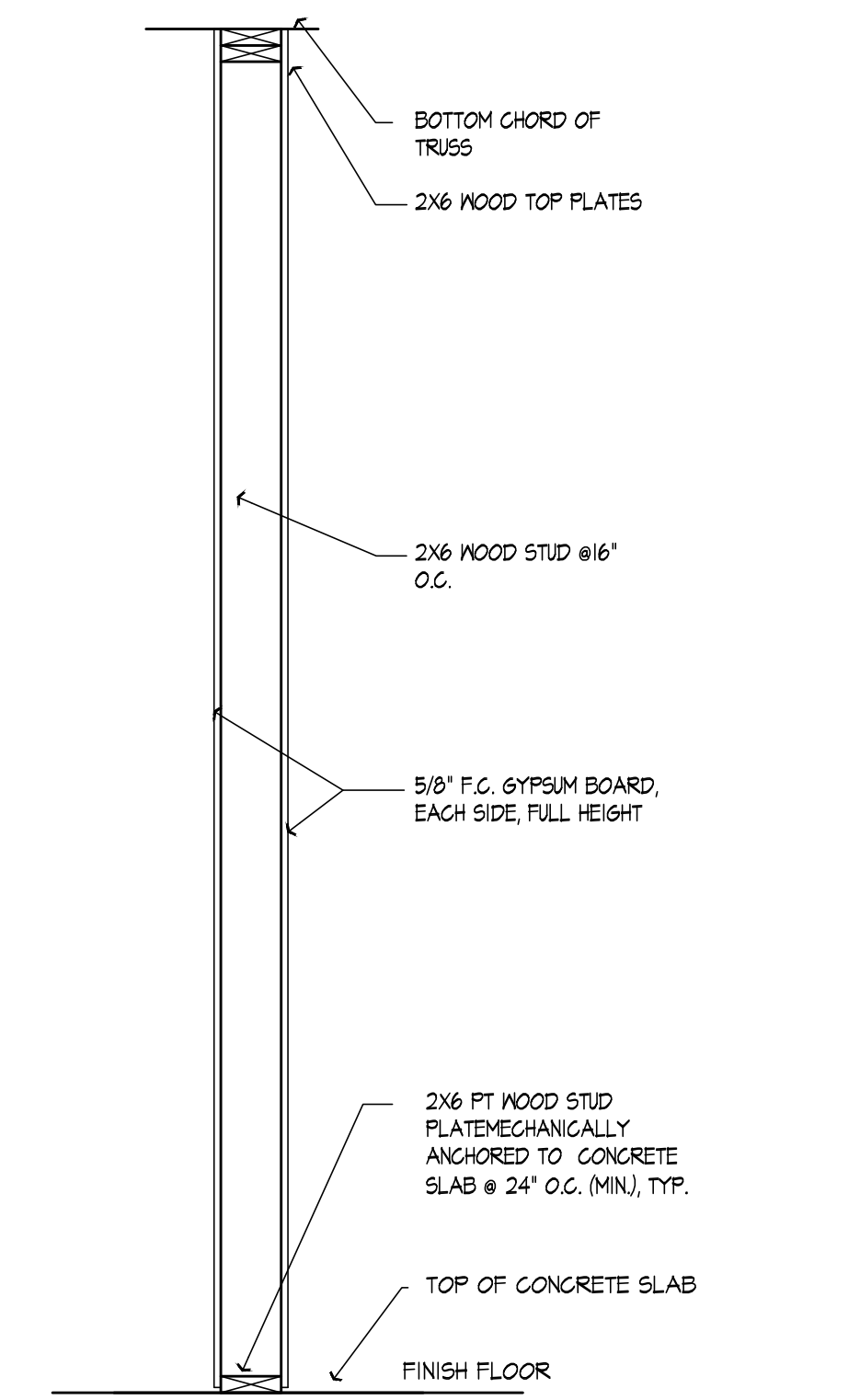
12'-4-1/2" WALL
WALL SECTION, TYP. (C)
SCALE: 3/4" = 1' - 0" (A-5)



FRONT AND SIDE
TYPICAL CANOPY DETAIL (F)
SCALE: 3/4" = 1' - 0" (A-5)



10'-4-1/2" AND 12'-4-1/2" TALL WALLS
METAL STUD WALL.
INTERIOR WALL SECTION, TYP. (D)
SCALE: 3/4" = 1' - 0" (A-5)



10'-4-1/2" AND 12'-4-1/2" TALL WALLS
WOOD STUD WALL.
INTERIOR BEARING WALL SECT. (E)
SCALE: 5/8" = 1' - 0" (A-5)

DATE	REVISION	BY

PROJECT NO. 5067-03
DESIGNED BY MSF/BLL
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REVIEWED BY MSF
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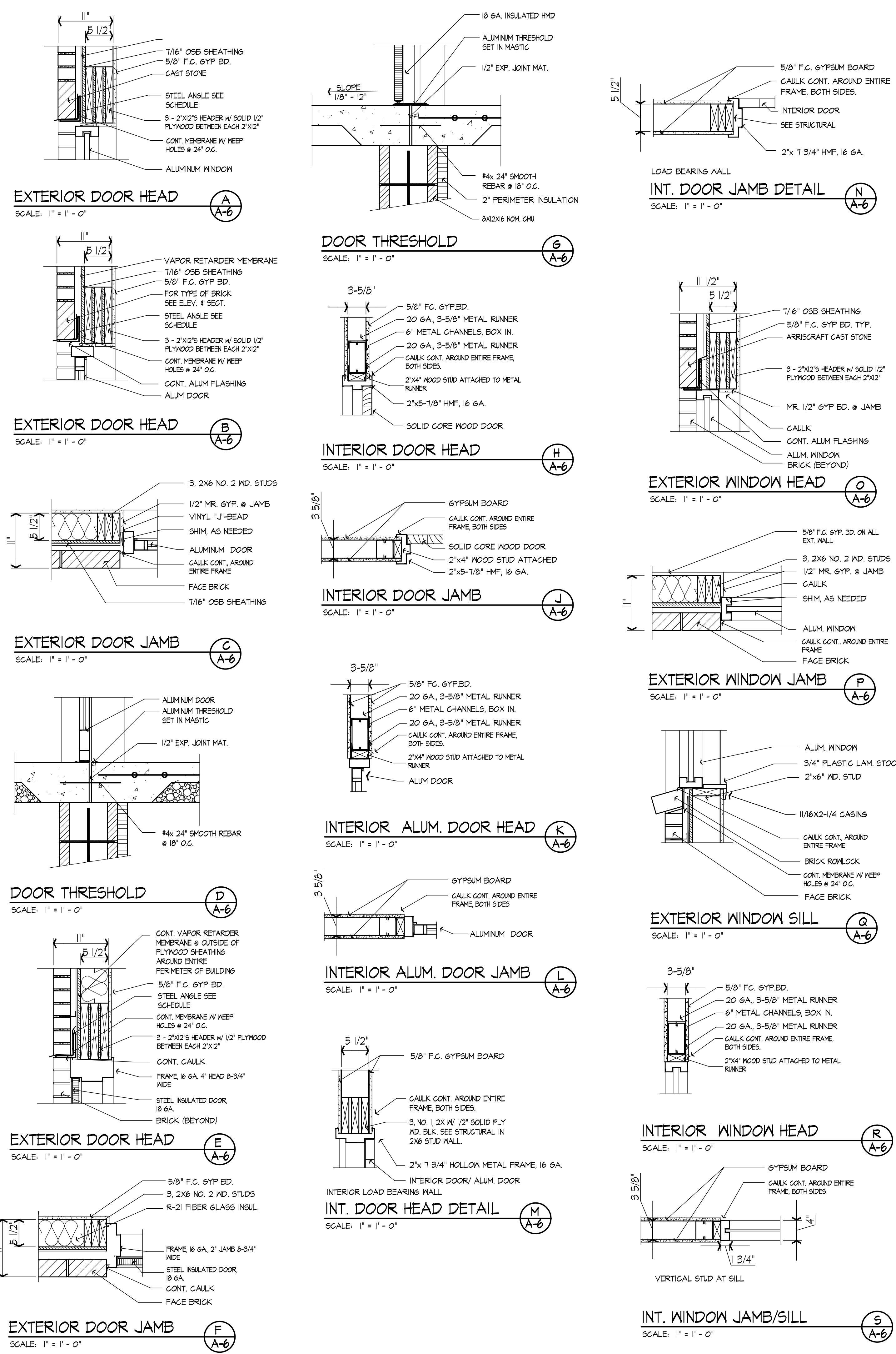


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MT. STERLING, KENTUCKY

PROJECT NO. 5067-03	DATE	REVISION
DESIGNED BY MGF/BLL	BY	
DRAWN BY BLL	DATE	
CHECKED BY MGF	DATE	
REVIEWED BY MGF	DATE	
SCALE 1/4" = 1' - 0"	DATE	
SCALE 1/4" = 1' - 0"	DATE	

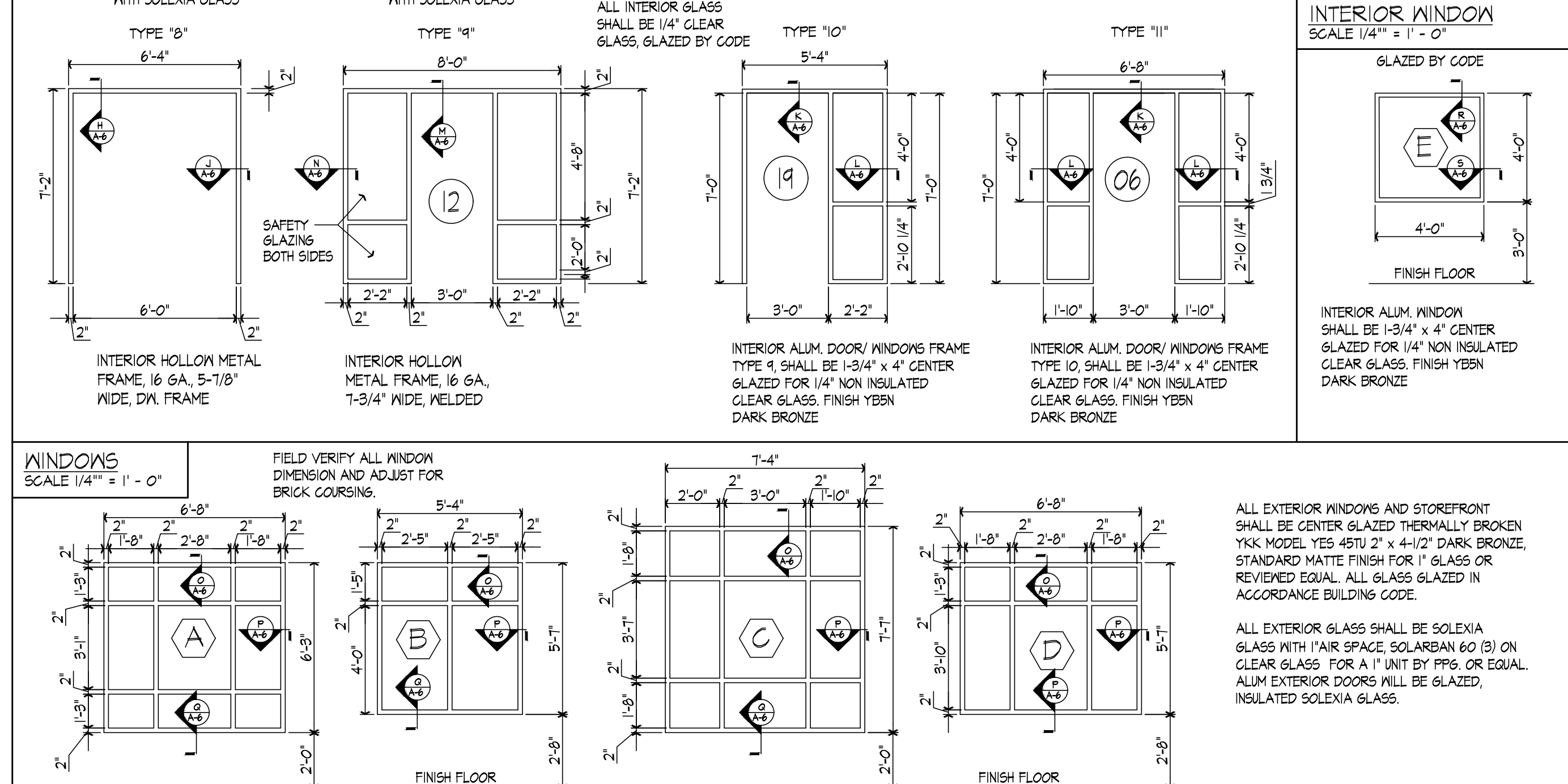
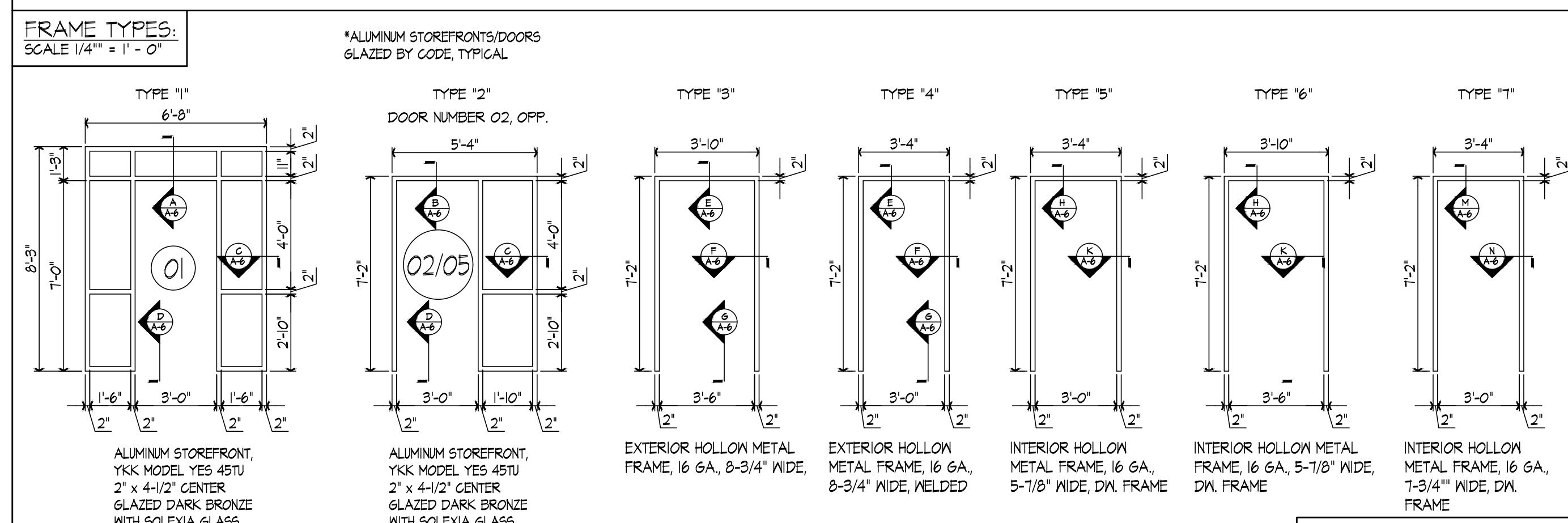
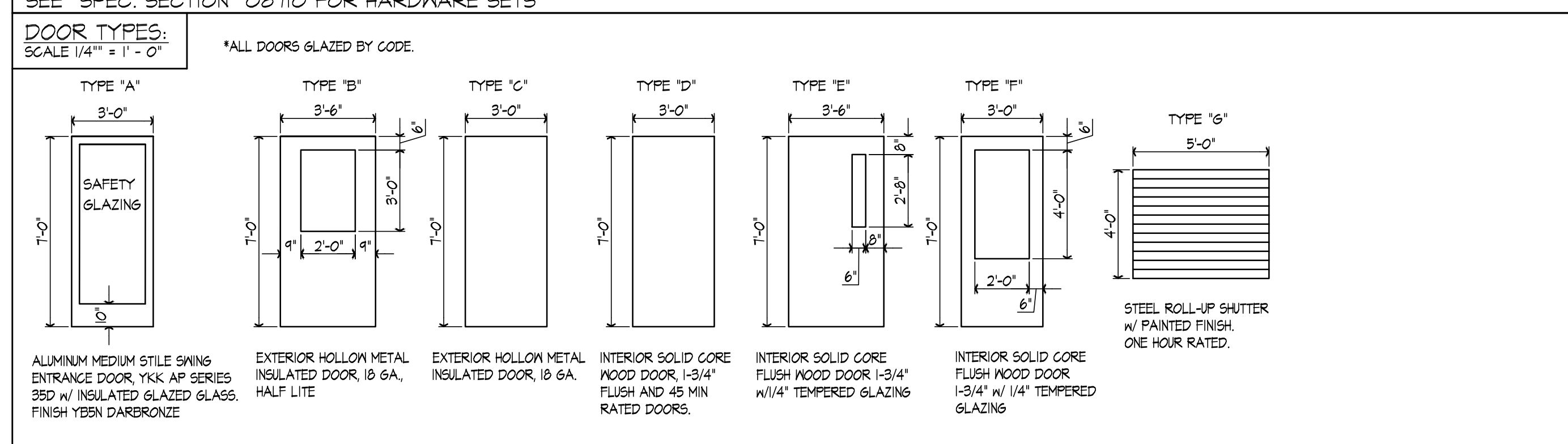
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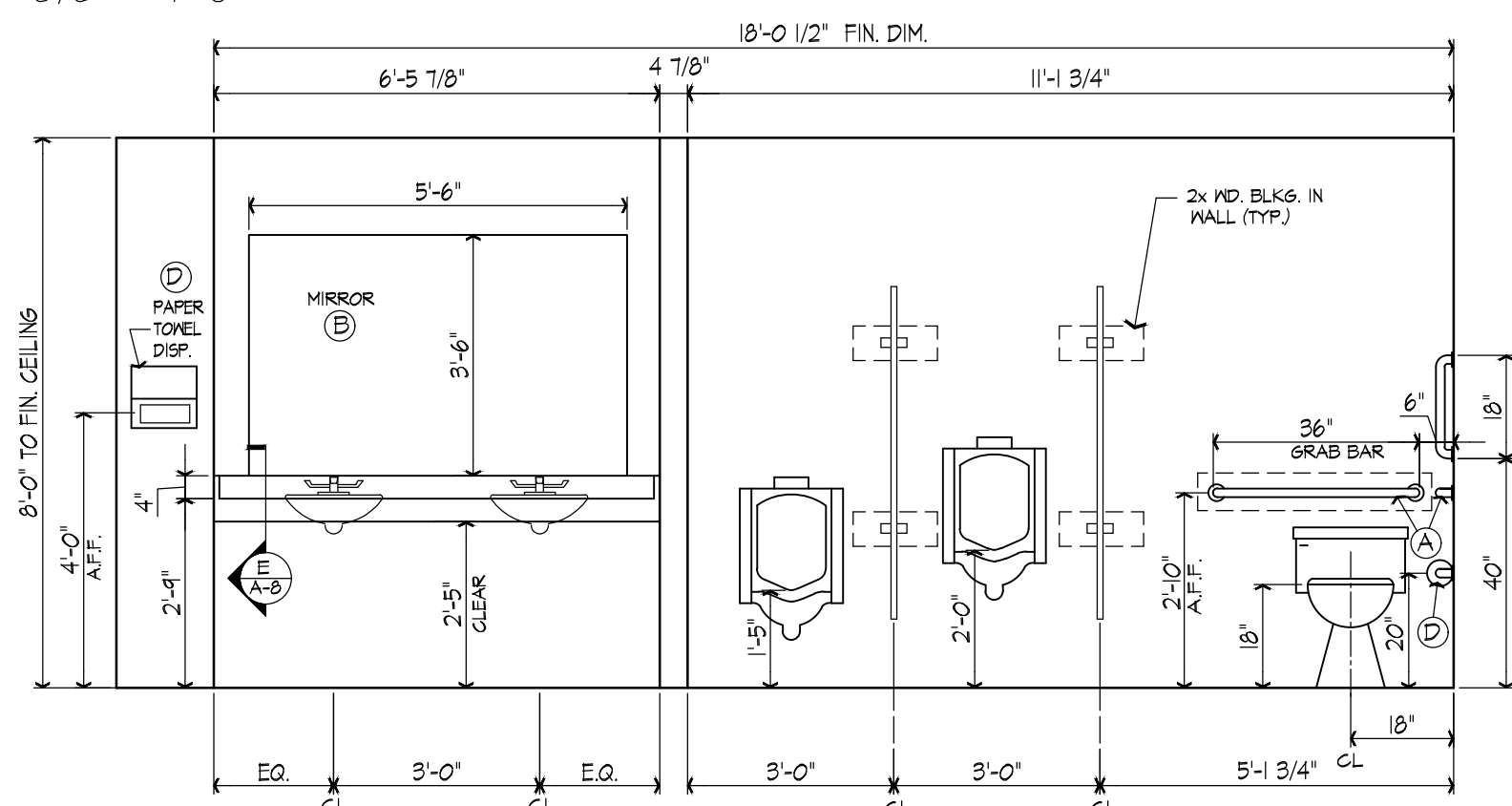
DOOR SCHEDULE

DOOR NO.	TYPE	MATERIAL	WIDTH	HEIGHT	THICK.	FRAME			REMARKS	
						TYPE	HEAD	JAMB		SILL
01	A	ALUM.	3'-0"	7'-0"	-----	1	A	B	D	
02	A	ALUM.	3'-0"	7'-0"	-----	2	B	C	D	
03	B	H.M. INS	3'-6"	7'-0"	1 3/4"	3	E	F	G	
04	C	H.M. INS	3'-0"	7'-0"	1 3/4"	4	E	F	G	
05	A	ALUM.	3'-0"	7'-0"	-----	2	B	C	D	
06	A	ALUM.	3'-0"	7'-0"	-----	11	K	L	---	
07	D	SCN	3'-0"	7'-0"	1 3/4"	5	H	J	---	
08	D	SCN	3'-0"	7'-0"	1 3/4"	5	H	J	---	
09	D	SCN	3'-0"	7'-0"	1 3/4"	5	H	J	---	
10	D	SCN	3'-0"	7'-0"	1 3/4"	5	H	J	---	
11	D	SCN	3'-0"	7'-0"	1 3/4"	5	H	J	---	
12	F	SCN	3'-0"	7'-0"	1 3/4"	5	H	J	---	
13	D	SCN	3'-0"	7'-0"	1 3/4"	5	H	J	---	
14	D	SCN	3'-0"	7'-0"	1 3/4"	7	M	N	---	
15	D	SCN	3'-0"	7'-0"	1 3/4"	5	H	J	---	
16	D	SCN	3'-0"	7'-0"	1 3/4"	5	H	J	---	
17	D	SCN	3'-0"	7'-0"	1 3/4"	5	H	J	---	
18	D	SCN	3'-0"	7'-0"	1 3/4"	5	H	J	---	
19	A	ALUM.	3'-0"	7'-0"	-----	10	K	L	---	
20	E	MC	3'-6"	7'-0"	1 3/4"	6	H	J	---	45-MIN. RATED, DOOR AND 45 MIN. RATED FRAME. WOOD FACE
21	D	MC	3'-0"	7'-0"	1 3/4"	7	M	N	---	45-MIN. RATED, DOOR AND 45 MIN. RATED FRAME. WOOD FACE
22	D	MC	FR 3'-0"	7'-0"	1 3/4"	8	H	J	---	45-MIN. RATED, DOOR AND 45 MIN. RATED FRAME. WOOD FACE
23	D	MC	3'-0"	7'-0"	1 3/4"	5	H	J	---	45-MIN. RATED, DOOR AND 45 MIN. RATED FRAME. WOOD FACE
24	G	STEEL	5'-0"	4'-0"	-----	---	---	---	---	1 HOUR RATED
25	C	H.M. INS	3'-0"	7'-0"	1 3/4"	4	E	F	G	

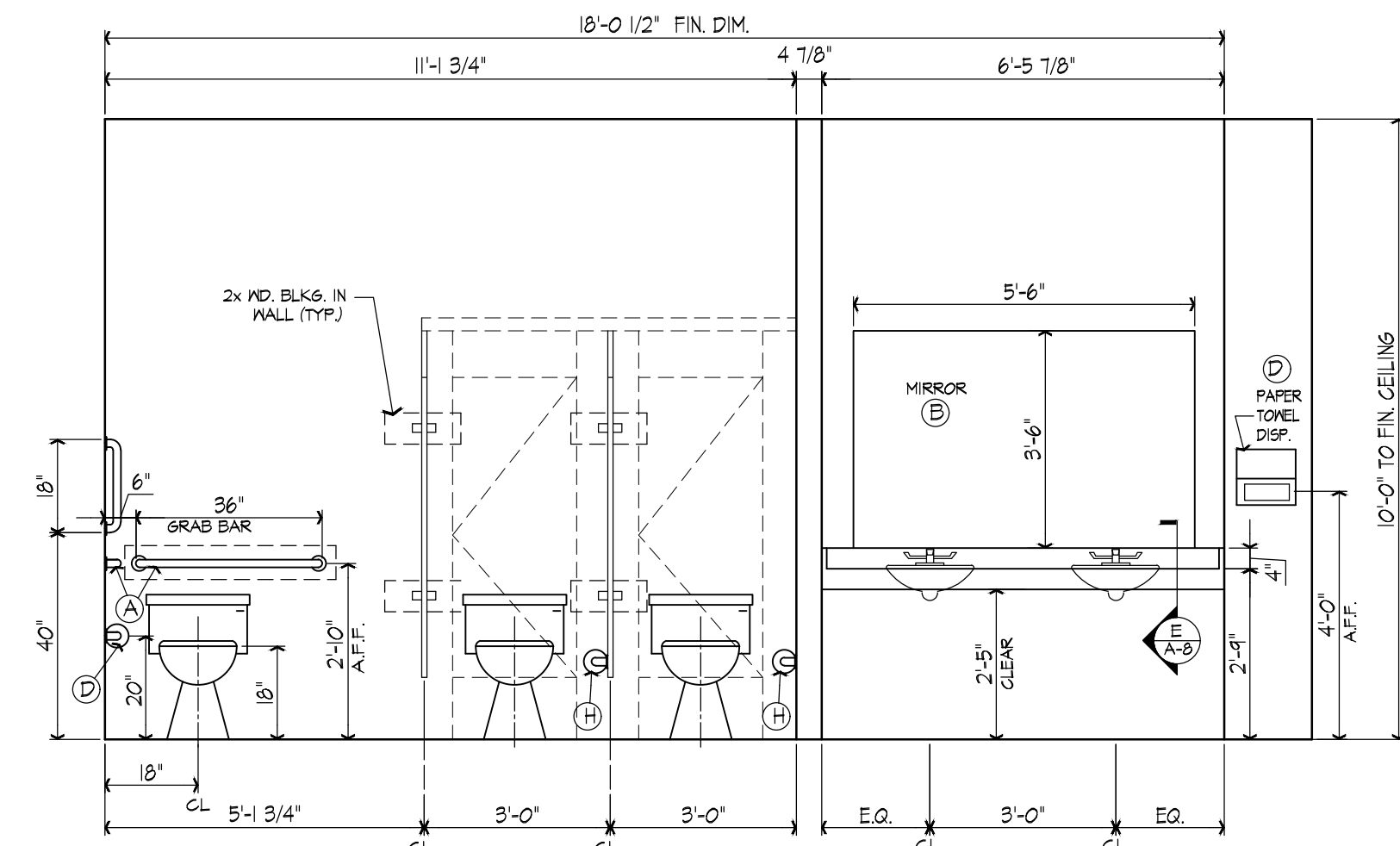


INTERIOR ELEVATIONS

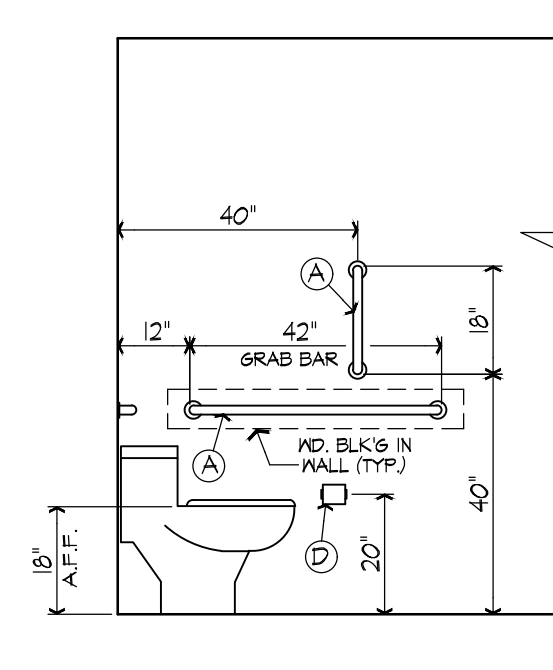
3/8" = 1'-0"



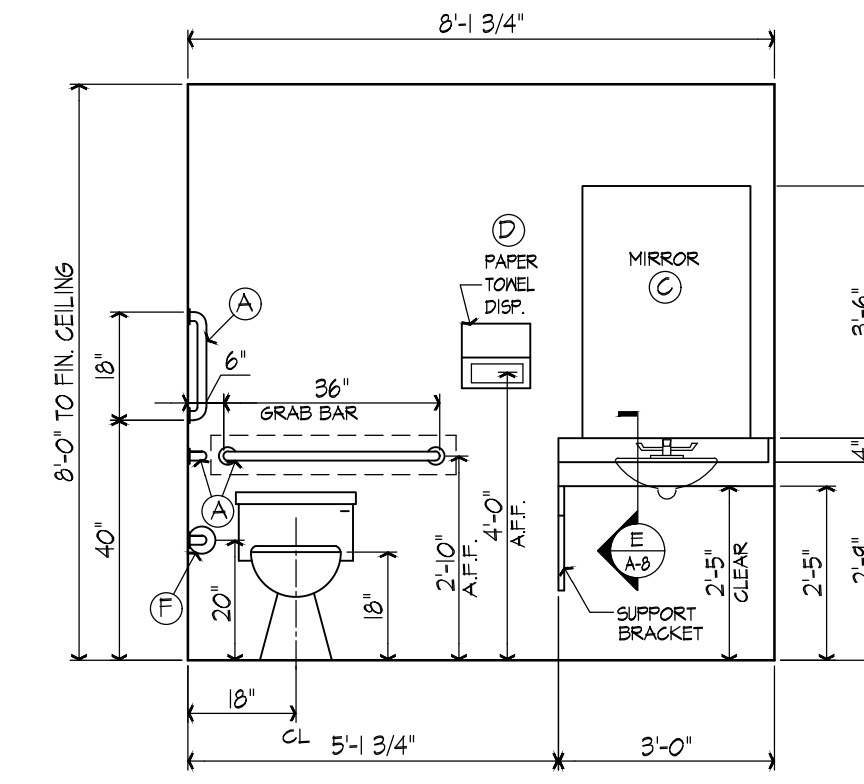
1 MEN (111)



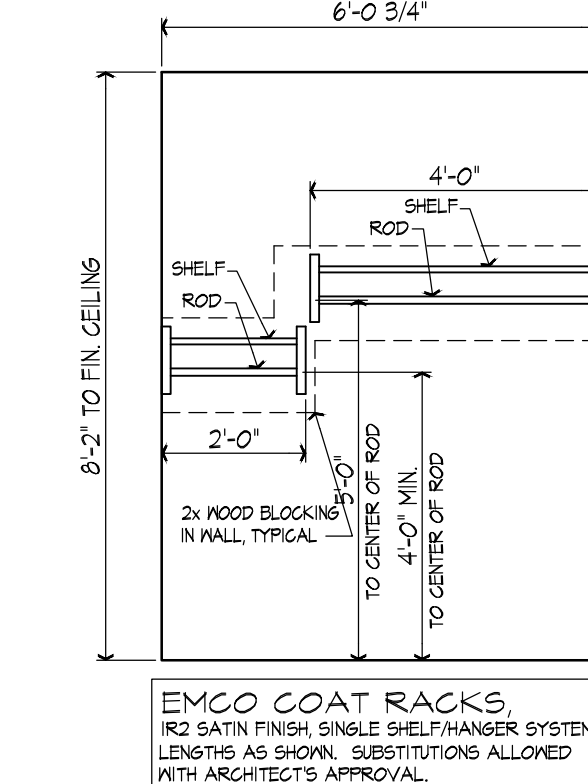
2 WOMEN (112)



3 TYPICAL SIDE VIEW (for ADA toilet & accessories)

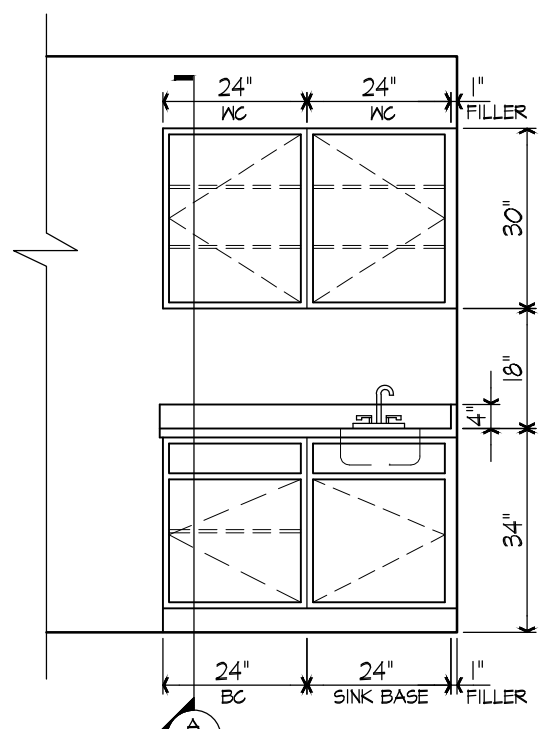


4 TOILET (106)

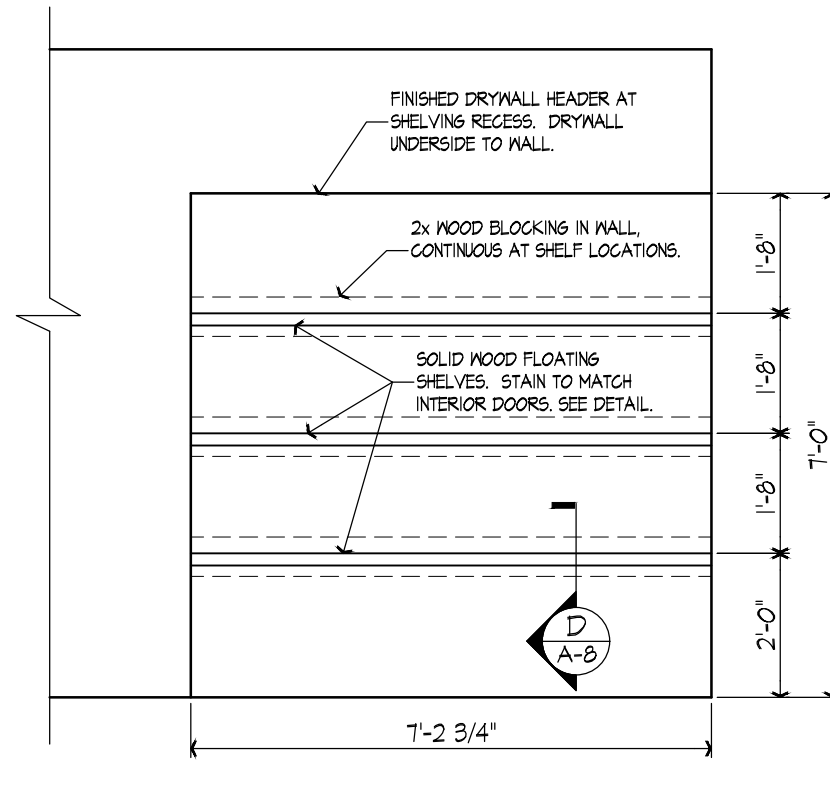


5 COAT RACK @ CORRIDOR (115)

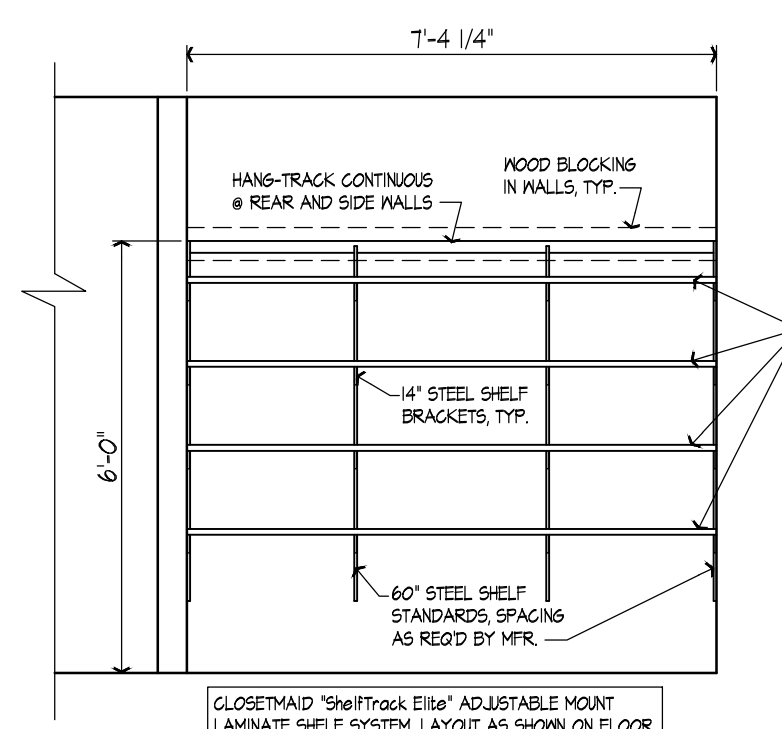
EMCO COAT RACKS, R2 SATIN FINISH SINGLE SHELF/HANGER SYSTEM LENGTHS AS SHOWN. SUBSTITUTIONS ALLOWED WITH ARCHITECT'S APPROVAL.



6 HEALTH ROOM (109)

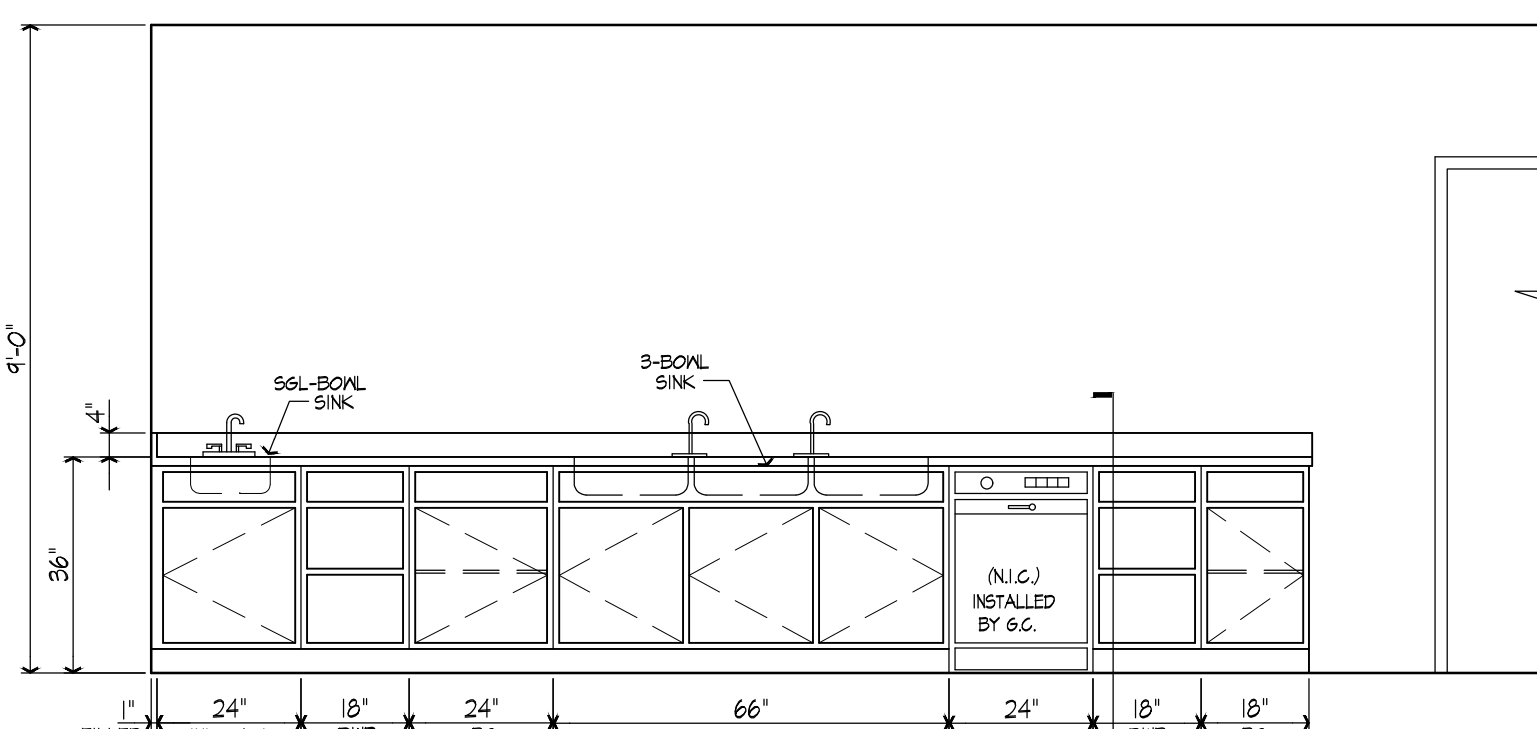


7 FITNESS ROOM (107)

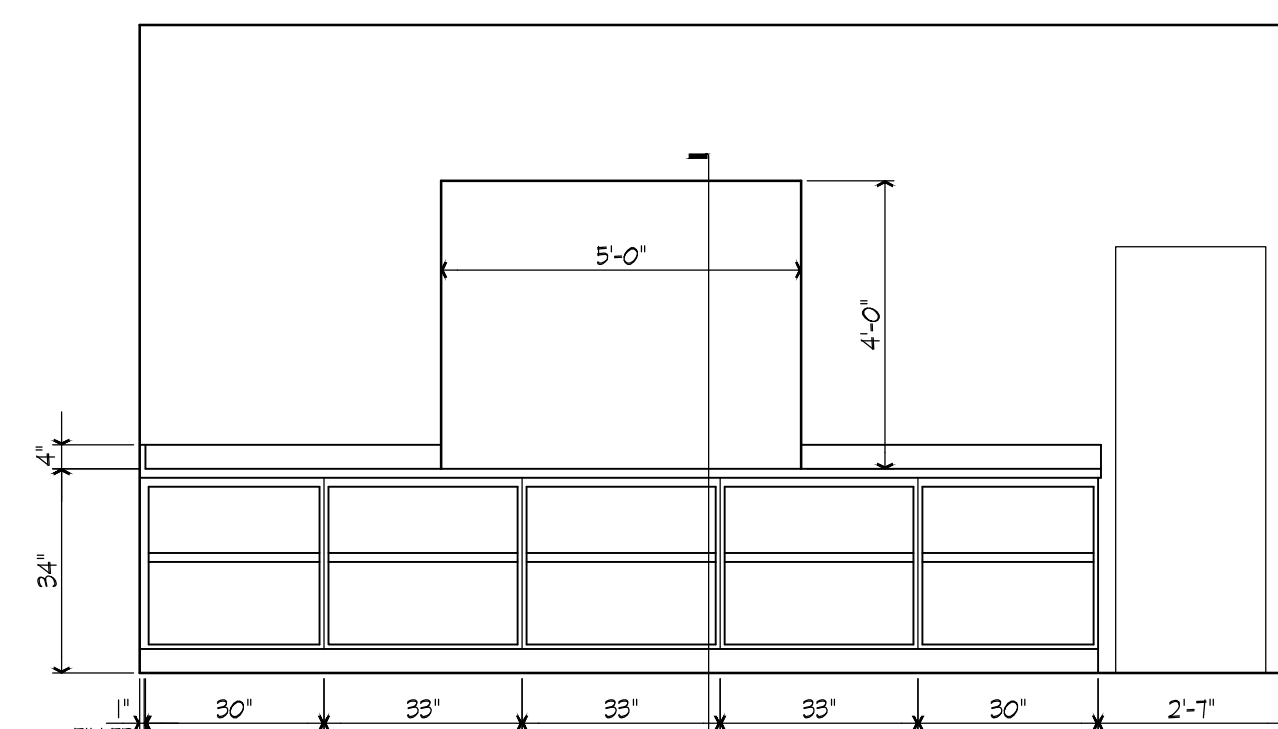


8 JANITOR/LAUNDRY (110)

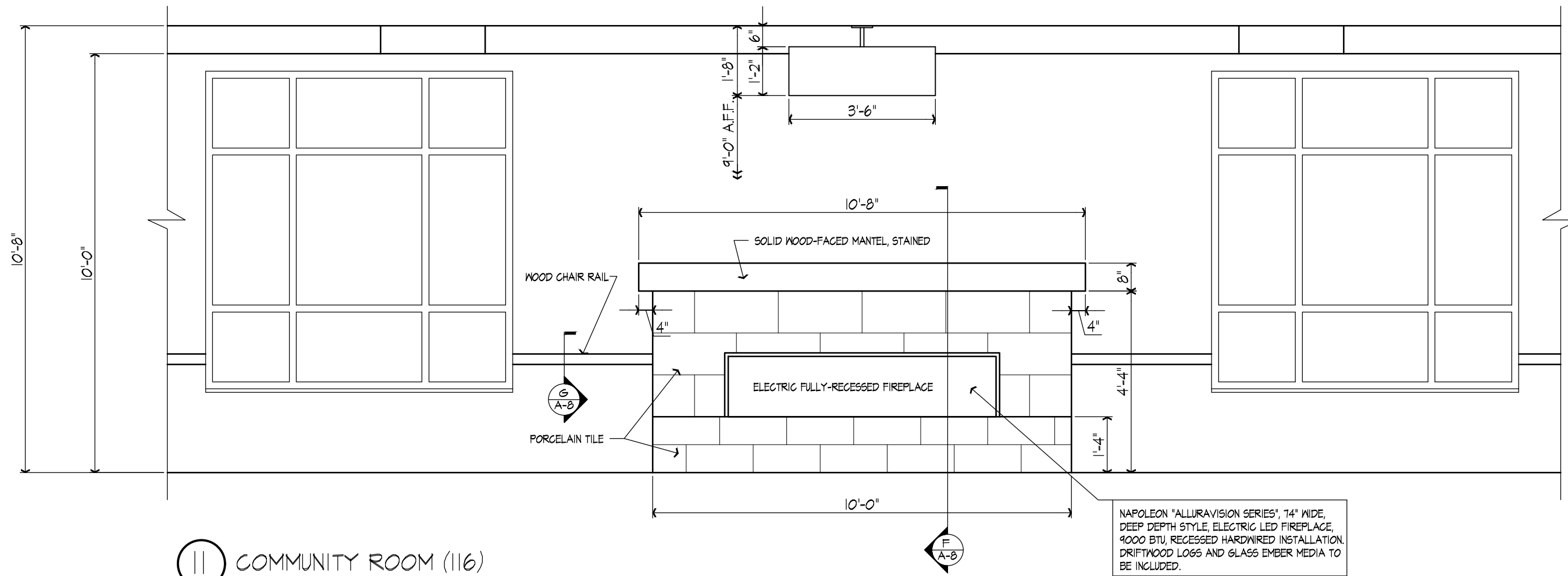
CLOSETMAID 'ShelTrack Elite' ADJUSTABLE MOUNT LAMINATE SHELF SYSTEM LAYOUT AS SHOWN ON FLOOR PLAN. FINISHES TO BE SELECTED BY OWNER.



9 KITCHEN (118)

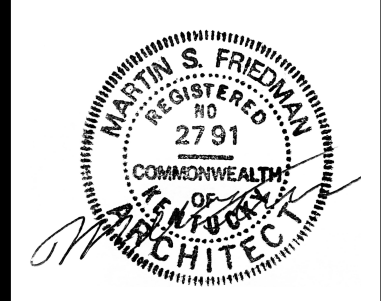


10 KITCHEN (118)



11 COMMUNITY ROOM (116)

NAPOLEON 'ALLURAVISION SERIES' 14\"/>



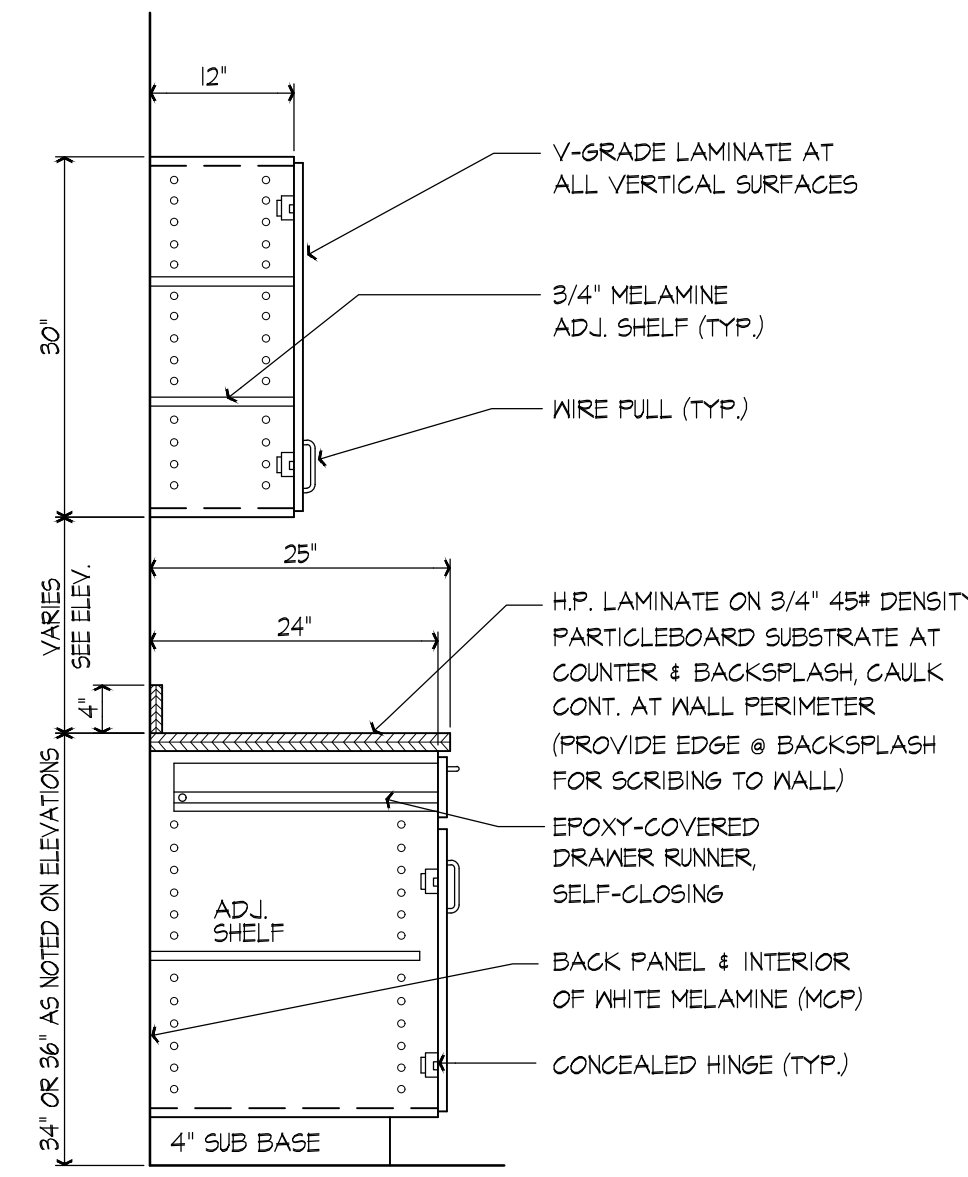
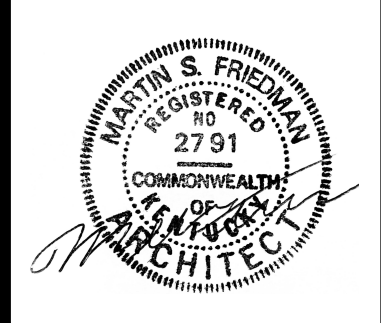
MONTGOMERY COUNTY SENIOR CITIZENS CENTER
MT. STERLING, KENTUCKY

DATE	REVISION	BY

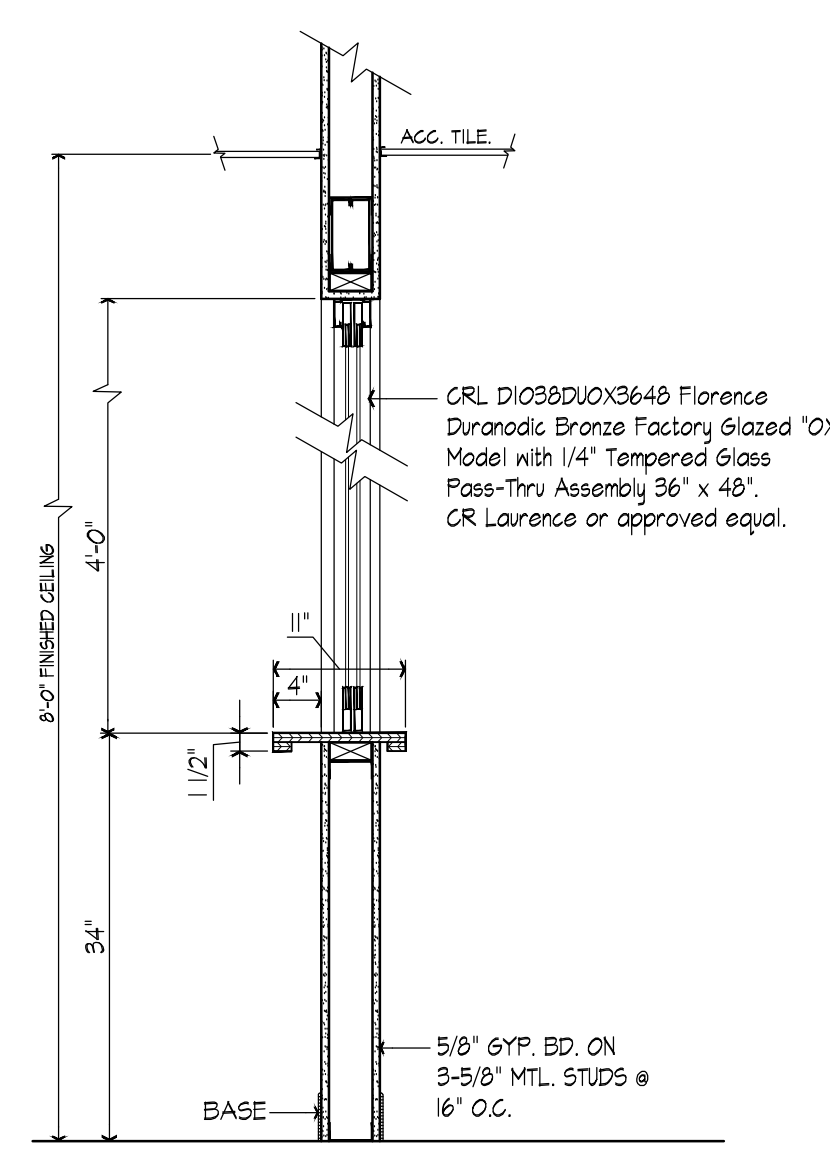
PROJECT NO. 5061-03
 DESIGNED BY: BLL
 DRAWN BY: BLL
 CHECKED BY: MGF
 REVIEWED BY: MGF
 DATE: DECEMBER, 2024
 SCALE: AS NOTED

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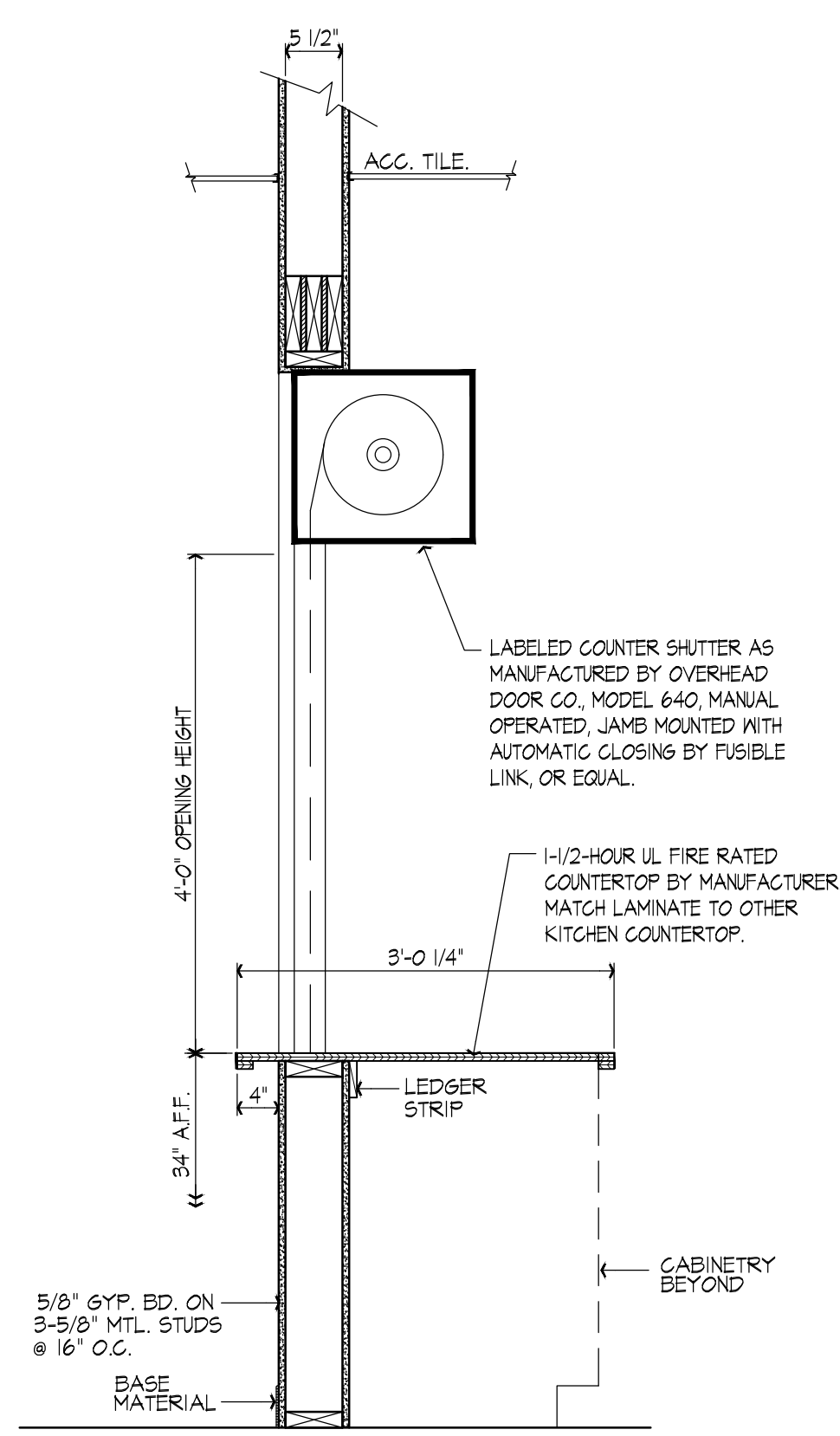
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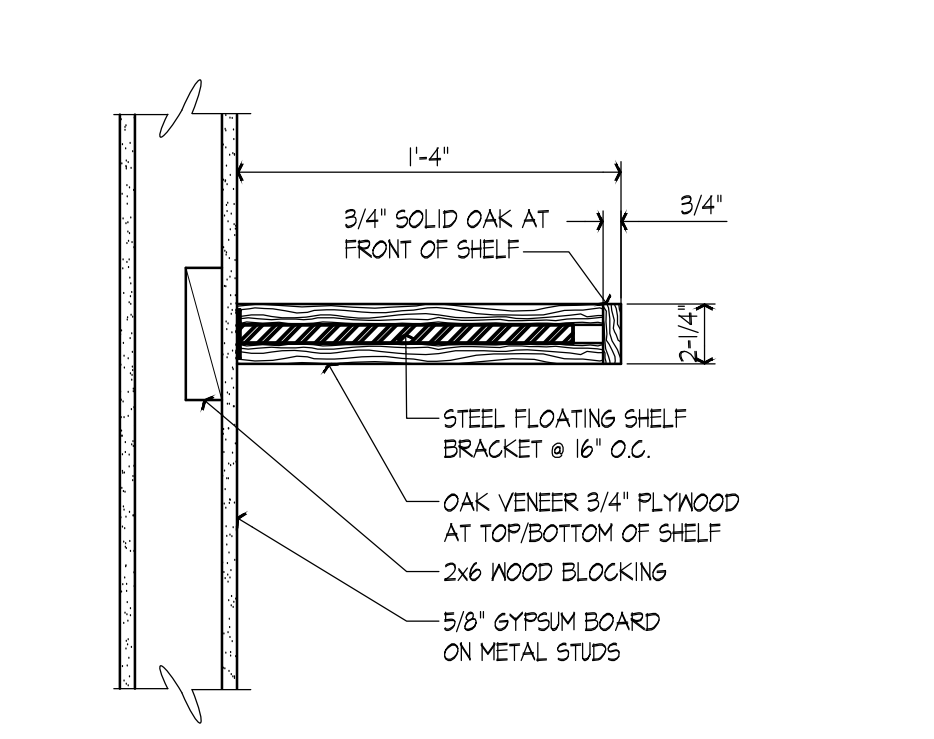
TYP. LAMINATE CABINETS
SCALE: 3/4"=1'-0"



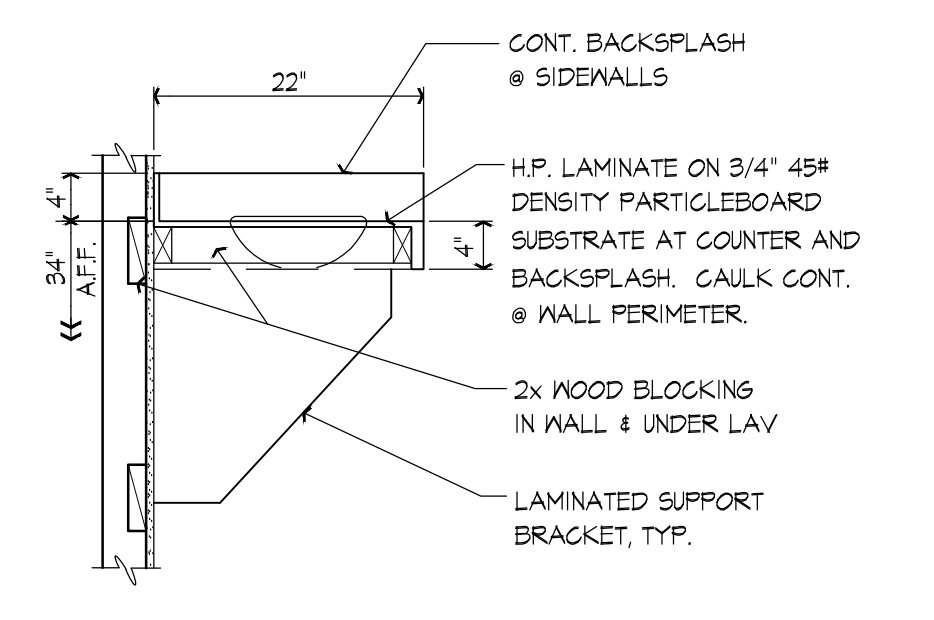
SLIDING WINDOW
SCALE: 3/4"=1'-0"



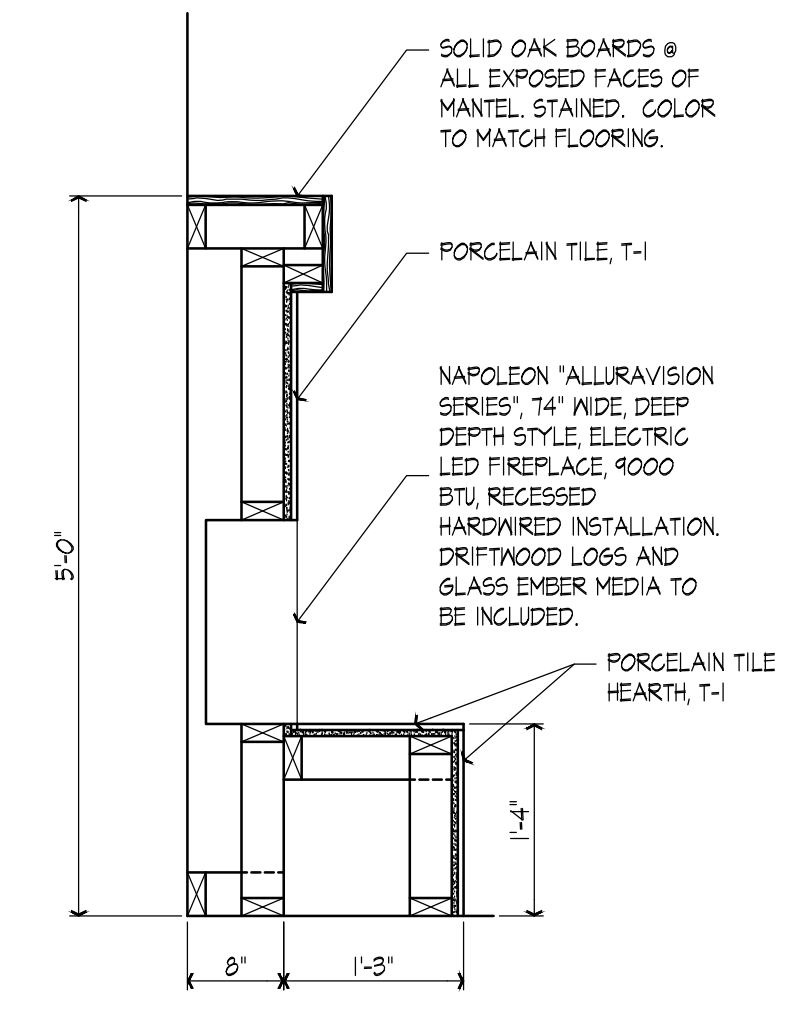
ROLLING COUNTER SHUTTER
SCALE: 3/4"=1'-0"



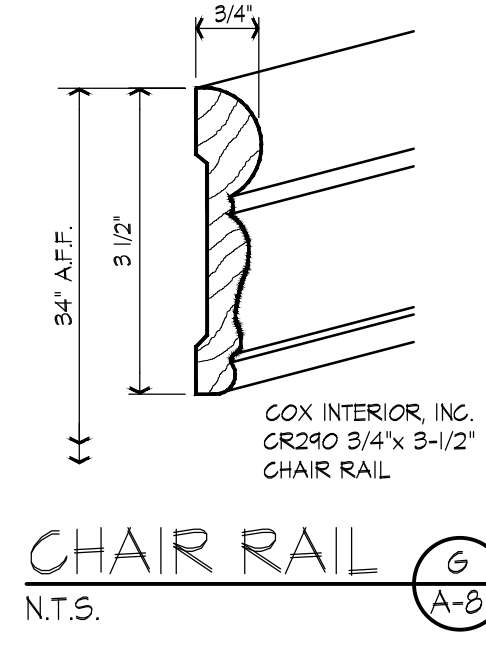
FLOATING SHELF DETAIL
SCALE: 3/4"=1'-0"



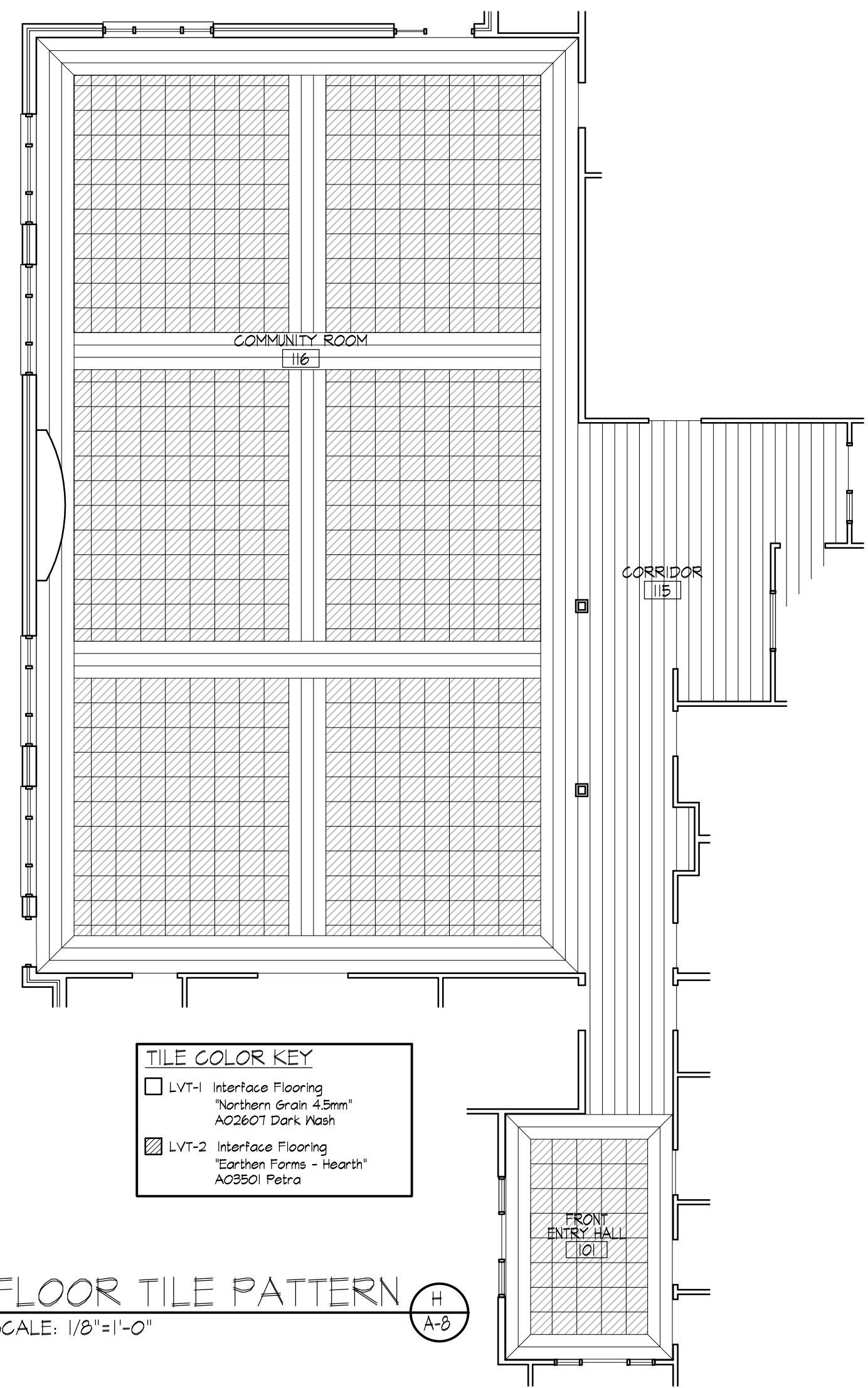
LAVATORY SECTION
SCALE: 3/4"=1'-0"



FIREPLACE SECTION
SCALE: 3/4"=1'-0"



CHAIR RAIL
N.T.S.



FLOOR TILE PATTERN
SCALE: 1/8"=1'-0"

FINISH SCHEDULE

ROOM #	ROOM NAME	FLOOR	BASE	WALLS & TRIM	MISC.	CLG.	CLG. HT.		
100	VESTIBULE	C-1							
101	FRONT ENTRY HALL	LVT-1, D	B-1	P-2		A-1	9'-0"		
102	OFFICE	LVT-1	B-1	P-1					
103	CLOSET	LVT-1	B-1	P-1					
104	CLOSET	LVT-1	B-1	P-1		P-5	10'-0"		
105	OFFICE	LVT-1	B-1	P-1					
106	TOILET		V-1	P-2	L-3	A-1	8'-0"		
107	FITNESS ROOM	LVT-1	B-1	P-4		A-1	9'-0"		
108	STORAGE	LVT-1	B-1	P-1		P-5	10'-0"		
109	HEALTH ROOM	LVT-1	B-1	P-1	L-2	A-1	9'-0"		
110	JANITOR/LAUNDRY		V-1	B-1	P-1	P-5	10'-0"		
111	MEN		V-1	B-1	P-2	L-3	A-1	9'-0"	
112	WOMEN		V-1	B-1	P-2	L-3	A-1	9'-0"	
113	OFFICE	LVT-1	B-1	P-1		A-1	9'-0"		
114	VESTIBULE	C-1		B-1	P-2		A-1	9'-0"	
115	CORRIDOR	LVT-1	B-1	P-2		A-1	9'-0"		
116	COMMUNITY ROOM	LVT-1, D	B-1	P-2, F	P-3, G, P-1, E, PT-1, H	T-1	A-2	P-5 10'-0"/10'-8"	
117	STORAGE		B-1	P-1		A-1	8'-0"		
118	KITCHEN		V-1	B-1	P-1	L-5	L-4	A-1	9'-6"
119	MECHANICAL/ELECTRICAL		B-1	P-1			P-5	12'-0"	
120	STORAGE		B-1	P-1			P-5	12'-0"	
121	MECHANICAL/ELECTRICAL		B-1	P-1			P-5	10'-0"	

FINISH SPECIFICATIONS

FLOORS:
C-1 Interface Flooring "Step Repeat 841", Color 1049B Smoke, 50cm x 50cm
LVT-1 Interface Flooring "Northern Grain 4.5mm" Color A02607 Dark Wash, 25cm x 1m
LVT-2 Interface Flooring "Earthen Forms - Hearth" Color A09501 Petra, 50cm x 50cm
V-1 Tarkett Commercial Vinyl Sheet Flooring "Grant Safe-T - 21193" - Color 501 Light Sand

BASE:
B-1 Tarkett Vinyl Wall Base 4" vinyl cavé base, Color - 22 Pearl

WALLS:
P-1 Benjamin Moore #0C-14 Natural Cream (TRIM, Offices, Kitchen, UII)
P-2 Benjamin Moore #359-225 Soaring Buff
P-3 Benjamin Moore #852 Blue Heron (Community room - below)
P-4 Benjamin Moore #1218-50 November Skies (Fitness room)
P-5 Benjamin Moore #1212-10 Chantilly Lace (ceilings, soffits)
PT-1 Florida Tile (Fireplace surround/hearth) "Alvira", Color - Imperial Gold Calacatta #FLTAU120P - 12" x 24", Finished

PLASTIC LAMINATES:
L-1 Formica #5T85-N6 Ashwood Beige (Kitchen cabinets)
L-2 Formica # 1267-58 Concrete Stone (Lavatory tops)
L-3 Formica #8320-FA Blue Teal (Kitchen countertop)
L-4 Formica #6350-58 Gumbo, Fabric (Health Rm countertop)
L-5 Wilsonart #17000K-5T Astree Oak (Health Rm cabinets/window sills)

CEILING:
A-1 Armstrong "Fine Fissured" #1728, 24" x 24" x 5/8", Square Lay-in, White (W) with White grid.
A-2 Armstrong "Ultima" #11050, 24" x 24" x 3/4", Square Lay-in, White (W) with White grid.

NOTES:

- A) Interior wood doors to be plain-sliced oak with light brown stained finish, to be approved by architect.
- B) All interior surfaces of metal doors and metal door frames to be painted with finish P-1, semi-gloss enamel.
- C) Plastic laminated window stools to be finished with plastic laminate L-5.
- D) Floor tile pattern using two styles of LVT in this area. See detail H/A-B.
- E) Wood chair rail mounted 34" a.f.f. to be painted with finish P-1, Interior Latex Semi-gloss enamel. See Detail G/A-B.
- F) Painted finish ABOVE chair rail.
- G) Painted finish BELOW chair rail.
- H) Porcelain tile at fireplace hearth and surround in Community Room 116 as shown on interior elevation 11/A-7.

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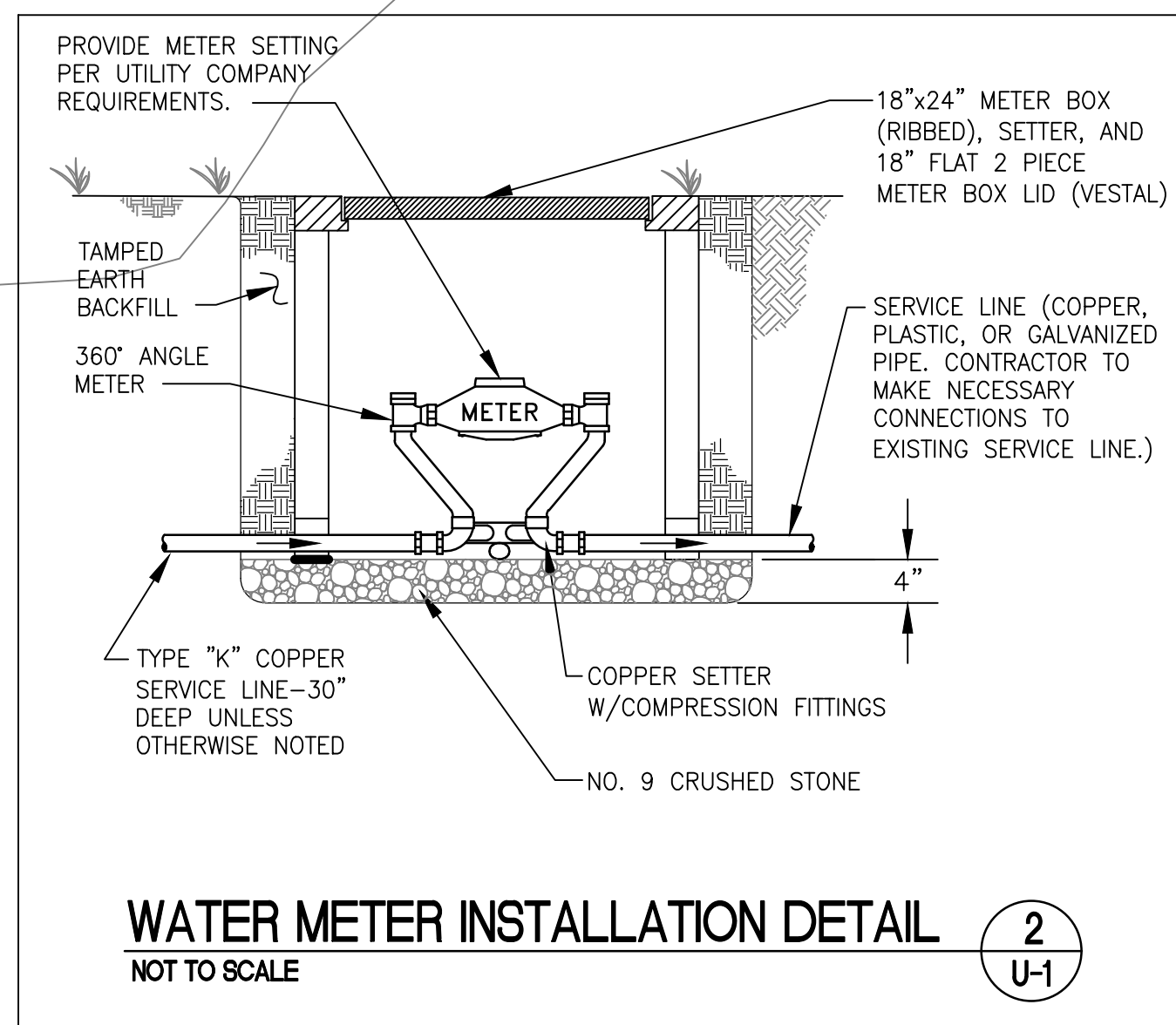
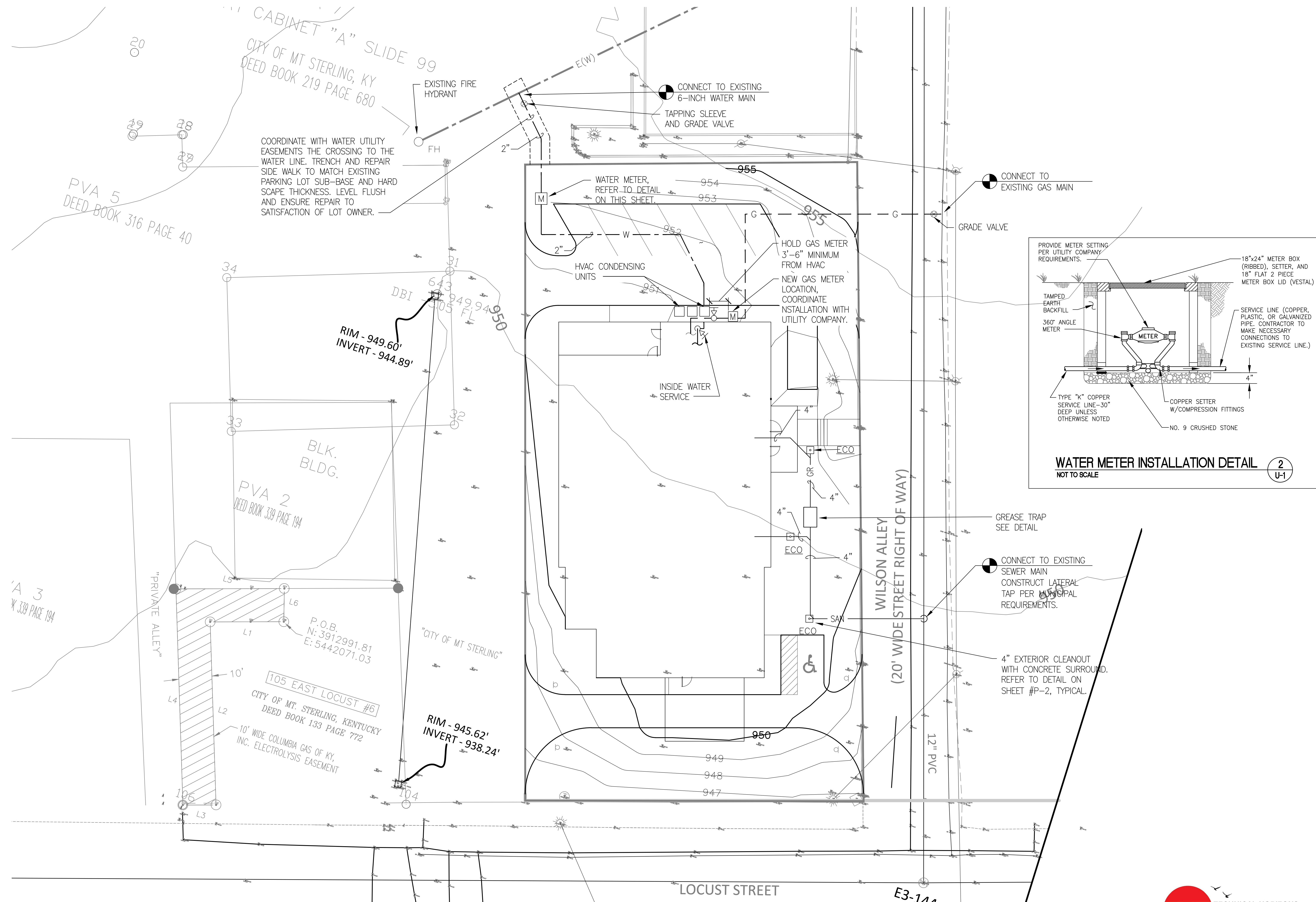
DATE	REVISION	BY

PROJECT NO. 5067-03
DESIGNED BY: BLL
DRAWN BY: BLL
CHECKED BY: MGF
REVIEWED BY: MGF
DATE: DECEMBER 2024
SCALE: AS NOTED

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WATER METER INSTALLATION DETAIL
NOT TO SCALE

2
U-1

SITE PLAN - PLUMBING
SCALE: 1" = 20'-0"

1
U-1

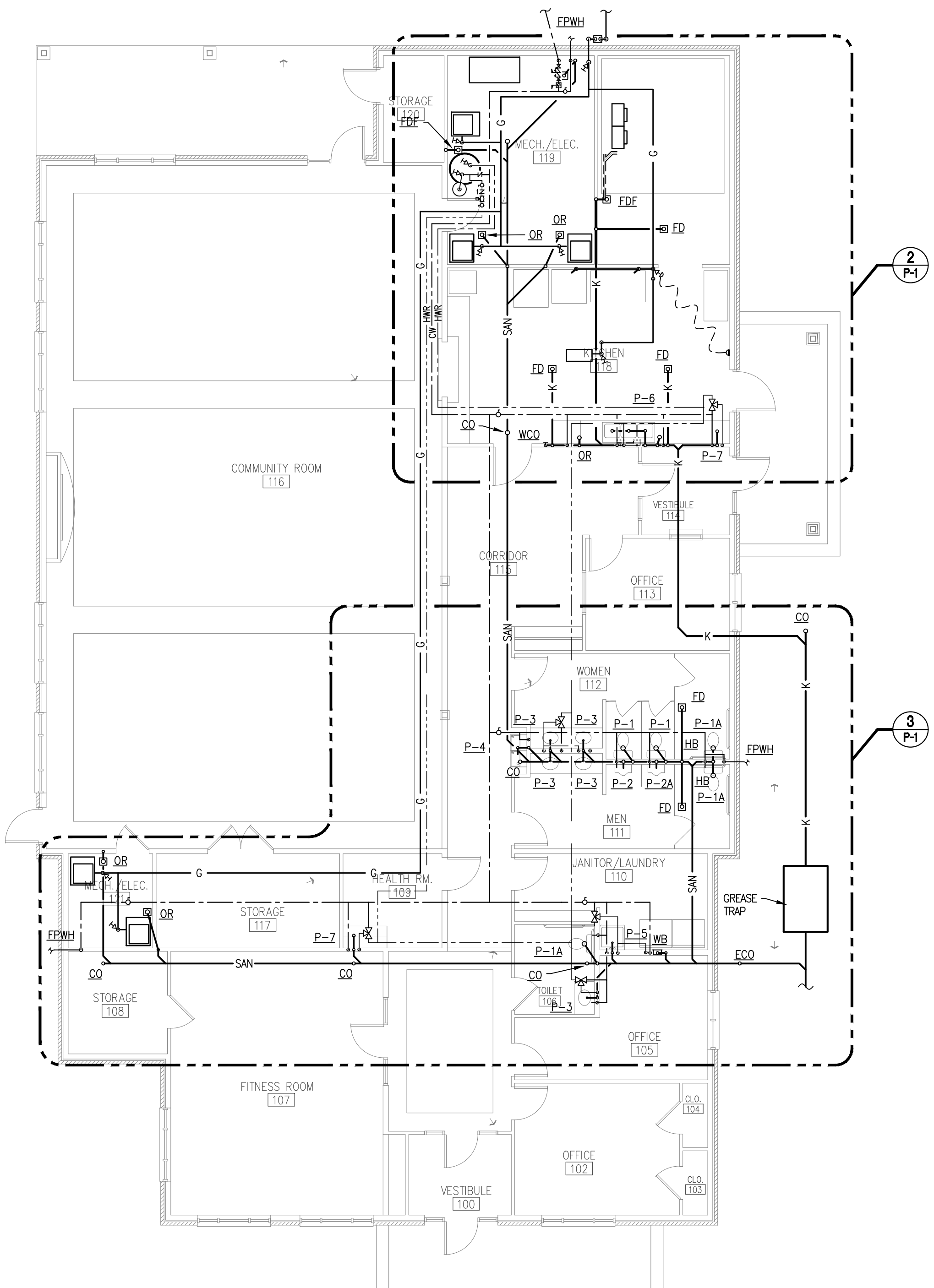


DATE	REVISION	BY

PROJECT NO. 5067-03	DESIGNED BY RVS	DRAWN BY RVS	CHECKED BY CME	REVIEWED BY	DATE SEPTEMBER 2024	SCALE AS NOTED
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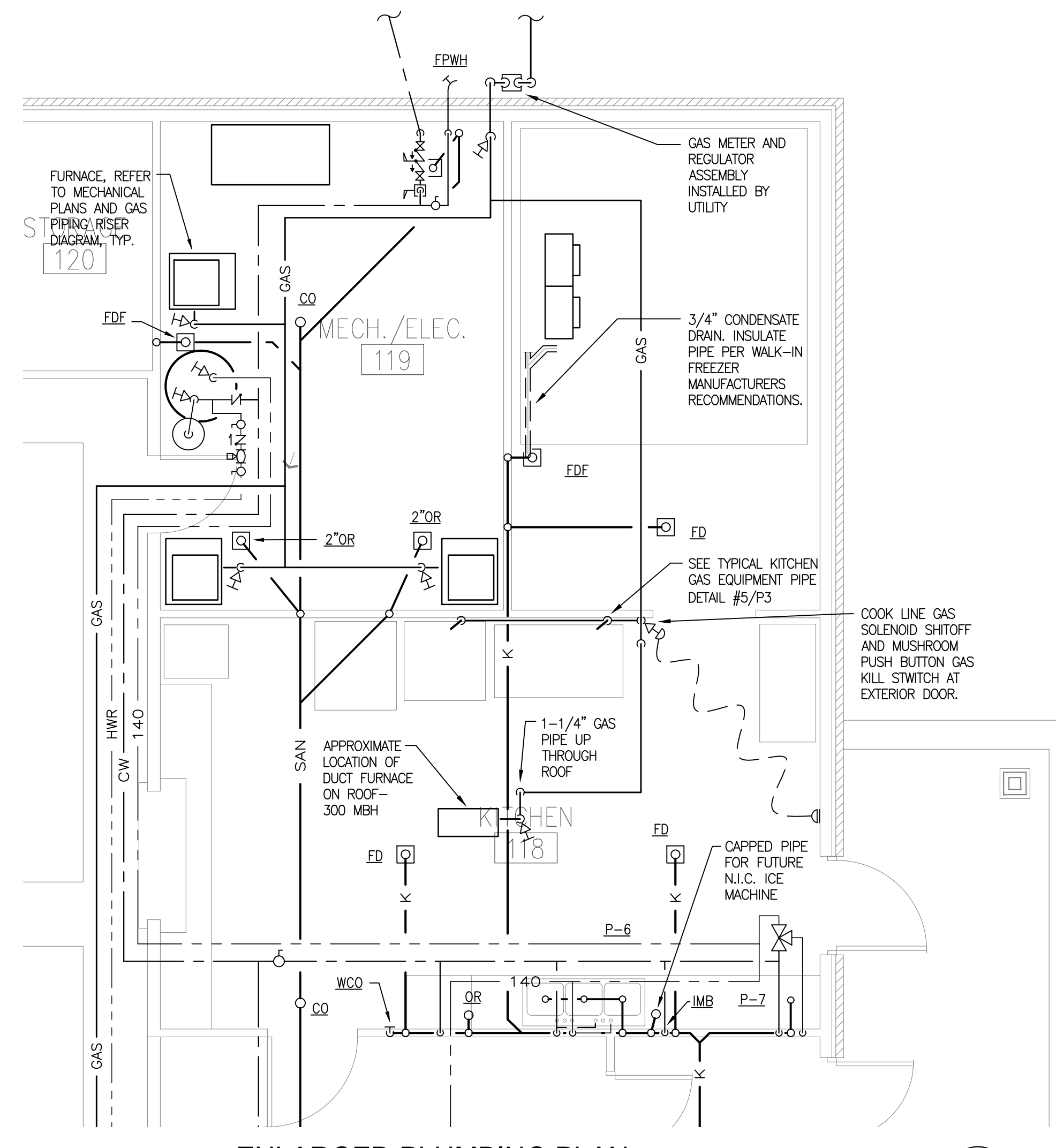
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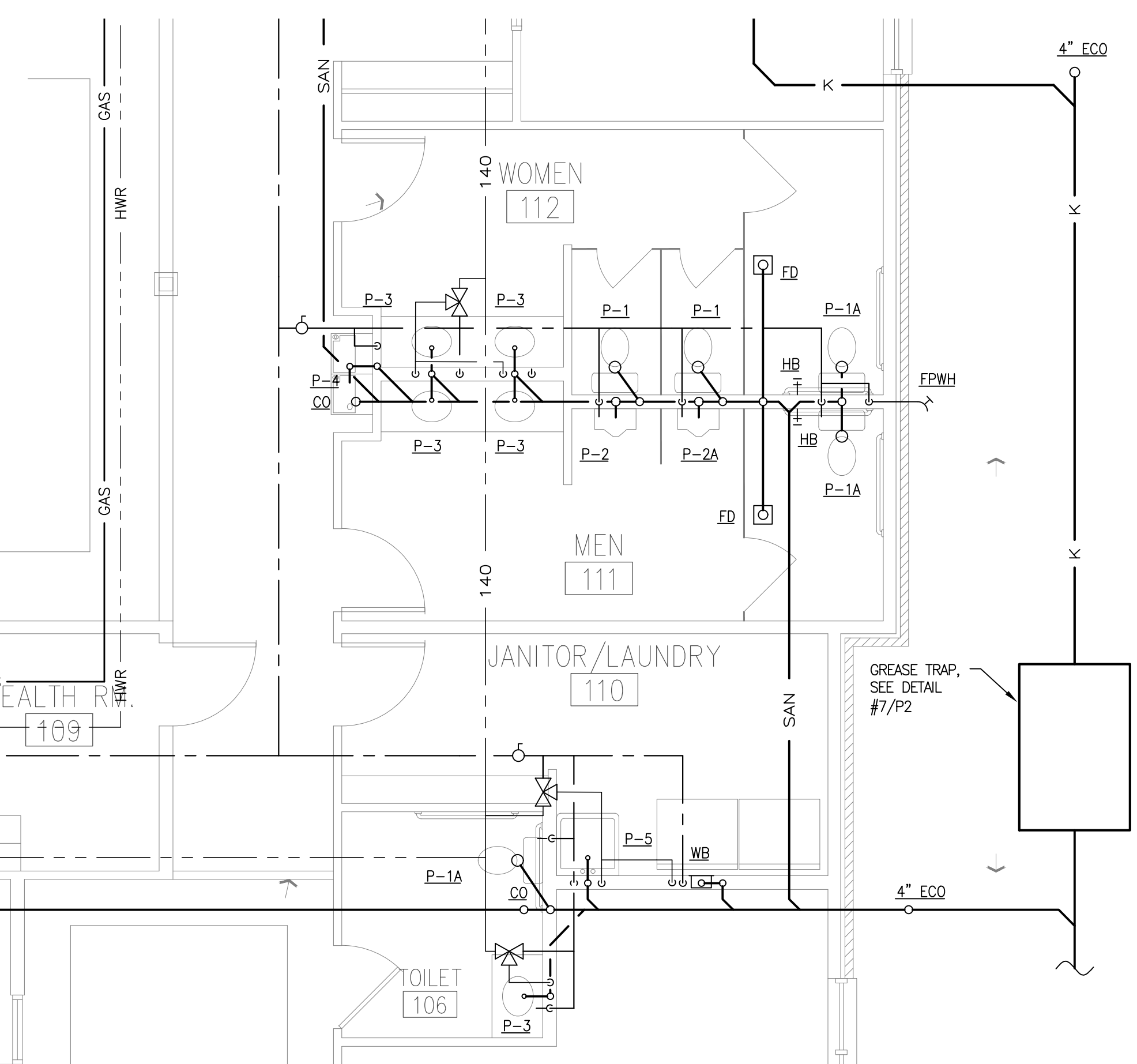
FLOOR PLAN - PLUMBING
SCALE: 1/8" = 1'-0"

1 P-1



ENLARGED PLUMBING PLAN
SCALE: 1/4" = 1'-0"

2 P-1



ENLARGED PLUMBING PLAN
SCALE: 1/4" = 1'-0"

3 P-1

PLUMBING SYMBOLS AND ABBREVIATIONS

NOTE: SOME SYMBOLS SHOWN IN THIS LEGEND MAY NOT NECESSARILY BE USED FOR THIS PROJECT.

---X---X---X---X--- DEMOLISH PIPING	---E(SAN)--- EXISTING SOIL AND WASTE PIPING	---SAN--- SOIL AND WASTE PIPING	---V--- VENT PIPING	---CW--- COLD WATER PIPING (CW)	---HW--- HOT WATER PIPING (HW)	---HWR--- HW RECIRC. PIPING (HWR)	---G--- NATURAL GAS PIPING	---K--- KITCHEN GREASE WASTE PIPING	VTR VENT-THRU-ROOF	UNION	--- --- --- THERMOSTATIC VALVE OR MIXING VALVE	○ CLEANOUT	SOLENOID VALVE	--- --- --- PRESSURE REDUCING VALVE	--- --- --- CHECK VALVE OR BACKFLOW PREVENTER	○ BALL VALVE	AFF ABOVE FINISHED FLOOR	AFG ABOVE FINISHED GRADE	MFR MANUFACTURER	GPM GALLONS PER MINUTE	NIC NOT IN CONTRACT	○ CONNECT TO EXISTING	◆ POINT OF DEMOLITION	--- --- --- FREEZE PROOF WALL HYDRANT	--- --- --- HOSE BIBB	X P-X DETAIL IDENTIFIER	○ P-X SHEET REFERENCE
--	--	------------------------------------	------------------------	------------------------------------	-----------------------------------	--------------------------------------	-------------------------------	--	-----------------------	-------	---	---------------	----------------	--	--	-----------------	-----------------------------	-----------------------------	---------------------	---------------------------	------------------------	--------------------------	--------------------------	--	--------------------------	-------------------------------	-----------------------------

PLUMBING GENERAL NOTES

- CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING LOCATIONS AND CONDITIONS OF ALL EXISTING SYSTEMS BEFORE CONSTRUCTION BEGINS. MAKE ALL PLUMBING CONNECTIONS TO SUCH SYSTEMS INCLUDING BUT NOT LIMITED TO, GAS, DOMESTIC WATER, SEWER, VENT, ETC.
- CONTRACTOR SHALL MAKE ALL NECESSARY PLUMBING CONNECTIONS TO EXISTING SYSTEMS PER KENTUCKY PLUMBING CODE, NFPA AND LOCAL GAS, SEWER AND WATER STANDARDS TO ASSURE ALL NEW INSTALLATIONS ARE COMPLETE AND IN WORKING ORDER.
- THERE IS A EQUIPMENT VENDOR FOR THIS PROJECT THAT WILL BE SUPPLYING EQUIPMENT THAT REQUIRES PLUMBING CONNECTIONS. CONTRACTOR SHALL COORDINATE WITH VENDOR PRIOR TO STARTING PROJECT AND INSTALL ALL NECESSARY PLUMBING FOR SUCH EQUIPMENT.
- THE FIXTURE ROUGH-INS AND THEIR LOCATIONS FOR ALL CONNECTIONS ARE ACCURATE TO THE BEST OF OUR KNOWLEDGE. IN SOME INSTANCES THE OWNER OR SUPPLIER MAY MAKE SUBSTITUTIONS OR THE FIXTURE MAY VARY FROM WHAT IS SHOWN. THEREFORE, THESE ITEMS SHALL BE VERIFIED WITH THE SUPPLIER. THE ARCHITECT/ENGINEER SHALL BE IMMEDIATELY NOTIFIED, PRIOR TO CONSTRUCTION, OF ANY DEVIATIONS FROM WHAT IS SHOWN OR IMPLIED ON THESE DRAWINGS. FAILURE OF THE APPROPRIATE CONTRACTOR TO VERIFY ROUGH-INS OR THEIR LOCATIONS SHALL PLACE THE RESPONSIBILITY FOR ANY SUBSEQUENT RELOCATION AND/OR ADDITIONAL ROUGH-INS DIRECTLY UPON THE CONTRACTOR.
- CONTRACTOR SHALL SUPPLY TO THE ARCHITECT EIGHT COPIES OF SHOP DRAWINGS FOR APPROVAL SO THE QUALITY OF INTENDED MATERIALS OR EQUIPMENT CAN BE REVIEWED BEFORE INSTALLATION.
- DO NOT SCALE THESE DRAWINGS. REFER TO ARCHITECTURAL FLOOR PLAN FOR BUILDING DIMENSIONS.
- THE SUBMISSION OF A PROPOSAL WILL BE CONSIDERED AS EVIDENCE THAT THE CONTRACTOR HAS FAMILIARIZED HIMSELF WITH THE PLANS AND BUILDING SITE. CLAIMS MADE SUBSEQUENT TO THE PROPOSAL FOR MATERIALS AND LABOR BECAUSE OF DIFFICULTIES ENCOUNTERED WILL NOT BE RECOGNIZED, IF THEY COULD HAVE BEEN FORESEEN HAD PROPER EXAMINATION BEEN MADE.
- PLUMBING CONTRACTOR SHALL INSTALL ALL SOIL AND WASTE PIPING WITH A MINIMUM SLOPE OF 1/8" PER FOOT UNLESS OTHERWISE REQUIRED BY THE STATE OR LOCAL ADMINISTRATIVE AUTHORITY.
- FURNISH & INSTALL 1/2" (MIN) FIBERGLASS INSULATION WITH ALL SERVICE JACKET ON ALL HOT & COLD WATER LINES ABOVE SLAB.
- MATERIALS, EQUIPMENT, ASSEMBLIES AND SYSTEMS SHALL MEET ALL PERTINENT REQUIREMENTS OF NATIONALLY RECOGNIZED TESTING ORGANIZATION SUCH AS THE UL, ASTM, ASSE, AWWA AND NFPA.
- ALL VENT PIPE TO BE COMPATIBLE WITH STRUCTURE, MECHANICAL EQUIPMENT AND DUCTWORK, ELECTRICAL EQUIPMENT AND LIGHTING.
- THE CONTRACTOR SHALL COOPERATE FULLY AMONG THE TRADES.
- ALL EQUIPMENT, FIXTURES AND MATERIALS SHALL BE OF NEW AND UNUSED CONDITION. EQUIPMENT SHALL BE INSTALLED IN STRICT CONFORMANCE TO MANUFACTURER'S RECOMMENDATIONS (U.O.N.). PROVIDE COMPLETE WITH ALL TRIM, STOPS, HANGERS, CARRIERS, SUPPORTS, ETC. INCLUDING PROVISION FOR THE HANDICAPPED, IF REQUIRED. WHERE FIXTURES ARE ACCESSIBLE TO THE HANDICAPPED, FIXTURES MUST COMPLY WITH ALL FEDERAL A.D.A. REGULATIONS.
- THE POTABLE WATER SUPPLY SHALL BE PROTECTED AGAINST BACKFLOW AND SIPHONAGE BOTH NATURAL AND INDUCED. ALL EQUIPMENT CONNECTED TO THE POTABLE WATER SYSTEM BEING CAPABLE OF POLLUTING OR CONTAMINATING THE POTABLE WATER DISTRIBUTION SYSTEM OR ANY PART THEREOF BY MEANS OF A REVERSAL OF FLOW, PRESSURE DROP, PRESSURE LOSS, INDUCED VACUUM OR BY INJECTION BECAUSE OF ANY PRIMARY OR AUXILIARY PUMPING SYSTEM CONNECTED THERETO MUST BE ISOLATED AND CONTAINED BY MEANS OF APPROVED BACKFLOW DEVICES, CHECK VALVES, AIR GAPS OR VACUUM BREAKERS. PLUMBING CONTRACTOR SHALL FURNISH AND INSTALL THESE DEVICES PER LOCAL CODE REQUIREMENTS.
- ALL ROOF PENETRATIONS SHALL BE MADE IN ACCORDANCE WITH ROOF SYSTEM MANUFACTURER'S GUIDELINES. COORDINATE WITH ARCHITECTURAL DETAILS FOR ROOF SYSTEM USED.
- FURNISH AND INSTALL SHUT OFF OR BALL VALVE AND DIELECTRIC UNION ON ALL HOT AND COLD WATER LINES. PLUMBING CONTRACTOR SHALL MAKE ALL FINAL CONNECTIONS TO PLUMBING FIXTURES. ALL SHUT-OFFS TO BE IN ACCESSIBLE LOCATIONS.
- PROVIDE CHROME PLATED ESCUTCHEONS AT ALL VISIBLE WALL, CEILING AND FLOOR PENETRATIONS.
- ALL V.T.R.'S SHALL BE EXTENDED TO A MINIMUM OF 1' ABOVE ROOF AND MAINTAINED 10'-0" MINIMUM FROM ALL OUTSIDE AIR INTAKES.
- VERIFY MOUNTING HEIGHTS OF ALL HANDICAP FIXTURES WITH ARCHITECTURAL PLANS.
- HANDICAPPED LAVATORY P-TRAP AND ANGLE STOP ASSEMBLIES SHALL BE INSULATED WITH TRAP WRAP PROTECTIVE KIT 500R BY BROCAR (1-800-827-1207) OR EQUAL. ABRASION RESISTANT EXTERIOR COVER SHALL BE SMOOTH AND HAVE 1/8" MIN. WALL OVER CUSHIONED FOAM INSERT. FASTENERS SHALL REMAIN SUBSTANTIALLY OUT OF SIGHT.
- BIDDERS SHALL BE LICENSED CONTRACTORS IN ACCORDANCE WITH LOCAL AND STATE LAWS.
- ALL INSTALLED SYSTEMS, DEVICES AND RELATED ITEMS SHALL BE TESTED IN PLACE ON SITE. REPLACE ANY AND ALL CONTRACTOR SUPPLIED DEFECTIVE DEVICES, ITEMS OR SYSTEMS AT CONTRACTOR'S OWN EXPENSE BEFORE COMPLETION OF PROJECT.
- ALL PERMITS AND FEES REQUIRED FOR THE WORK SHALL BE SECURED AND PAID FOR BY THE CONTRACTOR AND INCLUDED IN THE BID PRICE.
- THE WATER PIPING SYSTEM SHALL BE FLUSHED AND STERILIZED IN ACCORDANCE WITH LOCAL REGULATIONS.

PROGRESS REVIEW ONLY - NOT FOR CONSTRUCTION

PROJECT NO.	5067-03
DESIGNED BY	RVS
DRAWN BY	RVS
CHECKED BY	CME
REVIEWED BY	MARCH 4 2024
DATE	MARCH 4 2024
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MT. STERLING, KENTUCKY

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**MONTGOMERY COUNTY
SENIOR CITIZENS CENTER
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DATE	MARCH 4 2024
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DRAWING NO.
P-2
SHEET OF

PROGRESS REVIEW ONLY - NOT FOR CONSTRUCTION

PLUMBING FIXTURE SCHEDULE					
MARK	ITEM	HW	CW	WASTE	DESCRIPTION
P-1	FLOOR MOUNTED FLUSH VALVE (UNIVERSAL HEIGHT)	--	1/2"	4"	AMERICAN STANDARD #745A101.020, HOMESTEAD VORMAX 1.28 GPF ELONGATED BOWL, "RIGHT HEIGHT" FLOOR MOUNT FLUSH VALVE WITH OPEN FRONT SEAT, NO COVER. PROVIDE CHROME PLATED SUPPLY STOP AND ESCUTCHEON.
P-1A	FLOOR MOUNTED FLUSH VALVE (SUITABLE FOR ADA)	--	1/2"	4"	SAME AS FIXTURE P-1
P-2	URINAL	--	3/4"	2"	AMERICAN STANDARD ALLBROOK #655001.020 WALL HUNG, TOP SPUD SLOAN #8186 G2 OPTIMA PLUS BATTERY SENSOR FLUSH VALVE WITH H-573-A CP, STOP CAP / FRICTION RING ASM, 3/4" TOP SPUD, 1.0 GPM / FLUSH, STRAINER. WALL HUNG WITH FLOOD RIM MOUNTED AT 24" AFF.
P-2A	URINAL	--	3/4"	2"	SAME AS FIXTURE P-2; MOUNT FLOOD RIM AT 17" AFF
P-3	LAVATORY (SELF RIMMING MT. CHINA)	1/2"	1/2"	1-1/4"	AMERICAN STANDARD COLONY #0346403.020 DROP-IN, WHITE VITREOUS CHINA, FRONT DELTA 501 FAUCET AND CHROME TRIM INCLUDING GRID DRAIN; PROVIDE CHROME PLATED SUPPLIES, STOPS AND ESCUTCHEONS.
P-4	BI-LEVEL WATER COOLER WITH BOTTLE FILLER	--	1/2"	1-1/2"	ELKAY #EZSTL8WSLK EZH20 BOTTLE FILLING STATION AND BARRIER FREE BI-LEVEL WATER COOLER DESIGN WITH FRONT PUSH-BUTTON OPERATOR, MOUNTING HANGER, FLOW REGULATOR (20 TO 105 PSI), PROVIDE IN-WALL CARRIER MOUNTING PLATE, LIGHT GRAY FINISH. 8GPH CAPACITY [4.8 AMPS, 3.9KW, COMP. 1/5 HP.]. MOUNT BOTTOM OF LOWER FOUNTAIN APRON AT 27" FOR ADA COMPLIANCE.
P-5	MOP SINK	--	1/2"	3"	MUSTEE 63M FLOOR MOUNTED DURASTONE MOP BASIN 24" X 24" X 10" HIGH. PROVIDE SPEAKMAN #SC-5811-RCP SERVICE SINK FAUCET WITH VACUUM BREAKER. MOUNT FAUCET 36" ABOVE FINISHED FLOOR. PROVIDE DRAIN STRAINER, SPOUT BRACE, BUMPER GUARD, FILL HOSE, HOSE HANGER AND MOP HANGER ACCESSORIES.
P-6	FOOD AREA TRIPLE BOWL SINK	1/2"	1/2"	1-1/2"	JUST BRAND #NSFB354-118RL, 93" LONG SINK, 14 GAUGE SSSL FLOOR STANDING TYPE 304 THREE COMPARTMENT SINK, INCLUDES (2) 18" DRAIN BOARDS, 12" HIGH BACKSPASH PUNCHED FOR TWO FAUCETS. JUST BRAND #JIS-48-TA1 CHROME PLATED BACKSPASH MTD. FAUCET W/8" BRASS SWIVEL SPOUT, 2.2 GPM. PROVIDE TWIST HANDLE FRONT DRAIN W/STAINLESS STEEL FINISH, REMOVABLE FLAT STRAINER, AND BRASS 1-1/2" TAILPIECES.
P-7	HAND WASH SINK (DROP-IN BARRIER FREE)	1/2"	1/2"	1-1/4"	ELKAY CELEBRITY CR1721 STAINLESS STEEL 17" X 21-1/4" X 6-7/8" SINGLE BOWL DROP-IN SINK, PROVIDE LK 499A GOOSENECK SPOUT FAUCET WITH BH4A WRIST BLADE HANDLES AND AERATOR. PROVIDE GRID DRAIN, CHROME PLATED TAILPIECE AND P-TRAP, ESCUTCHEONS AND STOP VALVES.
FD	FLOOR DRAIN	--	--	LINE SIZE	JAY R SMITH, ZN415 SERIES, DUCO CAST IRON BODY, 1/2" TRAP PRIMER CONNECTION WITH 6" SQUARE POLISHED NICKEL-BRONZE STRAINER
DFD	FLOOR DRAIN FUNNEL	--	--	3"	SAME AS FD EXCEPT WITH FUNNEL ACCESSORY
OR	OPEN RECEPTACLE	--	--	LINE SIZE	JAY R. SMITH 2646 STRAIGHT SPIGOT ADAPTER WITH TOP AT 2" AFF OR AS REQUIRED. PROVIDE WITH TRAP PRIMER CONNECTION.
WCO	OPEN RECEPTACLE	--	--	LINE SIZE	ZURN Z1446 TEE, DUCO CAST IRON BODY, WATER TIGHT ROUND STAINLESS STEEL WALL ACCESS COVER W/SECURING SCREW.
CO	CLEANOUT	--	--	LINE SIZE	ZURN 1400 SERIES DUCO CAST IRON BODY WITH ROUND HEAVY DUTY SCORAIATED POLISHED BRONZE TOP. ADJUSTABLE TO FLOOR LEVEL AFTER CONCRETE HAS SET.
ECO	EXTERIOR CLEANOUT	--	--	LINE SIZE	ZURN 1400 SERIES DUCO CAST IRON BODY WITH ROUND HEAVY DUTY ENAMEL COATED DUCTILE IRON TOP. ADJUST LEVEL TO CONCRETE APRON. SEE DETAIL THIS SHEET.
IMB	ICE MAKER BOX	--	1/2"	--	GUY GREY MODEL #88164 RECESSED STAINLESS STL 10"x8" BOX W/ STAINLESS STL. FACEPLATE AND 1/2-INCH BRASS QUARTER TURN STOP VALVE. INSTALL AT 24" AFF.
HB	HOSE BIBB	--	1/2"	--	WOODFORD MODEL 24P-1/2 WITH REMOVABLE KEY HANDLE, VACUUM BREAKER AND POLISHED CHROME FINISH.
FPWH	WALL HYDRANT	--	3/4"	--	WOODFORD MODEL 65C, AUTOMATIC DRAINING, FREEZELESS, WITH VACUUM BREAKER, LOOSE KEY.
TP-1	TRAP PRIMER TYPE-1	ZURN Z-1022, TRAP PRIMER SHALL BE INSTALLED IN COLD WATER SUPPLY LINE OF NEAR BY PLUMBING FIXTURE, ONE TRAP PRIMER PER FLOOR DRAIN, ONE TRAP PRIMER PER FIXTURE.			

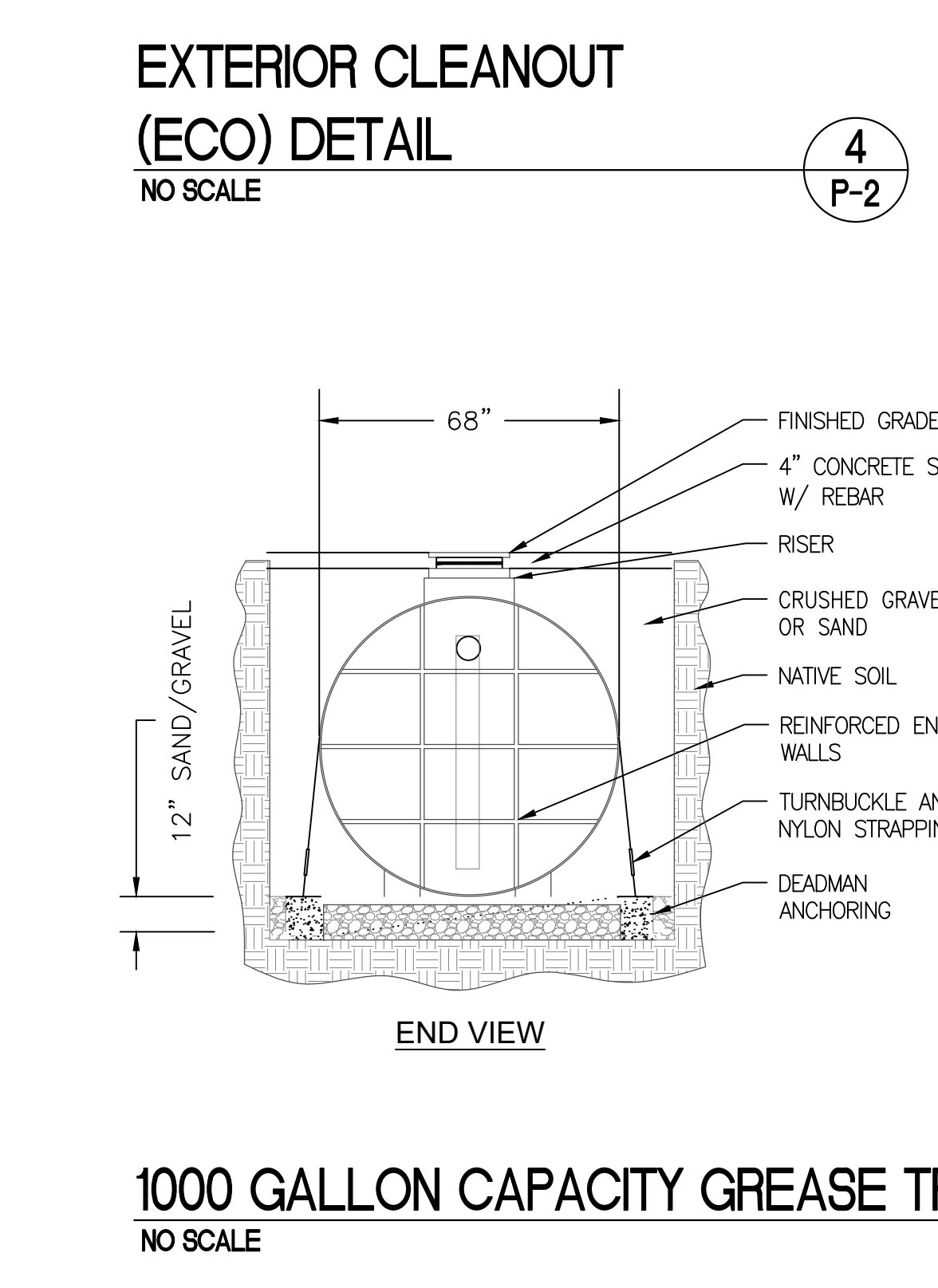
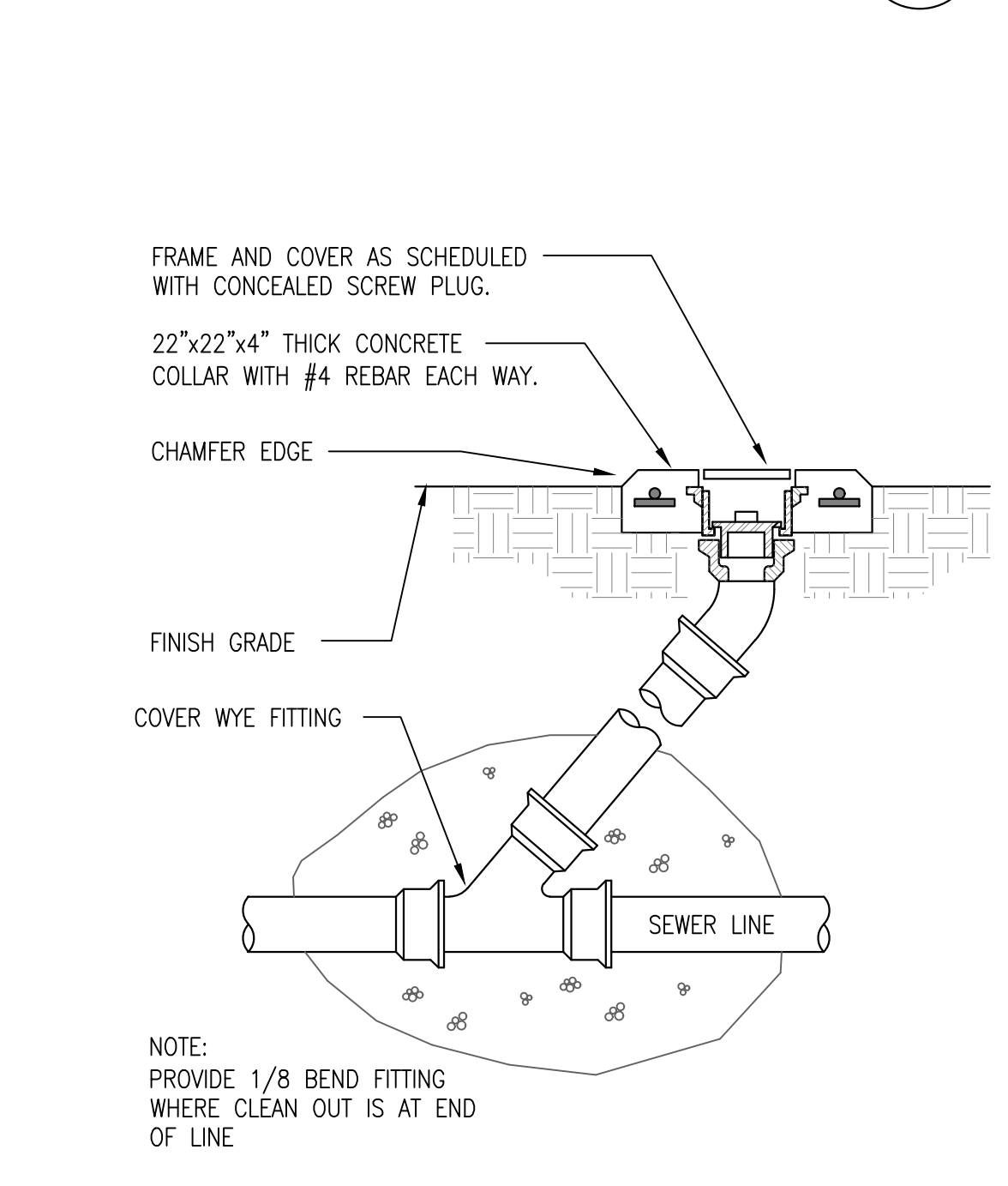
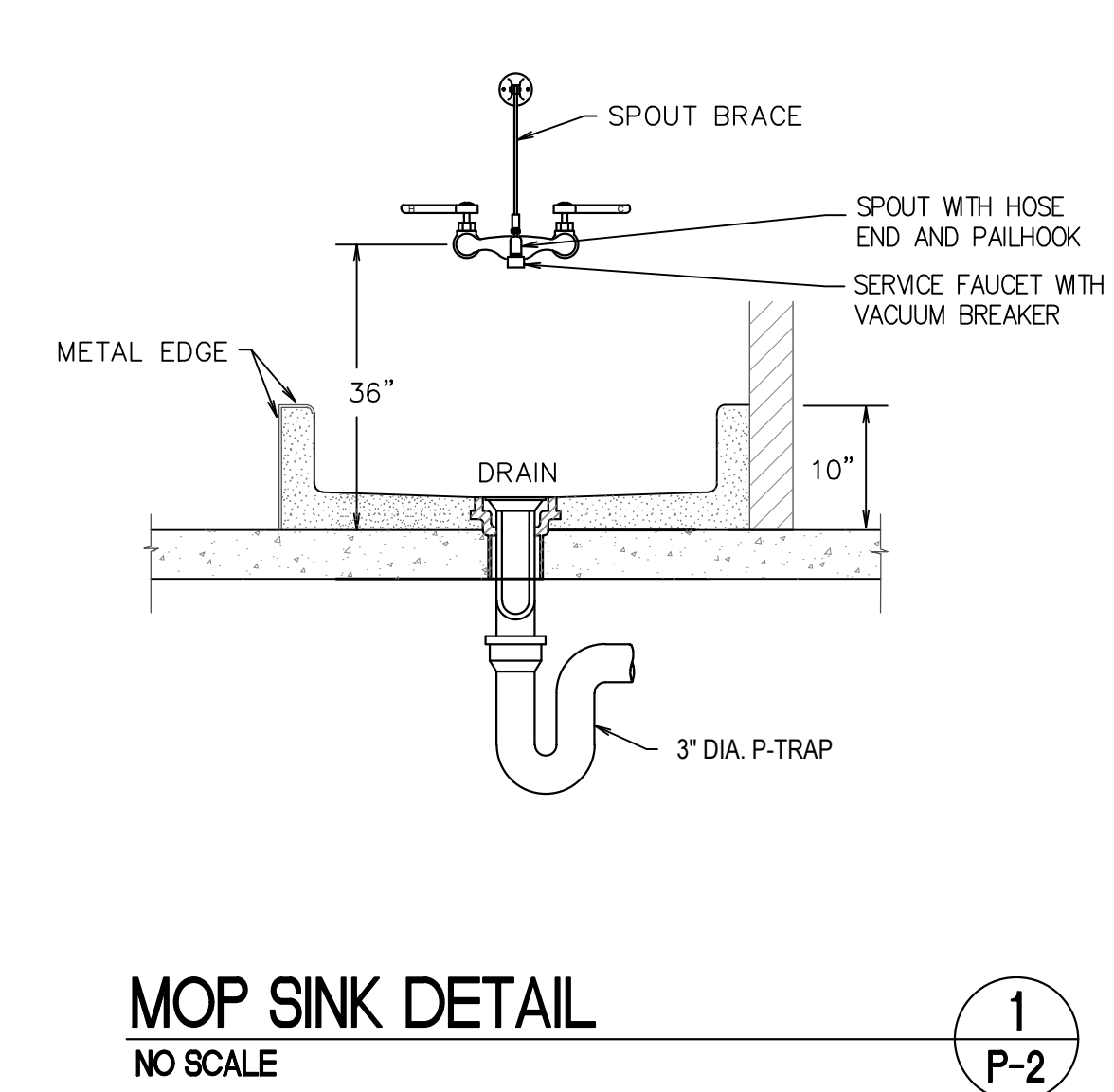
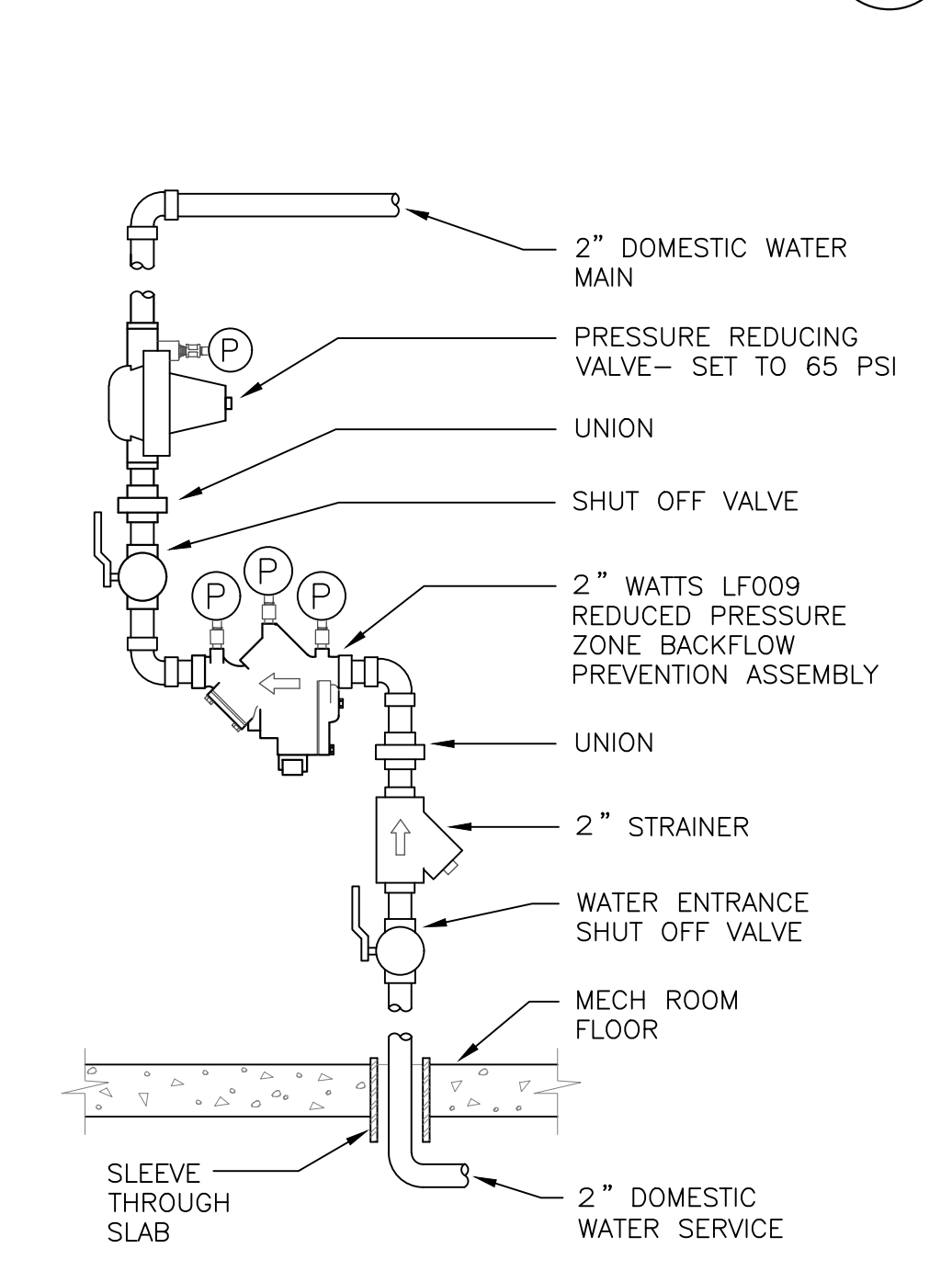
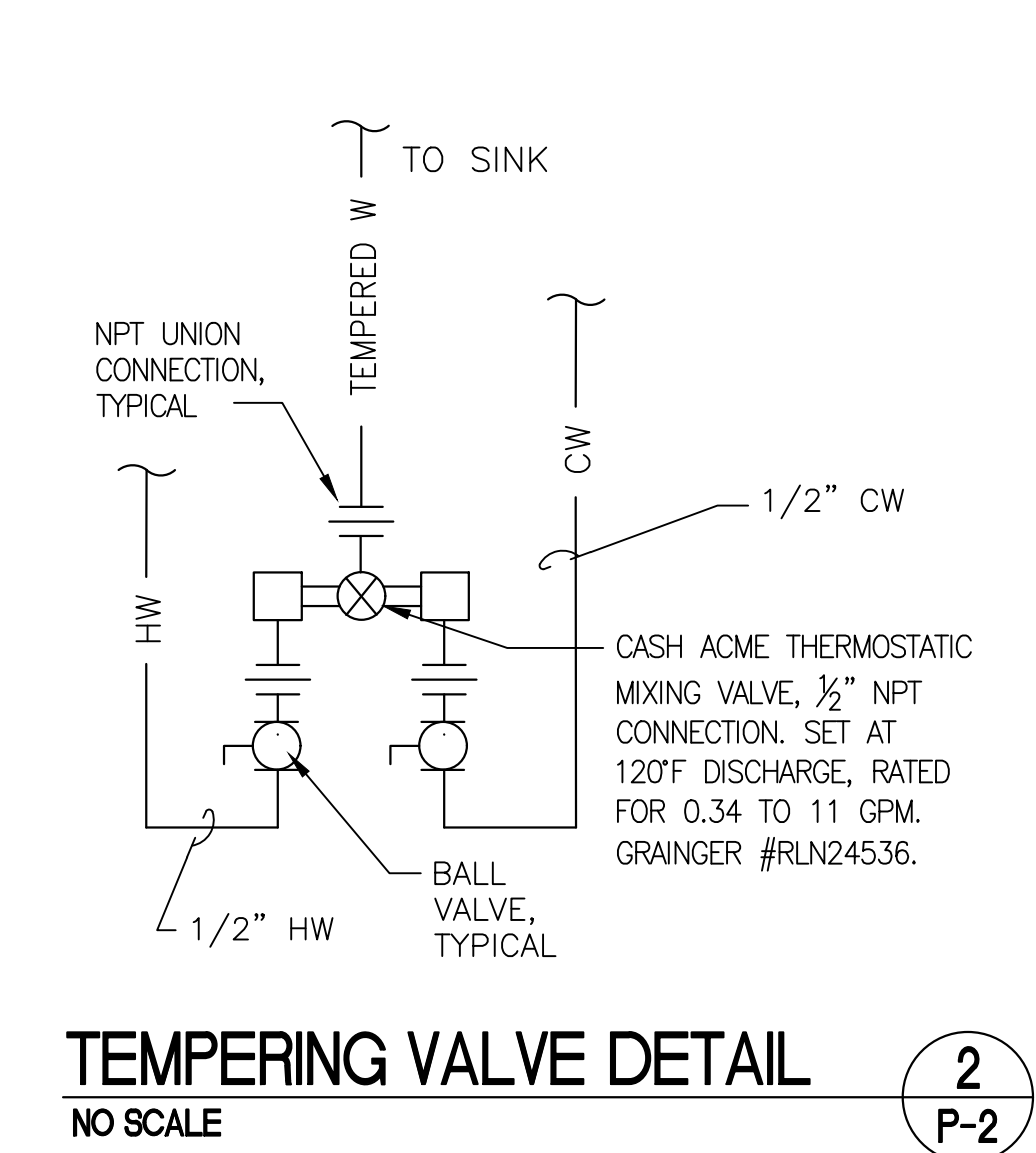
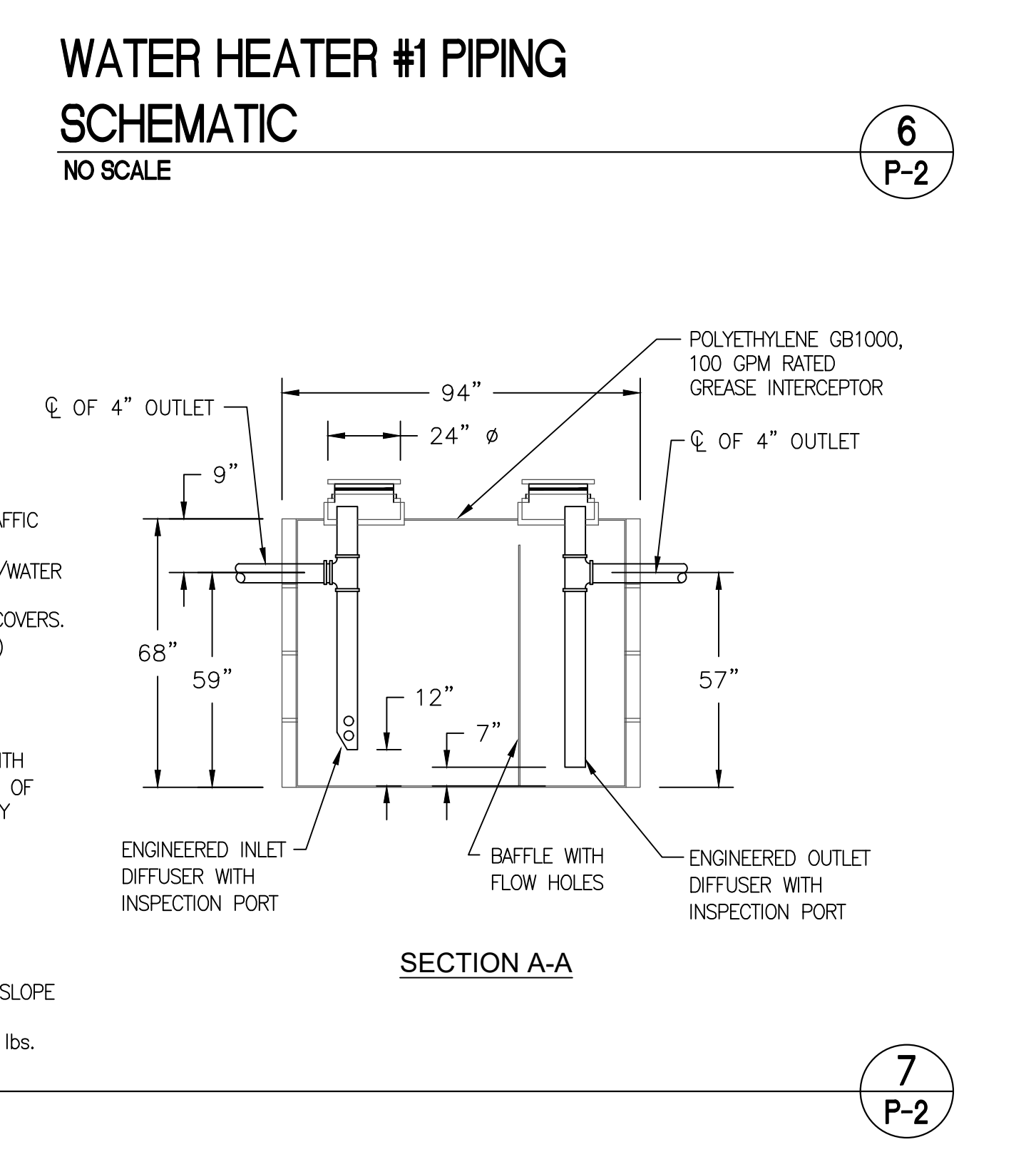
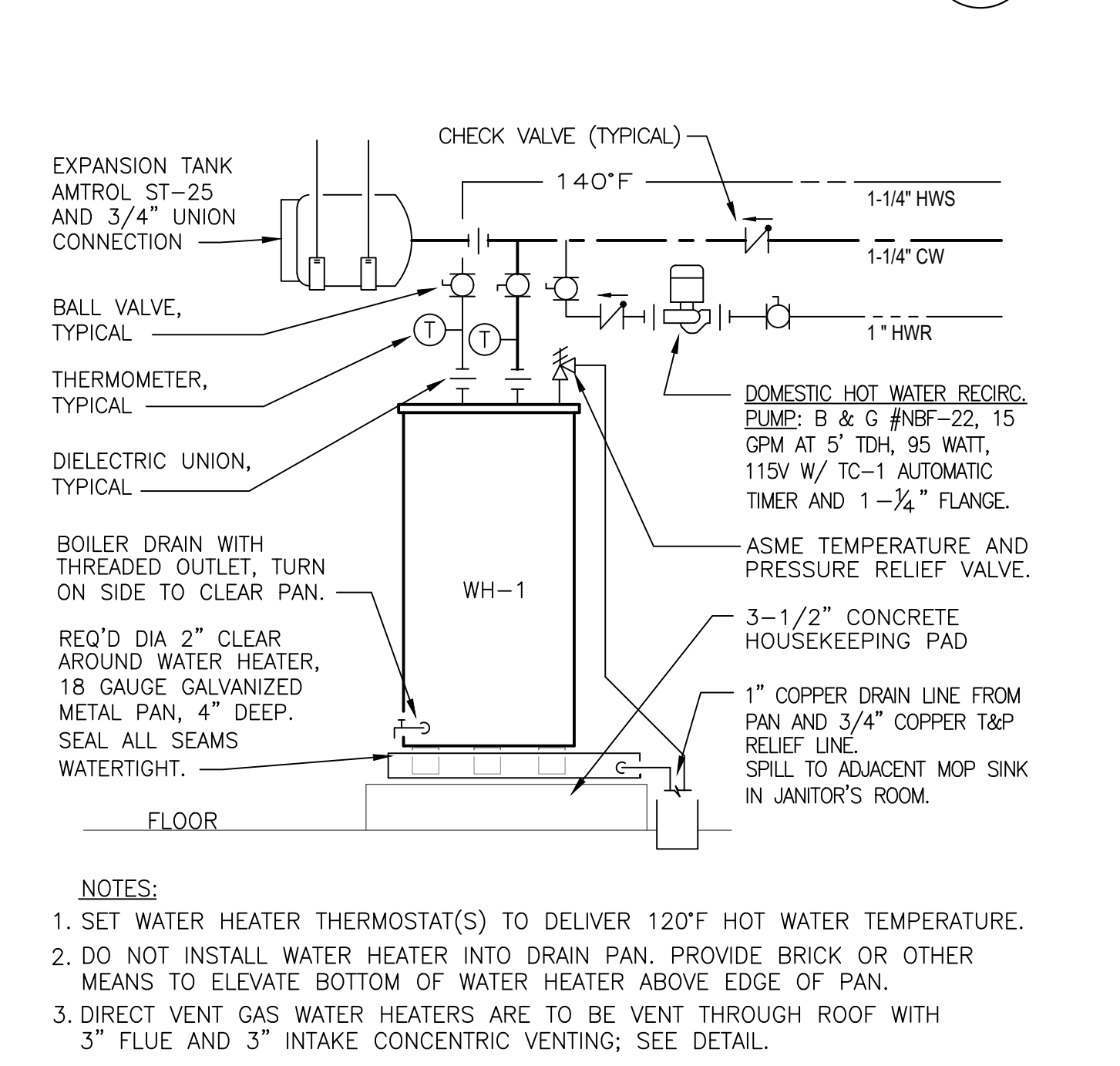
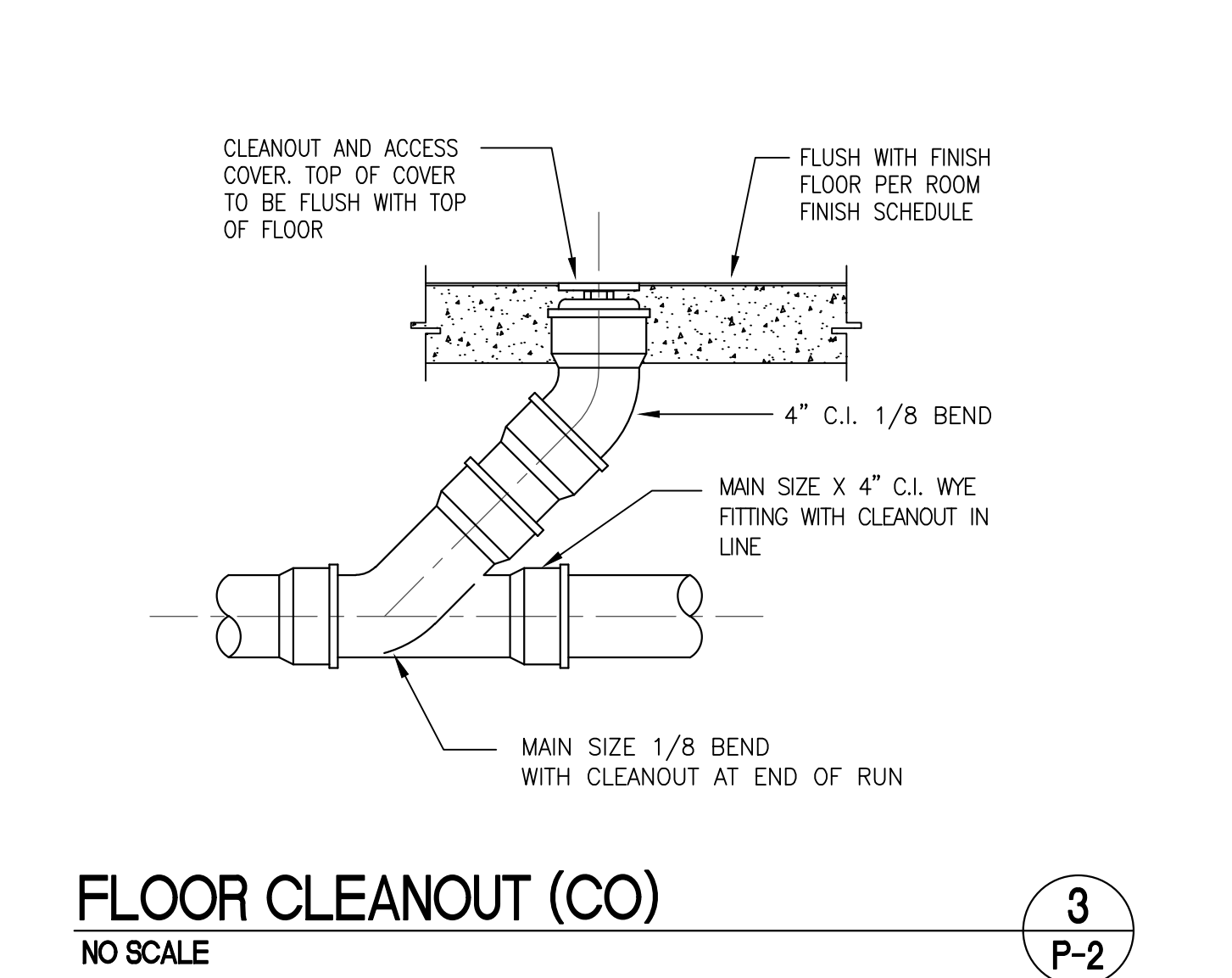
- ### PLUMBING FIXTURE SCHEDULE NOTES:
- CONTRACTOR SHALL FURNISH AND INSTALL CARRIER FOR EACH FIXTURE WHICH IS WALL HUNG, UNLESS OTHERWISE NOTED. PROVIDE APPROPRIATE CARRIER PER FIXTURE TYPE AND REQUIREMENTS.
 - CONTRACTOR SHALL FURNISH AND INSTALL WATTS, ZURN OR P.P.P. INC. TRAP PRIMERS TO SERVE ALL APPROPRIATE FLOOR DRAINS AND/OR OPEN RECEPTACLES AS REQUIRED.
 - ACCEPTABLE ALTERNATE MANUFACTURERS FOR ITEMS INCLUDING BUT NOT LIMITED TO:
 - 3.A. WATER CLOSETS: KOHLER, ELKER, CRANE, MANSFIELD LAVATORIES: SAME AS WATER CLOSETS.
 - 3.B. URINALS: SAME AS WATER CLOSETS.
 - 3.C. FLOOR DRAINS AND CLEANOUTS: WADE, ZURN, PLASTIC ODITIES.
 - 3.D. WATER HEATERS: LOCHINVAR, PVI, HESCO.
 - 3.E. HOSE BIBBS/WALL HYDRANTS: ZURN, CHICAGO FAUCET, T&S BRASS.
 - ENCLOSE ALL EXPOSED SUPPLIES AND P-TRAPS OF BARRIER FREE LAVATORIES WITH A PROTECTIVE INSULATING MATERIAL AND A SMOOTH JACKET (TRAP-WRAP OR EQUAL).
 - SHOCK ARRESTORS FOR BRANCH PIPING TO FIXTURES WITH QUICK CLOSING VALVES SHALL BE BY P.P.P. INC., ZURN (OR EQUAL), SIZED PER PDI REQUIREMENTS.

DOMESTIC WATER HEATER SCHEDULE							
MARK	MANUFACTURER	MODEL#	TANK SIZE	INPUT ENERGY	DIMS.	ELECTRICAL FLA VOLTS/Ø	REMARKS
WH-1	BRADFORD WHITE	EF-100T-199E-5N	100 GAL	199 MBH	76"Tx28"Ø	12 120/1	1, 2, 3

REMARKS:
 1. PROVIDE WITH ASME TEMPERATURE GAUGE.
 2. 5-YEAR WARRANTY, AQUASTAT W/ HIGH TEMP CUT OFF.
 3. POWER VENT KIT.

WATER HAMMER ARRESTOR SCHEDULE			
PDI UNITS	A	B	C
FIXTURE UNITS	1-11	12-32	33-60

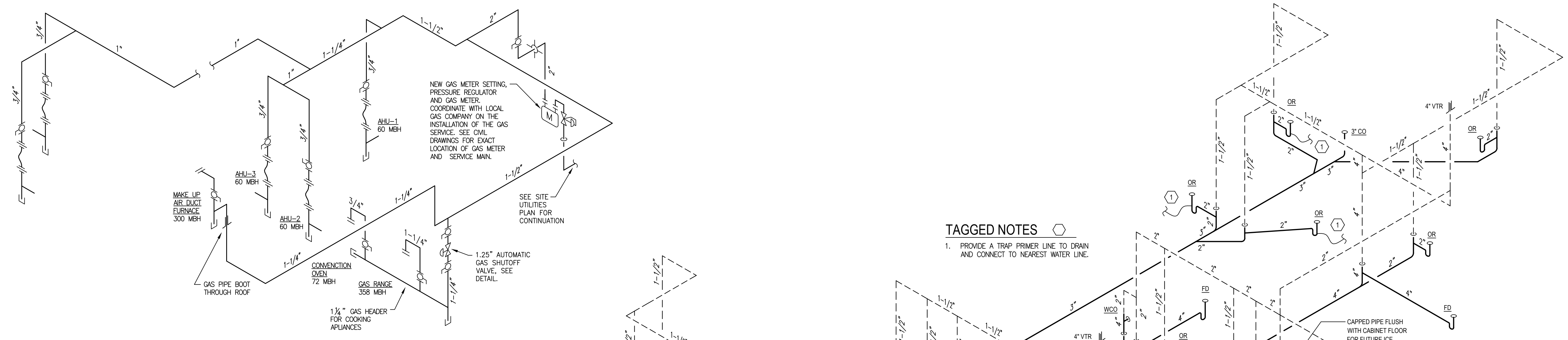
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Lexington, KY 40509
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1000 GALLON CAPACITY GREASE TRAP
NO SCALE



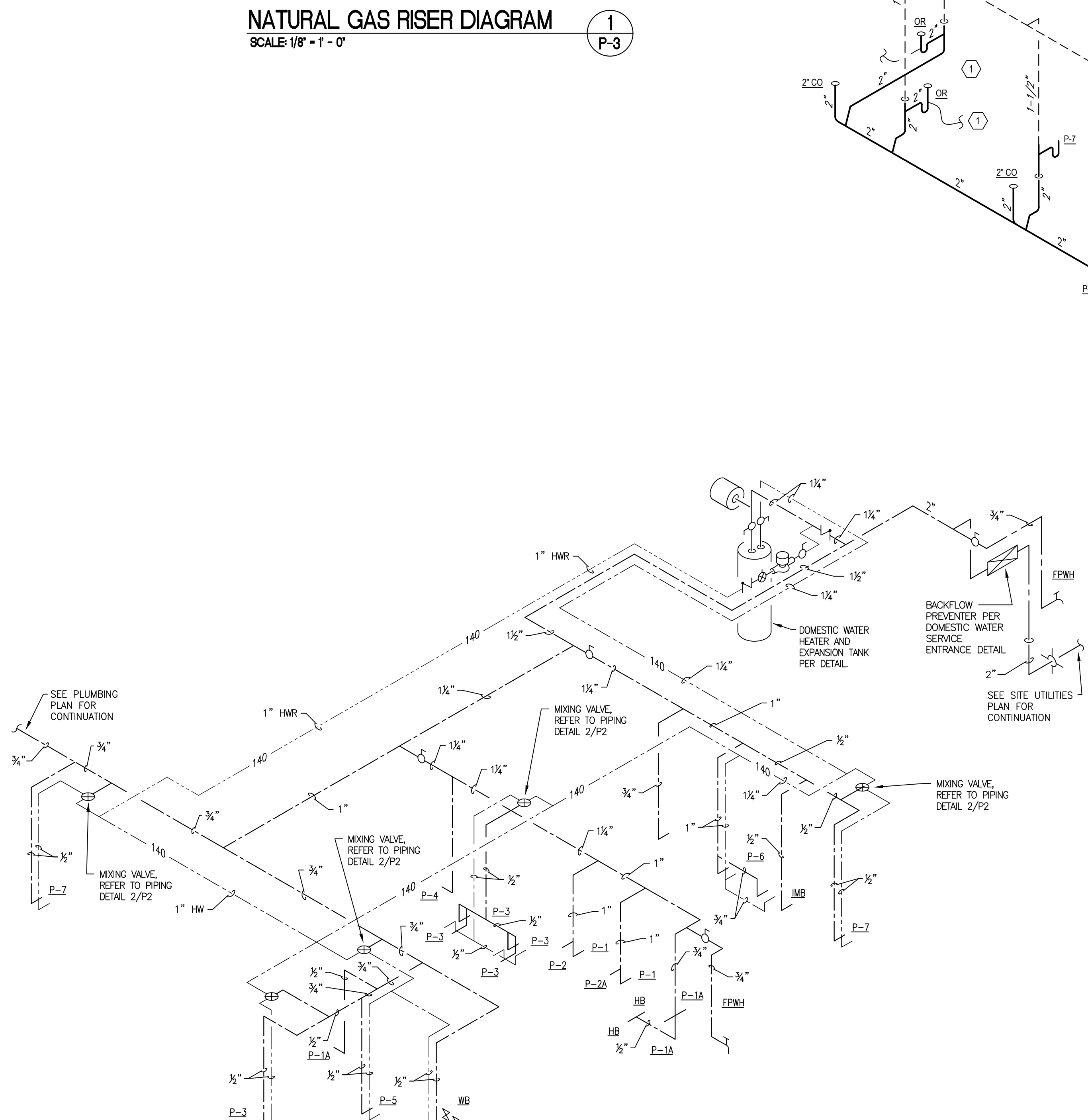
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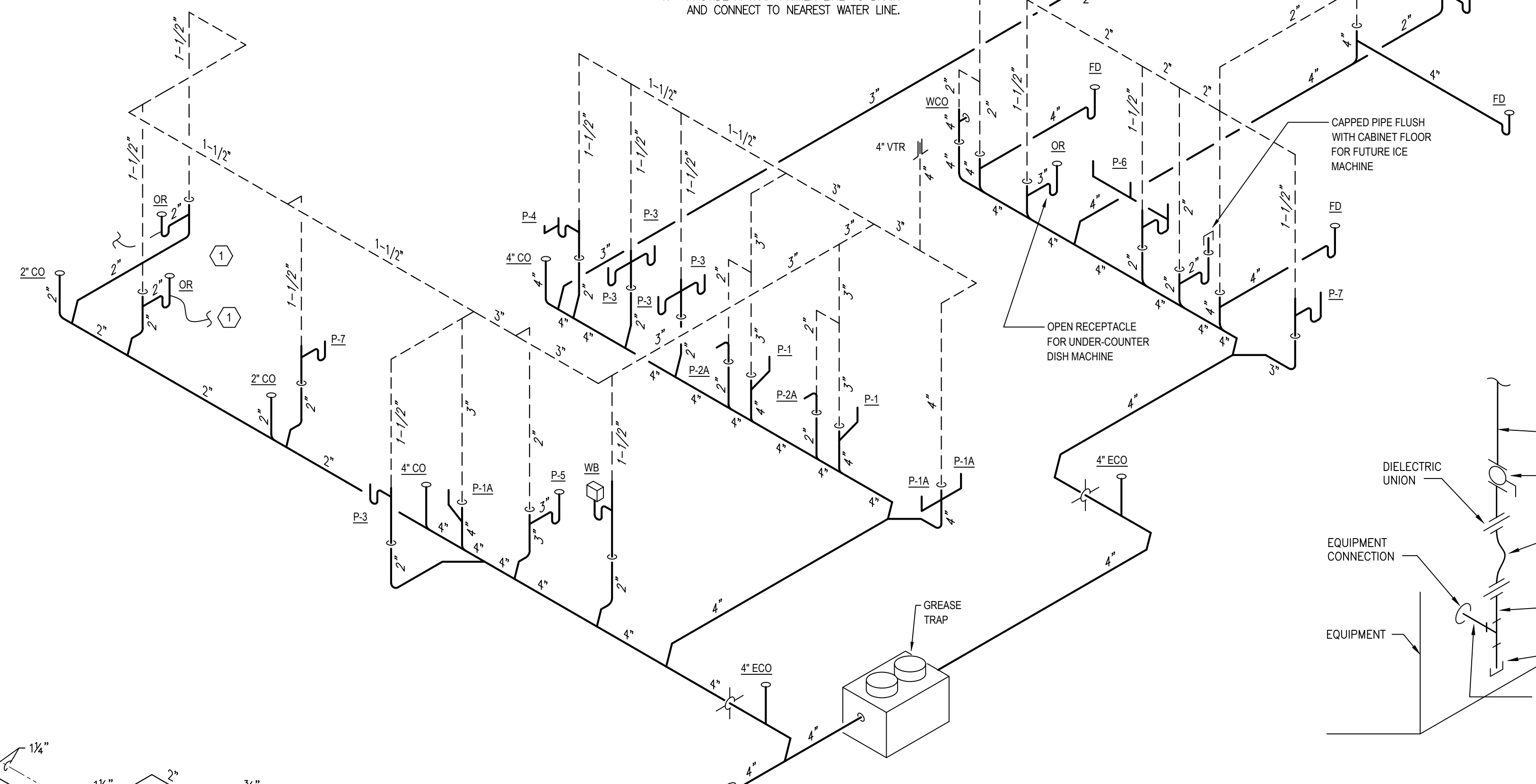
NATURAL GAS RISER DIAGRAM
SCALE: 1/8" = 1' - 0"
1 P-3

TAGGED NOTES

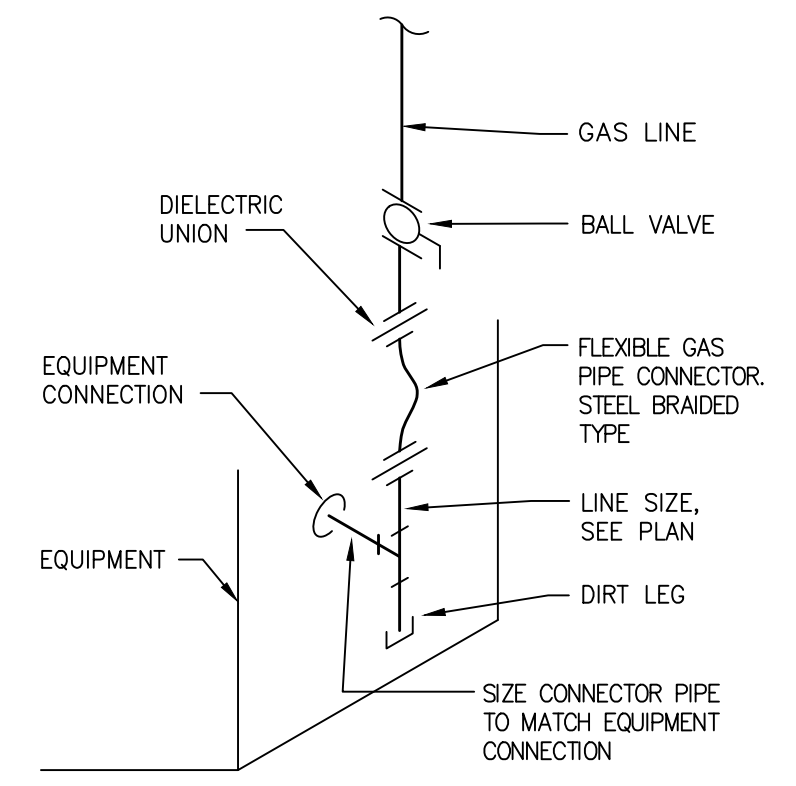
- 1. PROVIDE A TRAP PRIMER LINE TO DRAIN AND CONNECT TO NEAREST WATER LINE.



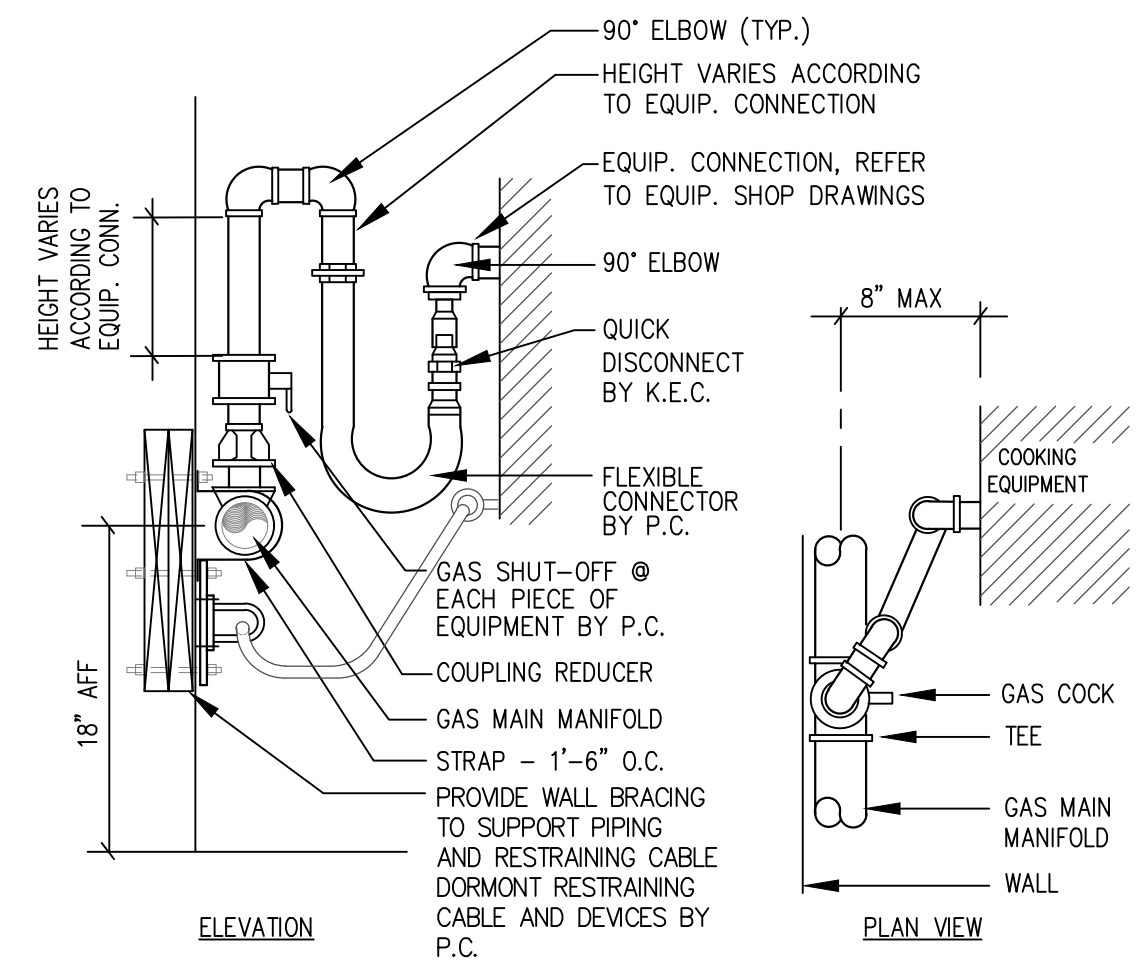
DOMESTIC WATER RISER
SCALE: 1/8" = 1' - 0"
4 P-3



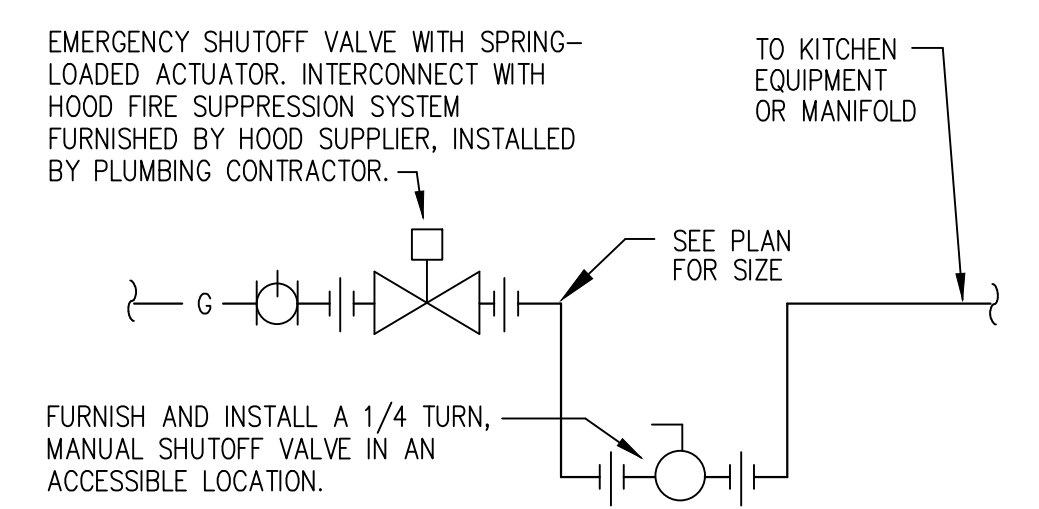
SOIL WASTE AND VENT RISER
SCALE: 1/8" = 1' - 0"
2 P-3



GAS PIPE EQUIPMENT CONNECTION
NO SCALE
3 P-3



TYPICAL KITCHEN EQUIPMENT GAS CONNECTION
NO SCALE
5 P-3



AUTOMATIC GAS SHUT-OFF VALVE SCHEMATIC
NO SCALE
6 P-3

REVISION

NO.	DATE	DESCRIPTION

PROJECT NO. 5067-03

DESIGNED BY	RVS
DRAWN BY	RVS
CHECKED BY	CME
REVIEWED BY	
DATE	MARCH 4 2024
SCALE	AS NOTED

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PROGRESS REVIEW ONLY - NOT FOR CONSTRUCTION



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DATE	REVISION	BY

PROJECT NO. 5067-03
 DESIGNED BY: OCC
 DRAWN BY: OCC
 CHECKED BY: [Signature]
 REVIEWED BY: [Signature]
 DATE: SEPTEMBER 2024
 SCALE: AS NOTED

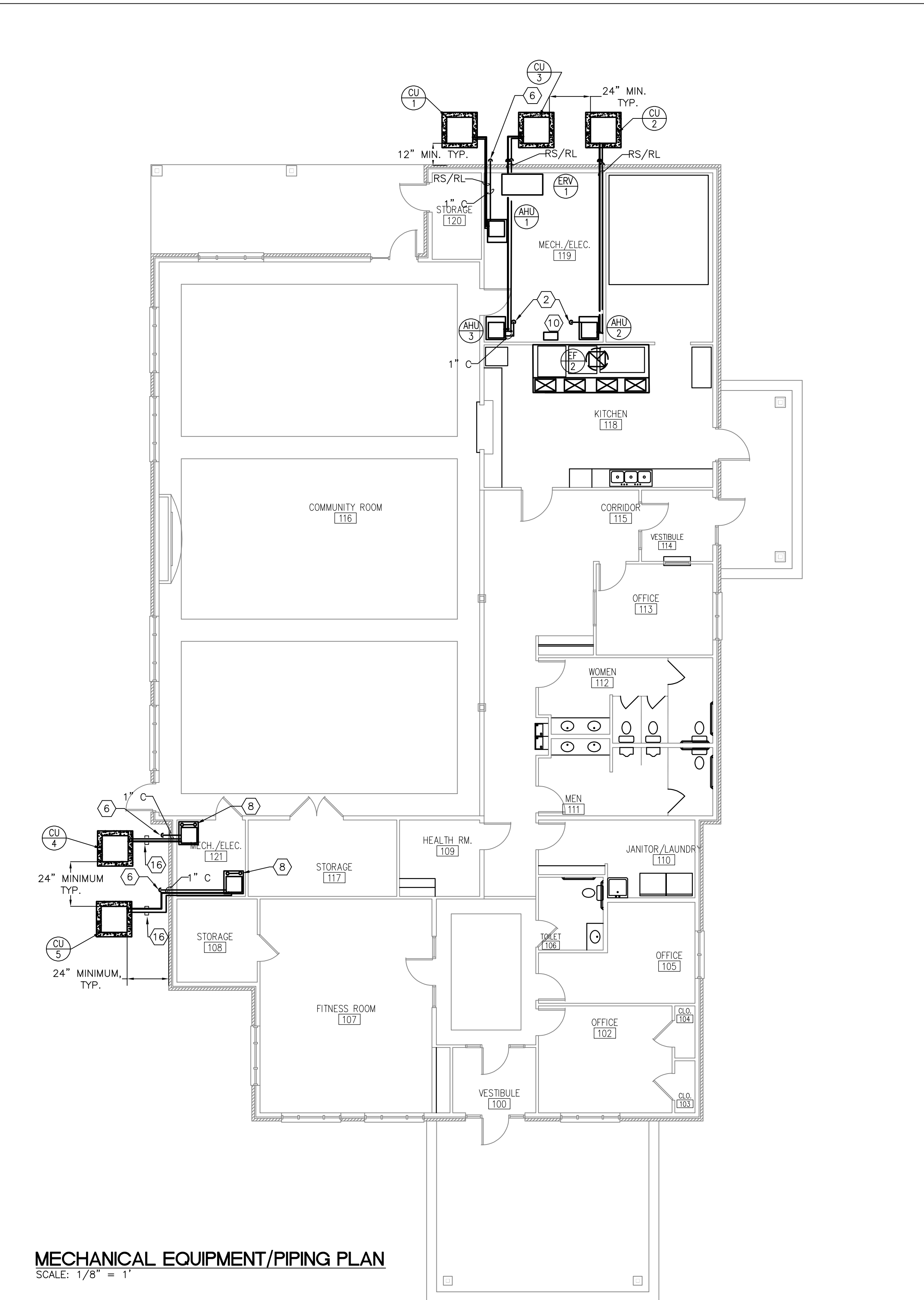
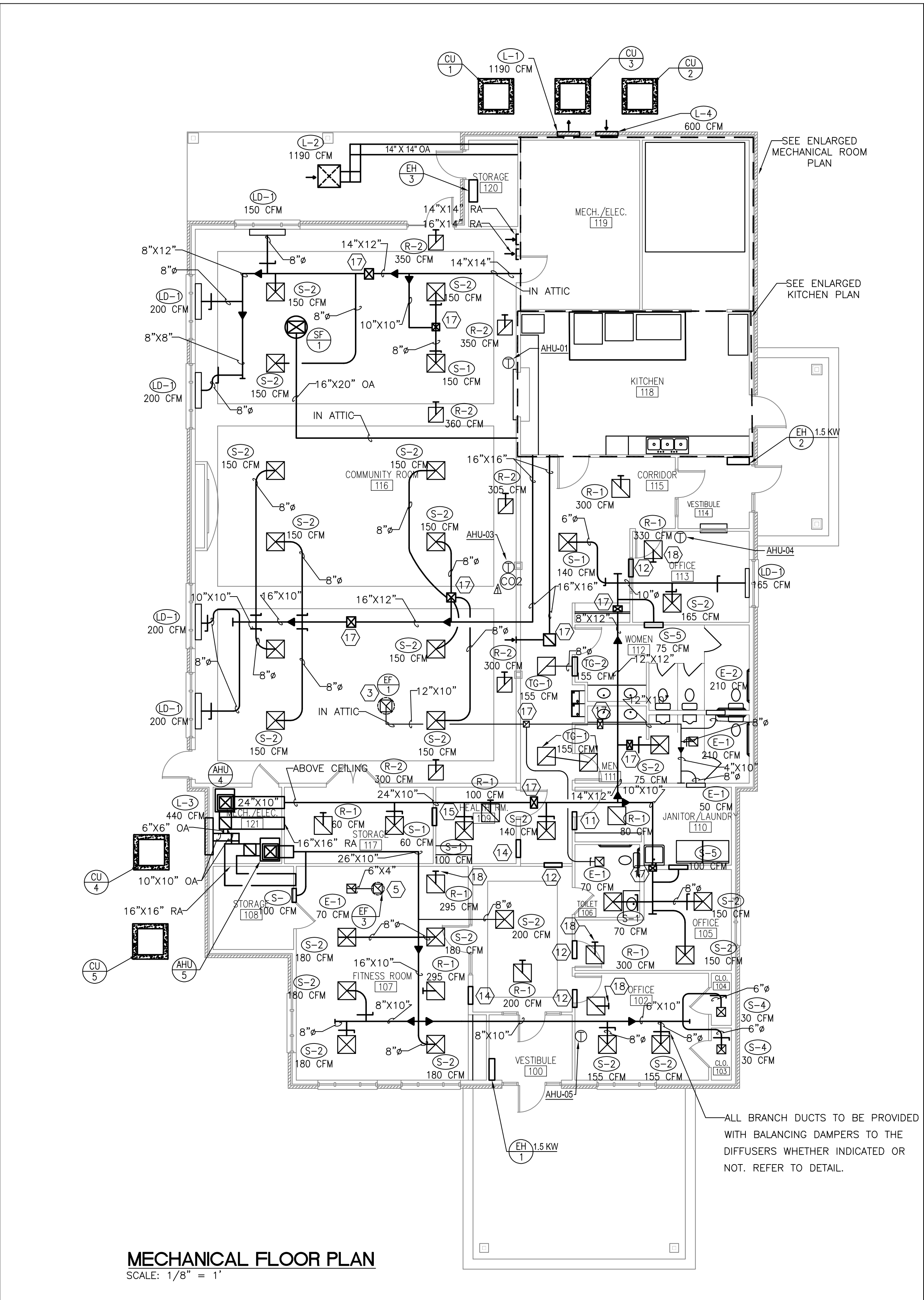
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DRAWING NO. M-1
SHEET OF



- MECHANICAL TAGGED NOTES**
- NOT USED.
 - SPILL CONDENSATE TO FD.
 - 12" X 10" EA DUCT UP TO EF-1.
 - 22" X 22" EA DUCT UP TO EF-2.
 - 6" X 6" EA DUCT UP TO EF-3.
 - SPILL CONDENSATE TO 8" AFG.
 - PIPE TO RAISE 6" BELOW CEILING.
 - 3" CONCENTRIC VENT THROUGH ROOF.
 - NOT USED.
 - REMOTE DUCT HEATER CONTROL PANEL FOR DH-1.
 - 6"X6" TRANSFER OPENING FOR RETURN PLENUM.
 - 8"X8" TRANSFER OPENING FOR RETURN PLENUM.
 - 10"X10" TRANSFER OPENING FOR RETURN PLENUM.
 - 10"X14" TRANSFER OPENING FOR RETURN PLENUM.
 - 10"X18" TRANSFER OPENING FOR RETURN PLENUM.
 - REFRIGERANT PIPE SUPPORT.
 - DROP DUCT FROM ATTIC INTO CEILING SPACE.
 - RETURN AIR SOUND BOOT.

- MECHANICAL CONTROLS**
- CO2 SENSOR TO ACTIVATE ERV SUPPLY WHEN SENSOR DETECTS 1000 PPM CO2 IN THE DINING ROOM SPACE. ERV TO REMAIN ON UNTIL 900 PPM CO2 IS ACHIEVED.

NOTE:
ALL PENETRATIONS FROM ATTIC THROUGH GYPSUM TO BE SEALED SMOKE TIGHT. INTENT OF ARCHITECTURAL APPLICATION OF TWO LAYERS OF FIRE CODE GYPSUM IS TO ESTABLISH DURABLE SMOKE BARRIER AND NOT TO ESTABLISH A FIRE BARRIER.





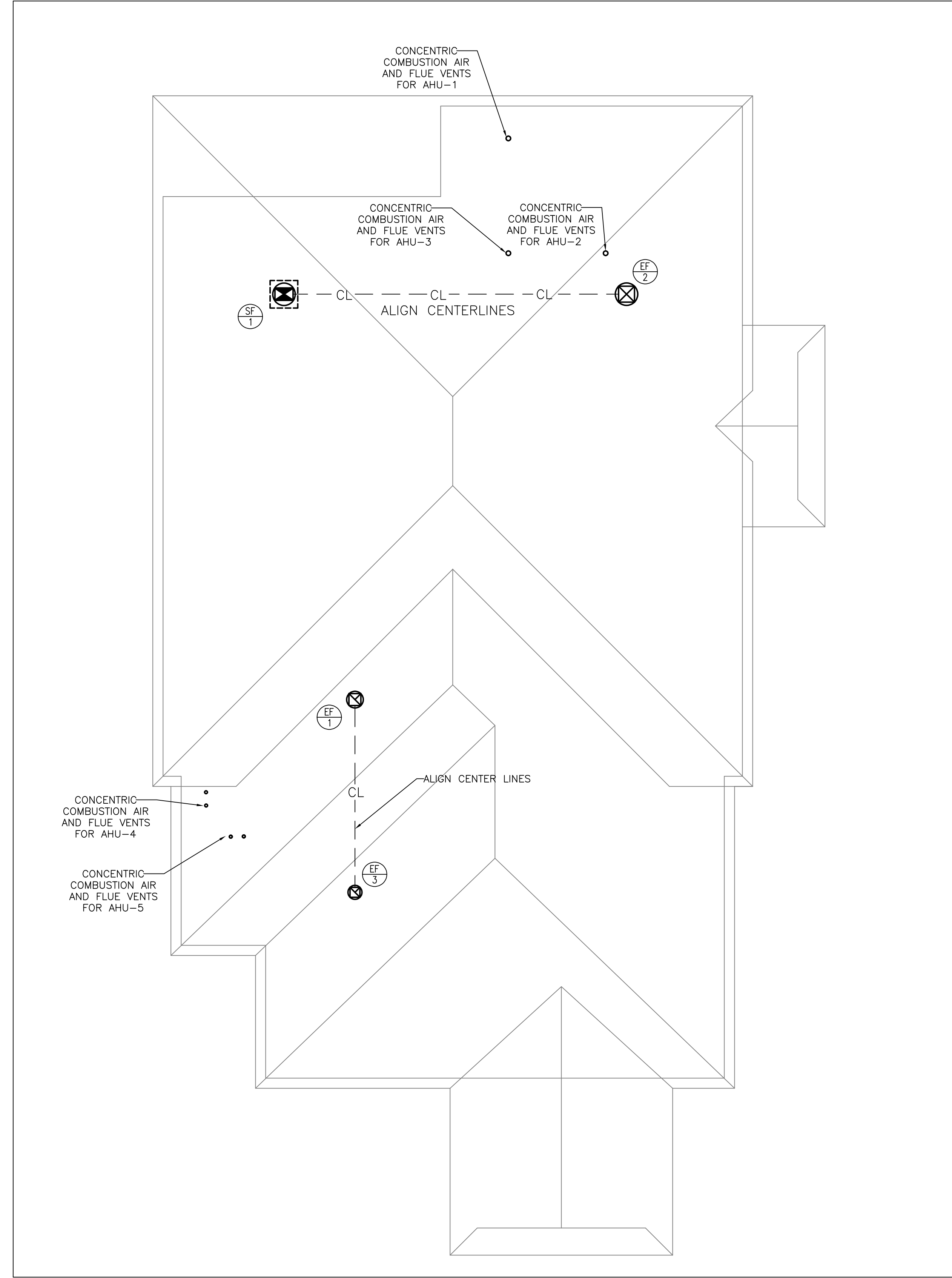
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DATE	REVISION	BY

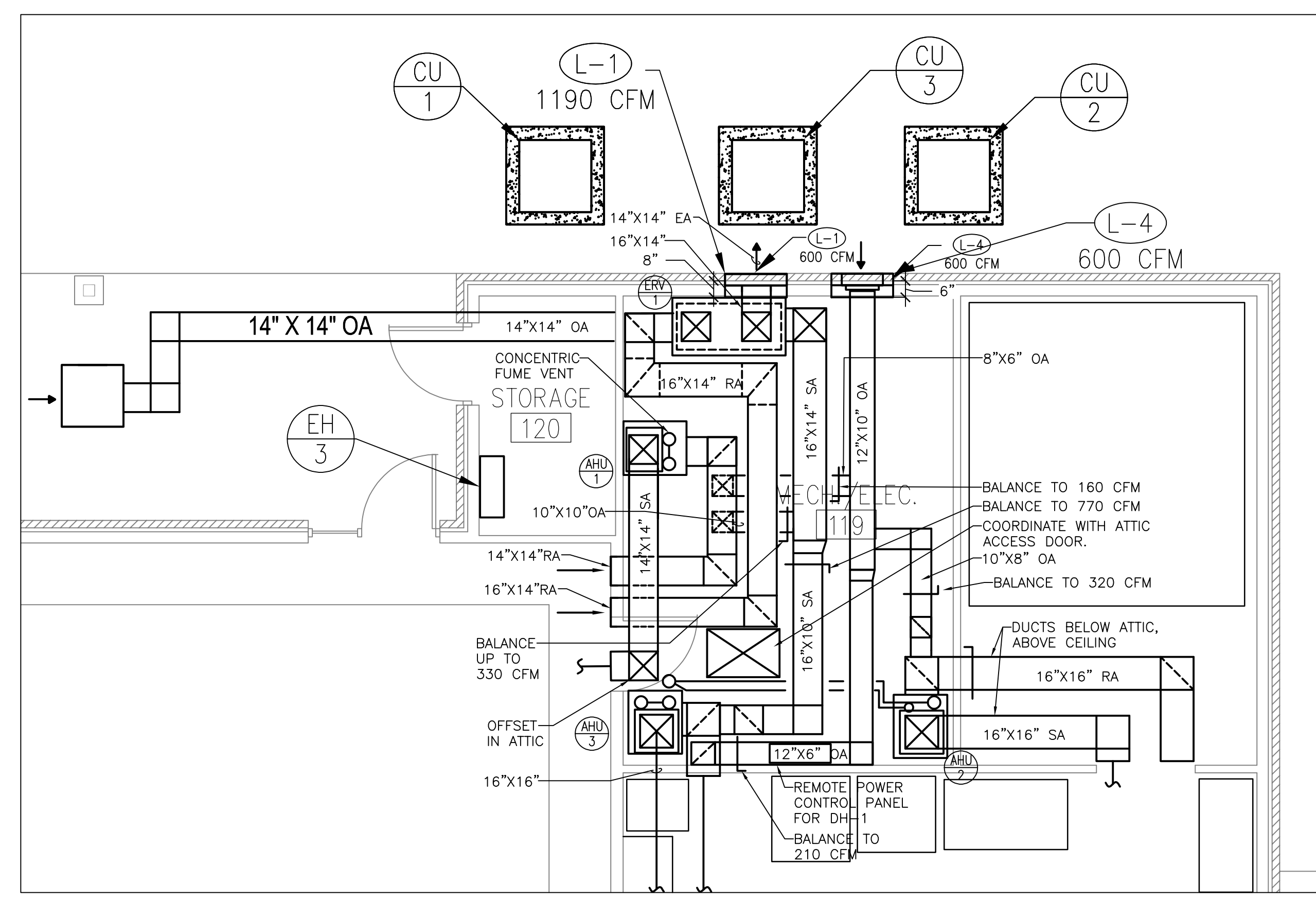
PROJECT NO. 5067-03	DESIGNED BY OCC	DRAWN BY OCC	CHECKED BY	REVIEWED BY	DATE SEPTEMBER 2024	SCALE 1/8" = 1' - 0"
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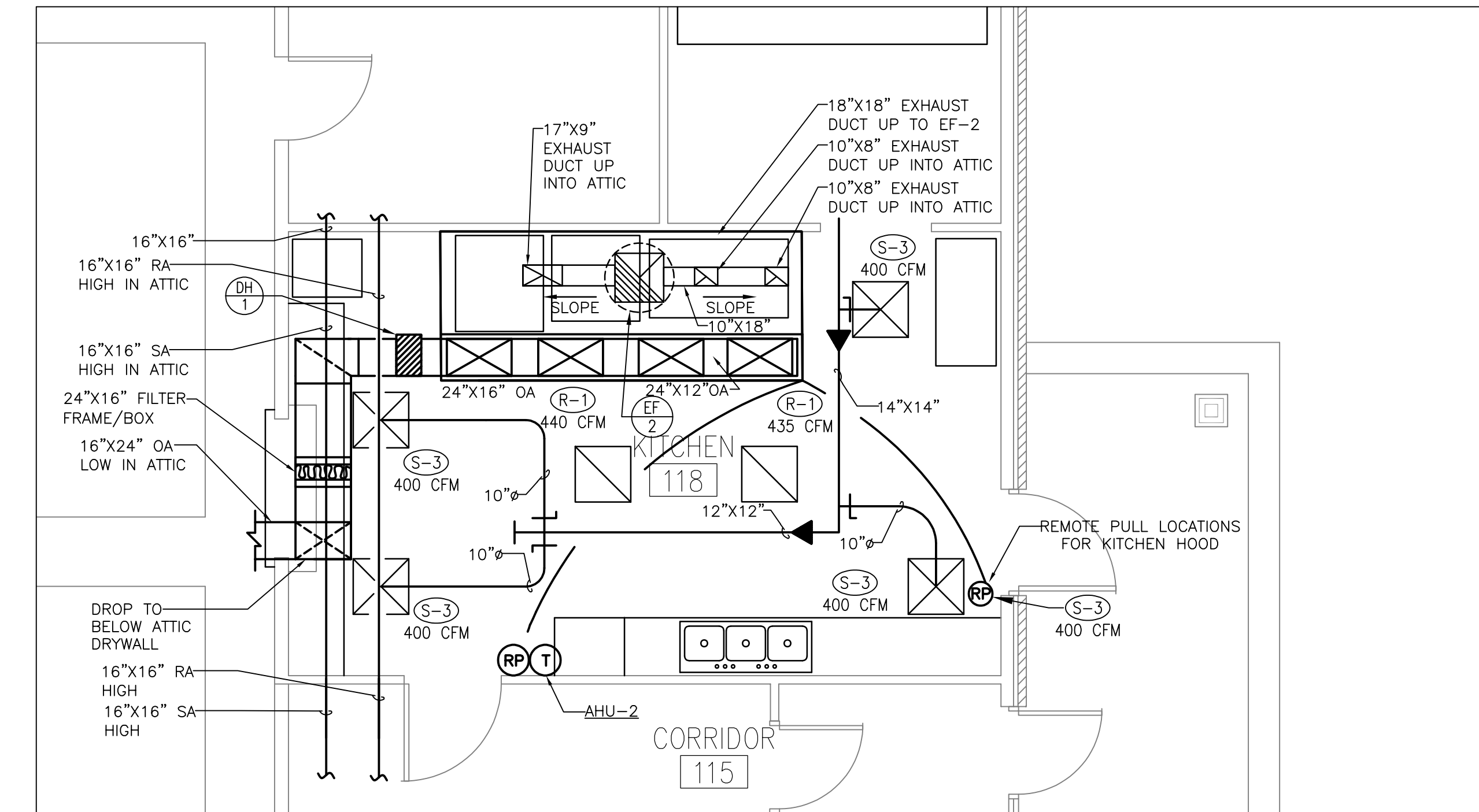
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MECHANICAL ROOF PLAN
SCALE: 1/8" = 1' - 0"



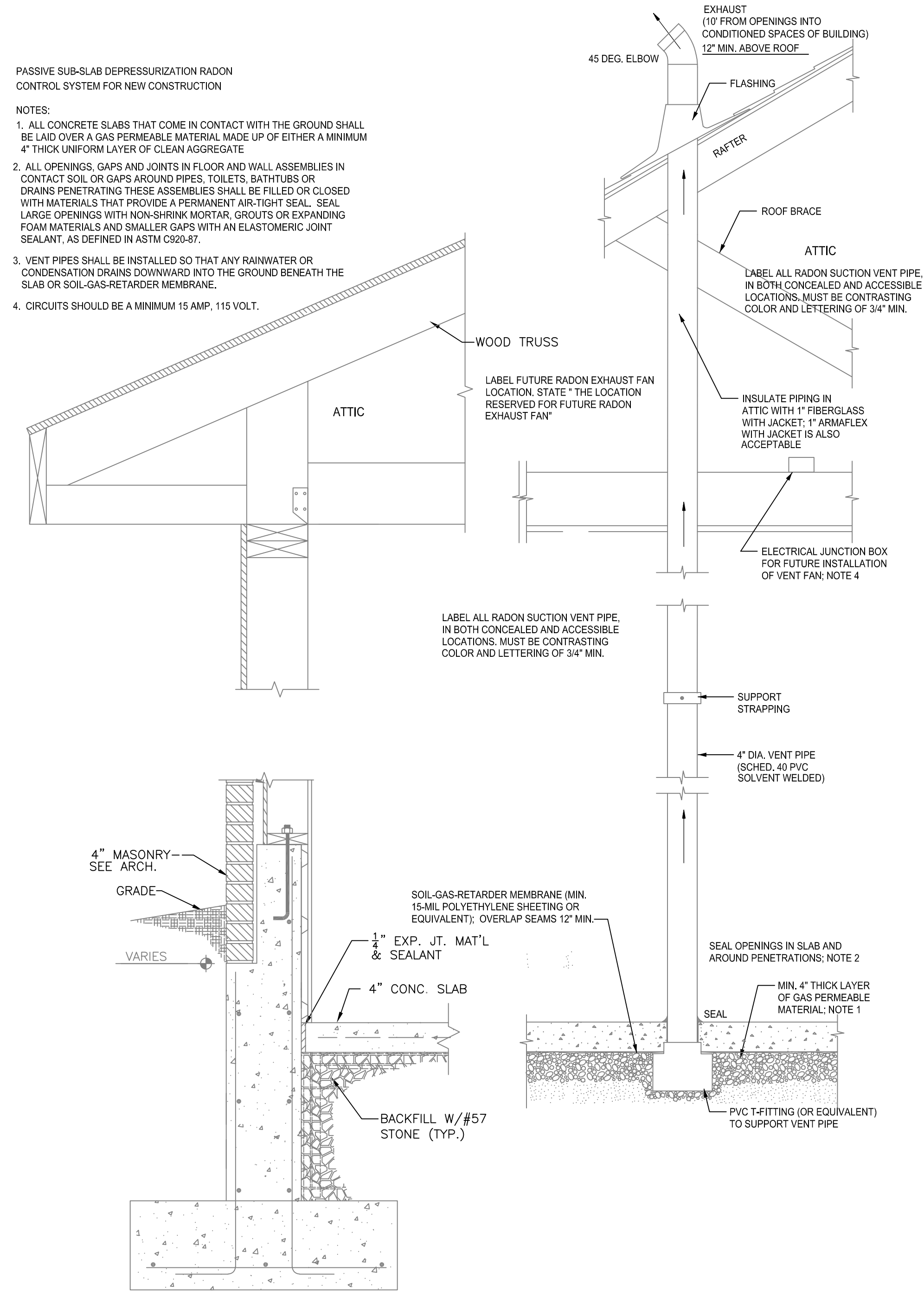
ENLARGED MECHANICAL ROOM PLAN
SCALE: 1/4" = 1' - 0"



ENLARGED KITCHEN PLAN
SCALE: 1/4" = 1' - 0"

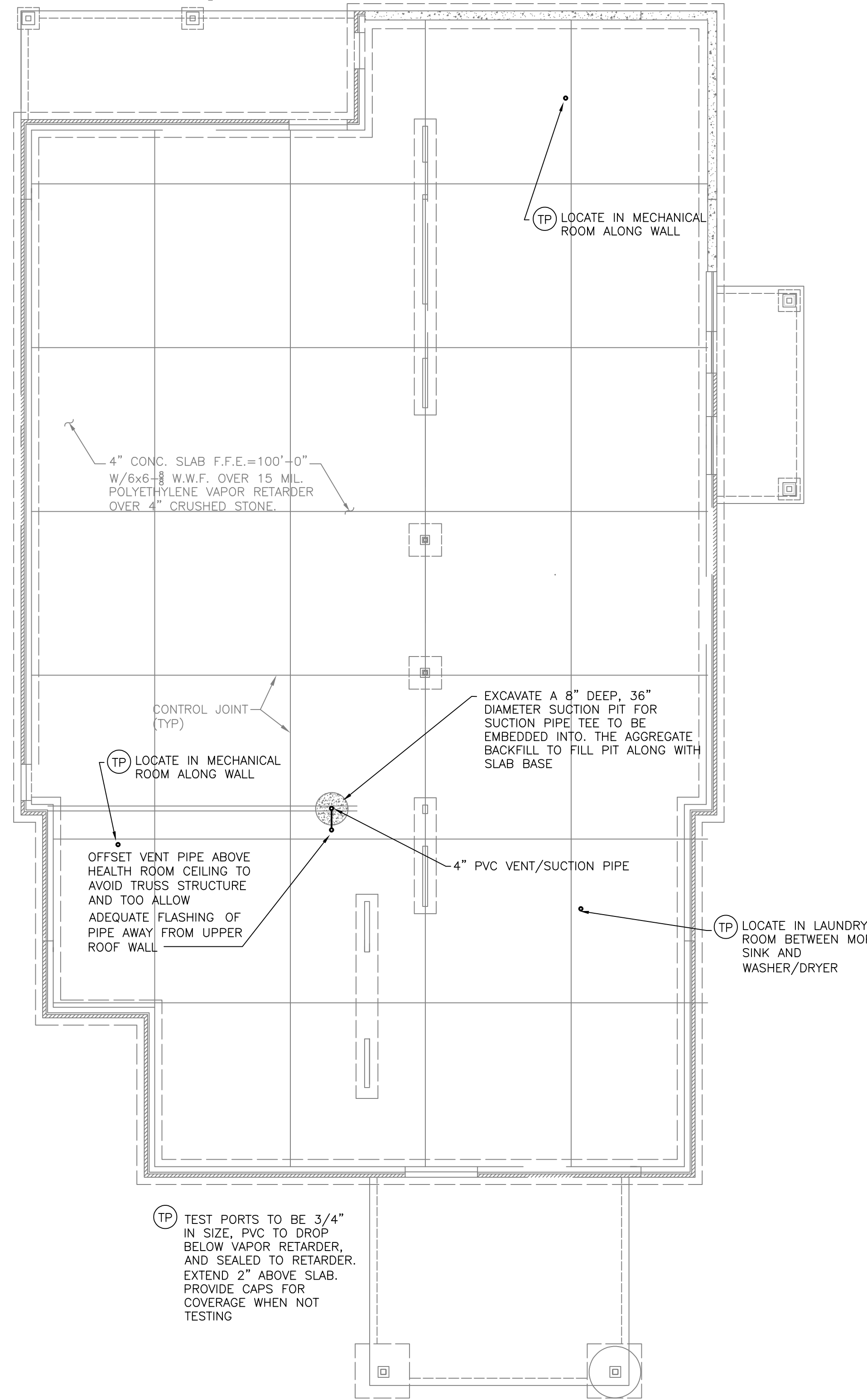
PASSIVE SUB-SLAB DEPRESSURIZATION RADON CONTROL SYSTEM FOR NEW CONSTRUCTION

- NOTES:**
1. ALL CONCRETE SLABS THAT COME IN CONTACT WITH THE GROUND SHALL BE LAID OVER A GAS PERMEABLE MATERIAL, MADE UP OF EITHER A MINIMUM 4" THICK UNIFORM LAYER OF CLEAN AGGREGATE
 2. ALL OPENINGS, GAPS AND JOINTS IN FLOOR AND WALL ASSEMBLIES IN CONTACT SOIL OR GAPS AROUND PIPES, TOILETS, BATHTUBS OR DRAINS PENETRATING THESE ASSEMBLIES SHALL BE FILLED OR CLOSED WITH MATERIALS THAT PROVIDE A PERMANENT AIR-TIGHT SEAL. SEAL LARGE OPENINGS WITH NON-SHRINK MORTAR, GROUTS OR EXPANDING FOAM MATERIALS AND SMALLER GAPS WITH AN ELASTOMERIC JOINT SEALANT, AS DEFINED IN ASTM C920-87.
 3. VENT PIPES SHALL BE INSTALLED SO THAT ANY RAINWATER OR CONDENSATION DRAINS DOWNWARD INTO THE GROUND BENEATH THE SLAB OR SOIL-GAS-RETARDER MEMBRANE.
 4. CIRCUITS SHOULD BE A MINIMUM 15 AMP, 115 VOLT.



RADON VENTING SYSTEM DETAIL

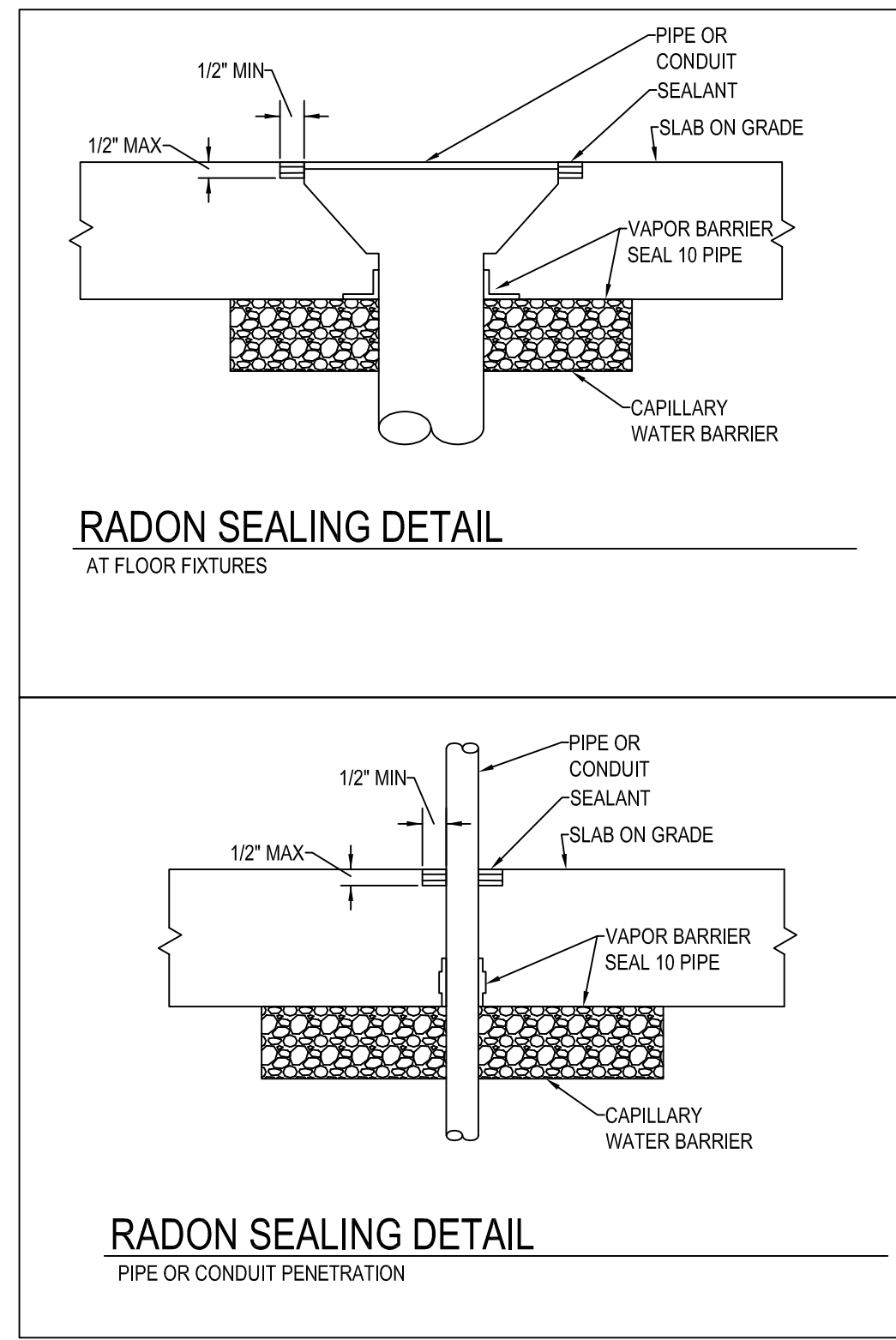
2
M-3



FLOOR PLAN - RADON VENTING SYSTEM

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

1
M-3



RADON SEALING DETAIL

AT FLOOR FIXTURES

RADON SEALING DETAIL

PIPE OR CONDUIT PENETRATION

RADON WORK EXECUTION AND TESTING REQUIREMENTS:

ALL WORK TO BE PERFORMED WITH SUPERVISION AND INSPECTION BY A KENTUCKY CERTIFIED PERSON/ENTITY FOR MEASUREMENT, MITIGATION OR LAB ANALYSIS. ALL TESTING AND INSPECTION TO BE DONE BY CERTIFIED PERSON OR FIRM.

- TESTING & INSPECTIONS**
- PHASE 1 TESTING/INSPECTION (BEFORE SLAB POUR)**
- CONTRACTOR TO VERIFY THE FOLLOWING:
1. FOUNDATION WALLS- WALLS THAT SURROUND SOIL GAS COLLECTION UNDERSLAB PLENUMS ARE DAMP-PROOFED WITH OPENINGS (SUCH AS AROUND UTILITY PENETRATIONS) CLOSED.
 2. GAS PERMEABLE LAYERS: AGGREGATES, VOIDS AND CONFIGURATIONS MEET OR EXCEED MINIMUM REQUIREMENTS.
 3. GAS VAPOR RETARDER IS INSTALLED MEETING REQUIREMENTS AND PIPING CONDUIT, AND OTHER PENETRATION ARE SEALED TO RETARDER.
 4. VENT PIPING AND INLETS: PIPE SIZING AND INLETS WITHIN GAS PERMEABLE LAYER MEET OR EXCEED MINIMUM REQUIREMENTS. CONFIRM SIZE OD SUCTION/VENT PIT.
 5. SOIL GAS INLETS: INLET OPENINGS TO SOIL GAS MEET SIZE AND CAPACITY REQUIREMENTS.
 6. TEST PORTS MEET MINIMUM REQUIREMENTS.

- PHASE 2 TESTING/INSPECTION (AFTER SLAB POUR, BEFORE FLOOR FINISHES)**
1. OVERALL CONFIRM THE VAPOR RETARDER BARRIER SEALED.
 2. VERIFY CONSTRUCTION JOINTS SEALED.
 3. ENSURE CONTROL JOINTS ARE SEALED.
 4. CONFIRM FLOOR PENETRATIONS AND FLOOR DRAINS ARE SEALED.
 5. CONFIRM SUCTION VENT PENETRATION IS SEALED.
 6. TESTING BY A PERSON/FIRM CERTIFIED IN KENTUCKY THAT THE VACUUM GENERATED THROUGH THE SUB SLAB GAS PERMEABLE LAYER IS ADEQUATE AND WITHIN NORMS PER ANSI/AARST CC-1000-2018-0523.

- PHASE 3 TESTING/INSPECTION (BEFORE FINAL CLOSURE OF WALLS AND CEILING)**
1. CONFIRM SIZE, MATERIAL AND SLOPE OF SUCTION VENT PIPE. CONFIRM PIPE TRANSITIONS AND CONNECTIONS DO NOT VARY IN SIZE.
 2. SECURED PIPES AND INLETS: PIPING AND INLET CONFIGURATIONS ARE SECURED IN PLACE IN A MANNER TO HELP AVOID DISLOCATION. VERTICAL PIPING TO BE SUPPORTED AT 10 FOOT MAX DISTANCE ON CENTER; HORIZONTAL PIPING ON 4'-0" CENTERS.
 3. CONFIRM ATTIC PIPING IS INSULATED WITH 1" PIPE WRAP.
 4. CONFIRM ANY HORIZONTAL PIPING IS SLOPED TO THE VERTICAL LINE FROM BELOW SLAB.
 5. CONFIRM ELECTRICAL BOX ROUGH-IN FOR FUTURE POTENTIAL EXHAUST FAN IS PROVIDED.
 6. EXHAUST IS TERMINATE THROUGH ROOF AS INDICATED.
 7. CONFIRM ALL THE REQUIRED LABELING IS PRESENT.

PHASE 4 ACCEPTANCE TESTING/INSPECTION (ONE MONTH BEFORE TURNOVER TO OWNER)

PROVIDE CERTIFIED TESTING OF THE BUILDING IN ACCORDANCE WITH ANSI/AARST MA-MFLB. VERIFY IF RADON LEVELS ARE LESS THAN NATIONAL ACTION STANDARDS. PROVIDE REPORT OF FINDINGS AND RECOMMENDATIONS IS A SUB-SLAB SUCTION EXHAUST FAN IS REQUIRED.

DOCUMENTATION:

ENSURE SYSTEM DESCRIPTION AND ALL TEST REPORTS ARE INCLUDED IN PROJECT OPERATIONS AND MAINTENANCE MANUAL(S).



**MONTGOMERY COUNTY
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PROJECT NO.	DESIGNED BY	DRAWN BY	CHECKED BY	REVIEWED BY	DATE	SCALE	AS NOTED
5067-03	CME	CME			SEPTEMBER 2024		

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MECHANICAL GENERAL NOTES

- EACH CONTRACTOR, PROPOSER, SUPPLIER AND/OR MANUFACTURER SHALL REFER TO ALL DOCUMENTS PERTAINING TO THIS PROJECT AND COORDINATE ACCORDINGLY SO AS TO ENSURE ADEQUACY OF FIT, COMPLIANCE WITH SPECIFICATIONS, PROPER VOLTAGE AND CURRENT CHARACTERISTICS TO AVOID CONFLICT WITH ANY OTHER BUILDINGS SYSTEMS.
- ALL OFFSETS, TURNS, FITTINGS, TRIM-, DETAIL, ETC., MAY NOT BE INDICATED, BUT SHALL BE PROVIDED AS REQUIRED. ADDITIONAL ALLOWANCES SHALL BE INCLUDED FOR SAME IN EACH PROPOSER'S BID.
- INSTALL NO PIPING, CONDUITS, ETC., IN A LOCATION OR IN A MANNER WHICH WILL ALLOW FREEZING AND THE COLLECTION OF CONDENSATION THEREON.
- OBSERVE ALL APPLICABLE CODES, RULES, AND REGULATIONS THAT MAY APPLY TO THE WORK UNDER THIS CONTRACT. (CITY, COUNCIL, LOCAL, FEDERAL, MUNICIPALITY, UTILITY COMPANY, OSHA, COMMONWEALTH OF KENTUCKY, ETC.)
- UNLESS OTHERWISE SPECIFIED OR INDICATED, ALL EQUIPMENT AND/OR MATERIALS WITHIN OCCUPIED SPACES OR EXPOSED TO VIEW ON THE BUILDING EXTERIOR SHALL BE PRIMED AND FINISHED WITH COLOR AS CHOSEN BY ARCHITECT.
- UNLESS OTHERWISE SPECIFIED OR INDICATED, INSTALL DIFFUSERS, REGISTERS, GRILLES, SMOKE DETECTORS AND OTHER CEILING MOUNTED APPURTENANCES IN A SYMMETRICAL PATTERN, UNLESS SPECIFICALLY INDICATED OTHERWISE, REFER TO THE ARCHITECT'S REFLECTED CEILING PLAN AS APPLICABLE.
- ANY VIBRATING, OSCILLATING OR OTHER NOISE OR MOTION PRODUCING EQUIPMENT SHALL BE ISOLATED FROM SURROUNDING SYSTEMS IN AN APPROVED MANNER. NOISY OR STRUCTURALLY DAMAGING INSTALLATIONS SHALL BE SATISFACTORILY REPLACED OR REPAIRED AT THE INSTALLING CONTRACTORS' EXPENSE.
- DEVIATIONS IN SIZES, CAPACITIES, FIT, FINISH, ETC., FOR EQUIPMENT FROM THAT PRIME SPECIFIED SHALL BE THE RESPONSIBILITY OF THE PURCHASER OF THAT EQUIPMENT. ANY PROVISIONS REQUIRED TO ACCOMMODATE A DEVIATION, SHALL BE THE RESPONSIBILITY OF THE PURCHASER.
- DO NOT SCALE FROM DRAWINGS, AS PRINTING DISTORTS SCALE. WORK SHALL BE LAID OUT FROM DIMENSIONED DRAWINGS, OR DIMENSIONS SUPPLIED TO THE CONTRACTOR.
- ALL ELECTRICAL COMPONENTS OR EQUIPMENT SHALL BE LABELED BY UNDERWRITER'S LABORATORIES, OR OTHER APPROVED LISTING AGENCY.
- ALL SUPPORT FOR EQUIPMENT, DEVICES OR FIXTURES SHALL BE UNIQUE, FROM THE BUILDING STRUCTURE. DO NOT SUPPORT WORK FROM OTHER TRADES OR EQUIPMENT. HOLD ALL ABOVE CEILING EQUIPMENT TIGHT TO STRUCTURAL SUPPORTING ROOF DECK.
- WHERE INTERRUPTING AN EXISTING UTILITY OR SERVICE DELIBERATELY OR ACCIDENTALLY, THE RESPONSIBLE CONTRACTOR SHALL WORK CONTINUOUSLY AS NEEDED TO RESTORE SAME PROVIDING PREMIUM TIME AS NEEDED.
- WHERE PENETRATING ROOFING MEMBRANE OR OTHER MATERIALS USED FOR WEATHERPROOFING THE BUILDING, MAKE SUCH PENETRATIONS IN A WAY THAT WILL NOT VOID OR DIMINISH THE ROOFING WARRANTY OR INTEGRITY IN ANYWAY. COORDINATE ALL SUCH PENETRATIONS WITH THE ROOFING MANUFACTURER.
- CONTRACTOR TO PROVIDE TURNING VANES IN ALL MAIN DUCT 45°/90 DEGREE TURNS. THIS APPLIES TO ALL S.A. & R.A. DUCTS.

KITCHEN EXHAUST DUCT REQUIREMENTS

- KITCHEN HOOD EXHAUST DUCTWORK SHALL BE CONSTRUCTED WITH 16 GAUGE BLACK IRON WITH LIQUID TIGHT WELDS (PROVIDE ACCESS PANELS FOR GREASE CLEANING IN CONFORMANCE WITH NFPA 96).
- CLEANOUTS ON THE EXHAUST DUCT SHALL BE PROVIDED AT ALL CHANGES OF DIRECTION AND 20 FOOT INTERVALS ON ALL HORIZONTAL RUNS
- CLEANOUTS ON THE EXHAUST DUCT SHALL HAVE A MINIMUM DIMENSION OF 10"
- PROVIDE A 1-1/2" THICK MORGAN THERMAL CERAMICS FIREMASTER BRAND "FAST_WRAP+" 1-HR RATED NON COMBUSTIBLE FLEXIBLE FIREPROOFING WRAP. THIS DUCT WRAP SHALL UL LISTED FOR USE AS A HORIZONTAL AND VERTICAL KITCHEN AIR AND GREASE DUCT PROTECTIVE ENCLOSURE. INSTALL ONLY IN ACCORDANCE WITH MANUFACTURER'S APPROVED METHOD AND MATERIALS.
- VERIFY ALL REQUIREMENTS WITH LOCAL CODE AUTHORITIES PRIOR TO INSTALLATION.

KITCHEN EXHAUST HOOD REQUIREMENTS

- KITCHEN TYPE I EXHAUST HOODS SHALL BE UL LISTED (SEE UL LISTING DESCRIPTION)
- JOINTS AND SEAMS ON EXHAUST HOODS SHALL BE WELDED LIQUID-TIGHT.
- EXHAUST FAN MOTOR SHALL BE LOCATED OUTSIDE OF THE EXHAUST DUCT. EXHAUST DISCHARGE MUST TERMINATE AT LEAST 40 INCHES ABOVE THE HIGHEST POINT WHERE THE SURFACE OF THE ROOF MEETS THE DUCT.
- MAKE UP AIR FANS SHALL BE ELECTRICALLY INTERLOCKED WITH THE HOOD EXHAUST FAN.
- ALL OUTSIDE AIR INTAKES SHALL BE LOCATED A MINIMUM OF 10 FEET AWAY FROM THE EXHAUST DUCT TERMINATION.
- FOR LISTED HOODS, A 6" OVERHANG MINIMUM IS REQUIRED ON ALL SIDES OF EQUIPMENT.
- GREASE TROUGH SHALL BE SLOPED TO REMOVABLE GREASE CUP (1 GALLON MAX)
- CLEARANCE TO COMBUSTIBLES SHALL BE OBSERVED FOR THE FOLLOWING: 18 INCHES, OR A CLEARANCE REDUCTION METHOD INDICATED ON TABLE 308.6 OF 2000 INTERNATIONAL MECHANICAL CODE OR ANOTHER METHOD COMPLYING WITH IMC 2000
- EXHAUST HOOD METAL SHALL BE A MINIMUM OF 18 GA ALUMINIZED STEEL AND 20 GA STAINLESS STEEL
- DISTANCE FROM THE FLOOR TO THE BOTTOM OF THE HOOD ON A CANOPY EXHAUST HOOD SHALL BE 75" - 84" OR AS INDICATED ON THE SHEET.
- THE DISTANCE FROM THE COOKING SURFACE TO THE BOTTOM OF THE FILTER SHALL BE GREATER THAN 18" (SEE DRAWING)
- KITCHEN EXHAUST SYSTEMS SHALL BE PROVIDED FOR ALL COMMERCIAL COOKING APPLIANCES. DOMESTIC COOKING APPLIANCES USED FOR COMMERCIAL PURPOSES SHALL ALSO BE PROVIDED WITH A COMMERCIAL EXHAUST HOOD.

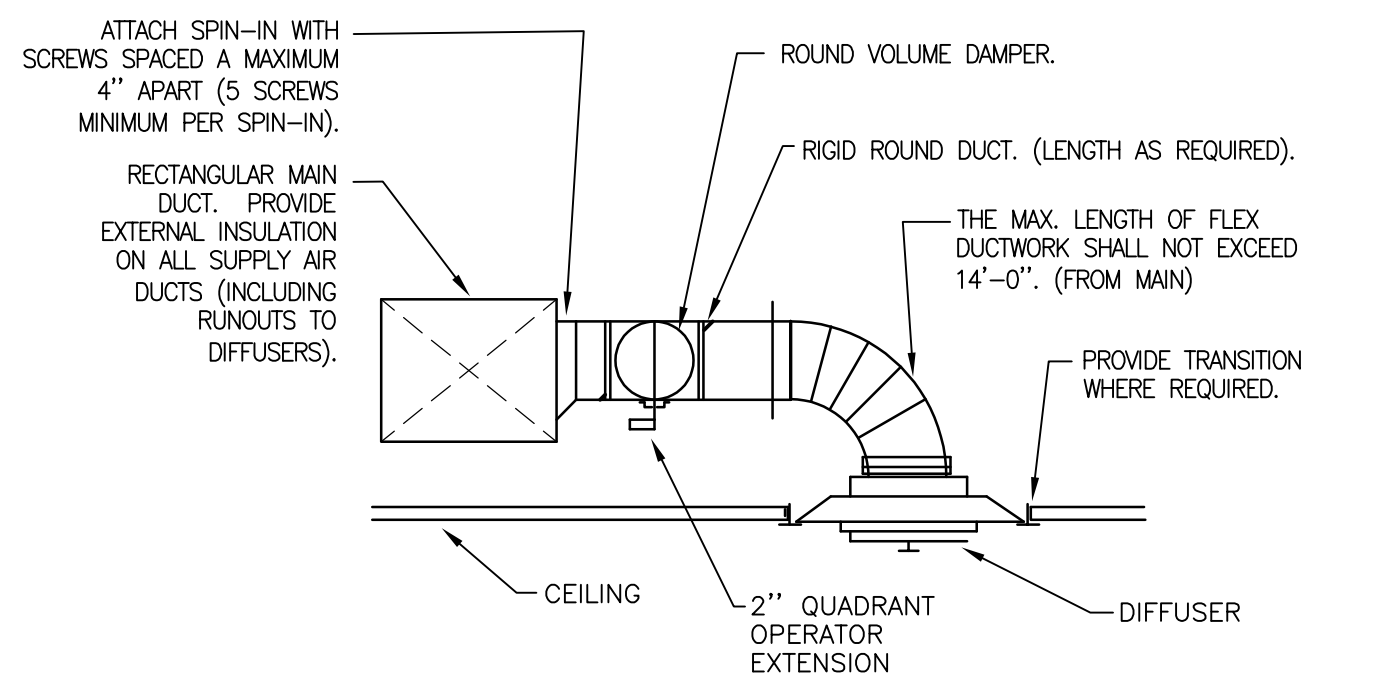
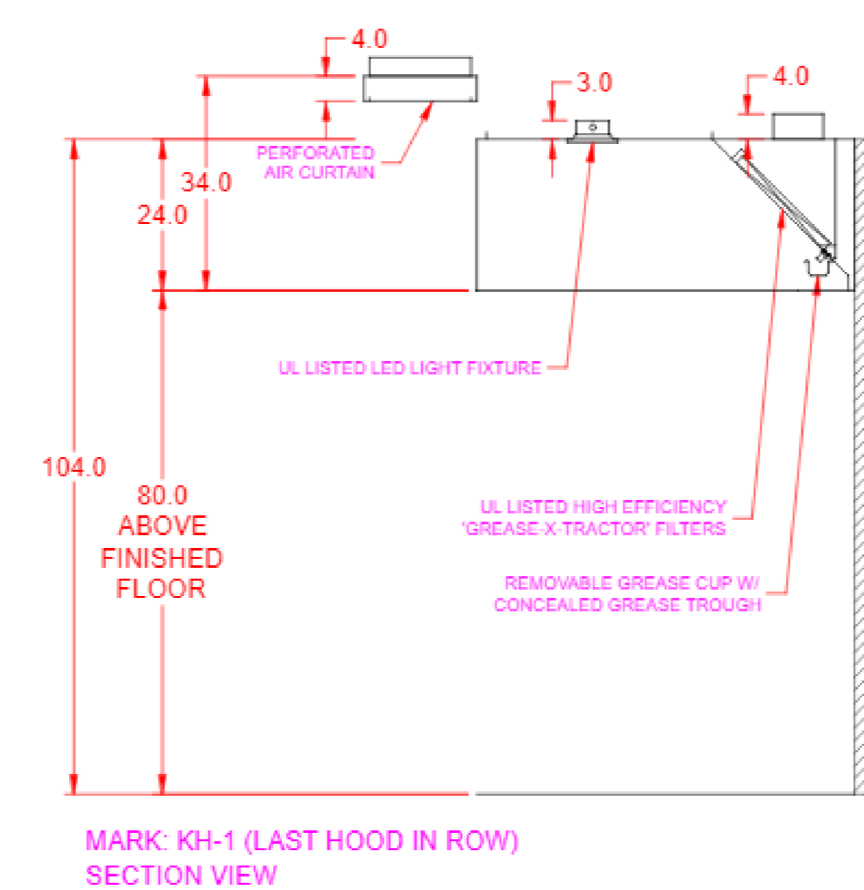
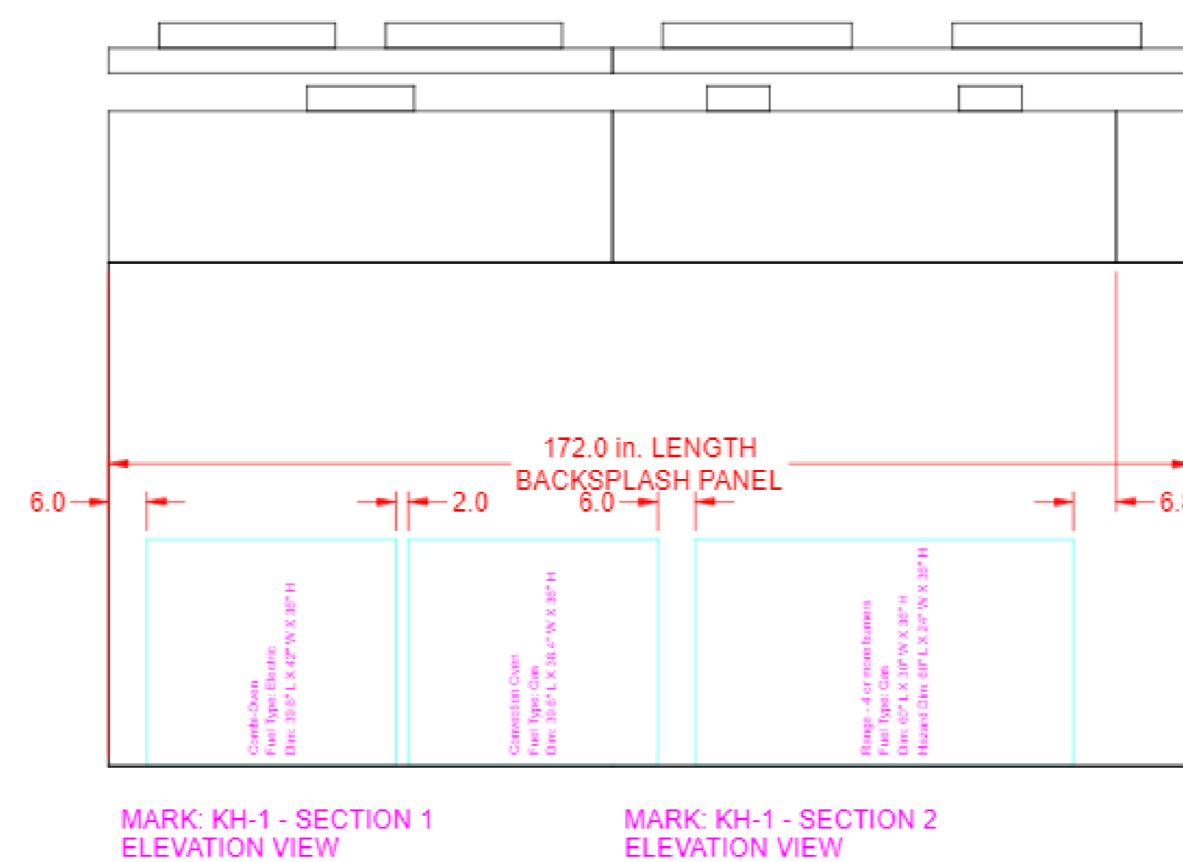
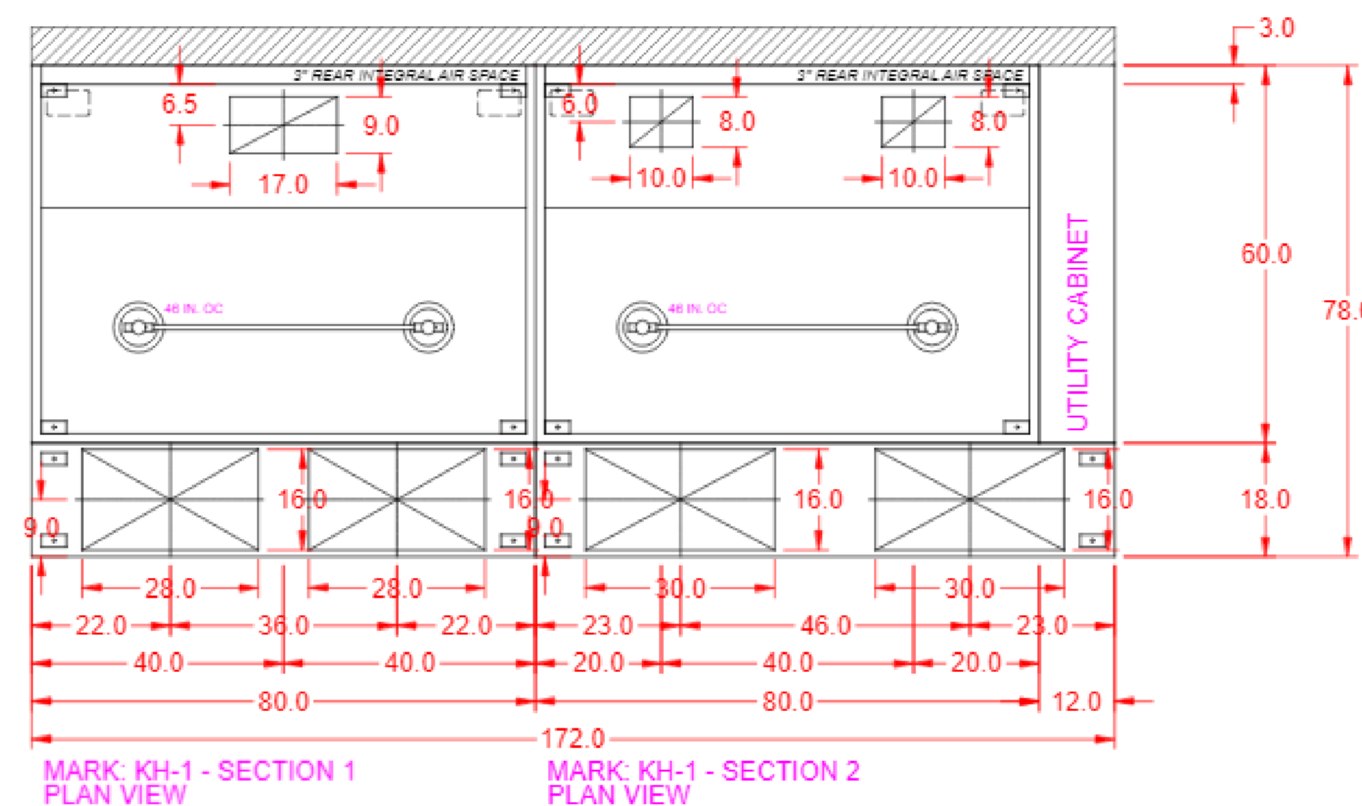
KITCHEN HOOD FIRE SUPPRESSION REQUIREMENTS

- KITCHEN EQUIPMENT VENDOR SHALL PROVIDE AN AUTOMATIC WET TYPE CHEMICAL FIRE EXTINGUISHING SYSTEM INSTALLED IN THE KITCHEN HOOD.
- THIS SYSTEM SHALL BE AN ANSUL SUPPRESSION SYSTEM (WET CHEMICAL) IN COMPLETE CONFORMANCE WITH NFPA 96.
- KITCHEN EQUIPMENT VENDOR SHALL BE RESPONSIBLE FOR ALL PERMITS AND TESTING REQUIRED. REQUIREMENTS WILL INCLUDE PULL STATION, SHUNT TRIP INTERLOCKS AND ALARM. LOCATE ON WALL ADJACENT TO HOOD.
- IF A BUILDING FIRE ALARM IS PROVIDED, THE AUTOMATIC SUPPRESSION SYSTEM SHALL BE CONNECTED TO THE FIRE ALARM SYSTEM.
- ACTIVATION OF THE SYSTEM SHALL AUTOMATICALLY SHUT OFF ALL FUEL AND HEAT COMPONENTS TO ALL EQUIPMENT UNDER THE HOOD
- MANUAL ACTIVATION FOR THE SUPPRESSION SYSTEM SHALL BE LOCATED AT LEAST 10' BUT NOT MORE THAN 20' AWAY FROM THE EXHAUST HOOD, IN THE PATH OF EGRESS.

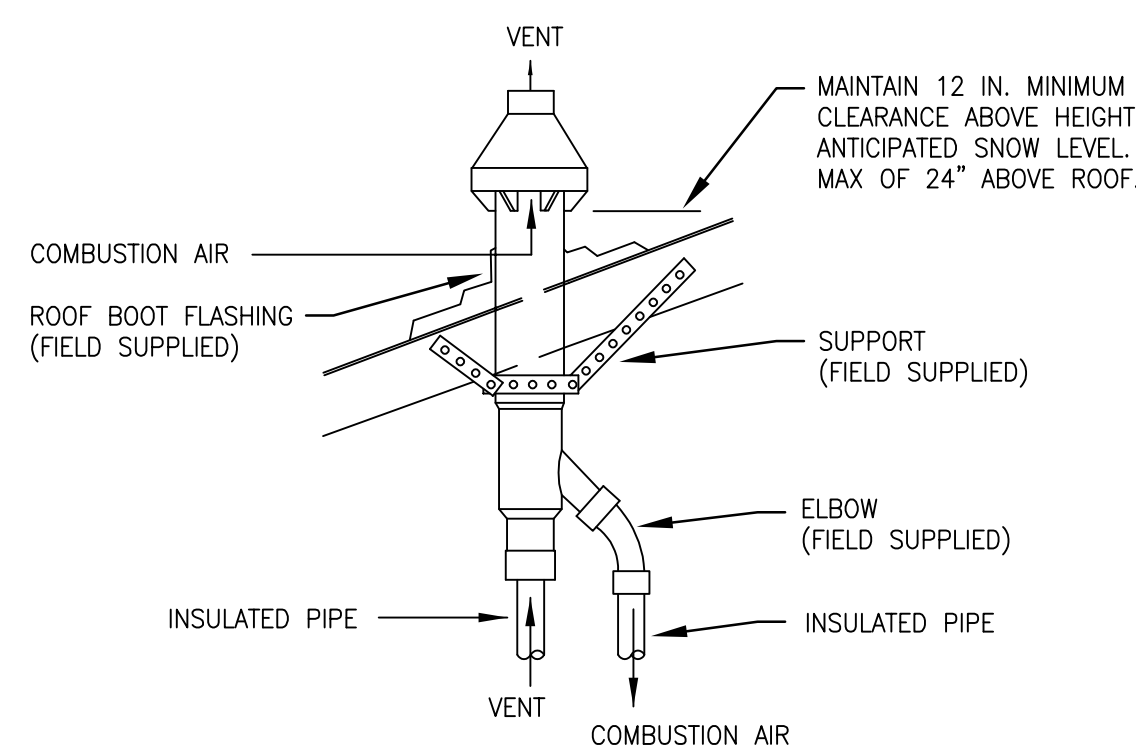
MECHANICAL SYMBOLS

AFG	ABOVE FINISHED GRADE
FFE	FINISHED FLOOR ELEVATION
AFF	ABOVE FINISHED FLOOR
AD	ACCESS DOOR
TYP	TYPICAL
NTS	NOT TO SCALE
FC	FLEXIBLE CONNECTION
EF-#	EXHAUST FAN
EH-#	ELECTRIC HEATER
MAU-#	MAKEUP AIR UNIT
RTU-#	ROOF TOP UNIT
FD	FIRE DAMPER
SD	SUCTION DIFFUSER
⬡	TAGGED NOTE
⬢	FIRE/SMOKE DAMPER
⬢	CARBON DIOXIDE SENSOR
— CD —	CONDENSATE DRAIN LINE
— S-# —	INDICATES AIR DISTRIBUTION DEVICE SPECIFICATION
— CFM —	L = LOUVER
	T = TRANSFER GRILLE
	S = SUPPLY DIFFUSER OR REGISTER,
	R = RETURN GRILLE OR REGISTER,
	E = EXHAUST GRILLE OR REGISTER)
	CFM IF INDICATED ON DWG.
— S20x12 —	SUPPLY AIR DUCT/DUCT DIM. 20" HORIZ. X 12" VERT. (ONE LINE)
— R20x12 —	RETURN AIR DUCT (ONE LINE) 20" HORIZ. X 12" VERT. (ONE LINE)
— E12x12 —	EXHAUST AIR DUCT (ONE LINE) 12" HORIZ. X 12" VERT. (ONE LINE)
— L —	VOLUME DAMPER (MANUAL)
— b —	BOWDEN VOLUME DAMPER
— UL —	UL LISTED PENETRATION
⊠	SUPPLY, RETURN, EXHAUST GRILLE
⊠	THERMOSTAT OR REMOTE SENSOR
⊠	DUCT MOUNTED SMOKE DETECTOR
— RTU-# —	MECHANICAL EQUIPMENT DESIGNATOR
— RS/RL —	SET OF REFRIGERANT LINES
— CL —	CENTER LINE

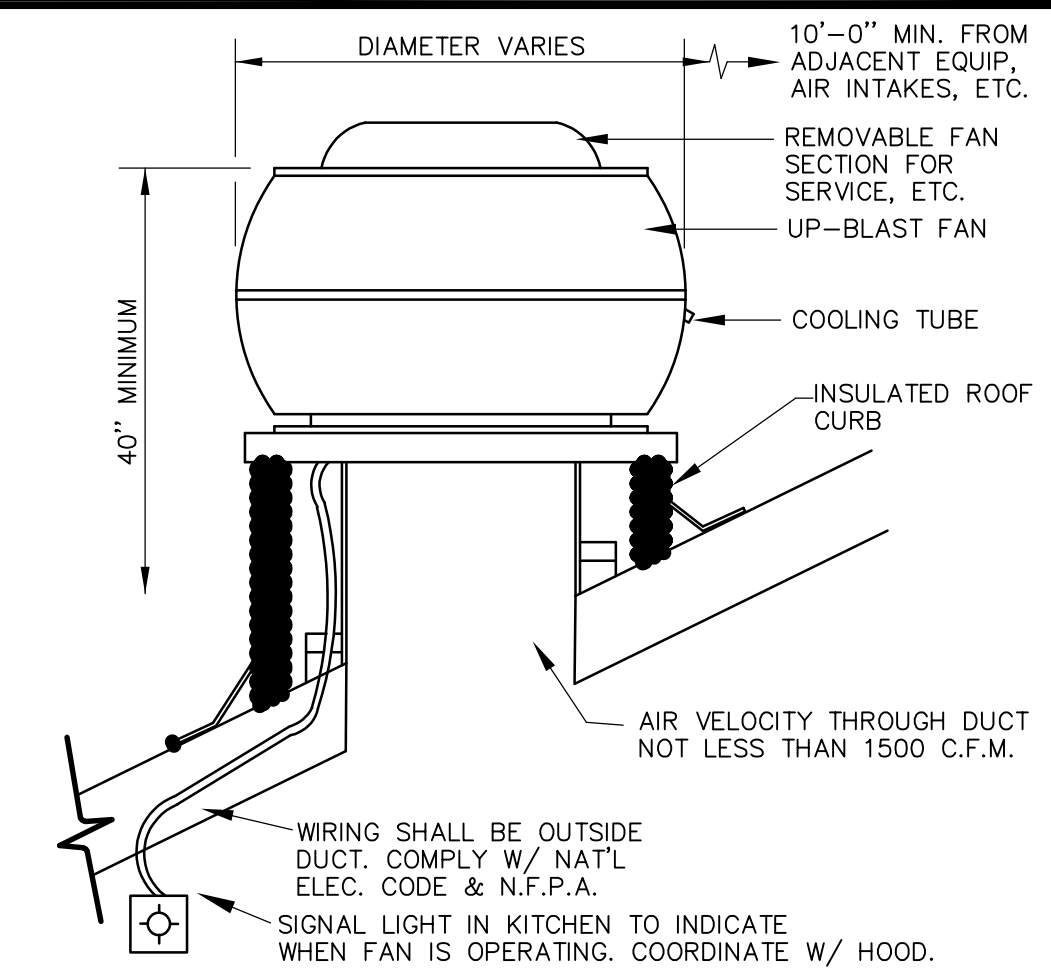
AIR BALANCE SCHEDULE					
EQUIPMENT	SUPPLY AIR (CFM)	OUTSIDE AIR (+CFM)	RETURN AIR (CFM)	EXHAUST AIR (-CFM)	NET AIRFLOW (CFM)
FAN EF-1	-	-	-	-540	-540
FAN EF-2	-	-	-	-3500	-3500
FAN EF-3	-	-	-	-70	-70
SF-1		+3100	-	-	+3100
AHU-1	1200	+70	1130	-	+70
AHU-2	1600	+320	1280	-	+320
AHU-3	1600	+210	1390	-	+210
AHU-4	1390	+110	1280	-	+110
AHU-5	1610	+330	1280	-	+330
ERV-1	-	+1000	-1000	-	0
NET TOTAL					+40



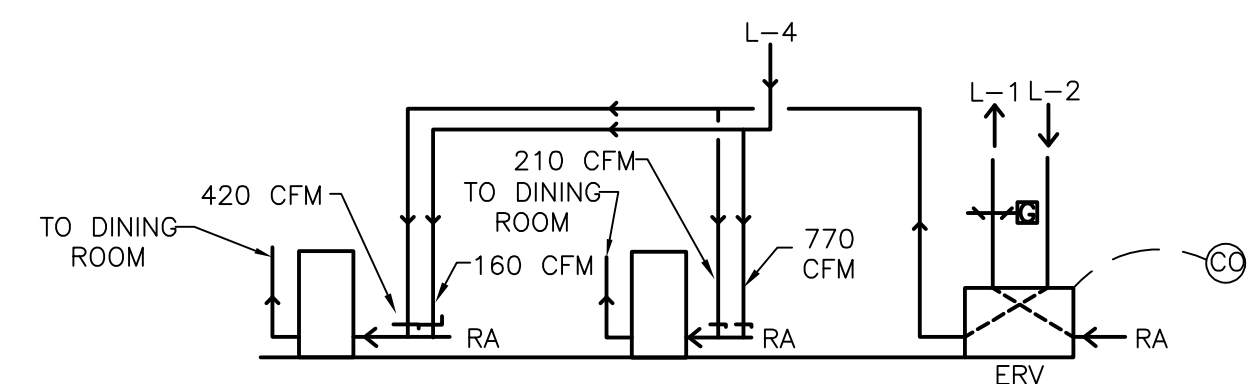
1 TYPICAL ROUND SUPPLY AIR BRANCH DUCT
NO SCALE



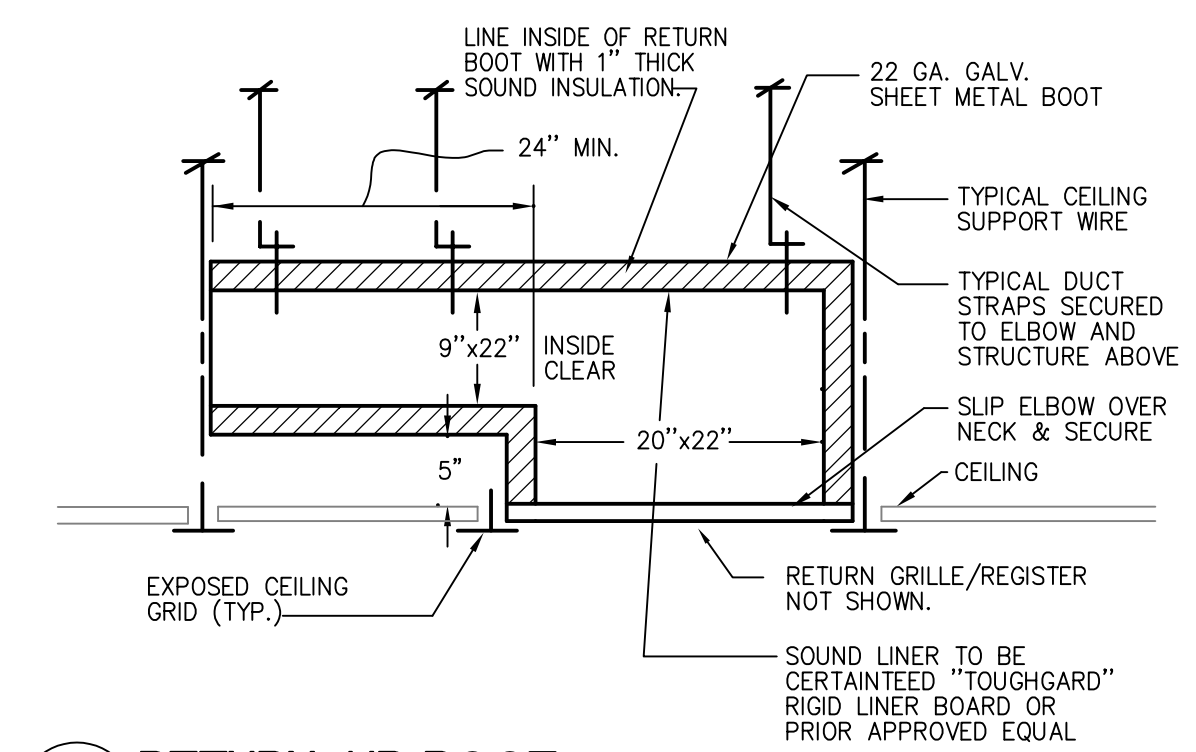
4 CONCENTRIC TERMINAL ROOF VENT
NOT TO SCALE



2 UP-BLAST EXHAUST FAN DETAIL
NO SCALE



3 ERV SUPPLY DETAIL
SCALE: 1/8" = 1'



5 RETURN AIR BOOT
NO SCALE



**MONTGOMERY COUNTY
SENIOR CITIZENS CENTER**
MT. STERLING, KENTUCKY

DATE	REVISION	BY

PROJECT NO. 5067-03
DESIGNED BY CCC
DRAWN BY CCC
CHECKED BY
REVIEWED BY
DATE SEPTEMBER 2024
SCALE AS NOTED

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DRAWING NO.
M-4
SHEET OF

EXHAUST AND SUPPLY FANS SCHEDULE

DESIGNATION	LOCATION	MANUFAC.	MODEL	CFM	ESP	H.P.	DRIVE	SONES	VOLT/Ø	STARTER	DISC.	ROOF CURB	WEIGHT (LBS)	REMARKS
EF-1	ROOF	GREENHECK	G-090-VG	540		1/4	DIRECT	5.0	115/1	BY M.C.	BY M.C.	YES	100	2,5,6,7,11
EF-2	ROOF	GREENHECK	CUBE-180-15	3,500	1	2	BELT	14.5	208/3	BY M.C.	BY M.C.	YES	250	1,4,5,7,8,9
EF-3	ROOF	GREENHECK	G-060-VG	70	0.25	1/15	DIRECT	0.7	115/1	BY M.C.	BY M.C.	YES	41	2,5,6,7,11
SF-1	ROOF	GREENHECK	SAF-112	3100	0.5	1	BELT	--	208/1	BY M.C.	BY M.C.	YES	300	1,2,5,6,7

REMARKS:

- BELT DRIVE MOTOR
- PROVIDE WITH APPROPRIATE GRAVITY BACK DRAFT DAMPER
- PROVIDE INTEGRAL INTAKE GRILLE
- RATED FOR HIGH TEMPERATURE APPLICATION
- PROVIDE STARTER AND DISCONNECT SWITCH
- PROVIDE BIRDSCREEN AND #12 MESH INSECT SCREEN
- PROVIDE SLOPED ROOF CURB
- LISTED FOR KITCHEN HOOD SERVICE
- PROVIDE GREASE CONTAINMENT FILTER
- PROVIDE INLET SCREEN
- PROVIDE ECM MOTOR AND POTENTIOMETER

DUCT HEATERS

MARK	MARKEL MODEL	EQUIPMENT WEIGHT (LBS)	HEATING DATA		MOUNTING	ELECTRICAL			REMARKS
			HEAT INPUT	REQUIRED ELECTRIC HEAT		MCA	MOP	VOLTS/Ø	
DH-1	HF SERIES	100	170.0	54 KW	DUCT	150.1	200	208/3	1,2,3,4

REMARKS:

- REMOTE CONTROL PANEL
- SIDE SERVICE ACCESS
- PROVIDE PROOF OF AIRFLOW SWITCH
- PROVIDE SCR DUCT HEATER CONTROL PANEL

SPLIT SYSTEM CONDENSING UNIT

MARK	FORMER DAIKIN MODEL (RERATE FOR R32)	SERVICE	NOMINAL TONNAGE	SEER RATING	TOTAL COOLING (MBH)	ELECTRICAL			REMARKS
						MCA	MOP	VOLTS/Ø	
CU-1	DXSEA3610	DINING ROOM	3	16.0	34.8	14.1	30	208/1	1,2,3,4,5,6,7,8
CU-2	DX9VCA4810	KITCHEN	4	19.2	45	14.1	35	208/1	1,2,3,4,5,6,7,8
CU-3	DX9VCA4810	DINING ROOM	4	19.2	45	14.1	35	208/1	1,2,3,4,5,6,7,8
CU-4	DX9VCA4810	BATHROOM/CORRIDOR	4	19.2	45	14.1	35	208/1	1,2,3,4,5,6,7,8
CU-5	DX9VCA4810	FITNESS/LOBBY	4	19.2	45	14.1	35	208/1	1,2,3,4,5,6,7,8

REMARKS:

- COOLING CAPACITY IS BASED ON 95°F AMBIENT AIR TEMP & RATED IN ACCORDANCE WITH D.O.E. TESTS & A.R.I. STANDARDS.
- PROVIDE UNIT WITH SUCTION AND DISCHARGE SERVICE VALVES.
- PROVIDE PROGRAMMABLE THERMOSTAT.
- PROVIDE UNIT WITH THERMAL EXPANSION VALVES AND HARD START KITS.
- 5 YEAR COMPRESSOR WARRANTY.
- PROVIDE HIGH EFFICIENCY UNIT.
- PROVIDE CRANKCASE HEATER, FILTER-DRIER, AND LOW PRESSURE SWITCH.
- R-32 OR R-454B WITH REFRIGERANT LEAK MONITORING AND MITIGATION SYSTEM.

ENERGY RECOVERY VENTILATOR

MARK	GREENHECK MODEL #	SUPPLY FAN					EXHAUST FAN					LEAVING AIR DESIGN		ELECTRICAL		WEIGHT LBS.	REMARKS	
		CFM	TYPE	DRIVE	HP	E.S.P.	CFM	TYPE	DRIVE	HP	E.S.P.	SUMMER	WINTER	MCA	MOP			VOLTS/Ø
ERV-1	MINICORE-5-VG	1000	DIFC	DIRECT	3/4	0.5	1100	DWFC	DIRECT	3/4	0.5	80.2/68.2WB	54.2°F	0	15	208/1	321	1-6

REMARKS:

- PERFORMANCE BASED ON OUTSIDE AIR AT 93/74WB SUMMER, 4°F WINTER. EXHAUST AIR ENTERS AT 70°F DB AT 50% RH.
- REMOVABLE HEAT WHEEL SEGMENTS FOR EASE OF MAINTENANCE. HEAT WHEEL RECOVERS BOTH SENSIBLE AND LATENT ENERGY.
- UNIT OPERATION AND MOTORIZED FRESH AIR DAMPER SHALL BE INTERLOCKED WITH A DIGITAL MULTI-CHANNEL TIME CLOCK.
- PROVIDE A SOLID STATE SPEED CONTROL TO BALANCE THE AIRFLOW.
- PROVIDE A SINGLE POINT WIRING WITH DOOR INTERLOCKING DISCONNECT.
- PROVIDE A TIMED EXHAUST FROST CONTROL.

ELECTRIC HEATERS

MARK	MAKE	MODEL	HEATER TYPE	MOUNTING	APPROX. FAN HP	WATTS	ELECTRICAL		REMARKS
							FLA	VOLTS/Ø	
EH-1	MARKEL	305	FAN FORCED	WALL	1/40	1,500	4.8	208/1	1,2,3,4,5
EH-2	MARKEL	305	FAN FORCED	WALL	1/40	1,500	4.8	208/1	1,2,3,4,5
EH-3	MARKEL	305	FAN FORCED	WALL	1/40	1,500	4.8	208/1	1,2,3,4,5

REMARKS:

- PROVIDE INTEGRAL THERMOSTAT.
- MANUAL RESET THERMAL LIMIT.
- BRUSHED ALUMINUM FINISH.
- FURNISH UL LISTED AND NEC COMPLIANT DISCONNECT MEANS.
- PROVIDE WITH ACCESSORY SURFACE MOUNT FRAME.

LOUVER SCHEDULE

DESIGNATION	MANUFACTURER	MODEL	E.S.P.	FREE AREA	FREE AREA VELOCITY (FT/MIN.)	SIZE WIDTH X HEIGHT	MAX CFM	DEPTH	REMARKS
L-1	GREENHECK	ESD-635	0.064	1.58	756	32"x24"	1,190	6"	1,2,3,5
L-2	GREENHECK	ESD-601	0.049	1.95	610	32"x32"	1,190	6"	1,2,5
L-3	GREENHECK	ESD-635	0.077	0.57	765	16"x24"	440	6"	1,2,5
L-4	GREENHECK	ESD-635	0.083	0.75	796	24"x24"	600	6"	1,2,5

REMARKS:

- PROVIDE BIRDSCREEN AND #12 INSECT SCREEN.
- FIXED BLADES, DRAINABLE
- GRAVITY BACKDRAFT DAMPER
- BLANK OFF AND SEAL ATTIC SIDE OF LOUVER WEATHER TIGHT. LOUVER FOR DECORATIVE PURPOSES ONLY.
- LOUVER PRIMED FOR PAINT. COLOR BY ARCHITECT.
- BLANK OFF AND SEAL UNUSED PORTION OF LOUVER WEATHER TIGHT.
- 24 VOLT MOTORIZED DAMPERS.

REGISTERS, GRILLES, AND DIFFUSERS

MARK	PRICE MODEL	TYPE	NOMINAL SIZE	MOUNTING	CFM MAX.	PD MAX.	THROW @ 100 FPS	OBD?	FINISH	NC MAX.	REMARKS
S-1	ASPD SERIES ALUMINUM	SQUARE PLAQUE DIFFUSER	24"x24" 6"Ø NECK	LAY-IN	120	0.023	3	YES	CHOSEN BY ARCHITECT	20	1,2,4
S-2	ASPD SERIES ALUMINUM	SQUARE PLAQUE DIFFUSER	24"x24" 8"Ø NECK	LAY-IN	220	0.045	4	YES	CHOSEN BY ARCHITECT	20	1,2,4
S-3	ASPD SERIES ALUMINUM	SQUARE PLAQUE DIFFUSER	24"x24" 10"Ø NECK	LAY-IN	420	0.03	6	YES	CHOSEN BY ARCHITECT	20	1,2,4
S-4	ASPD SERIES ALUMINUM	SQUARE PLAQUE DIFFUSER	12"x12" 6"Ø NECK	SURFACE	120	0.023	3	YES	CHOSEN BY ARCHITECT	21	1,2,4
S-5	MODEL 30 AIRFOIL SERIES	LOUVER FACED SUPPLY	8"x4" 6"Ø NECK	SURFACE	125	0.06	12' 22.5 DEFL	YES	CHOSEN BY ARCHITECT	17	1,2,4
R-1	SERIES 70 ALUMINUM	LOUVER FACED RETURN GRILLE	24"x24"	LAY-IN	800	0.015	-	-	CHOSEN BY ARCHITECT	20	2,3
R-2	SERIES 70 ALUMINUM	LOUVER FACED RETURN GRILLE	20"x18"	SURFACE	490	0.025	-	-	CHOSEN BY ARCHITECT	16	2,3
TG-1	SERIES 70 ALUMINUM	LOUVER FACED TRANSFER GRILLE	24"x24"	LAY-IN	260	0.04	-	-	CHOSEN BY ARCHITECT	20	2,3
TG-2	SERIES 70 ALUMINUM	LOUVER FACED TRANSFER GRILLE	12"x12"	SURFACE	260	0.04	-	-	CHOSEN BY ARCHITECT	21	2,3
E-1	SERIES 70 ALUMINUM	LOUVER FACED EXHAUST GRILLE	12"x12"	LAY-IN	270	0.032	-	-	CHOSEN BY ARCHITECT	20	1,2,4
E-2	SERIES 70 ALUMINUM	LOUVER FACED EXHAUST GRILLE	12"x12"	SURFACE	270	0.032	-	-	CHOSEN BY ARCHITECT	19	1,2,4
E-3	SERIES 70 ALUMINUM	LOUVER FACED EXHAUST GRILLE	8"x6"	SURFACE	78	0.032	-	-	CHOSEN BY ARCHITECT	20	1,2,4
LD-1	JS (50% OPEN)	LINEAR SLOT DIFFUSER	8" INLET, 4FT LENGTH, 1 SLOT, 1.5" SLOT WIDTH	SURFACE	240	0.126	17	YES	CHOSEN BY ARCHITECT	18	1,2

REMARKS:

- PROVIDE DUCT TRANSITION TO GRILLE/DIFFUSER AS REQUIRED.
- IF ARCHITECT DOES NOT CHOOSE A COLOR, THEN COLOR SHALL BE OFF-WHITE OR AS INDICATED ON PLANS.
- PROVIDE PLENUM BOX WHERE SHOWN ON DRAWINGS, FULL SIZE OF AIR DEVICE, 12" DEEP, DUCT TO TAP INTO SIDE. WHERE THE INSIDE OF PLENUM BOXES ARE VISIBLE FROM THE FLOOR, THEY SHALL BE PAINTED FLAT BLACK. SEE RETURN PLENUM DETAIL.
- PROVIDE MANUFACTURERS INTEGRAL BALANCING DAMPER IN DEVICE TO ALLOW BALANCING OF AIR DEVICE THROUGH FACE OF DEVICE.

GAS FURNACE -- DX COIL

MARK	DAIKIN MODEL	SUPPLY FAN					OA CFM	GAS INPUT (MBH)	GAS OUTPUT (MBH)	AFUE	ELECTRICAL			REMARKS
		CFM	TYPE	DRIVE	HP	E.S.P.					MCA	MOP	VOLTS/Ø	
AHU-1	DC96VC0403BN	1200	VARIABLE SPEED ECM	DIRECT	1/2	0.5	490	40000	38440	96	7.1	15	115/1	1,2,3,4,5
AHU-2	DC96VC0603BN	1600	VARIABLE SPEED ECM	DIRECT	1/2	0.5	320	60000	57660	96	7.1	15	115/1	1,2,3,4
AHU-3	DC96VC0603BN	1600	VARIABLE SPEED ECM	DIRECT	1/2	0.5	980	60000	57660	96	7.1	15	115/1	1,2,3,4,5
AHU-4	DC96VC0603BN	1600	VARIABLE SPEED ECM	DIRECT	1/2	0.5	110	60000	57660	96	7.1	15	115/1	1,2,3,4
AHU-5	DC96VC0603BN	1600	VARIABLE SPEED ECM	DIRECT	1/2	0.5	330	60000	57660	96	7.1	15	115/1	1,2,3,4,5

REMARKS:

- FRONT ACCESS FILTER WITH 2 SPARE SETS OF FILTERS.
- FACTORY 2-STAGE HEATING/COOLING THERMOSTAT WITH ON-OFF-AUTO FAN SWITCH AND HEAT/COOL ATUO-CHANGEOVER.
- PROVIDE A-FRAME DX REFRIGERATION COIL MATCHED TO CAPACITY OF SPECIFIED CONDENSING UNIT. R-32 OR R-454B.
- EXTERNAL STATIC PRESSURE OVER AND ABOVE THE LOSSES OF A WET DX COIL AND CLEAN FILTER.
- INSTALL AND INTERLOCK SMOKE SHUTDOWN DETECTORS ON UNIT RETURN.



MONTGOMERY COUNTY
SENIOR CITIZENS CENTER
MT. STERLING, KENTUCKY

DATE	REVISION	BY

DESIGN DOCUMENTS:
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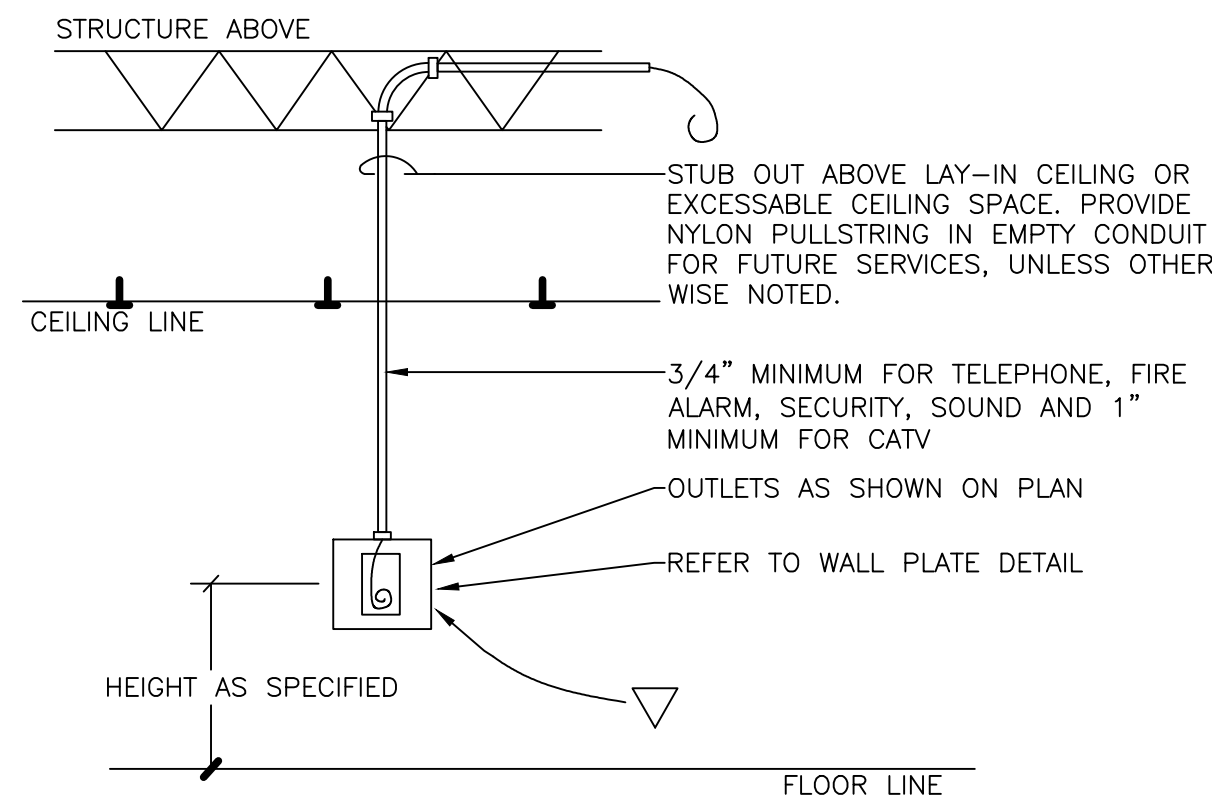
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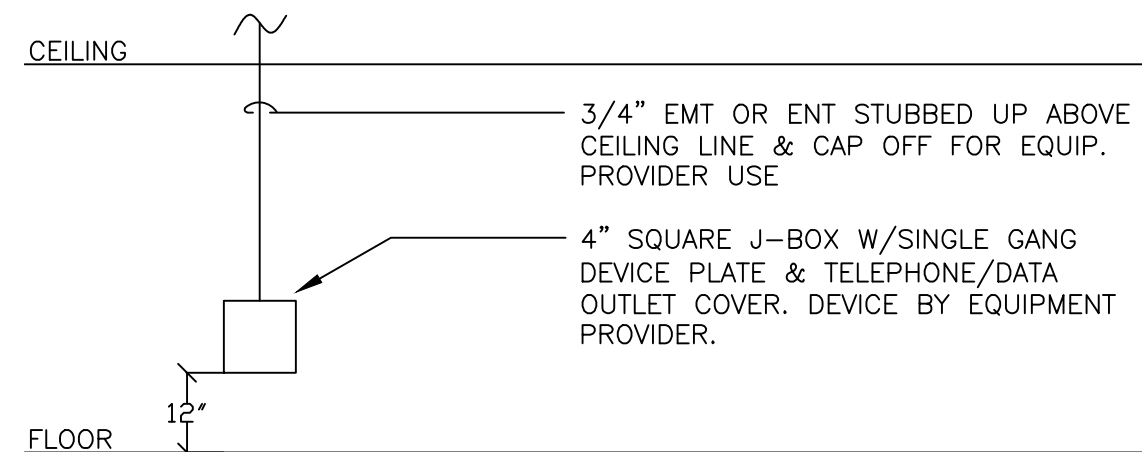


GENERAL NOTES - SCOPE OF WORK

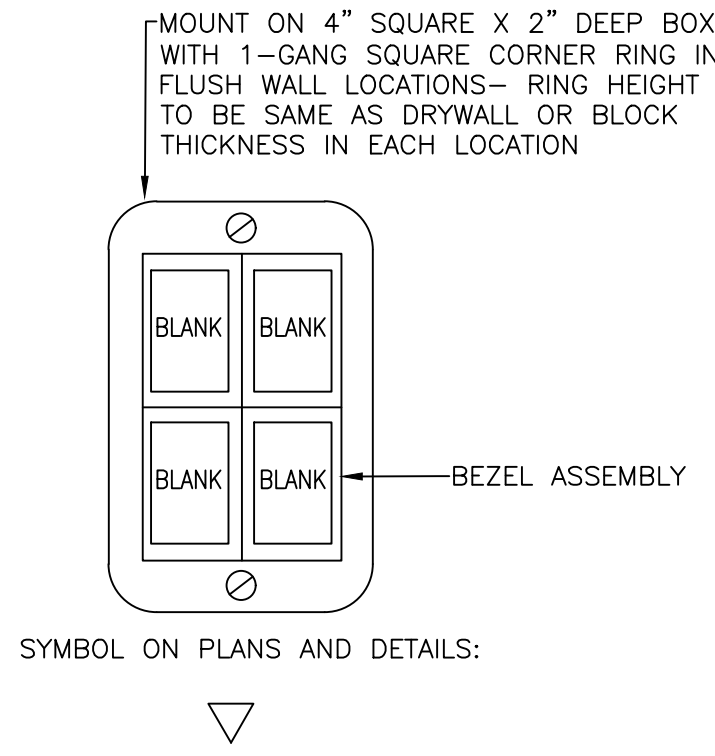
- A. SCOPE OF WORK**
- THE REQUIREMENTS HERE-IN-AFTER ARE IN ADDITION AND COMPLIMENT TO THE REQUIREMENTS, SHOWN ON THE DRAWINGS, & IN THE DIVISION 26,27,& 28 SPECIFICATIONS.
 - PROVIDE ALL LABOR AND MATERIAL NECESSARY TO ACCOMPLISH THE WORK SPECIFIED HEREIN AND AS SHOWN ON THE DRAWINGS.
 - COORDINATE WORK WITH ALL OTHER TRADES.
 - VISIT THE SITE AND VERIFY EXISTING CONDITIONS.
 - REMOVE ALL WASTE AND RUBBISH FROM THE SITE ON A DAILY BASIS.
- B. WARRANTY: WORKMANSHIP AND MATERIALS SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE BY THE OWNER, UON.**
- C. REGULATIONS**
- ELECTRICAL WORK SHALL COMPLY WITH THE FOLLOWING CODES AS PRESENTLY APPLICABLE:
 - NATIONAL ELECTRICAL CODE (NEC)
 - ENERGY CODE
 - LOCAL AND STATE CODES AND REGULATIONS
 - PERMITS: OBTAIN AND PAY FOR ALL REQUIRED PERMITS.
- D. SUBMITTAL AND SHOP DRAWINGS: PRIOR TO INSTALLATION, SUBMIT CATALOG DATA FOR ALL EQUIPMENT AND MATERIALS FOR REVIEW. SUBMIT SHOP DRAWINGS SHOWING COMPLETE TERMINAL-TO-TERMINAL WIRING FOR EACH SIGNAL AND COMMUNICATION SYSTEM. THREE COPIES REQUIRED. (DOES NOT APPLY TO ALL PROJECT PHASES.)**
- E. OPERATIONS AND MAINTENANCE MANUALS: PROVIDE MAINTENANCE AND OPERATIONS DATA FOR ALL ELECTRICAL EQUIPMENT AND SIGNAL AND COMMUNICATIONS SYSTEMS. TWO COPIES & ONE "E" COPY ARE REQUIRED.**
- F. RECORD DRAWINGS: CORRECTIONS AND CHANGES MADE DURING THE PROGRESS OF THE WORK SHALL BE NEATLY RECORDED ON A SET OF DRAWINGS DEDICATED & MARKED RECORD DRAWINGS AS ACTUALLY INSTALLED FOR RECORD DRAWINGS. SUBMIT TO THE ARCHITECT UPON PROJECT COMPLETION.**
- G. CERTIFICATES OF INSPECTION: SUBMIT SIGNED-OFF PERMITS FROM THE CODE ENFORCING AGENCIES TO THE OWNER UPON PROJECT COMPLETION.**
- H. PRODUCT LISTING OR LABELING: ALL ELECTRICAL EQUIPMENT SHALL BE LISTED AND LABELED BY UNDERWRITERSLABORATORIES, INC.**
- I. MATERIAL AND EQUIPMENT: ALL MATERIALS AND EQUIPMENT SHALL BE NEW UNLESS NOTED OTHERWISE. PROTECT ALL MATERIALS AND EQUIPMENT FROM DAMAGE OR CORROSION.**
- J. CUTTING AND PATCHING: PROVIDE ALL REQUIRED CUTTING AND PATCHING FOR THE ELECTRICAL WORK.**
- K. ANCHORAGE AND BRACING: PROVIDE COMPLETE SEISMIC ANCHORAGE AND BRACING FOR THE LATERAL AND VERTICAL SUPPORT OF CONDUIT AND ELECTRICAL EQUIPMENT AS REQUIRED BY THE INTERNATIONAL BUILDING CODE.**
- L. FIRESTOPPING: PROVIDE FIRESTOPPING FOR ALL PENETRATION IN RATED WALLS, CEILING AND FLOORS.**
- M. INSTRUCTION: CONTRACTOR SHALL INSTRUCT THE OWNER IN THE USE AND OPERATION OF ALL SYSTEMS INSTALLED UNDER THE SCOPE OF THIS CONTRACT.**



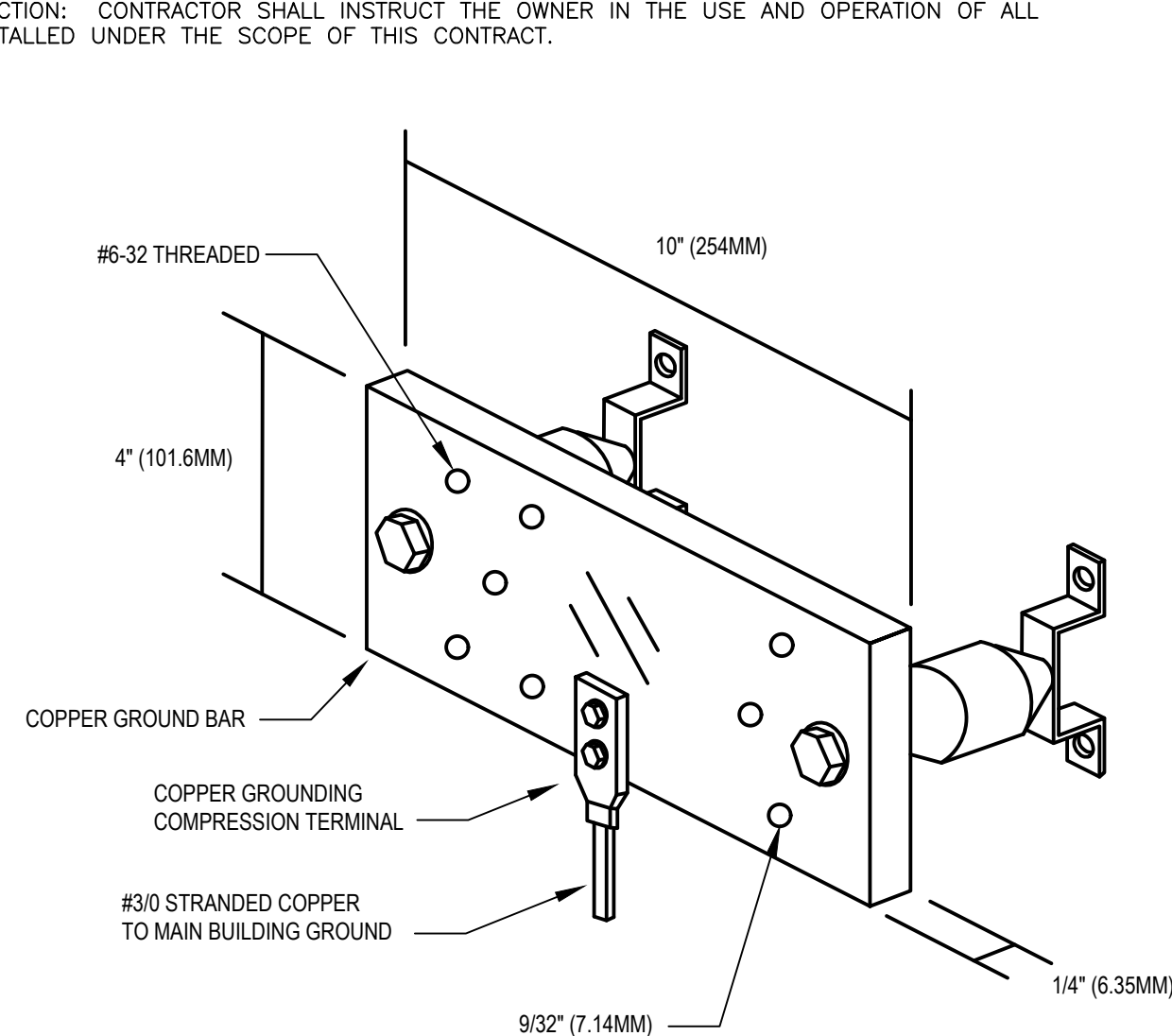
ROUGH-IN DETAIL FOR STUB-OUTS
SCALE: N.T.S.



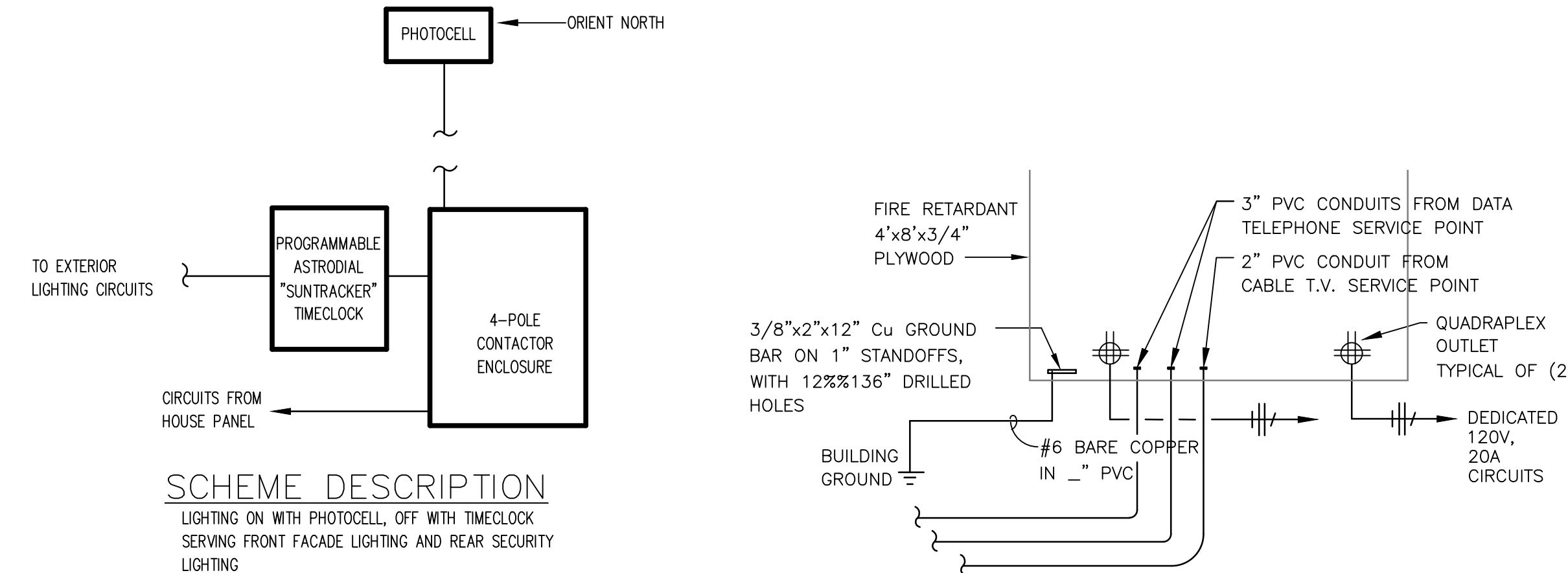
TELEPHONE DATA BOX INSTALLATION DETAIL
SCALE: N.T.S.



DETAIL OF TYPICAL TELE-DATA WALLPLATE
SCALE: N.T.S.

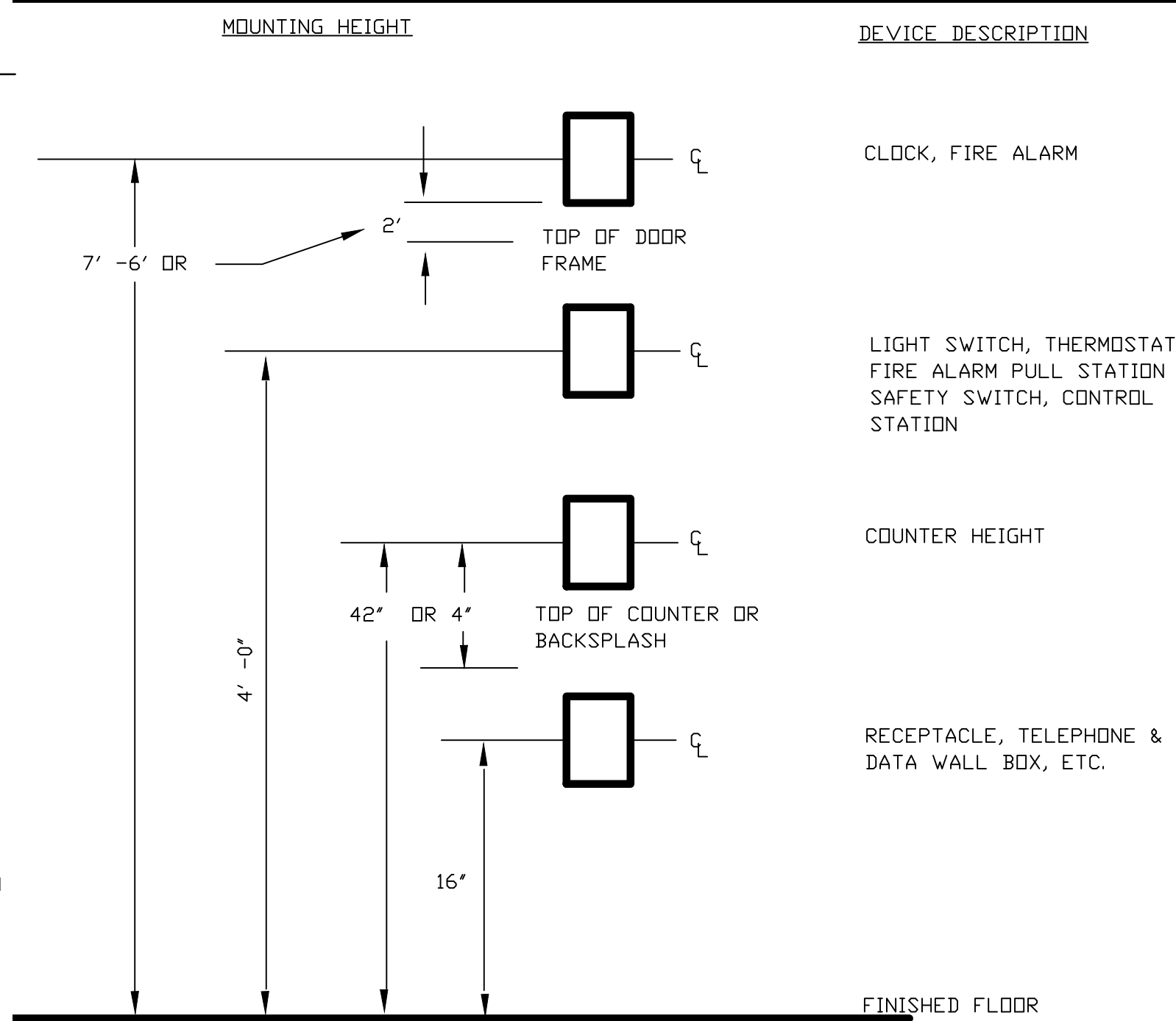


IT GROUND BAR DETAIL
SCALE: N.T.S.

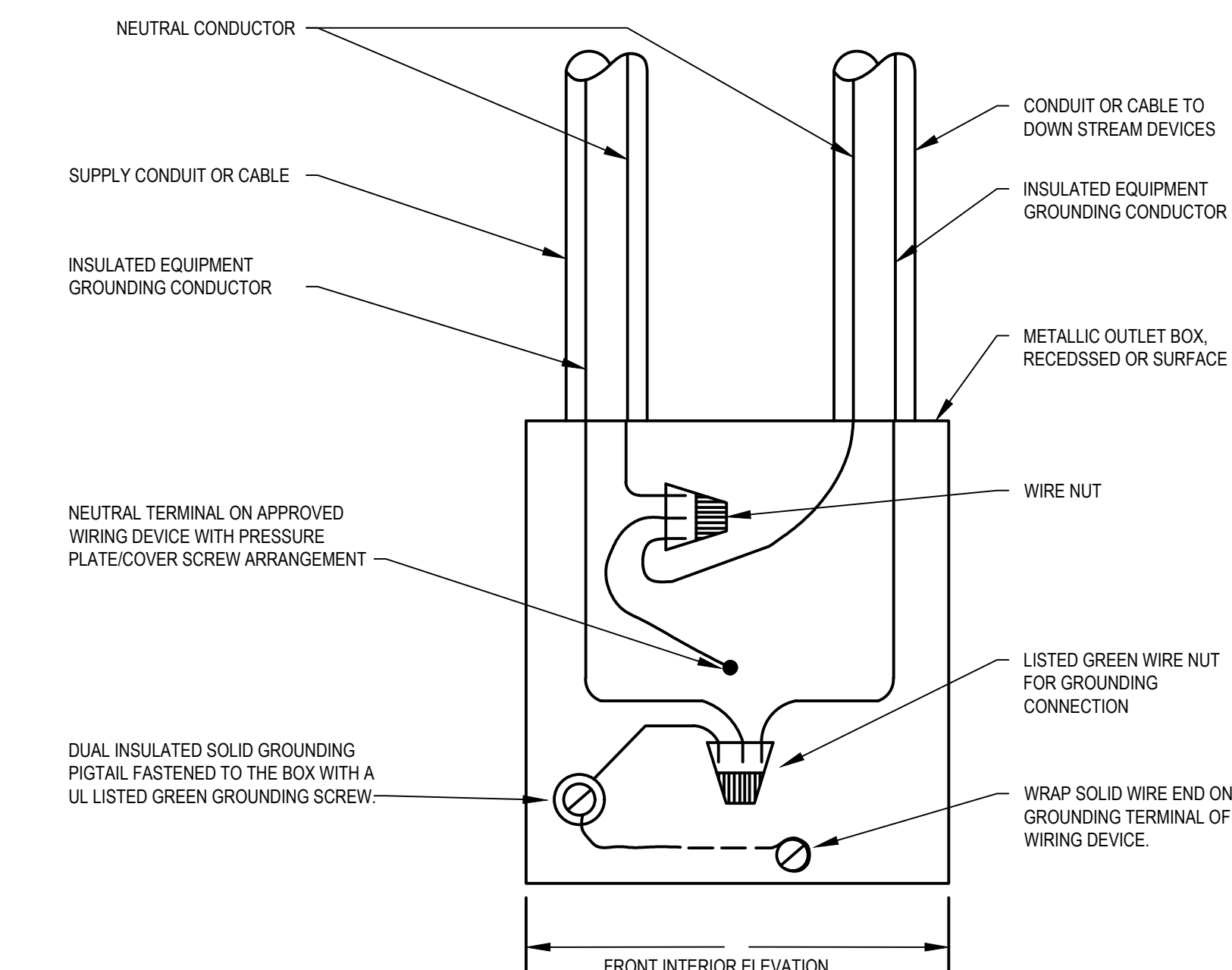


EXTERIOR BUILDING LIGHTING DIAGRAM
SCALE: N.T.S.

MAIN TELEPHONE TERMINAL BOARD
SCALE: N.T.S.



DEVICE MOUNTING DETAIL
SCALE: N.T.S.



TYPICAL WIRING DEVICE GROUNDING DETAIL
SCALE: N.T.S.

LEGEND OF SYMBOLS

- WALL MTD LUMINAIRE SEE FIXTURE SCHEDULE
- RECESSED LUMINAIRE SEE FIXTURE SCHEDULE
- INDICATES LUMINAIRE W/ EMERGENCY POWER COMPONENTS AND/OR EMERGENCY CIRCUITRY
- EXIT SIGN - CEILING MTD SEE FIXTURE SCHEDULE
- SURFACE - OR PENDANT MOUNTED LUMINAIRE SEE FIXTURE SCHEDULE
- LOWER CASE ALPHABET AT LUMINAIRES INDICATE SWITCHING SCHEME FOR INDIVIDUAL/GROUP OF LUMINAIRES
- LIGHTING CONTROL STATION - SEE KEYED NOTE REFERENCED IN EACH ROOM FOR TYPE OF CONTROL- OTHERWISE PROVIDE A SINGLE POLE SWITCH
- KEYED SWITCH WITH PILOT LIGHT KPL
- LIGHTING CONTROLLER, LOW VOLTAGE RELAY - POWER PACK
- OCCUPANCY SENSOR, DUAL TECHNOLOGY CEILING MTD
- DAYLIGHT SENSOR, CEILING MTD
- SWITCH WITH NUMERAL- 2-2 POLE 3-3 POLE 4-4 WAY
- DUPLEX CONVENIENCE RECEPTACLE 120 VOLT
- QUADPLEX RECEPTACLE- (2) DUPLEX RECEPTACLES IN 2 GANG BOX WITH 2 GANG PLASTER RING 120 VOLT
- 120 VOLT GROUND FAULT INTERRUPTING DUPLEX RECEPTACLE
- 120 VOLT DUPLEX CONVENIENCE RECEPTACLE MTD ABOVE A COUNTERTOP
- 120 VOLT DUPLEX CONVENIENCE RECEPTACLE WITH SPLIT WIRED, TOP WIRED HOT, BOTTOM SWITCH AS INDICATED
- 120 VOLT GROUND FAULT INTERRUPTING DUPLEX RECEPTACLE MTD ABOVE A COUNTERTOP
- SPECIALTY OUTLET. COORDINATE WITH NOTES.
- EWC ELECTRIC WATER COOLER OUTLET, SINGLE OUTLET
- WP/IFI WEATHER PROOF GFI 120 VOLT DUPLEX RECEPTACLE MTD OUTSIDE ABOVE GRADE OR AT ROOFTOP HVAC UNITS
- FLUSH FLOOR COMBINATION POWER & DATA OUTLET 120 VOLT
- FLUSH FLOOR SINGLE POWER OUTLET 120 VOLT
- FLUSH FLOOR COMMUNICATIONS OUTLET
- WALL MOUNTED QUAD NIPR WORK AREA OUTLET. PROVIDE WITH 1" EMT CONDUIT FROM OUTLET TO OVERHEAD AND BACK TO WIRE TRAY IN EXISTING TELECOM ROOM. NIPR CABINET LOCATED IN TELECOM ROOM.
- WALL MOUNTED DUAL SIPR WORK AREA OUTLET. PROVIDE WITH 1" EMT CONDUIT FROM OUTLET TO OVERHEAD AND BACK TO WIRE TRAY IN EXISTING TELECOM ROOM. SIPR SAFE IS LOCATED IN TELECOM ROOM
- JUNCTION BOX AS NOTED
- WALL MTD PUSH BUTTON AS NOTED.
- NON FUSED DISCONNECT SWITCH AS NOTED
- FUSED DISCONNECT SWITCH AS NOTED
- MAGNETIC STARTER SEE NOTES AND/OR SPECS
- COMBINATION STARTER/DISCONNECT. SEE NOTES AND/OR SPECS
- MOTOR CONNECTION
- EXHAUST FAN CONNECTION
- MOTORIZED DAMPER CONNECTION
- MANUAL MOTOR RATED FRACTIONAL HP SWITCH
- FIRE ALARM AUDIO/VISUAL SPEAKER NOTIFICATION APPLIANCE
- FIRE ALARM AUDIO/VISUAL NOTIFICATION APPLIANCE
- FIRE ALARM VISUAL ONLY (STROBE) NOTIFICATION APPLIANCE
- FIRE ALARM MANUAL PULL STATION
- TBD
- FIRE ALARM DUCT MTD SMOKE DETECTOR
- FIRE ALARM HEAT DETECTOR - CEILING MTD
- FIRE ALARM SMOKE DETECTOR - CEILING MTD
- FIRE ALARM TAMPER SWITCH CONNECTION AT SPRINKLE SYSTEM
- FIRE ALARM FLOW SWITCH CONNECTION AT SPRINKLY SYSTEM
- FIRE ALARM POST INDICATING VALVE AT SPRINKLY SYSTEM
- FIRE ALARM SYSTEM CONTROL PANEL
- FIRE ALARM SYSTEM REMOTE ANNUNCIATOR
- FIRE ALARM SYSTEM ELECTROMAGNETIC DOOR HOLDER
- SECURITY SYSTEM KEY PAD
- SECURITY SYSTEM CAMERA
- CEILING MTD SPEAKER
- COLUMN OR WALL MTD SPEAKER
- WALL MTD TV OUTLET
- SURGE PROTECTION DEVICE ALSO REFERENCED AS TVSS
- INDICATES CONDUIT IN FLOOR SLAB, CEILING BELOW OR BELOW GRADE
- INDICATES CONDUIT CONCEALED ABOVE CEILING IN WALL OR EXPOSED ON SURFACE ABOVE
- HOME RUN CIRCUIT CONDUCTORS TO BRANCH CIRCUIT PANEL
- CONDUIT
- EXTERIOR EMERGENCY EGRESS PERSONNEL DOOR LUMINAIRE WITH EMERGENCY POWER COMPONENTS - SEE FIXTURE SCHEDULE
- EXTERIOR BUILDING MTD AREA SECURITY LUMINAIRE - SEE FIXTURE SCHEDULE
- POLE MTD LUMINAIRE IN PARKING LOT - SEE FIXTURE SCHEDULE
- LANDSCAPE LIGHTING COMPONENT - SEE FIXTURE SCHEDULE
- ADJUSTABLE ARM TRUCK DOCK FLOOD LIGHT
- ABOVE FINISHED FLOOR
- ELECTRICAL CONTRACTOR
- MECHANICAL CONTRACTOR
- UNLESS NOTED OTHERWISE
- ABOVE FINISHED GRADE
- ELECTRIC WATER COOLER
- NIGHTLIGHT CIRCUIT
- WATER PROOF
- POINT OF SERVICE
- GROUND FAULT INTERRUPTER RECEPTACLE
- FURNISHED BY OTHERS
- FUSED DISCONNECT SWITCH UNLESS OTHERWISE NOTED
- NON-FUSED DISCONNECT SWITCH
- EQUIPMENT MTD JUNCTION BOX
- D INDICATES CONDUIT FOR DATA
- T INDICATES CONDUIT FOR TELEPHONE
- XFMR TRANSFORMER



MONTGOMERY COUNTY SENIOR CITIZENS CENTER
MT. STERLING, KENTUCKY

DATE	REVISION	BY

PROJECT NO. 5067-03
DESIGNED BY JM
DRAWN BY AJ
CHECKED BY JLF
REVIEWED BY JLF
DATE SEPTEMBER 2024
SCALE AS NOTED

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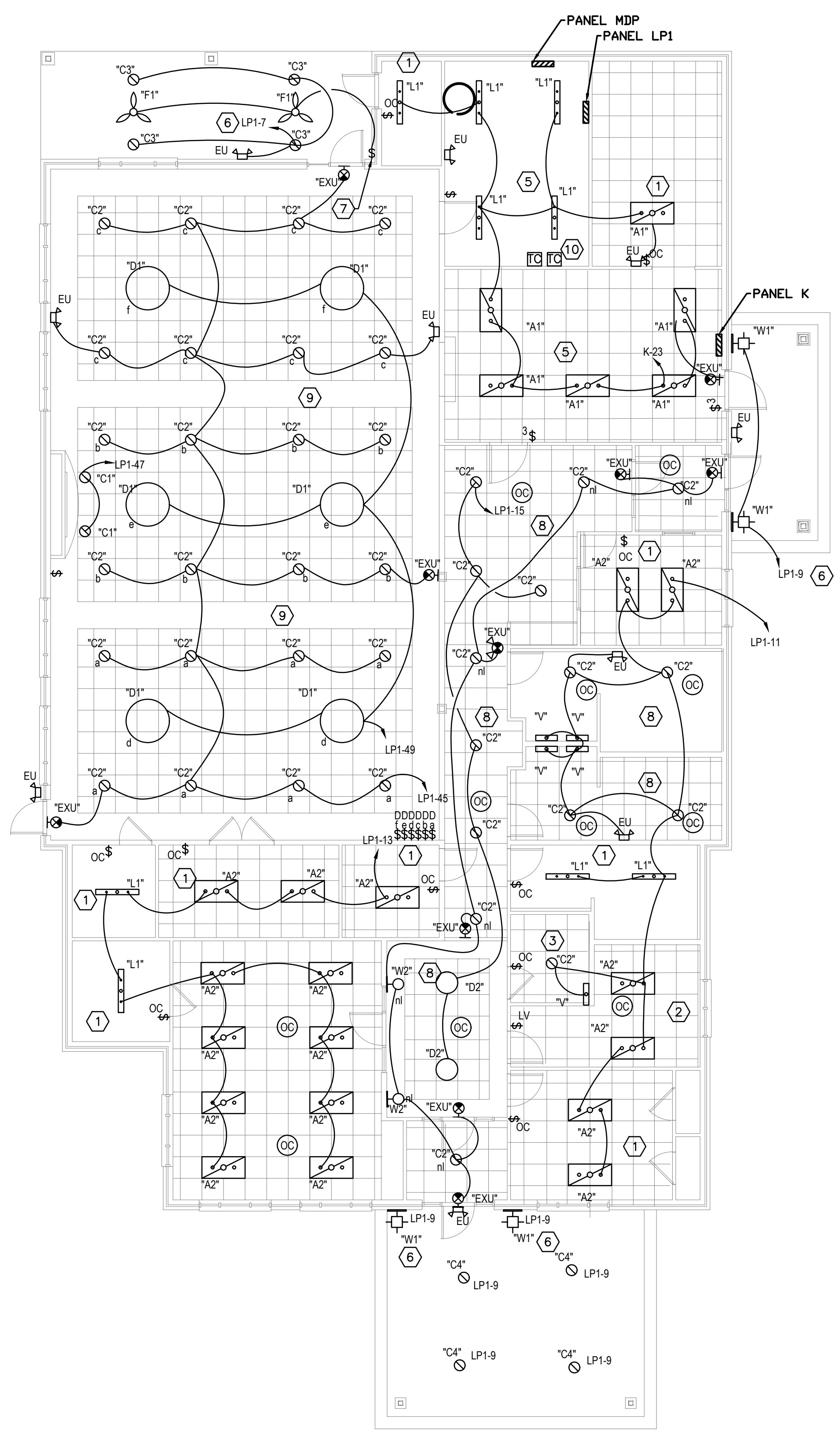
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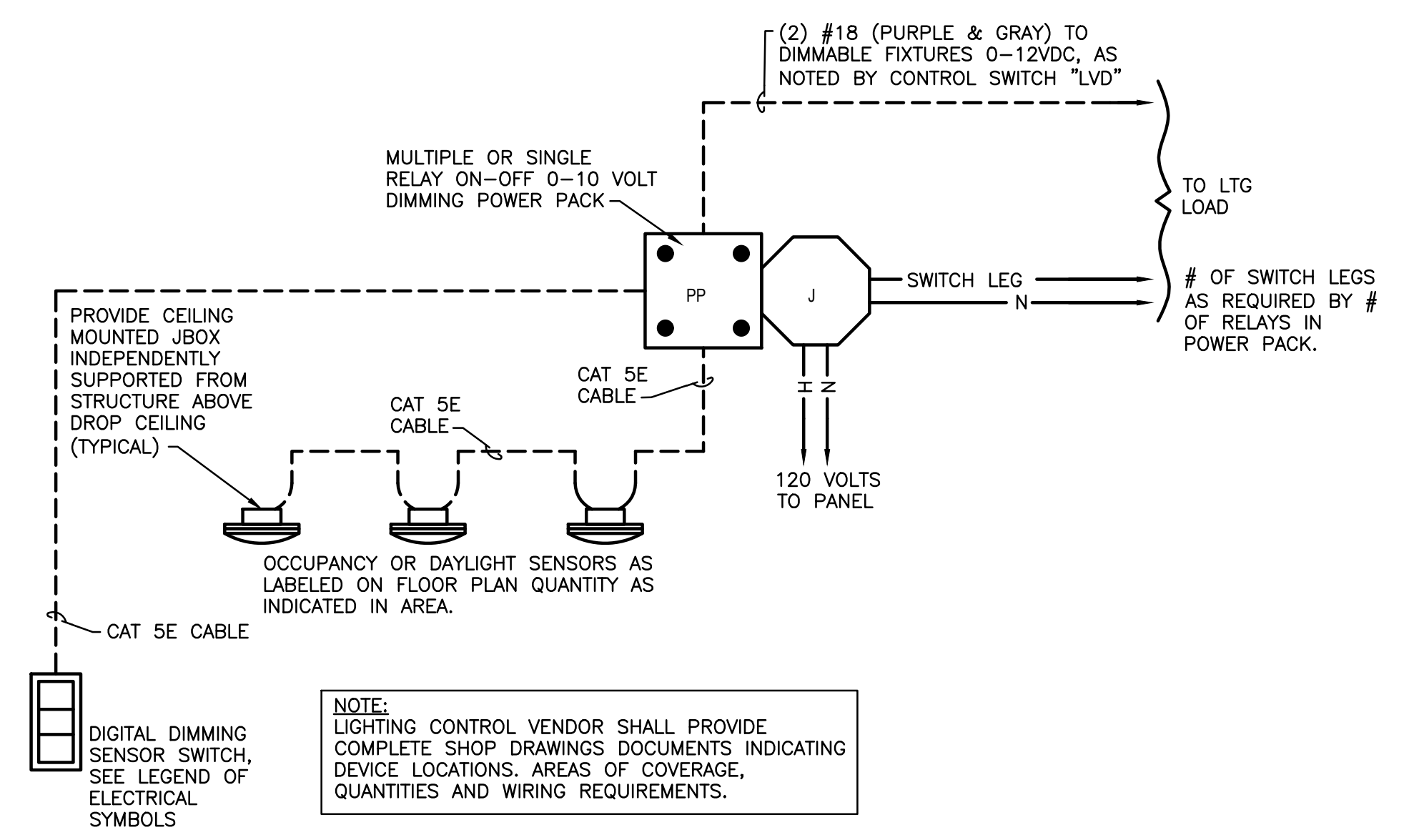
**MONTGOMERY COUNTY
SENIOR CITIZENS CENTER**
MT. STERLING, KENTUCKY

TAGGED NOTES - LIGHTING

1. LIGHTING CONTROLLED WITH WALL MOUNTED PUSH BUTTON, VACANCY SENSOR.
2. LIGHTING IN ROOM CONTROLLED WITH WALL MOUNTED PUSH BUTTON FOR ON/OFF CONTROL. PROVIDE CEILING MOUNTED VACANCY SENSOR FOR AUTO OFF CONTROL.
3. PROVIDE WALL MOUNTED OCCUPANCY SENSOR FOR AUTO ON/OFF CONTROL OF LIGHTS.
4. PROVIDE CEILING MOUNTED OCCUPANCY SENSOR FOR AUTO ON/OFF CONTROL OF LIGHTS.
5. LIGHTING IN THIS AREA CONTROLLED WITH MANUAL ON/OFF TOGGLE SWITCH(S).
6. EXTERIOR LIGHTS CONTROLLED WITH PHOTOCELL ON NORTH SIDE OF BUILDING AND TIME CLOCK. COORDINATE ON/OFF TIMES WITH OWNER. COORDINATE PHOTOCELL LOCATION IN FIELD.
7. EXTERIOR CEILING FANS CONTROLLED WITH MANUAL, WEATHER PROOF SWITCH.
8. LIGHTS IN CORRIDORS CONTROLLED WITH TIME CLOCKS. COORDINATE WITH OWNER ON ON/OFF TIMES. PROVIDE CEILING MOUNTED OCCUPANCY SENSORS FOR CONTROL OF LIGHTS FOR OFF HOURS.
9. LIGHTING IN THIS AREA CONTROLLED WITH LOCAL DIMMER SWITCHES. SWITCHES CONTROL CORRESPONDING LIGHTS.
10. TIME CLOCKS AND CONTACTORS FOR CONTROL OF EXTERIOR AND CORRIDOR LIGHTING



TYPE	DESCRIPTION	MFG	CATALOG #	LAMP	VOLTAGE	LUMENS	WATTS/FIXTURE	NOTES
A1	LED TROFFER WITH SELECTABLE LUMAN OUTPUT, IN KITCHEN	NICOR	TGLS324U	LED	120	5814 MAX	47-MAX	RECESSED IN CEILING GRID
A2	LED TROFFER WITH SELECTABLE LUMAN OUTPUT	NICOR	TGLS324U	LED	120	5814 MAX	47-MAX	RECESSED IN CEILING GRID
C1	4" LED CAN LIGHT - WALL WASH	NICOR	CDG4138SU9CLWHMD/CDG1LENS VVV	LED	120	3800 MAX	37 - MAX	RECESSED IN CEILING, SWITCHABLE LUMENS, 0-10V DIMMING
C2	6" LED CAN LIGHT	NICOR	CDG6138SU9CLWHMD	LED	120	3800 MAX	37 - MAX	RECESSED IN CEILING, SWITCHABLE LUMENS, 0-10V DIMMING
C3	6" LED CAN LIGHT - BATTERY BACKUP	NICOR	CDG6138SU9CLWHMD E2	LED	120	3800 MAX	37 - MAX	RECESSED IN CEILING, SWITCHABLE LUMENS, 0-10V DIMMING
C4	SURFACE MOUNTED CANOPY LIGHT	NICOR	OUC4 075S UNV S BZ	LED	120	9700 MAX	75 - MAX	SURFACE MOUNTED, SWITCHABLE LUMENS.
D1	LARGE DECORATIVE LIGHT	LITE TOPS	PD 6667 115 01 48 DR SN	LED	120	4000	42.5	5 MEDIUM BASE BULBS
D2	SMALL DECORATIVE LIGHT	LITE TOPS	SF 6432 115 01 1053- SN	LED	120	2400	25.5	3 MEDIUM BASE BULBS
EU	EGRESS LIGHT	NICOR	EOT 1 MV 5K SV P S C	LED	120			
EX	EXIT SIGN	NICOR	EXL1 10 UNV WH R-2 red	LED	120			LED EXIT SIGN
EXU	EXIT SIGN EGRESS LIGHT COMBO	NICOR	EXC1 20 UNV WH S 2	LED	120			LED EXIT SIGN/ EMERGENCY COMBO
F1	CEILING FAN	HUNTER	50258	LED	120	3200 MAX	38 - MAX	CABO FRIO OUTDOOR 52 INCH FAN
L1	LED STRIP LIGHT	NICOR	LSL1 4 45 S U S 8	LED	120	12803 MAX	93 - MAX	SURFACE MOUNTED.
V	LED VANITY	NICOR	32103 LED NK 40K	LED	120	3880 MAX	48 - MAX	
W	LED WALL PACK, SELECTABLE LUMENS, BATTERY BACKUP	NICOR	OWG4100SUNVSBZ E08	LED	120	13231 MAX	97 - MAX	0-10V DIMMING, WALL PACK, BATTERY BACKUP
W1	DECORATIVE LED WALL MOUNT - EXTERIOR	NICOR	34098	LED	120	1200	16	
W2	DECORATIVE LED WALL MOUNT - INTERIOR	LITE TOPS	WF A120 TBD 196 SN	LED	120	1,600	17	2 Candelabra Bulbs



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

OCCUPANCY SENSOR DETAIL
SCALE: N.T.S.

DATE	REVISION	BY

PROJECT NO. 5007-08
DESIGNED BY JM
DRAWN BY AJ
CHECKED BY JLF
REVIEWED BY JLF
DATE: SEPTEMBER 2024
SCALE: AS NOTED

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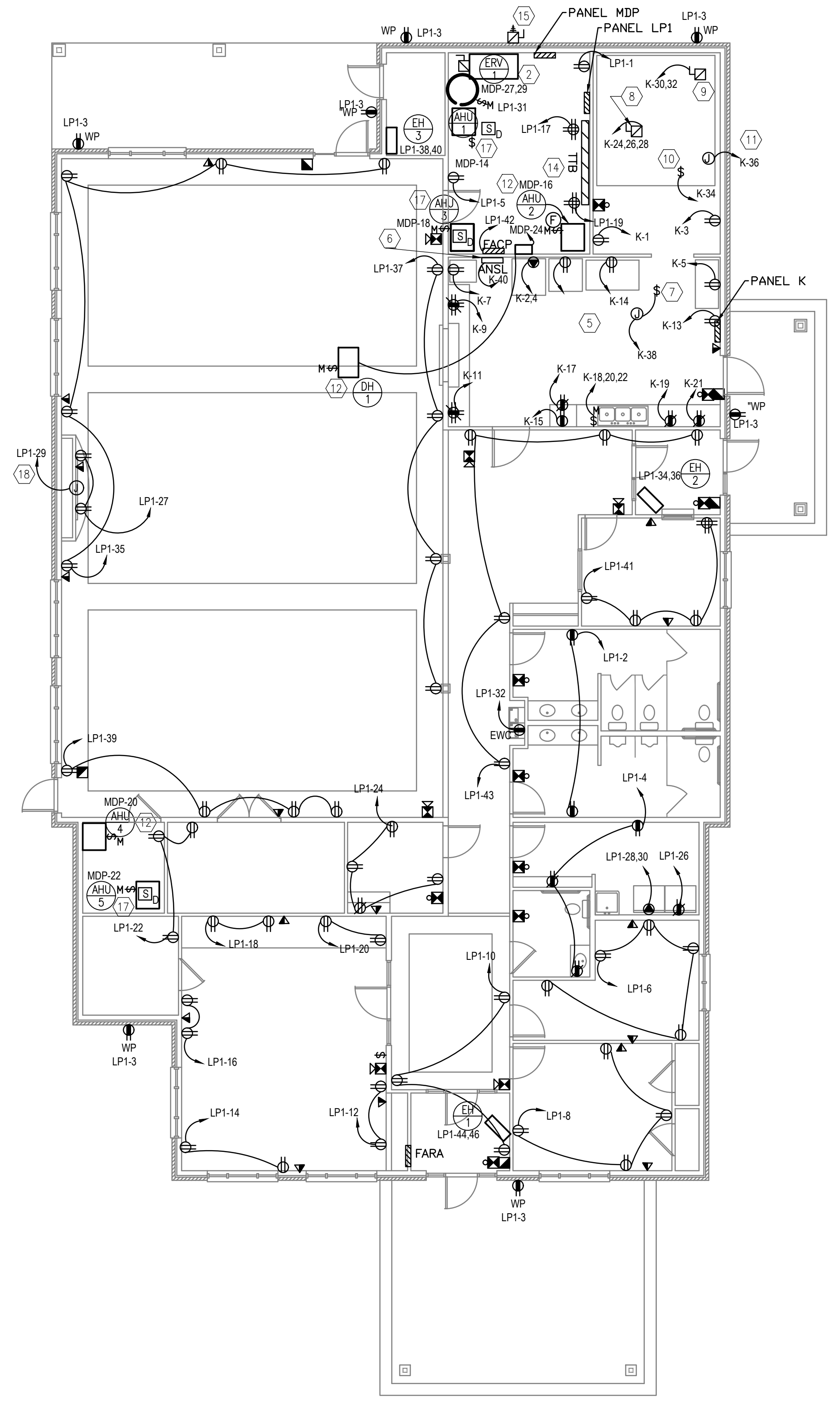
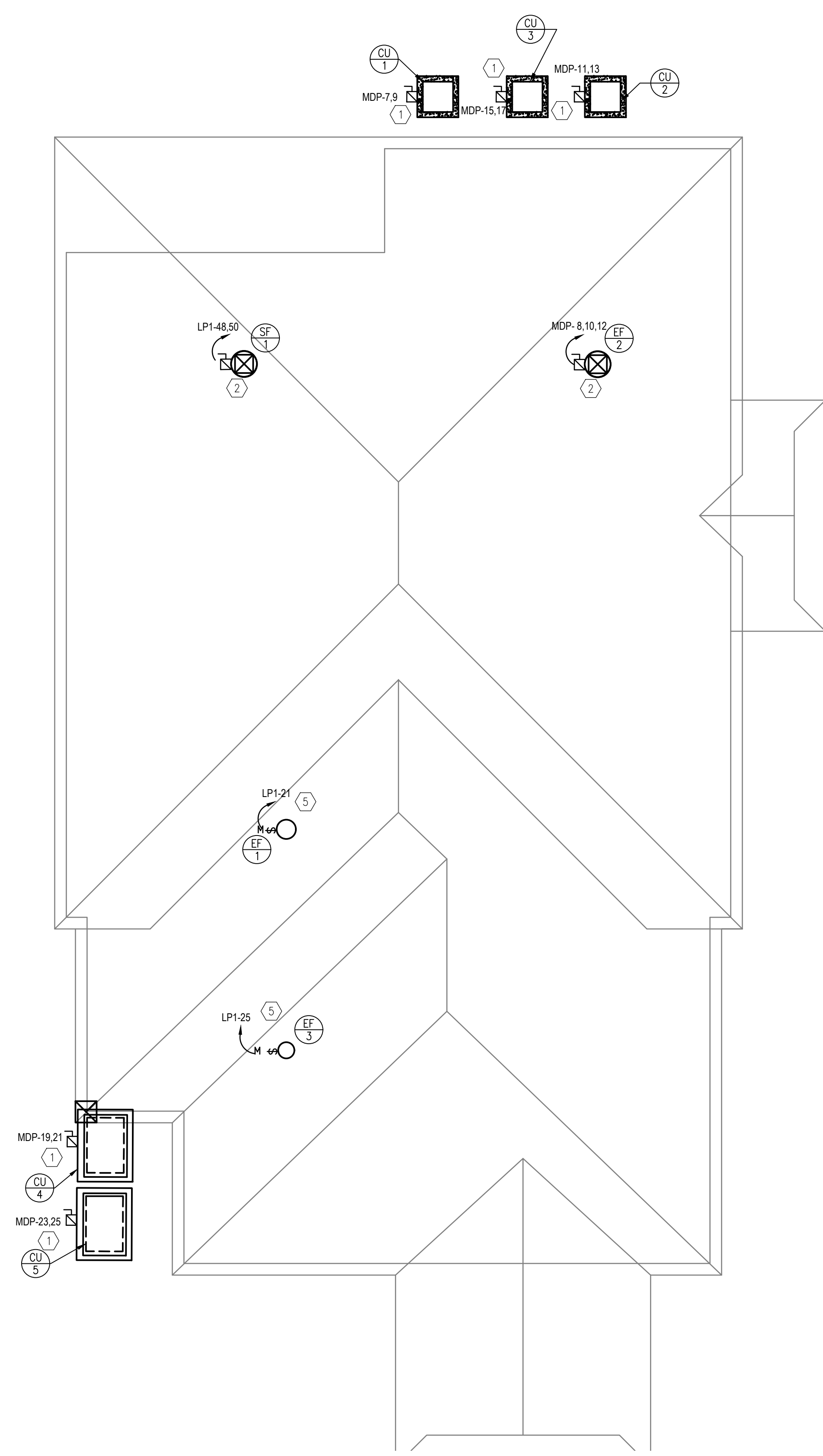




**MONTGOMERY COUNTY
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KEYED NOTES - POWER

1. NEMA 3R 60A 1-PHASE FUSED 208 VOLT DISCONNECT FOR EXTERIOR HVAC EQUIPMENT.
2. NEMA 3R 30A 1-PHASE FUSED DISCONNECT FOR EXTERIOR HVAC EQUIPMENT.
3. NEMA 3R 30A 3-PHASE FUSED DISCONNECT FOR EXTERIOR HVAC EQUIPMENT.
4. CIRCUIT EXHAUST FAN WITH LIGHTING IN FITNESS ROOM
5. PROVIDE NEMA 3R MOTOR RATE FRACTIONAL HP SWITCH FOR EXHAUST FAN.
6. ANSL SYSTEM FOR KITCHEN HOOD - CONNECT TO HOOD EXHAUST SEE DIAGRAM THIS DWG.
7. SWITCH FOR HOOD LIGHTS AND HOOD EXHAUST FAN CONTROLS.
8. ELECTRICAL CONNECTION FOR FREEZER CONDENSING UNIT. COORDINATE EXACT LOCATION OF UNIT WITH PROVIDER. IF UNIT IS OUTSIDE PROVIDE NEMA 3R FUSED DISCONNECT
9. ELECTRICAL CONNECTION FOR FREEZER EVAPORATOR.
10. ELECTRICAL CONNECTION FOR FREEZER LIGHTS, PROVIDED BY OTHERS.
11. ELECTRICAL CONNECTION FOR FREEZER ACCESSORIES. COORDINATE EXACT CONNECTION WITH MANUFACTURER.
12. MECHANICAL UNIT. PROVIDE NEMA 1 MOTOR REMOTE SNAP SWITCH FOR LOCAL DISCONNECT.
13. CONNECT TO INTERGAL ELECTRICAL DISCONNECT INSIDE OF ELECTRIC HEATER
14. 4"x8"x3/4" PLYWOOD BACKBOARD FOR TELE-DATA HEAD IN EQUIPMENT & TERMINATIONS, SEE DETAIL DWG #E-0.
15. BUILDING ELECTRICAL SYSTEM GROUNDING TRIAD - SEE DWG #E-3
16. WALL SWITCH FOR CONTROL OF
17. MECHANICAL UNIT. PROVIDE NEMA 1 MOTOR REMOTE SNAP SWITCH FOR LOCAL DISCONNECT. UNIT HAS DUCT SMOKE DETECTOR PROVIDED UNDER DIVISION 28, INSTALLED BY DIVISION 23 AND CONNECTED UNDER DIVISION 26.
18. ELECTRICAL CONNECTION FOR FIRE PLACE. COORDINATE EXACT CONNECTION WITH FIRE PLACE PROVIDER



ELECTRICAL POWER PLAN - ROOF
SCALE: 1/8" = 1'-0"

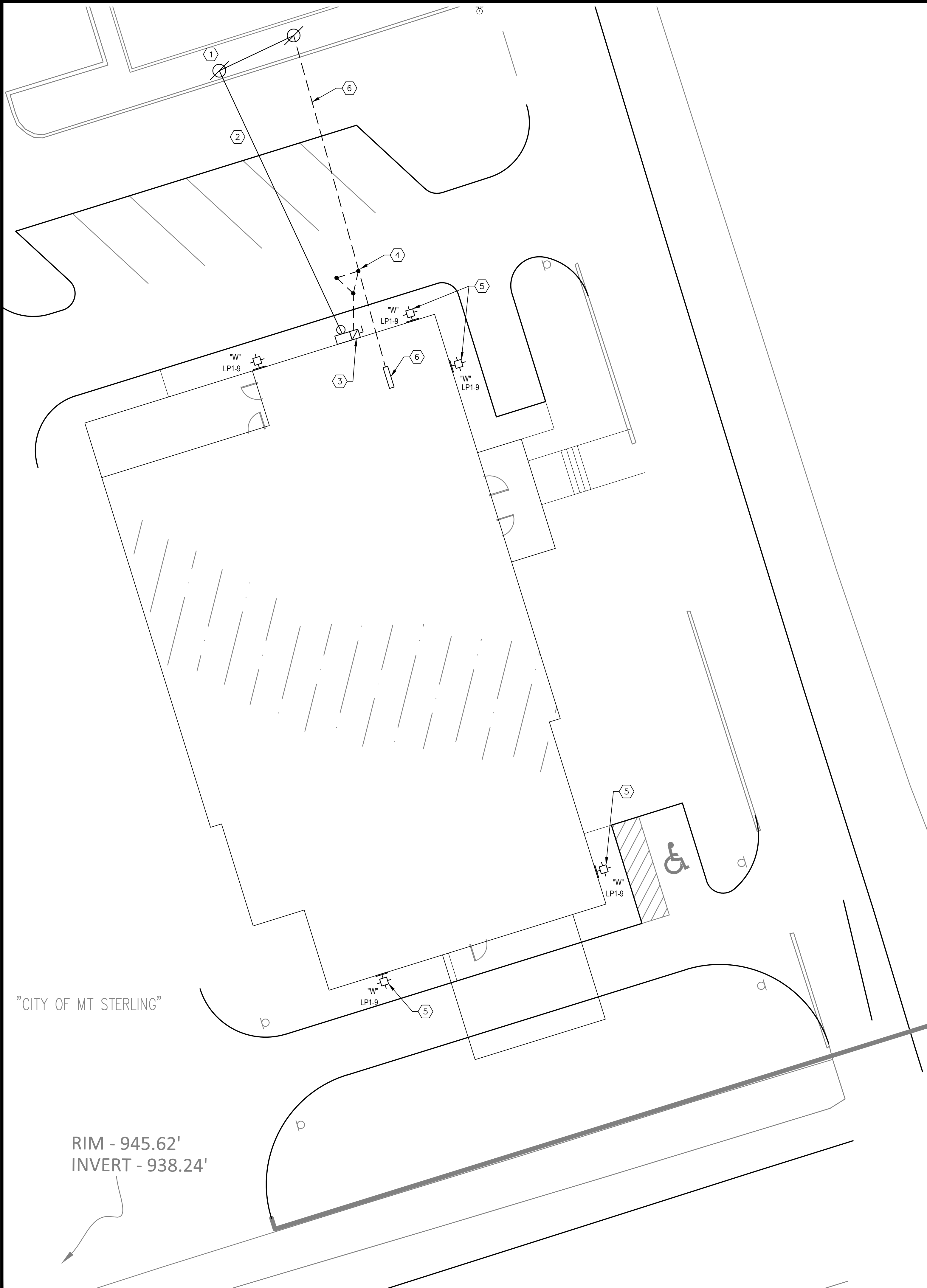
ELECTRICAL - POWER, SIGNAL, & SYSTEMS PLAN
SCALE: 1/8" = 1'-0"

DATE	REVISION	BY

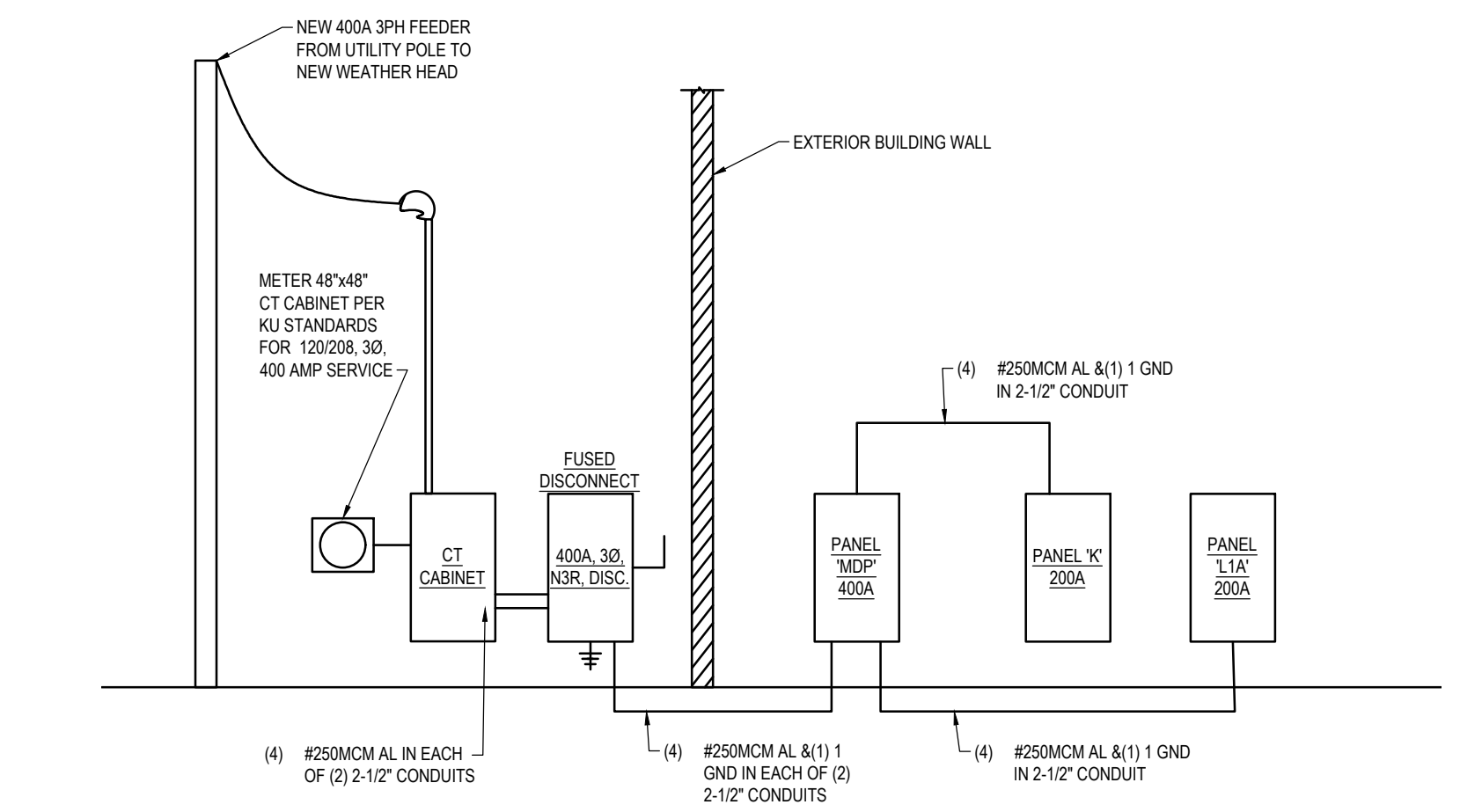
PROJECT NO. 5067-03
DESIGNED BY JM
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DATE SEPTEMBER 2024
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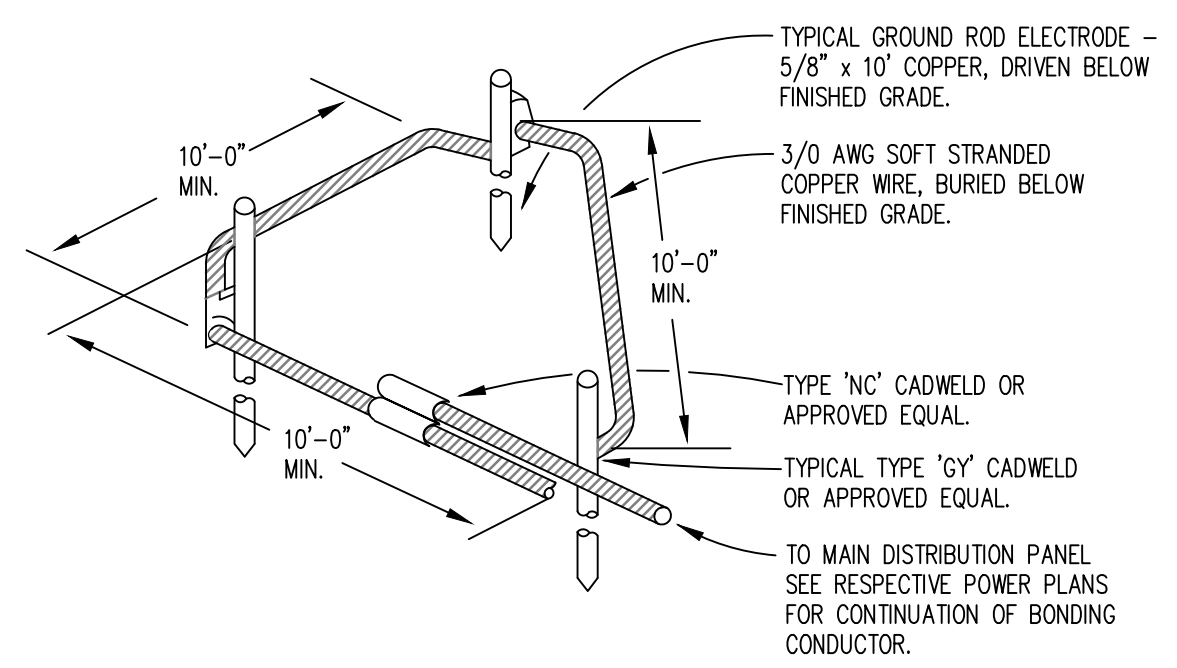


ELECTRICAL SITE UTILITY PLAN
SCALE: 1" = 10'-0"

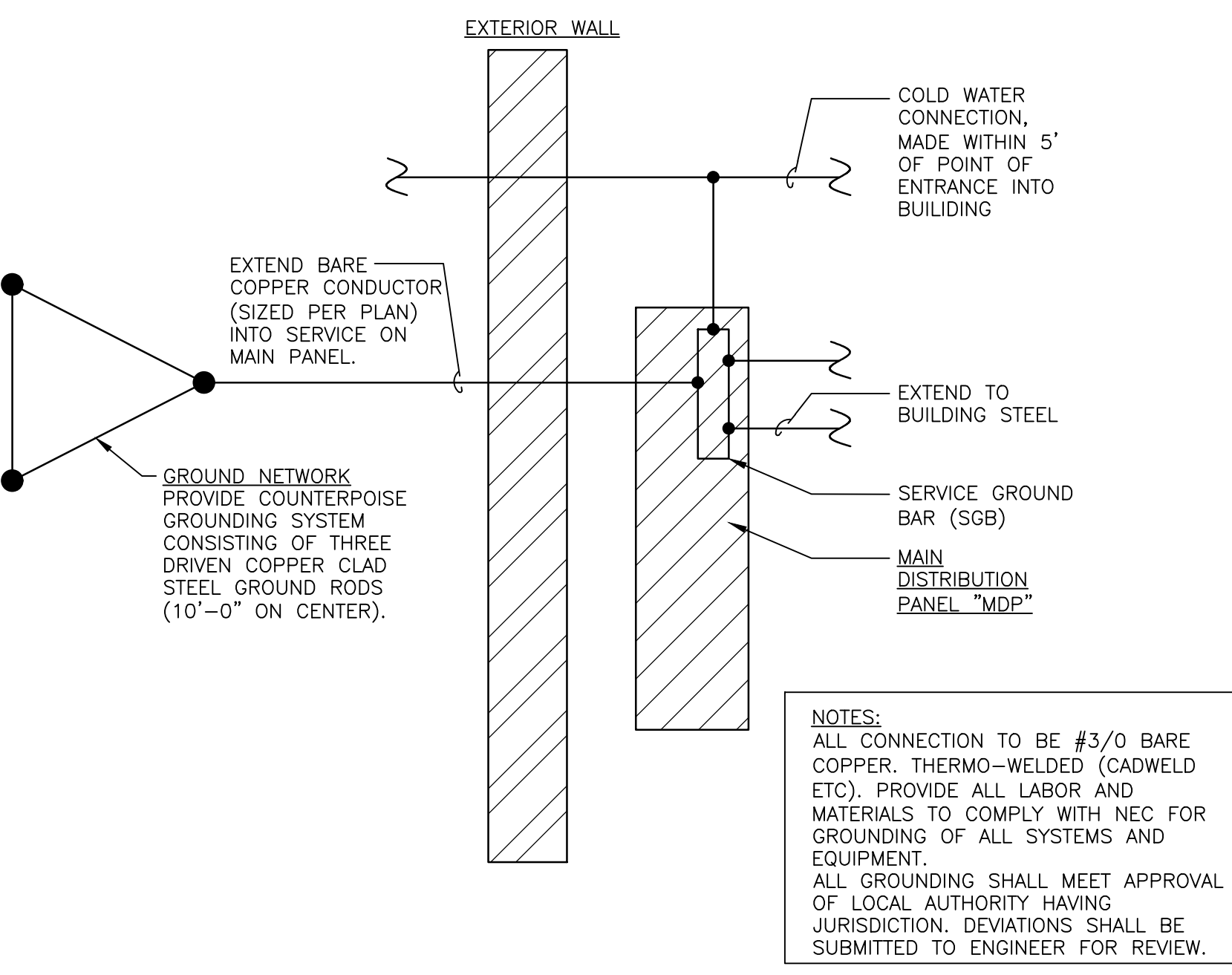


ELECTRICAL SERVICE FEEDER DIAGRAM
SCALE: N.T.S.

- KEYED NOTES**
1. NEW OVERHEAD UTILITY TRANSFORMER POLE. EXACT LOCATION TO BE DETERMINED BY UTILITY COMPANY.
 2. NEW OVERHEAD PRIMARY FROM NEW UTILITY TRANSFORMER POLE TO NEW WEATHER HEAD ON BUILDING.
 3. CT CABINET, METER BASE, AND NEMA 3R 400A 250 VOLTS FUSED DISCONNECT.
 4. BUILDING ELECTRICAL SERVICE GROUNDING SYSTEM SEE DETAILS THIS DWG.
 5. SEE EXTERIOR LIGHTING CONTROL DIAGRAM - DRAWING #E-0.
 6. THREE (3) UNDERGROUND COMMUNICATIONS CONDUITS TO TTB FROM TURN UP AT UTILITY POLE.



BUILDING GROUNDING TRIAD DETAIL
SCALE: N.T.S.



SERVICE ENTRANCE GROUNDING DETAIL
SCALE: N.T.S.



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PROJECT NO. 5067-03	DESIGNED BY JM	DRAWN BY AJ	CHECKED BY JLF	REVIEWED BY JLF	DATE SEPTEMBER 2024	SCALE AS NOTED
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PANEL: MDP																
VOLTAGE: 120 /208V			MINIMUM INTERRUPTING RATING: 22 KAIC				MAIN LUG RATING: 400									
PHASES: 3							MAIN CIRCUIT BREAKER RATING: 400									
WIRES: 4																
GROUND: INSULATED																
POLE NO.	C.B. TRIP	POLES	CIRCUIT SERVED	SIZE	Load Category	LOAD VA	A	B	C	LOAD VA	Load Category	WIRE SIZE	CIRCUIT SERVED	POLES	C.B. TRIP	POLE NO.
1	200	3	PANEL K	3/0	P	6994	19068			12074	P		PANEL LP1	3	200	2
3			P		6994		19068			12074	P					4
5			P		6994				19068	12074	P					6
7	40	2	CU-1	8	M	2080	2908			828	M		EF-2	3	15	8
9			M		2080		2908			828	M					10
11	45	2	CU-2	6	M	2355			3183	828	M					12
13			M		2355	3353				998	M	12	AHU-1	1	15	14
15	45	2	CU-3	6	M	2355		3353		998	M	12	AHU-2	1	15	16
17			M		2355			3353		998	M	12	AHU-3	1	15	18
19	45	2	CU-4	6	M	2355	3353			998	M	12	AHU-4	1	15	20
21			M		2355		3353			998	M	12	AHU-5	1	15	22
23	45	2	CU-5	6	M	2355			2767	413	H	12	DH-1	1	20	24
25			M		2355	2355						12	SPACE	1	20	26
27	15	2	ERV-1	12	M	998		998.4				12	SPACE	1	20	28
29			M		998			998.4				12	SPACE	1	20	30
31	20	1	SPARE	12			0					12	SPACE	1	20	32
33	20	1	SPARE	12			0					12	SPACE	1	20	34
35	20	1	SPARE	12					0			12	SPACE	1	20	36
37	20	1	SPARE	12			0					12	SPACE	1	20	38
39	20	1	SPARE	12			0					12	SPACE	1	20	40
41	20	1	SPARE	12			0					12	SPACE	1	20	42
TOTAL KVA PER PHASE:						31.04	29.68	29.37	RECEPT (R)			100%	0			
TOTAL CONNECTED KVA:						90.09		LIGHT (L)			100%	0				
TOTAL DEMAND:						90.67		MOTOR(M)			102%	33.1	DEMAND CACLS (KVA)			
DEMAND AMPS:						251.9		HEAT(H)			100%	0.41				
						PANELS (P)			100%	57.2						

PANEL: LP1																	
VOLTAGE: 120 /208V			MINIMUM INTERRUPTING RATING: 22KAIC				MAIN LUG RATING: 225										
PHASES: 3							MAIN CIRCUIT BREAKER RATING: 200										
WIRES: 4																	
GROUND: INSULATED																	
POLE NO.	C.B. TRIP	POLES	CIRCUIT SERVED	SIZE	Load Category	LOAD VA	A	B	C	LOAD VA	Load Category	WIRE SIZE	CIRCUIT SERVED	POLES	C.B. TRIP	POLE NO.	
1	20	1	RECPT RM 120	12	R	180	540			360	R	12	RECPT RM 111,112	1	20	2	
3	20	1	RECPT EXTERIOR	12	R	1080			1800	720	R	12	RECPT RM 105,106	1	20	4	
5	20	1	RECPT RM 119	12	R	180				1260	1080	R	12	RECPT RM 105 OFFICE	1	20	6
7	20	1	PORCH LTS	12	L	410	1130			720	R	12	RECPT RM 102 OFFICE	1	20	8	
9	20	1	ENTRY LTS	12	L	713			1253	540	R	12	RECPT VESTIBULE 100,CONFRENCE	1	20	10	
11	20	1	OFFICE/RR LTS	12	L	893			1253	360	R	12	RECPT RM 107 FITNESS	1	20	12	
13	20	1	FITNESS LTS	12	L	851	1211			360	R	12	RECPT RM 107 FITNESS	1	20	14	
15	20	1	CORRIDOR LTS	12	L	750		1110		360	R	12	RECPT RM 107 FITNESS	1	20	16	
17	20	1	TTB	12	R	360			720	360	R	12	RECPT RM 107 FITNESS	1	20	18	
19	20	1	TTB	12	R	360	720			360	R	12	RECPT RM 107 FITNESS	1	20	20	
21	15	1	EF-1	12	M	696			1236	540	R	12	RECPT RM 108, 117	1	20	22	
23	20	1	SPARE	12	M	1656			2556	900	R	12	RECPT RM 109, COAT RACK	1	20	24	
25	20	1	EF-3	12	M	100	1300			1200	R	12	WASHER	1	20	26	
27	20	1	REC	12	R	360		2760		2400	R	10	DRYER	2	30	28	
29	15	1	FIRE PLACE	12	N	180			2580	2400	R	10				30	
31	20	1	WH-1	12	H	1440	2440			1000	R	12	EWC	1	20	32	
33	20	1	SPARE	12				1500		1500	H	12	EH-2	2	20	34	
35	20	1	RECPT RM 116	12	R	360			1860	1500	H	12				36	
37	20	1	RECPT RM 116	12	R	540	2040			1500	H	12	EH-3	2	20	38	
39	20	1	RECPT RM 116	12	R	540		2040		1500	H	12				40	
41	20	1	RECPT RM 113 OFFICE	12	R	900			1400	500	P	12	FACP	1	20	42	
43	20	1	RECPT RM 114,115 CORRIDOR	12	R	900	2400			1500	H	12	EH-1	2	20	44	
45	20	1	LTS	12	L	888		2388		1500	H	12				46	
47	20	1	LTS	12	L	74			906	832	M	12	SF-1	2	15	48	
49	20	1	LTS	12	L	255	1087			832	M	12				50	
51	20	1	SPARE	12				0				12	SPACE	1	20	52	
53	20	1	SPARE	12				0				12	SPACE	1	20	54	
TOTAL KVA PER PHASE:						12.87	14.09	12.54	RECEPT (R)			76%	14.7				
TOTAL CONNECTED KVA:						39.49		LIGHT (L)			125%	6.04					
TOTAL DEMAND:						38.22		MOTOR(M)			110%	4.53	DEMAND CACLS (KVA)				
DEMAND AMPS:						100.6		HEAT(H)			100%	10.4					
						PANELS (P)			100%	0.5							

PANEL: K																
VOLTAGE: 120 /208V			MINIMUM INTERRUPTING RATING: 10 KAIC				MAIN LUG RATING: 225									
PHASES: 3							MAIN CIRCUIT BREAKER RATING: 200									
WIRES: 4																
GROUND: INSULATED																
POLE NO.	C.B. TRIP	POLES	CIRCUIT SERVED	SIZE	Load Category	LOAD VA	A	B	C	LOAD VA	Load Category	WIRE SIZE	CIRCUIT SERVED	POLES	C.B. TRIP	POLE NO.
1	20	1	RECPT RM 118 FREEZER	12	K	180	1280			1100	K		RECPT RM 118 COMBI	2	15	2
3	20	1	RECPT RM 118 FREEZER	12	K	180			1280	1100	K	12				4
5	20	1	(G) RECPT RM 118 COOLER	12	K	276			276				SHUNT TRIP			6
7	20	1	(G) RECPT RM 118 HEAT CAB.	12	K	2000	3100			1100	K	12	RECPT RM 118 CONV. OVEN	2	15	8
9	20	1	RECPT RM 118 NEAR ROLL-UP DOR	12	K	360			1460		K					10
11	20	1	RECPT RM 118 NEAR ROLL-UP DOR	12	K	360			360				SHUNT TRIP			12
13	20	1	RECPT RM 118 NEAR EXIT DOOR	12	K	180	360			180	K	12	RECPT RM 118 RANGE	1	20	14
15	20	1	RECPT RM 118 COUNTERTOP	12	K	180			180				SHUNT TRIP			16
17	20	1	RECPT RM 118 COUNTERTOP	12	K	180			3048	2868	K					18
19	20	1	RECPT RM 118 COUNTERTOP	12	K	180	3048			2868	K	10	DISHWASHER	3	30	20
21	20	1	RECPT RM 118 COUNTERTOP	12	K	180			3048	2868	K					22
23	20	1	KITCHEN LTS	12	L	643			2133	1490	M					24
25	20	1	SPARE	12					1490	1490	M	12	FREEZER	3	20	26
27	20	1	SPARE	12					1490	1490	M					28
29	20	1	SPARE	12					812	812	M	12	EVAP	2	20	30
31	20	1	SPARE	12					812	812	M					32
33	20	1	SPARE	12					200	200	L	12	FREEZER LTS	1	20	34
35	20	1	SPARE	12					1000	1000	H	12	DOOR HEAT	1	20	36
37	20	1	SPARE	12					500	500	L	12	HOOD LIGHTS	1	20	38
39	20	1	SPARE	12					500	500	P	12	ANSL	1	20	40
41	20	1	SPARE	12					0			12	SPACE	1	20	42
TOTAL KVA PER PHASE:						10.59	8.158	7.629	RECEPT (R)			100%	0			
TOTAL CONNECTED KVA:						26.38		LIGHT (L)			125%	1.68				
TOTAL DEMAND:						20.98		MOTOR(M)			106%	6.47	DEMAND CACLS (KVA)			
DEMAND AMPS:						58.3		HEAT(H)			100%	1				
						PANELS (P)			100%	0.5						



**MONTGOMERY COUNTY
SENIOR CITIZENS CENTER**
MT. STERLING, KENTUCKY

DATE	BY	REVISION

PROJECT NO. 5067-03
 DESIGNED BY: JM
 DRAWN BY: AJ
 CHECKED BY: JLF
 REVIEWED BY: JLF
 DATE: SEPTEMBER 2024
 SCALE: AS NOTED

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