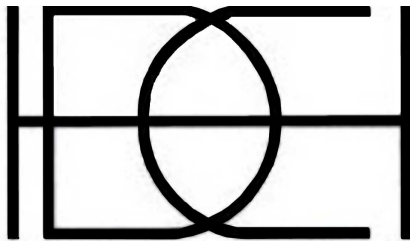


PROJECT MANUAL

New Facility for:
LEBANON
SENIOR CENTER
Lebanon, Kentucky

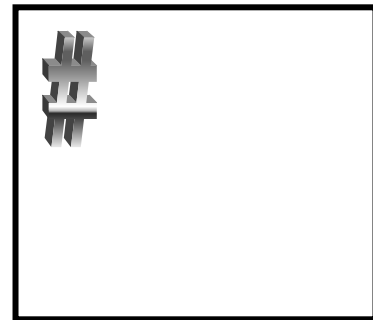


DATE: May 28, 2021



DAVID C. HENNEN
ARCHITECT

343 East Main Street, Lebanon KY 40033



PROJECT MANUAL FOR THE NEW FACILITY FOR:
LEBANON SENIOR CENTER
100 WEST MULBERRY STREET, LEBANON KY 40033

Owner: City of Lebanon
240 West Main Street
Lebanon, Kentucky 40033

Architect: David C. Hennen, Architect, PLC
343 East Main Street
Lebanon, Kentucky 40033
(270) 634-8153 dchennen@yahoo.com

Project Architect: David C. Hennen

Surveyor/Civil Engineer: KWM Engineering & Land Surveying
555 Mercer Avenue
Lebanon, Kentucky 40033
(270) 692-0089
nathan@mykw.com

Contact: Nathan King, PE, LPLS

Structural Engineer: Rhody Engineering, LLC
1111 Westwood Drive
Lawrenceburg, Kentucky 40342
(502) 343-8518

Contact: montyrhody@gmail.com

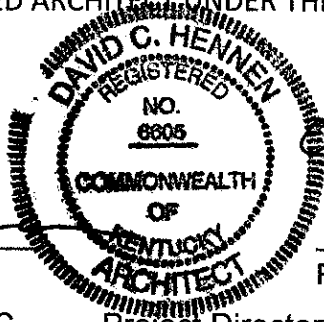
Mechanical Engineer: Harvard B. Johnson, PE
336 Collett Bridge Road
Alvaton, Kentucky 42122
harvardbeneng@gmail.com

Electrical Engineer: Harvard B. Johnson, PE

I HEREBY CERTIFY THAT THIS SPECIFICATION WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED ARCHITECT UNDER THE LAW OF THE STATE OF KENTUCKY.



DAVID C. HENNEN



05-28-2021

6605

REGISTRATION NUMBER

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DIVISION 00

PROCUREMENT AND CONTRACTING REQUIREMENTS

00 10 00 GENERAL PROJECT INFORMATION

Location: 100 West Mulberry Street, Lebanon, Kentucky 40033

List of Contracts

Contract: General Construction (inclusive of all divisions 0-16, 31-33)

Description: Approximately 4,000 square-foot (with entrance porches), single-story Senior Center (A-3 occupancy), to include assembly, meeting and exercise areas, public toilets, an office and a warming/serving kitchen. Exterior to consist of brick and decorative CMU masonry veneer with stone accents, caps and sills, fiberglass porch columns, fixed aluminum windows, aluminum entrances and standing seam metal roof. Warming kitchen to be equipped with 3-compartment sink, handwash sink stainless steel serving counter/sill and roll-up counter door. No other commercial kitchen equipment is to be included in the contract. Site to include paved parking areas (with curb and gutter), retaining wall, sidewalks, monument sign, site lighting, concrete pads for exterior trash/equipment area and patio, and vinyl-coated chain link fence (with plastic privacy slats) at the exterior trash/equipment area. Areas of planting will be identified, but installation of plantings and mulch shall be by Owner.

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 Owner shall obtain zoning approvals, and building permits prior to the submission of bids. The Contractor shall procure and pay all other permits, licenses and approvals (plumbing review, structural component review, special inspections and testing, etc.) necessary for the execution of the work.

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.

Grant No. CDBG 20-011

DIVISION 00

PROCUREMENT AND CONTRACTING REQUIREMENTS

00 11 13 ADVERTISEMENT FOR BIDS

Grant No./Project No. CDBG 20-011

 City of Lebanon, Kentucky
(Owner)

Separate sealed bids for General Construction (including all divisions 0-16, 31-33) for construction of the new Lebanon Senior Center, 100 West Mulberry Street, Lebanon, Kentucky 40033

Will be received by Mr. Gary D. Crenshaw, Mayor at the office of City of Lebanon, 240 West Main Street, Lebanon, Kentucky 40033

Until 2:00 o'clock P.M. (E.S.T.), Wednesday, June 23 , 2021 , and then at said office publicly opened and read aloud.

The Information for Bidders, Form of Bid, Form of Contract, Plans, Specifications and Forms of Bid Bond, Performance and Payment Bond, and other contract documents may be examined at the following:

1. Offices of the City of Lebanon, 240 West Main Street, Lebanon, Kentucky 40033
2. Builders Exchange of Kentucky, Inc. 2300 Meadow Drive #100, Louisville, Kentucky 40218

Copies may be obtained at Lynn Imaging.com/distribution located at 11460 Bluegrass Parkway, Louisville, Kentucky 40299 OR 328 old Vine Street, Lexington, Kentucky 40507 , upon payment of \$80 (plus shipping) for hard copy or \$60 (for digital download) for each set. The deposit (hard copy only) will be refunded in full upon returning a hard copy set promptly and in good condition.

The Owner reserves the right to waive any informalities or to reject any or all bids. Each bidder must deposit his bid security in the amount, form and subject to the conditions provided in the Information for Bidders.

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. These include Section 3, Segregated Facility, Section 109 and E.O. 11246. Further, Title VI Minority bidders are encouraged to bid.

No bidder may withdraw his bid within 30 days after the actual date of the opening thereof.

A Pre-Bid Meeting will be conducted at the site (100 West Mulberry Street, Lebanon KY) at 10:00 a.m. EST, Wednesday, June 9, 2021. Failure to attend the Pre-Bid meeting would be sufficient grounds for disqualifying a bidder (but may be waived at the discretion of the Owner).

(Date: June 3, 2021)

DIVISION 00

PROCUREMENT AND CONTRACTING REQUIREMENTS

00 21 13 INFORMATION FOR BIDDERS

1. Receipt and Opening of Bids:

The City of Lebanon, Kentucky (herein called the "Owner"), invites bids on the form attached hereto, all blanks of which must be appropriately filled in. Bids will be received by the Owner at the office of City Hall, 240 West Main Street, Lebanon, Kentucky 40033 until 2:00 p.m., EST, Wednesday, June 23, 2021, and then at said office publicly opened and read aloud. The envelopes containing the bids must be sealed and addressed to City of Lebanon at 240 West Main Street, Lebanon, Kentucky 40033 and designated as bid for Lebanon Senior Center.

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 30 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. Bid package shall also include all required qualification information, as outlined in paragraph 19 (below).

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, firm, 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.

DIVISION 00

PROCUREMENT AND CONTRACTING REQUIREMENTS

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 a new Senior Citizens Center of approximately 4,000 sq. ft. (General Construction inclusive of all contract divisions 0-16, 31-33).

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 240 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.

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.

DIVISION 00

PROCUREMENT AND CONTRACTING REQUIREMENTS

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:

David C. Hennen, Architect at 343 East Main Street, Lebanon, Kentucky 40033
(dchennen@yahoo.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.

PROCUREMENT AND CONTRACTING REQUIREMENTS

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:
- 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.
 - Exercise every precaution at all times for the prevention of accidents and the protection of persons (including employees) and property.
 - 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.
19. Bidder Qualifications: Each Bidder MUST submit with their bid the following information:
- A list of AT LEAST three (3) projects of similar size and budget that were constructed by the Bidder within the last five (5) years, in order to demonstrate that the Bidder has the relevant experience to successfully perform the Work under the terms and conditions of the contract.
 - References/contacts for those recent projects,
 - List and resumes of principals and employees who will likely be involved in the project,
 - License information for the Contractor, and major subcontractors
 - Certificate(s) of Insurance
20. Pre-Bid Meeting: A Pre-Bid meeting will be conducted at site Two (2) weeks prior to the deadline for the receipt of bids (10:00 a.m. EST, June 9, 2021). The Architect and Owner's Representative will be present. All bidders are encouraged to attend, inspect the existing site conditions and ask questions. The Architect will note any questions that are raised at the Pre-Bid Meeting (or after) and will distribute a summary of questions and clarifications to all attendees within Seven (7) days of the Pre-Bid Meeting to all contractors in attendance, or who have directly requested plans or indicated their intention to bid by contacting the Architect. Failure to attend the Pre-Bid meeting would be sufficient grounds for disqualifying a bidder (but may be waived at the discretion of the Owner).
21. Jobsite Sign: A temporary black and white construction sign shall be required to be supplied and installed by the contractor on a 4'-0" x 8'-0" x 3/4" plywood panel (APA rated A-B grade – Exterior). The sign shall be in the format (with graphics and text) as provided by the Office of the Governor an Department of Local Government (to be provided), and shall include the following information: Project Title, Project Sponsor (City Government), Sponsor Address, Architect, and Contractor.

PROCUREMENT AND CONTRACTING REQUIREMENTS

00 41 00 BID BOND FORM

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned, _____ as Principal, and _____ as Surety, are hereby held and firmly bound unto _____ as owner in the penal sum of _____ for the payment of which, well and truly to be made, we hereby jointly and severally bind ourselves, our heirs, executors, administrators, successors and assigns. Signed this _____ day of _____, 20__.

The Condition of the above obligation is such that whereas the Principal has submitted to _____ a certain Bid, attached hereto and hereby made a part hereof to enter into a contract in writing, for the _____

Now, THEREFORE,

- a. If said Bid shall be rejected, or in the alternate; or
- b. If said Bid shall be accepted and the Principal shall execute and deliver a contract in the Form of Contract attached hereto (properly completed in accordance with said Bid) and shall furnish a bond for his faithful performance of said contract, and for the payment of all persons performing labor or furnishing materials in connection therewith, and shall in all other respects perform the agreement created by the acceptance of said Bid...

Then, this obligation shall be void, otherwise the same shall remain in force and effect; it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall, in no event, exceed the penal amount of this obligation as herein stated.

The Surety, for value received, hereby stipulates and agrees that the obligations of said Surety, and its bond shall be in no way impaired or affected by any extension of the time within which the Owner may accept such Bid; and said Surety does hereby waive notice of any such extension.

IN WITNESS WHEREOF, the Principal and the Surety have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, the day and year first set forth above.

Principal

Surety

SEAL

By: _____

DIVISION 00

PROCUREMENT AND CONTRACTING REQUIREMENTS

00 41 13 BID FORM (FOR LUMP SUM CONTRACTS)

Place _____

Date _____

Project No. _____

Proposal of _____ (hereinafter called "Bidder")

(a _____ corporation/ a partnership/ an individual doing business as
(State) _____)

To the _____
_____ (hereinafter called "Owner")

Gentlemen:

The Bidder, in compliance with your invitation for bids for the construction of a _____

Having examined the plans and specifications with related documents and the site of the proposed work, and being familiar with all of the conditions surrounding the construction of the proposal project including the availability of materials and labor, hereby processes to furnish all labor, materials, and supplies, and to construct the project in accordance with the contract documents, within the time set forth therein, and at the prices stated below. These prices are to cover all expenses incurred in performing the work required under the contract documents of which this proposal is a part.

Bidder hereby agrees to commence work under this contract on or before a date to be specified in written "Notice to Proceed" of the Owner and to fully complete the project within 240 consecutive calendar day thereafter as stipulated in the specifications. Bidder further agrees to pay as liquidated damages, the sum of \$ 500 for each consecutive calendar day thereafter as hereinafter provided in Paragraph 19 of the General Conditions.

Bidder acknowledges receipt of the following addenda(um):

DIVISION 00

PROCUREMENT AND CONTRACTING REQUIREMENTS

BASE PROPOSAL: Bidder agrees to perform all of the _____
_____ work described in the specifications and shown on
the plans for the sum of _____
(\$ _____) (Amount shall be shown in both words and figures.) In
case of discrepancy, the amount shown in words will govern.

ALTERNATE PROPOSALS:

Alternate No. 1: Change Exterior sign to Laminated Acrylic Panels instead of Laser-cut Lettering in Aluminum face sheets over Acrylic (Spec 10 14 33)

Deduct the sum of _____ (\$ _____)

Alternate No. 2: Change Insulation at Exterior Stud Walls to Batt insulation in place of Spray-Applied Closed-Cell insulation (Spec 07 21 19)

Deduct the sum of _____ (\$ _____)

Alternate No. 3: Owner to Provide and Install Precast Concrete Retaining Wall System (Spec 32 32 15)

Deduct the sum of _____ (\$ _____)

Alternate No. 4: _____

Deduct the sum of _____ (\$ _____)

UNIT PRICES:

For changed quantities of work items from those indicated by the contract drawings upon written instructions from the Architect/Engineer, the following unit prices shall prevail:

- | | |
|--|----------------|
| 1. <u>Rock/Debris Excavation</u> _____ | \$ _____ /C.Y. |
| 2. <u>Debris Hauling (Free Local Disposal)</u> _____ | \$ _____ /C.Y. |
| 3. <u>Granular Fill</u> _____ | \$ _____ /C.Y. |

The above unit prices shall include labor, materials, bailing, shoring, removal, overhead, profit, insurance, etc., to cover the finished work of the several kinds called for. Changes shall be processed in accordance with paragraph 17 (a) of the General Conditions.

BID FOR LUMP SUM CONTRACTS (Page 2 of 3)

DIVISION 00

PROCUREMENT AND CONTRACTING REQUIREMENTS

Bidder understands that the Owner reserves the right to reject any or all bids and to waive any informalities in the bidding.

The bidder agrees that this bid shall be good and may not be withdrawn for a period of 30 calendar days after the scheduled closing time for receiving bids.

Upon receipt of written notice of the acceptance of this bid, bidder will execute the formal contract attached within 10 days and deliver a Surety Bond or Bonds as required by Paragraph 29 of the General Conditions. The bid security attached in the sum of _____ (\$ _____) is to become the property of the Owner in the event the contract and bond are not executed within the time above set forth, as liquidated damages for the delay and additional expense to the Owner caused thereby.

Respectfully submitted:

By _____
(Signature)

(SEAL – if bid is by a corporation)

(Title)

(Business Address and Zip Code)

PROCUREMENT AND CONTRACTING REQUIREMENTS

00 45 30 CERTIFICATION OF BIDDER REGARDING EQUAL 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.

OPPORTUNITY (Page 1 of 2)

PROCUREMENT AND CONTRACTING REQUIREMENTS

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	

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PROCUREMENT AND CONTRACTING REQUIREMENTS

00 45 33 CERTIFICATION OF BIDDER REGARDING SECTION 3 (SAMPLE)

Name of Prime Contractor

Lebanon Senior Center

Project Name

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 & Title of Signer (print or type)

Signature

Date

DIVISION 00

PROCUREMENT AND CONTRACTING REQUIREMENTS

00 45 34 CONTRACTOR SECTION 3 PLAN FORMAT (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 City of Lebanon, KY.

- 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 than \$100,000 will be exempt.

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PROCUREMENT AND CONTRACTING REQUIREMENTS

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

PROCUREMENT AND CONTRACTING REQUIREMENTS

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 City/County of _____'s boundaries.

 Company

 Project Name

 Project Number

 EEO Officer-Signature

 Date

PROCUREMENT AND CONTRACTING REQUIREMENTS

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				

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PROCUREMENT AND CONTRACTING REQUIREMENTS

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

Project Name

Project Number

EEO Officer-Signature

Date

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PROCUREMENT AND CONTRACTING REQUIREMENTS

00 45 45 Contractor’s Certification Concerning Labor Standards and Prevailing Wage Requirements

TO (Appropriate Recipient):	DATE
C/O	PROJECT NUMBER (if any)
	PROJECT NAME

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 higher of the Federal or State 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 designed 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:

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PROCUREMENT AND CONTRACTING REQUIREMENTS

(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."

Labor Standards and Prevailing Wage Requirements (page 2 of 2)

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PROCUREMENT AND CONTRACTING REQUIREMENTS

00 52 13 CONTRACT FORM

THIS AGREEMENT, made this _____ day of _____, 20____, by and between _____, Herein called "Owner,"

(Corporate Name of Owner

herein through its _____, and

STRIKE OUT (a corporation) _____ (a partnership)
INAPPLICABLE (an individual doing business as _____
TERMS _____

of _____, County of _____, and State of _____
hereinafter called "Contractor"

WITNESSETH: That for and in consideration of the payments and agreements hereinafter mentioned, to be made and performed by the OWNER, the CONTRACTOR hereby agrees with the OWNER to commence and complete the construction as described as follows:

Approximately 4,000 square-foot (with entrance porches), single-story Senior Center to include assembly, meeting and exercise areas, public toilets, an office and a warming/serving kitchen. Exterior to consist of brick and decorative CMU masonry veneer with stone accents, caps and sills, fiberglass porch columns, fixed aluminum windows, aluminum entrances and standing seam metal roof. Warming kitchen to be equipped with 3-compartment sink, handwash sink, stainless steel serving counter/sill and roll-up counter door. No other commercial kitchen equipment is to be included in the contract. Site to include paved parking areas (with curb and gutter), retaining wall (if accepted by Owner), sidewalks, monument sign, site lighting, concrete pads for exterior trash/equipment area and patio, and vinyl-coated chain link fence (with plastic privacy slats) at the exterior trash/equipment area. Areas of planting will be identified, but installation of plantings and mulch shall be by Owner.

hereinafter called the project, for the sum of _____ Dollars (\$ _____) and all extra work in connection therewith, under the terms as stated in the General and Special Conditions of the Contract; and at his (its or their) own proper cost and expense to furnish all the materials, supplies, machinery, equipment, tools, superintendence, labor, insurance, and other accessories and services necessary to complete the said project in accordance with the conditions and prices stated in the Proposal, the General Conditions, Supplemental General Conditions and Special Conditions of the Contract, the plans, which include all maps, plats, blue prints and other drawings and printed or written explanatory matter thereof, the specifications and contract documents therefore as prepared by _____ David C. Hennen, Architect, PLC _____, herein entitled the Architect/ Engineer, and as enumerated in Paragraph 1 of the Supplemental General Conditions, all of which are made a part hereof and collectively evidence and constitute the contract.

Contract Form (page 1 of 2)

PROCUREMENT AND CONTRACTING REQUIREMENTS

The Contractor hereby agrees to commence work under this contract on or before a date to be specified in written "Notice to Proceed" of the OWNER and to fully complete the project within 240 consecutive calendar days thereafter. The Contractor further agrees to pay, as liquidated damages, the sum of \$ 500 for each consecutive calendar day thereafter as hereinafter provided in Paragraph 19 of the General Conditions.

The OWNER agrees to pay the CONTRACTOR in current funds for the performance of the contract, subject to additions and deductions, as provided in the General Conditions of the Contract, and to make payments on account thereof as provided in Paragraph 25, "Payments to Contractor," of the General Conditions.

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

(Seal)

ATTEST

(Owner)

(Secretary) By _____

(Witness) _____
(Title)

(Seal)

(Contractor)

(Secretary) By _____

(Witness) _____
(Title)

(Address and Zip Code)

NOTE: Secretary of the Owner should attest. If Contractor is a corporation, Secretary should attest.

Contract Form (page 2 of 2)

DIVISION 00

PROCUREMENT AND CONTRACTING REQUIREMENTS

00 61 00 BONDING REQUIREMENTS

Construction project bids estimated to exceed \$25,000 must include bidder security. An acceptable form of bidder security is a bid guarantee from each bidder equivalent to five percent of the bid price. The “bid guarantee” shall consist of a firm commitment such as a bid bond, certified check, or other negotiable instrument accompanying a bid as assurance that the bidder will, upon acceptance of his/her bid, execute such contractual documents as may be required within the time specified.

Construction contracts or subcontracts exceeding \$25,000 must include:

- (a) **A performance bond on the part of the contractor for 100 percent of the contract price as it may be increased.** A “performance bond” is one executed in connection with a contract to secure fulfillment of all the contractor’s obligations under such contract.

- (b) **A payment bond on part of the contractor for 100 percent of the contract price.** A “payment bond” is one executed in connection with a contract to assure payment as required by law of all persons supplying labor and material in the execution of the work provided for in the contract.

Bonding Requirements

DIVISION 00

PROCUREMENT AND CONTRACTING REQUIREMENTS

00 62 00 CERTIFICATE OF OWNER'S ATTORNEY

I, the undersigned, _____, the duly authorized and acting legal representative of _____, do 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

Certificate of Owner's Attorney

DIVISION 00

PROCUREMENT AND CONTRACTING REQUIREMENTS

00 72 13 GENERAL CONDITIONS

General Conditions Table of Contents

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General Conditions (page 1 of 33)

PROCUREMENT AND CONTRACTING REQUIREMENTS**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.

General Conditions (page 2 of 33)

PROCUREMENT AND CONTRACTING REQUIREMENTS**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

- (a) 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.
- (b) 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.

General Conditions (page 3 of 33)

PROCUREMENT AND CONTRACTING REQUIREMENTS**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.

General Conditions (page 4 of 33)

PROCUREMENT AND CONTRACTING REQUIREMENTS**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.

General Conditions (page 5 of 33)

PROCUREMENT AND CONTRACTING REQUIREMENTS**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.

General Conditions (page 6 of 33)

PROCUREMENT AND CONTRACTING REQUIREMENTS**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 commenced 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.

General Conditions (page 7 of 33)

PROCUREMENT AND CONTRACTING REQUIREMENTS

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 Contractor 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.

General Conditions (page 8 of 33)

PROCUREMENT AND CONTRACTING REQUIREMENTS**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 Subcontractor 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 Subcontractor 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.

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PROCUREMENT AND CONTRACTING REQUIREMENTS**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.

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PROCUREMENT AND CONTRACTING REQUIREMENTS**25. Payments to the Contractor**

- (a) Not later than the 22nd 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 5th 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, material, men 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 impose any obligations upon the Owner to either the Contractor or his Surety .In paying any impose any obligations upon the Owner to either the Contractor or his Surety .In paying any terms of this Contract, but in no event shall the provisions of this sentence be construed to 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.

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PROCUREMENT AND CONTRACTING REQUIREMENTS**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 28th 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 14th 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 14th 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 14th 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.

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- (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.

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PROCUREMENT AND CONTRACTING REQUIREMENTS**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.

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PROCUREMENT AND CONTRACTING REQUIREMENTS**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.

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PROCUREMENT AND CONTRACTING REQUIREMENTS**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

- (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.

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PROCUREMENT AND CONTRACTING REQUIREMENTS**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.

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PROCUREMENT AND CONTRACTING REQUIREMENTS**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.

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PROCUREMENT AND CONTRACTING REQUIREMENTS**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.

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PROCUREMENT AND CONTRACTING REQUIREMENTS**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.

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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.

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- (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.)

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- (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.

PROCUREMENT AND CONTRACTING REQUIREMENTS**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

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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.

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- (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.

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- (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.

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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.

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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.

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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.

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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.

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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.

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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.

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OPPORTUNITY PROVISIONS

1. Enumeration of Plans, Specifications and Addenda
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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. T-1, CR-1, CR-2, C1.01 thru C4.01, A-1 thru A-5, S-1 thru S-2

Heating and Ventilating: Nos. M-1, M-2, M-3, M-4

Plumbing: Nos. P-1, P-2, P-3, P-4

Electrical: Nos. ES-1, E-1, E-2, E-3, E-4

SPECIFICATIONS:

General Construction: Divisions 00 to 10, inclusive

Plumbing Heating and Ventilating: Division 15, inclusive, and as shown on plans

Electrical: Division 16, inclusive, and as shown on plans

Exterior Improvements/Utilities: Divisions 31 to 33, inclusive, and as shown on plans

ADDENDA:

No. _____ Date _____ No. _____ Date _____

No. _____ Date _____ No. _____ Date _____

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DIVISION 00

PROCUREMENT AND CONTRACTING REQUIREMENTS

2. Stated Allowances

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

- (a) For Brick (to be selected by Owner) (Page 1 of 2 of Section 04 21 13 of Specifications – Brick Masonry) \$ 800 (per thousand modular brick F.O.B. jobsite)

- (b) For Date Stone and Address Stone Engraving (Page 1 of 2 of Section 04 33 13 of Specifications – Stone Masonry) \$ 1,000 (Owner to select font and text _____)

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:

- (a) Not Applicable

- (b) Not Applicable

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 \$2,000,000 for injuries, including accidental death, to any one person, and subject to the same limit for each person, in an amount not less than \$2,000,000 on account of one accident, and Contractor's Property Damage Insurance in an amount not less than \$2,000,000 .

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.

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PROCUREMENT AND CONTRACTING REQUIREMENTS

5. Photographs of Project

As provided in paragraph 30 of General Conditions, the Contractor will furnish photographs in the number, type and stage as enumerated below:

- (a) In the case that concrete reinforcing may be covered/encased/enclosed WITHOUT inspection by Inspection Engineer or Architect, ALL concrete reinforcing shall be documented with date-stamped photos, showing tape measured dimensions of bar size and spacing. This should only be done as a LAST RESORT to maintain project schedule, if deemed NECESSARY and is approved in advance by Owner and Architect.

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

Given in Section 13 of Supplementary Conditions (Below), and shall be confirmed or updated within NINE (9) days of Bid Opening.

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.

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DIVISION 00

PROCUREMENT AND CONTRACTING REQUIREMENTS

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.

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PROCUREMENT AND CONTRACTING REQUIREMENTS

- 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> 12%	Goals for Female <u>Participation</u> 6.9%
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PROCUREMENT AND CONTRACTING REQUIREMENTS

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 Marion County, KY (insert description of the geographical areas where the contract is to be performed giving the state, county, and city, if any).
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.

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PROCUREMENT AND CONTRACTING REQUIREMENTS

- (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.

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PROCUREMENT AND CONTRACTING REQUIREMENTS

- (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.

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PROCUREMENT AND CONTRACTING REQUIREMENTS

- (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.

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PROCUREMENT AND CONTRACTING REQUIREMENTS

- (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.

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PROCUREMENT AND CONTRACTING REQUIREMENTS

- (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 in 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.).

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PROCUREMENT AND CONTRACTING REQUIREMENTS

- (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).

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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

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PROCUREMENT AND CONTRACTING REQUIREMENTS

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 employ 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

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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.

- a. The Contractor agrees to comply with the rules, regulations and relevant orders of the Secretary of Labor issued pursuant to the Act.
 - b. 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.
 - c. 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.
 - d. 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.
 - e. 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:

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- 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.

Supplementary General Conditions (page 17 of 29)

6. As used in this clause:

PROCUREMENT AND CONTRACTING REQUIREMENTS

- 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.

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PROCUREMENT AND CONTRACTING REQUIREMENTS

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.

Supplementary General Conditions (page 19 of 29)

PROCUREMENT AND CONTRACTING REQUIREMENTS**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.

Supplementary General Conditions (page 20 of 29)

PROCUREMENT AND CONTRACTING REQUIREMENTS**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.

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PROCUREMENT AND CONTRACTING REQUIREMENTS

13. Wage Rate Determination(s)

"General Decision Number: KY20210042 01/15/2021

Superseded General Decision Number: KY20200042

State: Kentucky

Construction Type: Building

Counties: Barren, Casey, Clinton, Cumberland, Green, Hart, Knox, Logan, Marion, McCreary, Metcalfe, Monroe, Russell, Taylor and Wayne Counties in Kentucky.

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

Note: Under Executive Order (EO) 13658, an hourly minimum wage of \$10.95 for calendar year 2021 applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.95 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2021. If this contract is covered by the EO and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must pay workers in that classification at least the wage rate determined through the conformance process set forth in 29 CFR 5.5(a)(1)(ii) (or the EO minimum wage rate, if it is higher than the conformed wage rate). The EO minimum wage rate will be adjusted annually. Please note that this EO applies to the above-mentioned types of contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but it does not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60). Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/01/2021
1	01/15/2021

ASBE0046-002 05/01/2016

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PROCUREMENT AND CONTRACTING REQUIREMENTS

	Rates	Fringes
ASBESTOS WORKER/HEAT & FROST INSULATOR.....	\$ 24.77	13.28

	Rates	Fringes
BOIL0040-001 03/01/2018 BOILERMAKER.....	\$ 35.10	27.56

	Rates	Fringes
CARP1650-010 06/01/2018 CARPENTER (Excludes Acoustical Ceiling Installation, Drywall Hanging, and Metal Stud Installation).....	\$ 25.36	15.74

	Rates	Fringes
ELEC0317-005 06/01/2020 ELECTRICIAN.....	\$ 35.10	26.22

	Rates	Fringes
ELEV0011-001 01/01/2018 ELEVATOR MECHANIC.....	\$ 44.31	32.645

PAID HOLIDAYS:

a. New Year's Day, Memorial Day, Independence Day, Labor Day, Veterans Day, Thanksgiving Day, the Friday after Thanksgiving, and Christmas Day.

b. Employer contributes 8% of regular hourly rate to vacation pay credit for employee who has worked in business more than 5 years; 6% for less than 5 years' service.

	Rates	Fringes
ENGI0181-083 07/01/2020 POWER EQUIPMENT OPERATOR (Bobcat/Skid Steer/Skid Loader).....	\$ 32.38	17.25

	Rates	Fringes
ENGI0181-084 07/01/2020 POWER EQUIPMENT OPERATOR (Oiler).....	\$ 28.20	17.25

	Rates	Fringes
ENGI0181-085 07/01/2020 POWER EQUIPMENT OPERATOR (Crane).....	\$ 33.58 1	7.25

Supplementary General Conditions (page 23 of 29)

PROCUREMENT AND CONTRACTING REQUIREMENTS

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 07/01/2020		
	Rates	Fringes
POWER EQUIPMENT OPERATOR (Forklift).....	\$ 33.58	17.25

ENGI0181-092 07/01/2020		
	Rates	Fringes
POWER EQUIPMENT OPERATOR (Bulldozer).....	\$ 33.58	17.25

IRON0769-005 06/01/2020		
	Rates	Fringes
IRONWORKER, REINFORCING		
ZONE 1.....	\$ 32.75	26.34
ZONE 2.....	\$ 33.15	26.34
ZONE 3.....	\$ 34.75	26.34

ZONE 1 - (no base rate increase) Up to 10 mile radius of Union Hall, 1643 Greenup Ave, Ashland, KY.

ZONE 2 - (add \$0.40 per hour to base rate) 10 to 50 mile radius of Union Hall, 1643 Greenup Ave, Ashland, KY.

ZONE 3 - (add \$2.00 per hour to base rate) 50 mile radius & over of Union Hall, 1643 Greenup Ave, Ashland, KY.

LABO0189-007 06/01/2020		
	Rates	Fringes
LABORER (Pipelayer).....	\$ 24.18	14.30

LABO0576-011 07/01/2020		
	Rates	Fringes
LABORER (Carpenter Tender).....	\$ 20.52	11.40

LABO0576-012 07/01/2020		
	Rates	Fringes
LABORER (Mason Tender - Cement/Concrete).....	\$ 20.72	11.40

LABO1392-004 07/01/2020		
	Rates	Fringes
LABORER (Mason Tender - Brick)...	\$ 23.19	14.22

Supplementary General Conditions (page 24 of 29)

DIVISION 00

PROCUREMENT AND CONTRACTING REQUIREMENTS

PAIN1072-005 12/01/2018

	Rates	Fringes
PAINTER (Spray Only).....	\$ 27.76	18.50

PLUM0452-014 11/01/2020

	Rates	Fringes
PIPEFITTER.....	\$ 34.50	19.79

* SFKY0669-001 01/01/2021

	Rates	Fringes
SPRINKLER FITTER (Fire Sprinklers).....	\$ 36.63	22.07

SHEE0110-006 06/01/2017

	Rates	Fringes
SHEET METAL WORKER (Excludes HVAC Duct Installation).....	\$ 29.17	22.00

* UAVG-KY-0007 01/01/2019

	Rates	Fringes
IRONWORKER, ORNAMENTAL.....	\$ 29.95	23.89

* UAVG-KY-0008 01/01/2019

	Rates	Fringes
LABORER: Power Tool Operator....	\$ 27.18	14.67

SUKY2015-023 06/02/2015

	Rates	Fringes
BRICKLAYER.....	\$ 24.61	11.88
CEMENT MASON/CONCRETE FINISHER....	\$ 27.99	0.00
IRONWORKER, STRUCTURAL.....	\$ 22.31	15.40
LABORER: Common or General.....	\$ 16.97	6.11
OPERATOR: Backhoe/Excavator/Trackhoe.....	\$ 21.11	13.00
OPERATOR: Grader/Blade.....	\$ 24.33	13.00
PAINTER (Brush and Roller).....	\$ 18.20	6.43
PLUMBER.....	\$ 33.41	16.67
ROOFER.....	\$ 22.31	7.41
SHEET METAL WORKER (HVAC Duct Installation Only).....	\$ 25.91	8.06

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PROCUREMENT AND CONTRACTING REQUIREMENTS

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

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

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

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than ""SU"" or ""UAVG"" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this

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PROCUREMENT AND CONTRACTING REQUIREMENTS

classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

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

Survey Rate Identifiers

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

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

Union Average Rate Identifiers

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

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

Supplementary General Conditions (page 27 of 29)

DIVISION 00

PROCUREMENT AND CONTRACTING REQUIREMENTS

WAGE DETERMINATION APPEALS PROCESS

- 1.) Has there been an initial decision in the matter? This can be:
- * an existing published wage determination
 - * a survey underlying a wage determination
 - * a Wage and Hour Division letter setting forth a position on a wage determination matter
 - * a conformance (additional classification and rate) ruling

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

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

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

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

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

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

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

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

Supplementary General Conditions (page 28 of 29)

DIVISION 00

PROCUREMENT AND CONTRACTING REQUIREMENTS

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

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END OF GENERAL DECISION"

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.

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END OF DIVISION



GREENBAUM ASSOCIATES, INC.
GEOTECHNICAL & MATERIALS ENGINEERS

994 Longfield Avenue
Louisville, Kentucky 40215
502/361-8447
FAX 502/361-4793

February 10, 2021

Mr. John O. Thomas
City of Lebanon
P. O. Box 840
Lebanon, KY 40033

**SUBJECT: GEOTECHNICAL INVESTIGATION
LEBANON SENIOR CENTER
100 WEST MULBERRY STREET
LEBANON, KENTUCKY
GREENBAUM PROPOSAL 20-370**

Dear Mr. Thomas:

Attached is the report of the geotechnical investigation that we carried out for the above referenced senior center. Soils at this site are competent to support spread footings designed based on an allowable net bearing capacity of up to 1,800 pounds per square foot. Further detail on foundations and other geotechnical considerations are provided in the body of the attached report.

If you have any questions regarding this report, please call.

Sincerely,

GREENBAUM ASSOCIATES, INC.

Sandor R. Greenbaum

Sandor R. Greenbaum, P.E.
Principal Engineer

GEOTECHNICAL INVESTIGATION

FOR

PROPOSED SENIOR CENTER

100 WEST MULBERRY STREET

LEBANON, KENTUCKY

FOR

CITY OF LEBANON, KENTUCKY

P. O. BOX 840

LEBANON, KY 40033

BY

GREENBAUM ASSOCIATES, INC.

994 LONGFIELD AVENUE

LOUISVILLE, KY 40215

FEBRUARY 10, 2021



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 - 5.5 Light- and Heavy-Duty Pavement**
 - 5.6 Temporary Earth Slopes or Cuts**
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APPENDIX

Site Location Plan (1 sheet)

Boring Location Plan (1 sheet)

Soil Description Terminology/Rock Quality Determination (1 sheet)

Test Boring Reports (3 sheets)

Classification of Soils for Engineering Reports (1 sheet)

Grain Size Distribution (1 sheet)

Atterberg Limits Test (1 sheet)

GREENBAUM ASSOCIATES, INC.
GEOTECHNICAL & MATERIALS ENGINEERS

1.0 Introduction

The City of Lebanon has been contracted to build a new 3,500 square foot, single-story senior center to be located at 100 West Mulberry Street in Lebanon, Kentucky. This site is currently part of a larger asphalt parking lot. A boring location plan is included in the appendix of this report that shows the proposed site development in addition to the approximate locations of the borings. A site location plan is also included.

We were contracted by The City of Lebanon to carry out a geotechnical investigation directed at determining foundation support characteristics of the materials upon which this senior center and associated pavement will be supported. Work was coordinated through Mr. David C. Hennen, AIA, of David C. Hennon, Architect, PLC.

2.0 General Geology

The soils below this site are shown by the Kentucky Geological Survey to residuum, a residual product of weathering of the local bedrock. The local bedrock is shown by the Geological Survey to be near the top of the Drakes Formation. This area is, therefore, underlain by the uppermost member of the Drakes Formation, which is the Saluda Dolomite. The Kentucky Geological Survey describes the Saluda Dolomite as:

Dolomite, calcareous, silty, light gray to light-greenish-gray, thin-bedded, in part laminated. Unit poorly exposed. Basal beds weathered and contact poorly exposed along hill slopes and in roadcuts.

3.0 Investigation

Three borings were carried out, two in the proposed footprint of the building and one in an area to be paved near the proposed drop-off lane, all by standard penetration procedures to auger refusal. A Diedrich D-25 track-mounted drill rig was used to carry out the borings through the use of 3-¼ inch inside diameter hollow stem augers and an automatic hammer. Boring locations were staked

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using a nylon tape from existing topography, so boring locations are only as accurate at this method allows.

The standard penetration procedure involves driving a standard 2-inch diameter split spoon in the formation at selected intervals using a 140-pound hammer falling through 30 inches. The blow counts for each 6 inches of drive, to a total of 18 inches, are recorded and the number of blows for the 12 inches after the first 6 inches is a standard measure of the condition of the soil. As the split spoon is removed from the ground, it retrieves a sample of the soil in a disturbed condition. Nevertheless, this sample is suitable for certain classification tests and is representative of the soils at the depth tested.

Soil samples were returned to the laboratory where a program of testing was carried out. This testing included a grain size analysis and a natural moisture determination.

Grain size determination arrives at a curve of grain size against that fraction of the soil that is finer than that particular grain size. It also allows the determination of the clay fraction, silt fraction, sand fraction, etc. in any particular soil sample. Based on this division of grain sizes, the field soils classifications are refined and the boring logs adjusted. In the case of fine grained soils, the soils are largely silt and clay; thus requiring that the soils be suspended in an aqueous medium and the rate at which the particles drop out is measured in order to arrive at the grain size distribution. Silt and clay grains are so fine that sieve analysis alone will not function in this range. The coarse fraction of this sample is separated from the fine and run through a nest of sieves in order to further detail the grain size distribution in the coarse range.

The Atterberg Limits determination arrives at those moisture contents at which the soil turns from a solid state to a plastic condition (the Plastic Limit) and then from a plastic condition to a liquid condition (The Liquid Limit). The points in question are arrived at by standard procedures that accept specific cohesive and flow properties of the soil as standard for these limits. Again, knowing the moisture content of the soil is in relative to these limits and gives some broad measure of the soil strength and soil characteristics. The arithmetic difference between these two limits is called Plasticity Index and all three together are used for classifying the soils in a number of standard systems.

The natural moisture determination arrives at the in-situ moisture content of the soil and is useful for correlating the strength of various samples of like texture and in conjunction with the Atterberg limits, gives a strong measure of the strength range the soils are likely to be found in.

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GEOTECHNICAL & MATERIALS ENGINEERS

4.0 Findings

4.1 Boring Results

The borings found the asphalt pavement covering this site to consist of three- to eight-inches of asphalt over about six inches of crushed stone. Below this, soils are fill consisting of moist, medium stiff to very stiff, grayish brown, lean clay with crushed stone. This fill was found to extend to 2 feet depth in the case of boring B-2 but was found to extend to bedrock in the case of borings B-1 and B-3. Auger refusal on New Albany Shale bedrock was encountered between 6.0- and 6.7-feet depth with weathered shale encountered at 5 feet depth in boring B-3.

The table below provides a tabulation of N-values in the borings as determined by the Standard Penetration Test and corrected for the energy of the automatic hammer. Depth to auger refusal is also indicated.

Depth	B-1	B-2	B-3
2 – 3.5 feet	12	8	17
5 – 6.5 feet	50/1"	10	50/4"
Auger Refusal	6.1'	6.7'	6.0'

No groundwater was encountered in any of the borings, but groundwater is probably present seasonally. Groundwater should be expected to infiltrate excavations slowly due to the low permeability of the soils present at this site.

4.2 Laboratory Results

A sample of soil was tested and classified and was found to be lean clay. The result of this testing is summarized in the table at the top of the following page with detailed results provided in the appendix of this report. Moisture content is provided graphically on the boring logs.

Soil Sample	Grain Size Distribution			Atterberg Limits			Soil Classification	
	Percent Sand	Percent Silt	Percent Clay	Liquid Limit	Plastic Limit	Plasticity Index	Unified	AASHTO
B-3 @ 2' – 3.5'	23	45	32	32	19	13	CL	A-6

4.3 Historic Aerial Photographs

Aerial photographs dating back to 1985, available on Google Earth, were examined. In the 1985 photograph, was of such poor quality that nothing useful could be discerned from the image. The next older photograph was from 1997 and this site was part of the same parking lot then that it is now. No significant change to the site can be discerned in the available photographs.

4.4 Seismicity

By the 2018 edition of the Kentucky/2015 International Building Code, this is a very dense soil and soft rock profile, site class C. The Spectral Response Acceleration Coefficients, for this area, as provided by U.S.G.S., FEMA Design Parameters are:

$S_s = 0.186 \text{ g}$	$S_{MS} = 0.224 \text{ g}$	$S_{DS} = 0.149 \text{ g}$
$S_1 = 0.102 \text{ g}$	$S_{M1} = 0.173 \text{ g}$	$S_{D1} = 0.115 \text{ g}$

5.0 Recommendations

5.1 Foundations

The proposed building may be supported on a spread footings bearing on shallow soil or structural fill placed in accordance with section 5.3 of this report. These foundations may be designed based on an allowable net bearing capacity of up to 1,800 pounds per square foot. Shallow soils at this site are fill and that fill is relatively silty. For both these reasons, it is possible that there will be areas underlain by soft soils that require undercut and refill below foundations as outlined in the following paragraph.

Once foundation bearing surfaces are exposed, an engineer or senior engineering technician from this office should be present to view all bearing surfaces to determine the presence of soft soils. Where soft soils are encountered, undercut will need to extend to firm material or to a level determined to be acceptable by the geotechnical engineer and should be refilled with either lean concrete ($f_c' = 2,000 \text{ psi}$) or open-graded stone such as Number 57 stone.

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Soil bearing foundations exposed to weather must bear at least 30 inches below finished grade to insulate the bearing strata from freezing. Interior foundations protected from freezing are exempt from this requirement. Continuous footings must be at least 16 inches wide and isolated footings must be at least 24 inches wide.

Settlement of foundations designed based on the above criteria should be below that which is considered acceptable for this type of construction; that is total settlement should be less than one inch and differential settlement should be less than three quarters of an inch.

For shallow foundations, friction along the base of the footing can be used to resist lateral forces. A friction coefficient of 0.35 may be used, which assumes that the footing concrete is placed directly against the natural cut faces. The coefficient of friction value recommended is an ultimate value and a minimum factor of safety of 1.5 must be applied when determining the allowable sliding resistance.

5.2 Slab-On-Grade

Prior to placement of the fill in the slab area, the subgrade must be proofrolled and carefully examined by a geotechnical engineer for areas of soft or loose soil. If soft or loose soils are encountered, they must be undercut and refilled in accordance with instructions given by the geotechnical engineer's on-site representative. Undercut and refill in soft areas consists of excavating to a depth up to two feet below subgrade elevation and refill should be with "Surge Rock", 6-inch minus or Number 3 stone. Large rock should not be used in areas where trenching will be required to install piping or conduit.

A slab-on-grade that is structurally separated from the walls, columns and foundations is preferable, though thickened slab may be used. Separation of slab-on-grade from foundations will minimize the stress caused by possible differential settlement between the slabs and the foundations and between adjacent slabs. A vapor barrier must be incorporated into the design and at least four inches of Dense Graded Aggregate (DGA) should underlie the slab. The floor slab may be designed based on a Modulus of Subgrade Reaction of 85 pounds per cubic inch.

5.3 Site Preparation and Earthwork

All fill should be placed in lifts not exceeding 8 inches in uncompacted thickness and must be compacted to at least 98 percent of the soils maximum dry density as determined by the Standard Proctor (ASTM D-698). Soil moisture content should be within 2 percent of optimum as determined from the Standard Proctor.

Soil from any off-site borrow sources should be tested and approved by this office prior to being used on the site. Satisfactory borrow materials are those falling in one of the following classifications: GC, SM, SC, ML, or CL. Soil types MH, CH and OH and peat are unsatisfactory borrow materials.

The site should be maintained in a well-drained condition both during and after construction. Site grading should provide for drainage of surface run-off away from the building and pavement.

The placement of compacted fill should be carried out by an experienced excavator with the proper materials. The excavator must be prepared to adapt his procedures, equipment and materials to the type of project, to weather conditions, and the structural requirements of the engineer. Methods and materials used in summer may not be applicable in winter; soil used in proposed fill may require wetting or drying for proper placement and compaction. Conditions may also vary during the course of a project or in different areas of this site. These needs should be addressed in the project drawings and specifications.

During freezing conditions, the fill must **not** be frozen when delivered to the site. It also must not be allowed to freeze during or after compaction. Since the ability to work the soil while keeping it from freezing depends in part on the soil type, the specifications should require the contractor to submit a sample of his proposed fill before construction starts, for laboratory testing. If the soil engineer determines that it is not suitable, it should be rejected. In general, silty sand, clayey sand, and cohesive/semi-cohesive soils should not be used as fill under freezing conditions. All frozen soil of any type should be rejected for use as compacted fill.

It is important that compacted fill be protected from freezing after it is placed. The excavator should be required to submit a plan for protecting the soil. The plan should include details on the type and amount of material (straw, blankets, extra loose fill, topsoil, etc.) proposed for use as frost protection. The need to protect the soil from freezing is ongoing throughout construction and applies both before **and** after concrete is placed, until backfilling for final frost

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protection is completed. Foundations placed on frozen soil can experience heaving and significant settlement, rotation, or other movement as the soil thaws. Such movement can also occur if the soil is allowed to freeze **after** the concrete is placed and then allowed to thaw. The higher the percentage of fines (clay and silt) in the fill, the more critical is the need for protection from freezing.

The contractor should be required to adjust the moisture content of the soil to within a narrow range near the optimum moisture content (as defined by the applicable Proctor or AASHTO Test). In general, fill should be placed within 2% of optimum moisture. The need for moisture control is more critical as the percentage of fines increases. Naturally occurring cohesive/semi-cohesive soil are often much wetter than the optimum. Placing and attempting to compact such soils to the specified density may be difficult. Even if compacted to the specified density, excessively wet soils may not be suitable as pavement subgrades due to pumping under applied load. This is especially true when wet cohesive/semi-cohesive soil is used as backfill in utility trenches and like situations. Excessively wet soil in thick fill sections may cause post-construction settlement beyond that estimated for fill placed at or near ($\pm 2\%$) the optimum moisture content.

5.4 Earth Pressures

Any retaining walls should be constructed with a drainage blanket of sand or a synthetic drainage material. Synthetic drainage media should be available from suppliers of geotextile. The wall should be drained at its base by a perforated PVC underdrain or weepholes at a spacing of not more than 10 feet. Where a relatively thin drainage blanket is used, the retaining wall should be designed based on a coefficient of active earth pressure (K_a) of 0.36 and a soil unit weight (γ_w) of 130 pounds per cubic foot. This results in an equivalent fluid pressure of 47 pounds per cubic foot. Where granular backfill completely fills the area defined by a plane extending upward from the base of the wall at a 45 degree angle, the retaining wall may be designed based on a coefficient of active earth pressure (K_a) of 0.27 and a soil unit weight (γ_w) of 130 pounds per cubic foot. This results in an equivalent fluid pressure of 35 pounds per cubic foot.

However, where the wall is restrained from movement, as in the case of building basement walls bearing against the basement slab or building frame, the wall must be designed based on the "at rest" earth pressure. The coefficient of "at rest" earth pressure (K_0) is 0.47 with a soil unit weight (γ_w) of 130 pounds per cubic foot in the case of a thin drainage blanket behind the wall, resulting in an equivalent fluid of 61 pounds per cubic foot unit weight. Where granular backfill completely fills the area defined by a plane extending upward from the base of the wall at a 45-degree angle, the retaining wall may be designed based on a

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coefficient of “at rest” earth pressure (K_0) of 0.43 and a soil unit weight (γ_w) of 130 pounds per cubic foot. This results in an equivalent fluid pressure of 56 pounds per cubic foot.

The table below summarizes the design earth pressures.

	Active Earth Pressure Coefficient (K_a)	Passive Earth Pressure Coefficient (K_p)	Coefficient of Earth Pressure at Rest (K_0)	Equivalent Fluid Pressure on Cantilever Walls	Equivalent Fluid Pressure on Braced Walls
Fill Material/Local Soils	0.36	2.77	0.47	47 pcf	61 pcf
Granular Backfill	0.27	3.69	0.43	35 pcf	56 pcf

Surcharge above the wall will add additional load. A uniform surcharge must be multiplied by the appropriate coefficient of earth pressure to determine the additional load applied to the wall.

Any retaining wall design must use appropriate factors of safety. It is critical that drainage be provided as mentioned earlier in this section in order to avoid hydrostatic pressure. Hydrostatic pressure would increase pressure against the wall substantially.

5.5 Light- and Heavy-Duty Pavement

Pavement subgrade should be examined and proofrolled as described under “Floor Slabs”. If soft areas are encountered, the soft soils will need to be undercut and refilled in accordance with the instructions of the geotechnical engineer’s on-site representative. Subgrade stabilization was discussed in section 5.2 for slab-on-grade. The same approach should be taken for pavement subgrade, but the requirement for a stable, non-yielding subgrade is even more important in the case of asphalt pavement.

A pavement analysis was conducted using a life cycle of 20 years and a cumulative 18-kip equivalent single axle load of 20,000 for light traffic loads and 160,000 for moderate traffic loads. Recommendations are provided for both flexible and rigid pavement systems. However, rigid pavement should be used in special truck traffic areas, such as those areas which receive frequent traffic by garbage trucks. The concrete pavement should extend throughout the areas that require extensive turning and maneuvering of garbage trucks or other heavy

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trucks. Heavily loaded pavement areas that are not designed to accommodate these conditions often experience localized pavement failures, particularly if flexible pavement sections are used.

The minimum recommended thickness for both hot mixed asphalt concrete (HMAC) and reinforced Portland cement concrete (PCC) pavement sections are presented in the table below for the described light, moderate and special traffic condition.

Recommended Pavement Section					
Component	Light		Moderate		Special
	Rigid	Flexible	Rigid	Flexible	Rigid
Reinforced Portland Cement Concrete (PCC)	5 inches		6 inches		7 inches
Hot Mixed Asphalt Concrete (HMAC)		3 inches		4 inches	
Crushed Limestone Base (Dense Graded Aggregate)	4 inches	8 inches	4 inches	8 inches	4 inches

The Portland cement concrete should be air-entrained and conform to ASTM C-94 (Standard Specifications for Ready-Mixed Concrete) and have a minimum compressive strength of 4,000 pounds per square inch. Reinforcing should meet the requirements of ACI.

Hot mix asphalt concrete and Dense Graded Aggregate should meet the requirements of the Kentucky Transportation Cabinet. The top inch and a half of asphalt should be a surface mix, the remainder being a base mix.

5.6 Temporary Earth Slopes or Cuts

Temporary earth cuts necessary to construct foundations or utility lines should be no deeper than 4 feet without benching or sloping. Cuts deeper than this should be sloped no steeper than one horizontal to one vertical or should have benches every 2 feet of height equating to this slope. If vertical faces deeper than 4 feet are used, bracing designed for short term loads may be used. Excavations should comply with OSHA regulations. If soft soils are encountered, Greenbaum Associates, Inc. should view the cut face prior to personnel entering the excavation.

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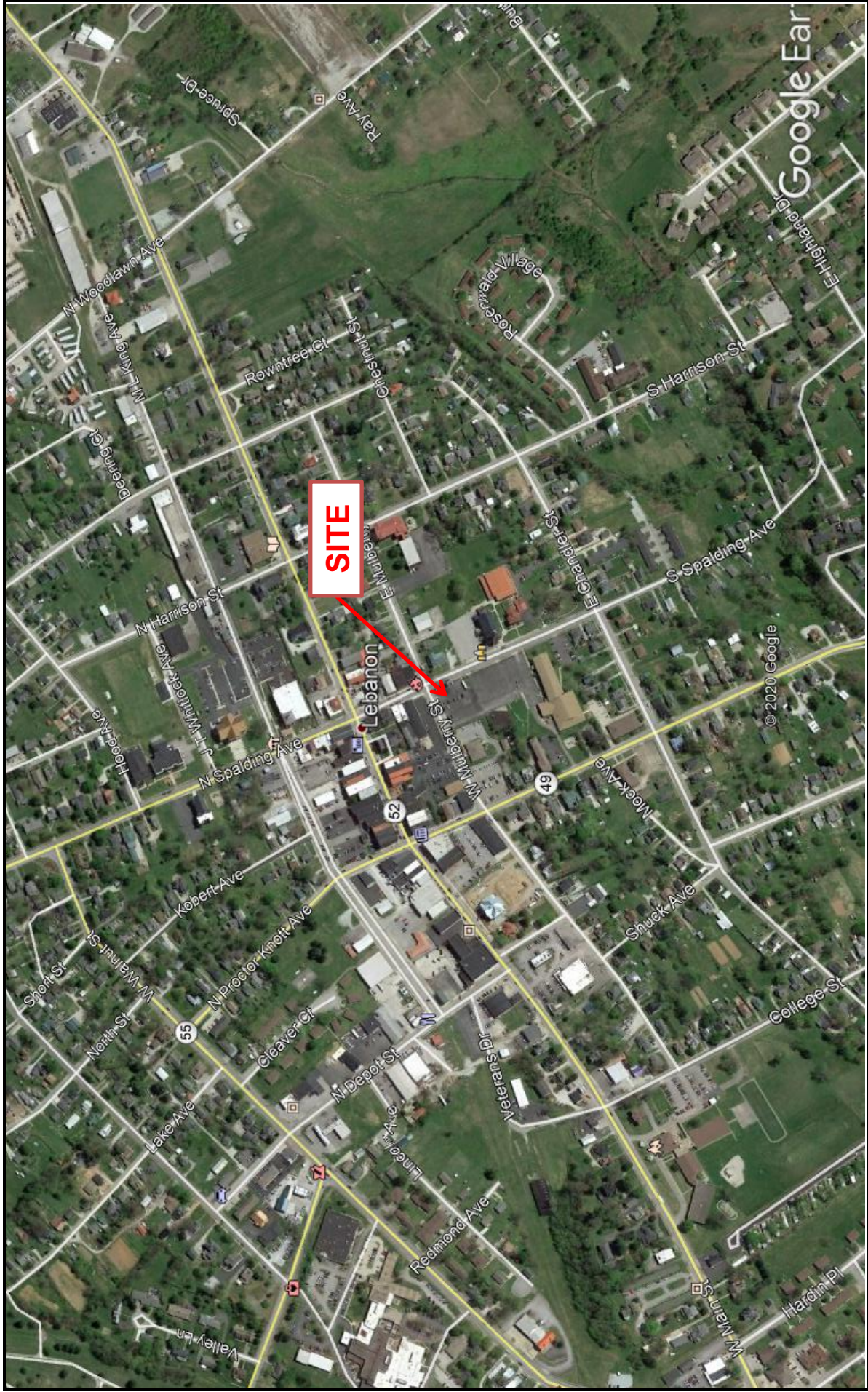
5.7 Limitations

We strongly recommend that bearing surfaces and compaction be monitored by Greenbaum Associates, Inc. Our technicians will be available to further assist you in providing these and other normally specified quality control services. The report is preliminary until such time as these examinations are completed to confirm conditions consistent with those discovered in the investigation.

The conclusions and recommendations offered in this report are based on the subsurface conditions encountered in the borings. No warranties can be made regarding the continuity of conditions between or beyond borings. If, during construction, soil conditions are encountered that differ from those indicated in this report, a representative of Greenbaum Associates, Inc. should inspect the site to determine if design modification is required.

This study was directed at a specific 3,500 square foot, single-story senior center and associated pavement at this location to be constructed within a reasonably short period after this study. Once the development is better defined, a geotechnical investigation specific to that construction should be performed.

This study is directed at mechanical properties of the soils and includes no sampling, testing or evaluation for environmental considerations.



Site Location Plan
Proposed Senior Center
100 W. Mulberry St., Lebanon, Kentucky
Greenbaum Project Number: 20-001G



**City of Lebanon,
Kentucky**

SOIL DESCRIPTION TERMINOLOGY

Soils are identified and classified in this report according to the Unified Classification System with the following modifiers:

RELATIVE DENSITY OF GRANULAR SOILS

<u>Description</u>	<u>Blows/Foot</u>
Very Loose	0 to 4
Loose	5 to 10
Medium Dense	11 to 30
Dense	31 to 50
Very Dense	51 to 80
Extremely Dense	81+

CONSISTENCY OF COHESIVE SOILS

<u>Description</u>	<u>N-value</u>	<u>q_n (tsf)</u>
Very Soft	0 to 2	0 to 0.25
Soft	3 to 4	0.26 to 0.50
Medium Stiff	5 to 8	0.51 to 1.0
Stiff	9 to 15	1.1 to 2.0
Very Stiff	16 to 30	2.1 to 4.0
Hard	>30	4.1 to 8.0
Very Hard		8.1+

PARTICULAR SIZES

<u>Components</u>	<u>Size or Sieve No.</u>
Boulders	over 12 inches
Cobbles	3 to 12 inches
Gravel -	Coarse $\frac{3}{4}$ to 3 inches
	Fine No. 4 to $\frac{3}{4}$ inch
Sand -	Coarse No. 10 to No. 4
	Medium No. 40 to No. 10
	Fine No. 200 to No. 40
Fines (silt and clay)	Finer than No. 200

SOIL MOISTURE

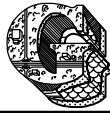
	<u>Descriptive Term</u>
Dry	Dry of Standard Proctor Optimum
Damp	Moist (sand only)
Moist	Near Standard Proctor Optimum
Wet	Wet of Standard Proctor Optimum
Saturated	Free Water in Sample

ROCK DESCRIPTION TERMINOLOGY

The Rock Quality Determination (Deere et. Al., 1969) method of determining rock quality as reported here was obtained by summing up the total length of core recovered in each run, counting only those pieces of core which are four inches (10 cm.) in length or longer and which are hard and sound. The sum is then represented as a percentage over the length of the run. If the core is broken by handling or by the drilling process, the fresh broken pieces are fitted together and counted as one piece provided that they the requisite length of four inches (10 cm.). RQD is reported as a percentage.

RELATIONSHIP BETWEEN RQD AND ROCK QUALITY

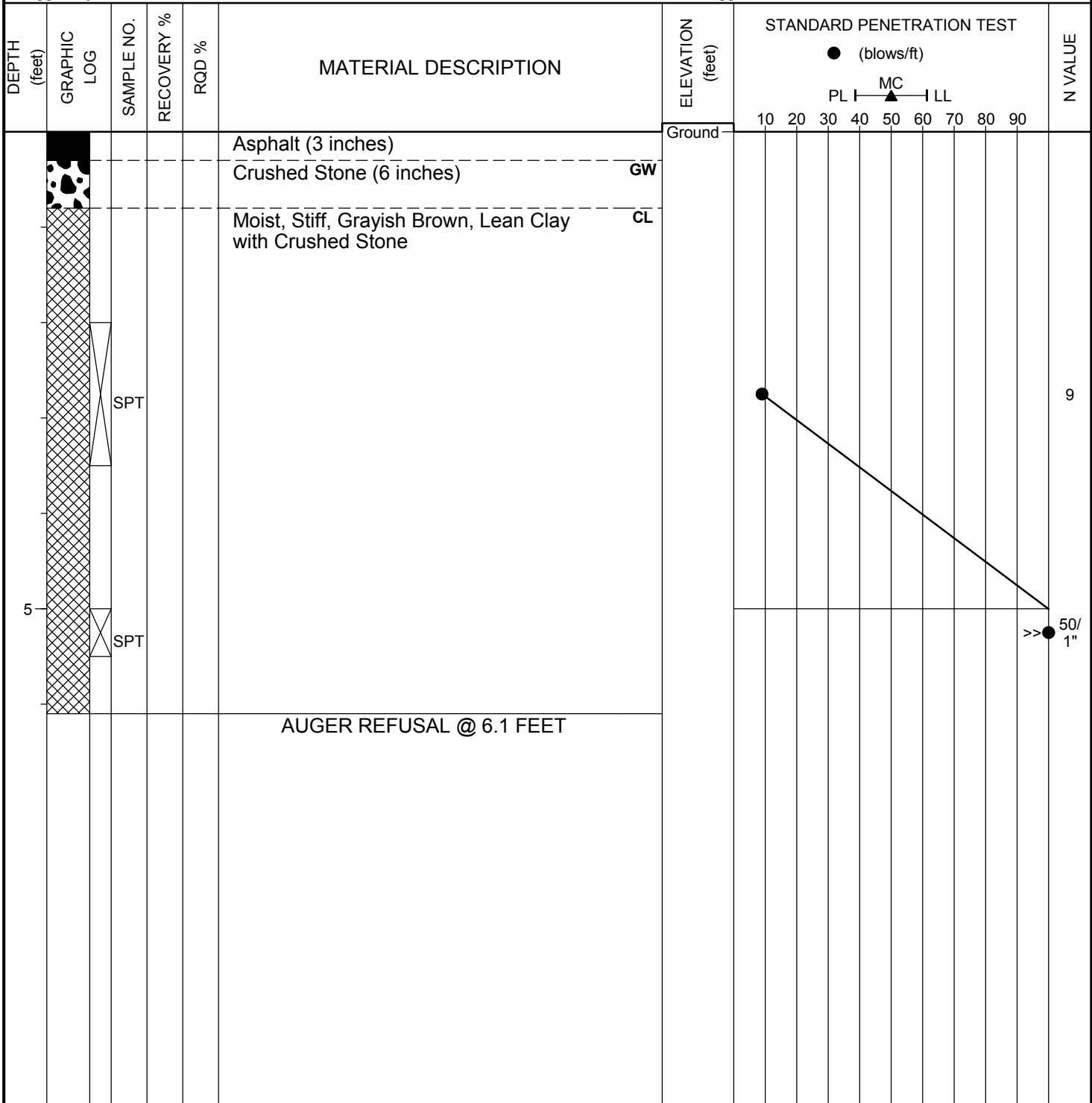
<u>RQD (%)</u>	<u>Description of Rock Quality</u>
0 to 25	Very Poor
26 to 50	Poor
51 to 75	Fair
76 to 90	Good
91 to 100	Excellent



Greenbaum Associates Inc
Louisville, Ky 40215 502-361-8447

Client: City of Lebanon, Kentucky	HOLE No. B-1
Project: Senior Living Facility Lebanon, KY	Sheet 1 of 1
Project No.: 21-001G	

Boring Location: See Boring Location Plan	Surface Elevation: Ground	Station: n/a
Drilling Equipment: D-25 Track-Mounted Drill w/Auto Hammer Drilling Method: 3 1/4 Inch Hollow Stem Auger		
Depth to water immediately: Dry	Overburden: 6.1	Rock: 0 Total Depth: 6.1
Logged By: L. Van Nevel	Driller: B. Sumler	Date Logged: 1/18/21 - 1/18/21



LOG WITH WELL AND SPT GRAPH 21-001.GPJ 08-053.GPJ 2/10/21

SAMPLER TYPE SS - Split Spoon NX - Rock Core, 2-1/8" ST - Shelby Tube CU - Cuttings HQ - Rock Core, 2-1/2" CT - Continuous Tube	DRILLING METHOD HSA - Hollow Stem Auger RW - Rotary Wash CFA - Continuous Flight Augers RC - Rock Core DC - Driving Casing	Hole No. <div style="text-align: center; font-weight: bold; font-size: 1.2em;">B-1</div>
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Greenbaum Associates Inc
Louisville, Ky 40215 502-361-8447

Client: City of Lebanon, Kentucky	HOLE No. B-2
Project: Senior Living Facility Lebanon, KY	Sheet 1 of 1
Project No.: 21-001G	

Boring Location: **See Boring Location Plan** Surface Elevation: **Ground** Station: **n/a**

Drilling Equipment: **D-25 Track-Mounted Drill w/Auto Hammer** Drilling Method: **3 1/4 Inch Hollow Stem Auger**

Depth to water immediately: **Dry** Overburden: **6.6** Rock: **0** Total Depth: **6.6**

Logged By: **L. Van Nevel** Driller: **B. Sumler** Date Logged: **1/18/21 - 1/18/21**

DEPTH (feet)	GRAPHIC LOG	SAMPLE NO.	RECOVERY %	RQD %	MATERIAL DESCRIPTION	ELEVATION (feet)	STANDARD PENETRATION TEST (blows/ft)											N VALUE
							10	20	30	40	50	60	70	80	90			
	Asphalt (4 inches)					Ground												
	Crushed Stone (6 inches)				GW													
	Fill; Moist, Medium Stiff, Tan, Lean Clay with Crushed Stone				CL													
	Moist, Loose, Gray Silt with Brown Mottling				ML													
	SPT																	6
5	SPT																	8
					AUGER REFUSAL @ 6.7 FEET													

LOG WITH WELL AND SPT GRAPH 21-001.GPJ 08-053.GPJ 2/10/21

SAMPLER TYPE SS - Split Spoon ST - Shelby Tube HQ - Rock Core, 2-1/2"	DRILLING METHOD NX - Rock Core, 2-1/8" CU - Cuttings CT - Continuous Tube	DRILLING METHOD HSA - Hollow Stem Auger CFA - Continuous Flight Augers DC - Driving Casing	RW - Rotary Wash RC - Rock Core Hole No. <div style="text-align: center; font-weight: bold; font-size: 1.2em;">B-2</div>
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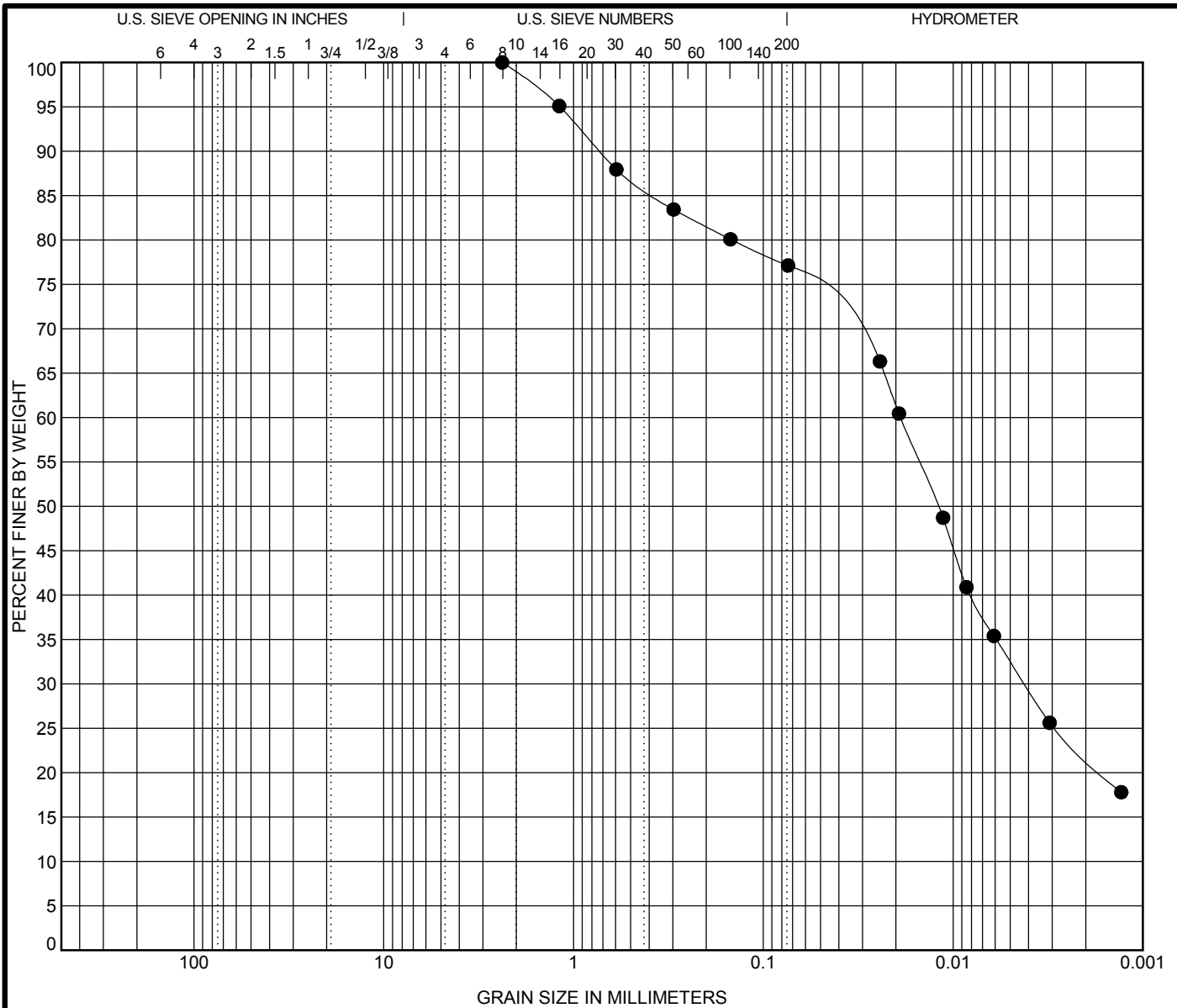
CLASSIFICATION OF SOILS FOR ENGINEERING PURPOSES

ASTM D2487 and D2488

Major Divisions		Group Symbols	Typical Names	Laboratory Classification Criteria					
Coarse-grained soils (More than half of material is <i>larger</i> than No. 200 sieve size)	Gravels (More than half of coarse fraction larger than No. 4 sieve)	Clean Gravels (Little or no fines)	GW	Well-graded gravels, gravel-sand mixtures, little or no fines	Determine percentages of sand and gravel from grain-size curve. Depending on percentage of fines (fraction smaller than No. 200 sieve size), coarse-grained soils are classified as follows: Less than 5 percent More than 12 percent 5 to 12 percent GW, GP, SW, SP GM, GC, SM, SC <i>Borderline cases requiring dual symbols^b</i>				
			GP	Poorly graded gravels, gravel-sand mixtures, little or no fines		Not meeting all gradation requirements for GW			
		Gravels with fines (Appreciable amount of fines)	GM^a	d		Silty gravels, gravel-sand-silt mixtures	Atterberg limits below "A" line with P. I. less than 4	Above "A" line with P. I. between 4 and 7 are <i>borderline cases</i> requiring use of dual symbols	
				u			Atterberg limits below "A" line with P. I. greater than 7		
		GC	Clayey gravels, gravel-sand-clay mixtures						
	Sands (More than half of coarse fraction is smaller than No. 4 sieve size)	Clean Sands (Little or no fines)	SW	Well-graded sands, gravelly sands, little or no fines		$C_u = D_{60}/D_{10}$ greater than 4 $C_u = (D_{30})^2 / (D_{10} \times D_{60})$ between 1 and 3 $C_u = D_{60}/D_{10}$ greater than 6 $C_u = (D_{30})^2 / (D_{10} \times D_{60})$ between 1 and 3			
			SP	Poorly graded sands, gravelly sands, little or no fines			Not meeting all gradation requirements for SW		
		Sands with fines (Appreciable amount of fines)	SM^a	d			Silty sands, sand-silt mixtures	Atterberg limits above "A" line or P.I. < 4	Limits plotting in hatched zone with P.I. between 4 and 7 are <i>borderline cases</i> requiring use of dual symbols
				u				Atterberg limits above "A" line with P.I. > 7	
		SC	Clayey sands, sand-clay mixtures						
Fine-grained soils (More than half material is smaller than No. 200 sieve)	Silts and clays (Liquid limit less than 50)	ML	Inorganic silts and very fine sands, silty or clayey fine sands, or clayey silts with slight plasticity	<p style="text-align: center;">Plasticity Chart</p>					
		CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays						
		OL	Organic silts and organic silty clays of low plasticity						
	Silts and clays (Liquid limit less than 50)	MH	Inorganic silts, micaceous or diatomaceous fine sand or silty soils, elastic silts						
		CH	Inorganic clays of high plasticity, fat clays						
		OH	Organic clays of medium to high plasticity, organic silts						
	Highly organic soils	Pt	Peat and other highly organic soils						

^a Division of GM and SM groups into subdivisions of d and u are for roads and airfields only. Subdivision is based on Atterberg limits :suffix d used when L. L. is 28 or less and the P. I. is 6 or less; the suffix u used when L. L. is greater than 28.


^b Borderline classifications, used for soils possessing characteristics of two groups, are designated by combinations of group symbols. For examples: GW-GC, well-graded gravel-sand mixture with clay binder.



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Specimen Identification	Classification	LL	PL	PI	Cc	Cu
● B-3 2.0	LEAN CLAY with SAND(CL)	32	19	13		

Specimen Identification	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
● B-3 2.0	2.38	0.019	0.004		0.0	22.8	44.7	32.5



Greenbaum Associates Inc
Louisville, Ky 40215
502-361-8447

GRAIN SIZE DISTRIBUTION

Project: Senior Living Facility
Location: Lebanon, KY
Number: 21-001G

U.S. GRAIN SIZE 21-001.GPJ GREENBAUM.GDT 2/10/21

DIVISION 1 GENERAL REQUIREMENTS

01 11 13 SUMMARY OF WORK AND GENERAL INFORMATION

- A. Work includes the construction of a **4,000** square foot **Senior Center** building.
- B. This construction has concrete footings and foundations, with slab on grade concrete floors, conventional light-frame construction, pre-engineered wood trusses, exterior walls of brick/CMU veneer with stone accents over wood studs. Exterior to incorporate fiberglass columns, standing seam metal roofing, plastic-composite trim, pre-finished metal trim, gutters and downspouts. Interiors to include walls of wood studs with gypsum wall board, acoustic ceilings, ceramic tile and vinyl plank flooring, wood doors, hollow metal frames and side lights. Building is heated and air-conditioned.
- C. Construction is to be Type **V-B**, for Group **A-3** occupancy as defined by the International Building Code, 2015 Edition, as amended by the 2018 Kentucky Building Code.
- D. The Articles of the General Requirements, Division 1, shall modify the General Conditions of the Contract where applicable, shall take precedence over the General Conditions of the Contract.
- E. Architect's Status:
 - 1. The Architect shall be the Owner's representative during the construction period and shall observe the work in progress on behalf of the Owner. He shall have authority to act on behalf of the Owner only to the extent expressly provided in the Contract Documents or otherwise in writing, which will be shown to the contractor. He shall have authority to stop the Work whenever such stoppage may be necessary in his reasonable opinion to insure proper execution of the Contract.
 - 2. The Architect shall be in the first instance, the interpreter of the Conditions of the contract and the judge of its performance. He shall side neither with the Owner nor with the contractor, but shall use his powers under the Contract to enforce its faithful performance by both.
- F. Intent of the Drawings and Specifications:
 - 1. Drawings and Specifications are to be understood as supplemental to each other. Items or Work, which are called for in Drawings but not Specified (or Specified but not shown on Drawings), shall be included or executed as if included in both Drawings and Specifications.
 - 2. If there is a conflicting variance between the Drawings and the Specifications, such variance shall be immediately reported to the Architect who shall promptly clarify the intent in writing. If there is a conflicting variance between the General Conditions and the Specifications, the Specifications shall control.
 - 3. Any discrepancies found between the Drawings and Specifications and site conditions or any errors or omissions in the Drawings or Specifications shall be immediately reported to the Architect who shall promptly correct such error or

DIVISION 1 GENERAL REQUIREMENTS

- omission in writing. Any work done by the contractor after his discovery of such discrepancies errors or omissions and before receiving written permission to proceed shall be done at the subcontractor's risk.
4. It is distinctly understood that no extra work or credit of any kind will be allowed except where authorized by a written change order signed jointly by the Contractor, Architect and Owner.
 5. However, if in any portion of the Specifications, authority is vested in the Architect or Engineer to approve extra work or credits or changes of adjustment in the cost of the Work, for whatever reason, or to approve extensions of time it is understood that such authority is conditioned on prior approval, specifically in each case by the Owner.
 6. Neither the Architect's superintendent nor the field superintendents for the Owner have the authority to order any extras or credits or deviations from the Drawings and Specifications except in cases of emergency involving danger of life or property, and in such cases, the Contractor concerned shall notify the Owner promptly in writing.
 7. Contractors shall follow sizes in Specifications or figures on Drawings in preference to scale measurements and follow detail drawings in preference to general drawings.
 8. Where it is obvious that a Drawing illustrates only a part of a given work or of a number of items, the remainder shall be deemed repetitious and so constructed. Where a typical or representative detail is shown on the Drawings, this detail shall constitute the standard in workmanship and material throughout the corresponding parts of the project, subject to approval of the Architect.
- G. Observation and Access to the Work:
1. The Architect and their representative(s) shall have access to the Work at all times and shall be given notice by the contractor in advance before any important or special work is to commence as to the time when such work is to be executed.
 2. Provide written reports of all tests, approvals and guarantees as required by laws, ordinances, public authority, Architect's instructions, or as called for in the Specifications.
 3. Re-examination for questioned Work may be ordered by the Architect, and if so ordered, the Work must be uncovered by the subcontractor. If such Work be found in accordance with the contract documents, the Owner shall pay the cost of re-examination and replacement.
 4. If such Work be found not in accordance with the contract documents, the subcontractor shall pay such cost unless it be found that the defect in the work was caused by a contractor employed under a separate contract by the Owner, and in that event the Owner shall pay such cost.
 5. After the required completion work, corrective work and adjustment noted by the Architect have been completed in their entirety, the Contractor shall notify the Architect in writing and final observation will be made.

DIVISION 1 GENERAL REQUIREMENTS

- H. Measurements:
1. Before ordering material or doing any Work, each subcontractor shall verify all measurements and elevations at the site for his particular class of Work and shall be responsible for the correctness of same.
 2. No extra charge or compensation will be allowed to the subcontractor for differences between actual dimensions and the measurements shown on the Drawings. Any noticeable discrepancy in this respect shall be reported to the Architect immediately for his consideration and decision. All the component parts of the Work shall be carefully checked and laid out in order that the project as a whole shall conform to the true intent of the Drawings.
- I. Regulations: All Work and material shall conform strictly to the respective requirements of the latest editions of the following:
1. Rules of the National Board of Fire Underwriters.
 2. Standard Specifications of the American Society of Testing Materials.
 3. Local ordinances and codes.
 4. State laws of Kentucky.
- J. Regulations, Permits, Fees and Taxes:
1. All Work and materials shall comply in every respect with the Building Code and all associated laws and ordinances, regulations, and the directions of the inspectors of buildings and other proper officials of the area in which the project is to be constructed. Such laws, regulations and directions are to be considered as part of this Specification. If the subcontractor performs any work knowing it to be contrary to such laws, ordinances, rules and regulations, and without notice to the Architect, he shall bear the cost arising therefrom.
 2. Each subcontractor shall be responsible for all violations of ordinances as regards to the obstruction of streets and sidewalks, either by tearing up the same or the accumulation of materials or debris, or otherwise interfering with the convenience of the public during or as a result of the execution of the Work under these Specifications, and he shall make good any damages to the street or pavement to the satisfaction of the city officials. He shall give all requisite notices to public officers, secure all necessary permits, execute all required bonds, and pay all legal fees and charges to public officers.
 3. Subcontractors shall pay for all necessary fees, licenses, permits, and sales and use taxes required for performance of the work in his respective Specifications section.

DIVISION 1 GENERAL REQUIREMENTS

- K. Application of Materials and/or Equipment:
1. Prior to application of any material or items of equipment to Work or surfaces provided by others, all Contractors, subcontractors, and trades concerned shall inspect the Work or surfaces and report in writing to the Contractor with a copy to the Architect any defects or deficiencies which would impair complete and satisfactory application or installation of their Work and allow a reasonable period of time for the correction of unsatisfactory Work before beginning installation or application of their work.
 2. Starting application or attachment to Work of others constitutes acceptance of that Work as satisfactory and assumption of full responsibility for satisfactory application or installation of their work.
- L. Workmanship:
1. Skilled labor must be skilled and performed by the workman in a thorough, faithful, workmanlike manner to the best of their ability, in conformity to the Drawings and Specifications.
 2. Should it become necessary to retain any faulty work which, if remodeled, would cause undue risk, injury or delay, a sum to be recommended by the Architect and approved by the Owner, but not exceeding the whole value of such work and material, if correct will be deducted from the contract price.
- M. Responsibility of Subcontractors:
1. It is the duty and responsibility of each subcontractor to watch the progress of the Work and ascertain when and where his Work will be needed, and plan accordingly. He shall give advance notice and proper information to other contractors of any special provisions necessary for the placing and setting of his Work coming in contact with the Work of the other contractors. Failing to do so in proper time, he shall be held responsible and shall pay for any and all alteration and repair necessary by such neglect. Should any of the subcontractors, be so hindered in the execution of his respective portions of the Work, the subcontractor so hindered, shall report immediately in writing to the Architect. Neglect to report promptly will be deemed an abandonment of any claim.
 2. Each subcontractor shall protect his Work from damage by the weather at all times in the most thorough manner, and he shall be liable to the Owner for all damages to any part of the Work as a result of his negligence or of the carelessness of any of his employees or his subcontractors.
 3. Unless otherwise stipulated, each subcontractor shall furnish and pay for all materials, labor, tools, equipment, hoists, scaffolding, runways, transportation and power necessary in carrying out his contract regardless of trade jurisdiction and shall be solely responsible for their safety and legal operation and maintenance.
 4. All subcontractors are responsible to perform their Work in full compliance with all OSHA Standards and Regulations. All costs for Work requested by the General Contractor and/or OSHA personnel to comply with OSHA safety standards will be the responsibility of the applicable subcontractor.

DIVISION 1 GENERAL REQUIREMENTS

- N. **Guarantee:** Prime subcontractors shall guarantee and make good without cost to the Owner any defects, settlements, shrinkages or other faults in work arising from improper materials or workmanship on his part which may appear within one (1) year after the acceptance of the Work (except for specified guarantees for another length of time specified elsewhere). The subcontractor shall, immediately upon notification by the Architect, proceed at his own expense to replace and repair such Work together with any damage to finish, fixtures, equipment, furnishings that may result due to defective work or faults. Any payments for this Work shall not relieve him in any way from his responsibility. If no money is available, the subcontractor and his sureties agree to pay the Owner the cost of such Work. Nothing herein intends or implies that guarantee shall apply to Work which has been abused or neglected by the Owner.
- O. **Changes in Work:** The change order shall stipulate the mutually agreed estimate of costs which shall be added to or deducted from the contract price. The subcontractor's proposal shall include a complete itemization of:
1. Description and quantities of materials.
 2. Unit cost and total cost of materials.
 3. Hours of labor.
 4. Hourly rates (including fringe benefits) and total labor cost.
 5. Equipment rental or pro-rata share (items of equipment must have an individual cost in excess of \$500.00 when new).
 6. Contractor's overhead and profit on labor, material and equipment rental.
 7. Liability insurance, travel allowances, subsistence allowances, social security, and unemployment insurances when applicable may be added, but without the contractor's overhead and profit fee.
- P. **Damage to Other Contractors, Neighbors and Public:**
1. The General Contractor and each subcontractor will be held responsible and shall make good all damages to adjoining property caused by the execution of this Work under this contract. Each subcontractor will be held responsible for all damage or delays that may be caused to other Work in the project by the execution of this Work or from the carelessness of his employees. The Owner assumes no responsibility, therefore, and shall not be liable for any damages caused to any subcontractor by other subcontractors.
 2. Each subcontractor shall take all necessary precautions for the safety of employees on the Work and shall comply with all applicable provision of Federal, State and Municipal safety laws and building codes to prevent accidents or injury to persons on, about or near to the premises where any of the Work is being performed.

DIVISION 1 GENERAL REQUIREMENTS

01 23 00 ALTERNATES

In addition to the base bid proposal, subcontractors shall state the amount to be deducted from the base bid for the following alternates:

ALTERNATE NO. 1 - Change exterior monument sign to Laminated Acrylic Faces (from Laser-cut Lettering in Aluminum face sheets over Acrylic on BOTH sides (See Specification Section 10 14 33 Illuminated Signage).

ALTERNATE NO. 2 - Change Insulation at Exterior Stud Walls to Fiberglass Batt from Spray-Applied, Closed-Cell Polyurethane (See Specification Section 07 21 19 Spray-Applied Polyurethane Insulation).

ALTERNATE NO. 3 - Owner to provide and Install Precast Concrete Retaining Wall System where indicated on Civil Engineered plans (See Specification Section 32 32 15 Precast Concrete Retaining Wall).

01 25 00 SUBSTITUTIONS OF PRODUCT OR EXECUTION

All products shall be submitted to the Architect for approval prior to bidding unless directly specified or noted as an equivalent. Submissions for prior approval must include a self-addressed stamped envelope to return approval information. Substitutions of equivalent products are allowable as noted, insomuch they are judged equivalent. If the Architect, Engineer, or General Contractor deem them not equivalent, their approval will be rejected.

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.

01 29 73 PAYMENT PROCEDURES

This section is a summary of the procedures for completion of and payment for the Work. This section does not in any way amend the General Conditions or the Supplementary Conditions of the contract as previously referenced in this Specification.

A. Schedule of Values:

Before the first Application for Payment, the Contractor shall submit to the Architect a schedule of values which breaks down the total cost of the project into the costs of its individual divisions of work and sub-contracts.

B. Progress Payments and Retainage:

1. On or before the Fifth (5th) day of each month, the Contractor shall make application to the Owner for payment of the previous month's work by use of AIA form G702S, Application and Certificate for Payment or some such similar format. Each pay application will reflect ninety percent (90%) of the value of work performed to date, leaving a 10 percent (10%) retainage.

DIVISION 1

GENERAL REQUIREMENTS

2. The Architect reviews the application to evaluate its accuracy and will, within seven (7) days after receipt of the Application and Certificate for Payment, either issue to the Owner a Certificate of Payment for the amount the Architect determines is properly due with a copy to the Contractor, or notify the Owner and Contractor in writing of the Architect's reasons for withholding certification in whole or in part.
 3. Within ten (10) days from receiving the Certificate of Payment from the Architect, the Owner shall make payment and notify the Architect
- C. Substantial Completion and Final Payment:
1. At the point at which the Work is ninety-eight percent (98%) complete and the Owner can utilize the Work for its intended use the Contractor shall inform the Architect that the Work is substantially complete and shall arrange for an inspection of the Work by the Architect and provide the Architect with a list of items to be completed or corrected before final payment and a cost estimate for the items to be completed or corrected.
 2. The Architect will inspect the Work and issue a Certification of Substantial Completion (AIA G704) which will establish the date of Substantial Completion and establish responsibilities of the Owner for security, operations and maintenance, utilities, insurance, damage to the work, as well as establishing warrantee/guarantee periods for the Contractor and Sub-contractors. With the Certification of Substantial Completion shall be included a list of items to be completed or corrected before final payment and a cost estimate for the items to be completed or corrected, along with a date establishing when the Work on the list will be completed.
 3. Within thirty (30) days after receipt of the Certification of Substantial Completion, the Owner shall make payment for the entire value of the completed Work, including retainage, minus the value of incomplete work on the accompanying list.
 4. The Contractor will inform the Architect that the Work is ready for final inspection and acceptance and will issue a final Certificate for Payment. The Architect will promptly make such an inspection and, when the Architect finds the work acceptable and complete under the Contract Documents, the Architect will promptly issue a final Certificate of Payment.
 5. The Owner shall make final payment in similar manner to Progress Payments, as outlined in 'B' above.

01 31 19 PRE-CONSTRUCTION MEETING

Within fifteen (15) days after execution of the contract, the General Contractor shall conduct a pre-construction meeting with the Architect, with the primary subcontractors in attendance. At this meeting the General Contractor will present the construction schedule and procedures for required submittals, changes, etc.

01 32 13 SCHEDULES AND REPORTS

Within fifteen (15) days after execution of the contract, the General Contractor shall submit to the Architect a breakdown of the total construction cost in a form generally following the sections of the Specifications (Schedule of Values) along with a construction progress schedule and a complete list of all the subcontractors and material suppliers to be used under the contract.

DIVISION 1 GENERAL REQUIREMENTS

01 32 23 SURVEY AND LAYOUT

A. SITE:

1. Layout of all work shall be made by a licensed surveyor acceptable to the Architect.
2. Maintain all bench marks, control monuments and stakes, whether newly established by Surveyor or previously existing. Protect from damage or dislocation. If necessary to disturb existing bench marks, re-establish in a safe place.
3. If any discrepancies are found by surveyor between the Drawings and actual conditions at the site, the Architect reserves the right to make such minor adjustments in Work specified as necessary to accomplish the intent of the contract documents, without increased cost to Owner.

B. BUILDING:

The General Contractor shall be responsible for overall layout of the building. Each subcontractor shall provide layout for their own Work.

01 33 23 SUBMITTAL PROCEDURES (SAMPLES AND SHOP DRAWINGS)

- A. Suppliers/Contractors shall submit to the Architect a minimum of five (5) copies of shop drawings, samples, product information, or color charts for all materials where specified. Shop drawings shall be submitted far enough in advance to allow two (2) weeks for review. Reproducible shop drawings are not required.
- B. Shop drawing review and approval is for conformance to design intent and does not relieve contractor from responsibility for verification of dimensions, quantities, and construction methods.
- C. See Section 00 72 13 "General Conditions" (Section 4).

01 35 23 SAFETY REQUIREMENTS

1. 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.

DIVISION 1 GENERAL REQUIREMENTS

- 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.

01 45 23 TESTING AND INSPECTING SERVICES

- A. Where testing of work is required in other sections, the tests shall be done by an independent testing agency approved by the Architect. The cost of such testing shall be paid by the subcontractor performing the tested work. Submit results to Architect for approval.
- B. Work requiring testing may include, but is not limited to, soil compaction, concrete and density, mortar, and any other items specified.
- C. See Section 00 72 13, "General Conditions" (Standard Form A104™– 2017 Section 9.9 Submittals).

01 45 33 CODE REQUIRED SPECIAL INSPECTIONS AND PROCEDURES

The following periodic special inspections shall be performed (or confirmed) by David C. Hennen, Architect (the registered design professional in responsible charge) or by a qualified third-party inspector as selected and engaged directly by the Owner:

1. Prior to placing footing or foundation concrete, a visual observation shall be performed to ensure proper size and placement of steel reinforcement. Concrete testing shall be reviewed (as performed by the Contractor, in accordance with the contract specifications).
2. Prior to enclosure of load bearing walls, a visual observation shall be made to ensure proper attachment of wall to foundation and trusses to walls.
3. Prior to the enclosure of columns, a visual observation of base plate/anchorage and connection to roof structure shall be made for proper attachment.

01 51 00 TEMPORARY FACILITIES

A. JOB OFFICE

The Contractor shall maintain a job office at the site, and will maintain a set of Drawings, Specifications and shop drawings, in a neat and orderly manner.

B. TELEPHONE/INTERNET FACILITIES

Telephone/Internet facilities shall be made available at the General Contractor's expense.

DIVISION 1 GENERAL REQUIREMENTS

C. SANITARY FACILITIES

The General Contractor shall provide and maintain approved sanitary facilities in accordance with state and local ordinances until such time as the new facilities may be used.

D. WATER

Water will be provided only after service is complete. Each sub-contractor requiring water must make their own provision until service is complete.

E. TEMPORARY ELECTRICITY

1. The electrical subcontractor shall provide, install, and maintain sufficient temporary energy for the job site trailer and to perform the work. The temporary service shall be removed by the electrical subcontractor immediately following cessation of its purpose. All energy will be paid for by the General Contractor. If masonry subcontractor uses electric mixer or any subcontractor uses excessive amounts of electricity, that subcontractor shall be responsible for such cost. Electrical power used for heating shall be paid for by Owner.
2. The service shall include lighting in all work areas to a 15 foot candle level and 2 duplex outlets on separate circuits for power tools shall be provided every 100' on each level. Such outlets shall be wired so that line voltage is maintained at all times.
3. Service size shall be 120V, single phase, 100 amp, with disconnect.

F. TEMPORARY HEAT

The General Contractor shall pay for all temporary heat necessary and incidental to construction of the building. He shall enclose the building as promptly as possible and shall maintain the temperature of the building at not less than 40 degrees F. except in areas receiving materials necessitating higher temperatures. The General Contractor may use the permanent heating system when the building is completely enclosed and insulated, but must receive written permission from the mechanical and electrical contractors, stating that the system is operative. The Owner shall pay for all energy cost of operation of the permanent heating system during construction. The air cooling system shall not be used without written permission of the Owner. If the permanent heating system is used, the General Contractor shall install temporary filters in the system, if required to properly protect the system, which shall be replaced as necessary during construction. After final clean up, the specified filters, in a new and clean condition shall be installed.

DIVISION 1 GENERAL REQUIREMENTS

01 74 00 CLEANING AND WASTE MANAGEMENT

- A. All subcontractors are responsible for their own cleanup. All trash and debris shall be removed from the construction area on a daily basis.
- B. The General Contractor shall provide a dumpster or similar on-site trash/waste storage to be available for use by all subcontractors and trades, which will be emptied at regular intervals, in order to prevent unwanted trash and debris from littering the site and adjacent property.
- C. The General Contractor shall provide all final cleanup necessary for Owner occupancy.

01 78 00 CLOSEOUT SUBMITTALS (PROJECT RECORD DOCUMENTS)

- A. All subcontractors including mechanical and electrical shall provide as-built drawings and plans when actual design significantly varies from the plans, including all underground utilities.
- B. The as-built drawings shall consist of a set of full-size bond prints of the project with appropriate changes and modifications noted and drawn in red ink. The set of drawings shall be turned over the Architect at the time of substantial completion.

END OF SECTION

DIVISION 2 EXISTING CONDITIONS

GENERAL REQUIREMENTS

Instructions to Bidders; Division 0, Conditions of the Contract; and Division 1, General Requirements, are part of this division and the Specification as if bound herein.

02 21 10 SURVEYS

A Boundary and Topographical survey (including all visible improvements and site utilities) has been provided in the Drawings.

The Contractor will be responsible for verifying all site conditions, including ordering timely location of all utilities, before commencing any work. The Contractor will also be responsible for performing or hiring a surveyor to perform layout/location of boundary lines, building location, and location of all site improvements.

02 31 10 GEOTECHNICAL INVESTIGATIONS

Geotechnical investigations have been performed for this site. Soil boring logs, Locations and Recommendations are included in the attached Geotechnical Report.

02 41 10 SITE DEMOLITION

The building site will require removal of existing bituminous paving, concrete curbs, underground utilities, topsoil and other material. Refer to the civil-engineered site plans for details and extent of site demolition. All material shall be cleared and disposed of in a legal manner.

END OF DIVISION

GENERAL REQUIREMENTS

Instructions to Bidders; Division 0, Conditions of the Contract; and Division 1, General Requirements, are part of this division and the Specification as if bound herein.

03 11 00 CONCRETE FORMWORK

SCOPE OF WORK

- A. Provide all concrete formwork for the concrete and reinforced concrete work shown on the Drawings. All work shall conform to the criteria stipulated in the latest edition of the ACI "Building Code Requirements for Reinforced Concrete." See Section 07 13 00 Waterproofing.
- B. Furnish and install all inserts, anchors, sleeves, bolt, dowels, stoop decking, etc., specified and shown cast in place.
- C. Furnish and install expansion joint filler and control joint filler at all locations shown.
- D. Refer to Structural notes for additional information. Note: The provisions of this section can be superseded by notes included on Structural drawings.

MATERIALS

- A. Form Ties: Break-off type which leaves no portion of the tie closer than 1" from wall surface no more than 7/8" diameter in concrete face.
- B. Oiled Waterproof Plywood Forms: Douglas Fir, CS45 5 ply, 3/4" thickness. Both faces "B" veneer, small tight knots and plugs will be allowed.
- C. Lumber: Clean, sound and true
- D. Flush Metal: Standard smooth-faced forms
- E. Form Oil: Non-staining mineral oil or form oil

DESIGN OF FORMS

The concrete contractor shall be responsible for the design, structural soundness and construction of all forms. Place and maintain forms true to lines and Drawings shown and to avoid fins and irregularities. Construct forms such that minimum concrete covering for reinforcing steel will be as follows:

- A. All exterior concrete, 2"

DIVISION 3 CONCRETE

- B. Slabs, center of slab, $\frac{3}{4}$ " minimum
- C. Beams, columns and piers, 1 $\frac{1}{2}$ " to ties
- D. Walls, 2" exterior face, 1" interior face
- E. Footings and foundations, 3" bottom, 2" top and sides

INSTALLATION

Install all inserts, anchors, sleeves, bolt, dowels, stoop decking, etc. specified and shown cast in place. Install expansion joint filler and control joint filler at all locations shown.

All layout work for this section to be done by this contractor, under the supervision of the General Contractor, and coordinated with site layout work, per Civil Engineered Drawings.

Coordinate the work of this section with all trades whose Work relates to the installation of concrete. All necessary openings, chases, recesses, etc., shall be provided to take the Work of the mechanical, electrical and equipment contractors. All sleeves, hangers, supports or other forms shall be located, furnished and placed by the mechanical, electrical, end equipment contractors and shall be built into the concrete work by the concrete contractor. All anchors, ties, plates, joists, beams, lintels, flashings, inserts, and etc., which come in contact with concrete shall be built in with the concrete work. No cutting or drilling of concrete that affects the structural strength shall be done without permission of the Engineer and Architect.

END OF SECTION

03 20 00 CONCRETE REINFORCEMENT

SCOPE OF WORK

Furnish reinforcing steel for all reinforced concrete work and all reinforced masonry work. Refer to Structural notes for additional information. Note: The provisions of this section can be superseded by notes included on Structural drawings.

MATERIALS

- A. Deformed Bars: ASTM A615, Grade 60
- B. Accessories: Bolsters, chairs, blocks and iron tie wire as required or as shown
- C. Welded Wire Fabric: ASTM A185

FABRICATION

- A. Fabricated in accordance with latest editions of ACI-318 and ACI-315. Vertical wall reinforcing shall be doweled to the footings with bars of same size and spacing as vertical wall steel.
- B. Shop drawings shall be submitted in accordance with Section 01340.

INSTALLATION

- A. All reinforcing shall be stored clear of the ground and protected from the weather. No concrete shall be poured until required inspections have been made.
- B. Steel Bars: Securely tie with soft iron tie wire and support in proper position to prevent displacement.
- C. Welded Wire Fabric:
 - 1. In slabs on grade splice fabric so that overlap between outermost cross wires of each fabric sheet is not less than two wire spaces.
 - 2. Support fabric off grade before placing concrete and wire together to prevent displacement of fabric during concrete placement.
 - 3. In slabs on grade, locate fabric not less than 1/4 or more than 1/3 thickness of slabs, measured downward from tops of slabs, unless noted otherwise on Drawings.

END OF SECTION

03 30 53 MISCELLANEOUS CAST-IN-PLACE CONCRETE

SCOPE OF WORK

Furnish all miscellaneous and exterior concrete work shown on Drawings to assure the complete installation of cast-in-place concrete work. Work shall include installing exterior walks (including trench drains and curb ramps), stairs, pads, expansion materials, and concrete pads for mechanical and electrical equipment (see mechanical and electrical plans and coordinate with mechanical and electrical contractors). Refer to Civil and Structural notes for additional information. Note: The provisions of this section can be superseded by notes included on Civil and Structural drawings.

MATERIAL

- A. See Section 03 31 00 Structural Concrete.
- B. Handicapped accessible curb ramps at sidewalks shall include Precast Polymer Concrete Tactile Dome Safety Tile, as manufactured by Castek Inc. or approved equal. Tile area shall be a minimum of 36 inches wide (perpendicular to direction of travel) and 24 inches long (along direction of travel). Tiles to be furnished and installed by Concrete Contractor, per manufacturer's installation instructions. Tiles and installation will meet ADA compliant standards.
- C. Where indicated on plans, trench drains in or across sidewalks shall be installed by Concrete Contractor. Unless noted otherwise, all trench drains to be Zurn Z886 Perma Trench 6" wide pre-sloped trench drainage system or architect-approved equivalent.

EXECUTION

- A. General:
 - 1. Concrete shall not be placed on soft, muddy or frozen sub-grade. Any excavation made below design elevation shall be brought to grade by additional concrete at time of placing. Place as nearly as possible to final position in a continuous operation until panel or section is complete. All concrete slabs to be screeded with pipe screeds at 8'-0" o.c. maximum (wet screeds not allowed). Construction joints shall occur at end of each continuous pour.
 - 2. Place all slabs on maximum density soil. See Section 03 31 00 for Specifications on concrete strength, finish and curing.
 - 3. All sidewalks and entrance slabs shall be furnished and installed by Concrete Contractor.

DIVISION 3 CONCRETE

B. Exterior Concrete Work

1. All exterior stairs, walks, platforms, curbs shall be of air entraining monolithic concrete. Reinforcement as shown on Drawings. Base shall be compacted and graded prior to pouring to the established elevations. Place ½" thick expansion joint material full depth of slab at:
 - a. Intersection of walks with building or curbs.
 - b. Intersection of walks with walks.
 - c. Maximum 40'-0" o.c. in walks. Walks shall be scored at a minimum of 10'-0" o.c. or as shown on drawings. All scores to be "v" tooled, unless noted otherwise on plans, at surface and all edges, and joints shall be tooled. Walks shall be steel troweled and hair broomed. Construct curbs to profiles detailed, cut through at 10'-0" o.c. and place ½" expansion joint material full section every 60'-0" at tangent points and corners unless shown otherwise.
2. All sidewalks indicated on the Drawings are to be 4" thick concrete. In general, furnish smooth wood float finish or lightly broomed over steel-troweled finish.
3. Concrete pads for mechanical and electrical equipment to be provided by concrete contractor unless noted otherwise on Drawings. Pads shall be similar to exterior sidewalks described above, unless noted otherwise on Drawings.

END OF SECTION

03 31 00 STRUCTURAL CONCRETE

SCOPE OF WORK

Furnish all reinforced concrete work shown on Drawings to assure the complete installation of cast-in-place concrete work. Work shall include installing all slabs on grade, stoops, stairs, footings, foundations, bond beams at CMU, and structural topping. Refer to Civil and Structural notes for additional information. Note: The provisions of this section can be superseded by notes included on Civil and Structural drawings.

Related Sections:

- 03 30 53 Miscellaneous Cast-in-place Concrete
- 04 22 00 Concrete Unit Masonry
- 07 13 00 Waterproofing
- 07 21 00 Building Insulation

MATERIAL

- A. Below Slab Vapor Retarder: 10 mil polyurethane film

- B. Portland Cement: Use one brand only for all exposed work.
 - 1. Normal: ASTM C150, Type 1
 - 2. Air Entraining: Provide 5 to 7% entrained air

- C. Fine Aggregate: ASTM C33

- D. Coarse Aggregate: ASTM C33

- E. Water: Clean, potable and free from deleterious amounts of acids, alkalis or organic materials.

- F. Concrete Curing Compound: Apply 1 coat of Brock White "Creteseal", or 2 coats of L & M "Chem Hard", cure seal hardener immediately after final concrete finishing operation. Shall be applied only to areas where 'sealed' concrete is shown on room finish schedule. All other concrete surfaces to be poly cured.

- G. Ready-Mixed Concrete: Concrete delivered in outdoor temperature of less than 40° F. shall arrive at the site at temperature not less than 70° F. Addition of water is cause for rejection of any batch. No admixtures other than approved air entraining agent shall be allowed without approval from the General Contractor.

- H. Concrete Quality
 - 1. All concrete shall have a minimum specified strength at 28 days of 3,000 psi for interior floors or structural work and 4,000 psi for exterior concrete work.
 - 2. Air entrained concrete, 6% +/- 1% air entrainment, shall be used for all exterior concrete work.

DIVISION 3 CONCRETE

EXECUTION

A. General:

1. Concrete shall not be placed on soft, muddy or frozen sub-grade. Any excavation made below design elevation shall be brought to grade by additional concrete at time of placing. Place as nearly as possible to final position in a continuous operation until panel or section is complete. All concrete slabs to be screeded with pipe screeds at 8'-0" o.c. maximum (wet screeds not allowed). Construction joints shall occur at end of each continuous pour.

B. Slabs on Grade:

1. Finish floor surfaces to elevations shown. Surfaces to receive topping are to be raked or wire broomed. All other surfaces to be wood floated and steel troweled to produce dense, smooth and true finish. Concrete shall be maintained moist and covered with polyethylene film for a minimum of seven (7) days to prevent shrinkage and surface crazing. Lap all edges, ends of polyethylene film and seal laps. Temperature shall be maintained at a minimum of 50° F for seven (7) days. All construction joints shall be keyed. Control joints shall be sawcut or plastic insert as where indicated on the Drawings and not to exceed 15' o.c. Trowel slab to level or true slopes as indicated, tolerance 1/8" per 10'.

C. Concrete Tests:

1. The minimum number of cylinders shall be one pair for each 100 yards or one day's pour. All cylinders to have the date scratched into surface. Sampling to be as per ASTM C172 and curing as per ASTM C31. Cylinders to be submitted to an approved testing laboratory for 7 and 28 day strength analysis. All required testing cylinders are to be turned over to Owner by the Concrete Subcontractor.

END OF SECTION

GENERAL REQUIREMENTS

Instructions to Bidders; Division 0, Conditions of the Contract; and Division 1, General Requirements, are part of this division and the Specification as if bound herein.

04 05 16 MASONRY GROUTING

SCOPE OF WORK

Work of this section includes all labor, materials and equipment necessary for the provision, mixing and testing of mortar and grout for masonry work, in accordance with the Drawings and Specifications.

- A. See related specification sections for installation of mortar.
- B. Related work specified elsewhere:

Section 04 22 00 Concrete Masonry Units

MATERIALS

- A. Masonry Cement: ASTM C-91
- B. Portland Cement: ASTM C-150, regular, Portland slag cement.
- C. Lime: Hydrated ASTM C-207.
- D. Sand: ASTM C-144, clean and sharp.
- E. Water: Clean and fresh, suitable for domestic consumption.
- F. Mortar Color: Use natural cement of light color.
- G. Antifreeze Compounds: Salts or other substances shall not be used in mortar to lower freezing point.

DIVISION 4 MASONRY

EXECUTION

- A. Unless otherwise approved by Architect, mortar materials shall be proportioned as follows and mixed in a drum type batch mechanical mixer. Mixing time shall be not less than three (3) minutes after all ingredients have been placed in mixer, all in accordance with ASTM C-270.
- B. Mortar for Below Grade Masonry: (By Volume)
Type M: 1 part Portland Cement
1/4 parts hydrated lime or lime putty (max.)
3-3/4 parts sand (max.)
- C. Mortar for Other Masonry Work: (By Volume)
Type N: 1 part Portland Cement
1-1/4 parts hydrated lime (max.)
6-3/4 parts sand (max.)
- D. Mortar not used within the following time limits shall be discarded:
Temperature: 80° or higher, 1-1/2 hours
80° or lower, 3-1/2 hours
- E. Mortar shall be thumbprint hard before tooling and in extreme dry and hot weather. Mortar may have to be fog sprayed CONTINUOUSLY for 48 to 72 hours to achieve desired strength.
- F. Only one brand of Portland or hydrated lime may be used for all mortar mix. Masons cement WILL NOT be allowed as an alternate for Portland and hydrated lime.

END OF SECTION

04 05 23 MASONRY ACCESSORIES

SCOPE OF WORK

Furnish and install through wall flashing as shown on the Drawings.

MATERIAL

Through wall flashing membrane equal to Nervastral HD, 20 mil., as manufactured by Rubber and Plastics Compound Company, Inc., Wascoseal by York, Safseal 6620, Sandell Mfg., Inc. – Nuflex Plastic Flg., Carlisle – CCW-705TWF, approved equivalent.

INSTALLATION

Masonry contractor shall install membrane flashing as recommended by the manufacturer and as detailed on the Drawings. Seal all laps watertight. Turn up ends of flashing 4" minimum. Extend flashing out 1/4" beyond exterior face of brick.

END OF SECTION

04 21 13 BRICK MASONRY

SCOPE OF WORK

Install brick at exterior walls as indicated on Drawings. See Section 04230 for Precast Concrete components. See Section 04 05 23 for Through Wall Flashing.

MATERIALS

- A. Brick shall be modular size and meet ASTM C216 standards for grade SW, Type FBS, hard burned clay brick. Allow \$800 per thousand modular brick, F.O.B. jobsite, tax included.
 - 1. The Architect and Owner shall make the final selection of brick.
 - 2. All brick shall be protected from elements so to be within moisture control limits at time of laying.
- B. Mortar: See Section 04 05 16
- C. Masonry Veneer Ties: To be Hohmann & Barnard or Wire-Bond truss design with anchor plate/tie and adjustable loop, or approved equivalent.
- D. Sureklean 600 detergent brick cleaner by Prosoco.
- E. Weep: Plastic spacer/tube, see plan for spacing.

EXECUTION

- A. Lay brick running bond with concave tooled joints. Shove all head and bed joints tight. Compress all exposed joints with a jointing tool when mortar has walls. All head and bed joints to be horizontal and vertically aligned on 8" modular grids. Extend veneer ties through cavity wall insulation and minimum 2" lap into brick joints.
- B. Bond brick to back up stud and gypsum sheeting wall with corrosion-resistant wire ties equal to DW-10 HS Anchor Plate, X-Seal Anchor (at continuous insulation), HB-200/DA-213 Adjustable veneer Anchor as manufactured by Hohman & Barnard or equivalent. Use one tie for each 2-2/3 sq. ft. ties to be embedded a minimum of 2" into bed joints of brick veneer.
- C. Pointing: Upon completion, point all exposed work in this section; fill holes and cracks. Remove loose mortar, cut out defective work and re-point where directed. Remove weep ropes after mortar has set.

DIVISION 4 MASONRY

- D. **Cleaning:** Thoroughly clean exposed surfaces with Sureklean. Prewet surfaces to be cleaned before applying detergent. Rinse thoroughly with clean water. Leave surfaces clean, free from mortar and other stains. Clean all new brick and existing brick that will be inside.
- E. All walls shall be covered on top at all times when work is not in progress to prevent rain from entering cavity. This covering must be kept in place until the roof is on. This is a precautionary measure to limit efflorescence and to protect cavity wall insulation.
- F. **Control Joints:** Locate control joints at 25'-0" o.c. (maximum) and as shown on Drawings. Refer to details for construction of control joints.

END OF SECTION

04 22 00 CONCRETE UNIT MASONRY

SCOPE OF WORK

Work in this section includes all labor, materials, and equipment necessary for the provision and installation of concrete block and related materials, in accordance with the Drawings and Specifications.

Includes, but not limited to:

- A. Concrete unit masonry.
- B. Installation of mortar and masonry grout.
- C. Installation of masonry reinforcing and accessories.
- D. Installation of perimeter insulation at exterior of foundation walls.

Related work specified elsewhere:

Section 01 51 00 Temporary Heat
Section 03 20 00 Concrete Reinforcement
Section 03 31 00 Concrete Cast-In-Place
Section 04 05 16 Masonry Grouting
Section 05 52 00 Miscellaneous Metals
Section 06 10 00 Rough Carpentry
Section 07 13 00 Waterproofing
Section 07 21 16 Building Insulation
Section 07 92 00 Sealants

MATERIALS

All material shall conform to modular construction with special shapes and sizes by Drawings. All concrete block shall be protected from the elements so to be within moisture control limits at time of laying.

- A. Concrete Masonry Units (CMU): ASTM C90, normal weight hollow load bearing block (2 core block only). To be used below grade, exterior exposures, and where concrete block is called for on Drawings.

DIVISION 4 MASONRY

- B. All exposed or decorative block shall be obtained from a single source and shall be uniform in dimension, texture and color.
- C. Mortar: See Section 04 05 16. Colored Mortar to be used at integrally colored C.M.U.
- D. Masonry Wall Joint Reinforcement: To be Hohmann & Barnard or Wire-Bond (or approved equivalent) products truss design with prefabricated corners and tees as required, of proper sizes for wall conditions. All wall joint reinforcing to be galvanized.
- E. Non-shrink grout.
- F. Masonry contractor to furnish and install all perimeter and cavity insulation at masonry walls or foundations as described in Section 07 21 00.

INSTALLATION

- A. All block shall be laid in running bond unless noted otherwise on Drawings. Reinforce walls with continuous joint reinforcing in the horizontal joints in every other course. Use full mortar bedding with full coverage of face shells.

Ensure that all head joints are full of mortar and shoved tight to adjacent block. Shove all head joints tight. Compress all exposed joints with a jointing tool when mortar has become thumbprint hard. All other joints to be cut flush. Fill five courses solid under all lintels, bearing plates, beams and joists. Cover all masonry work at the end of each day.

- B. Install reinforcing in all walls where such Work is required by Drawings. Reinforcing is furnished under Section 03 20 00.
- C. Exposed joints shall be tooled to a smooth, dense, concave surface. Joints concealed in the finished Work shall be cut flush. Joints in scored block shall be raked and butt joints to be rake tooled.

DIVISION 4 MASONRY

- D. Coordinate the Work of this section with all trades whose Work relates to the installation of masonry. All necessary openings, chases, recesses, etc., shall be provided to take the Work of the mechanical, electrical and equipment contractors and shall be built into the masonry work by the masons. All anchors, ties, plates, joists, beams, lintels, flashing, inserts, and etc., which come in contact with masonry shall be built-in with the masonry work. No cutting and/or drilling of masonry that affects the structural strength shall be done without permission of the Engineer and Architect.
- E. Standard units to be light in color with uniform fine texture. Broken units not to be used and chipped or otherwise defective units will not be acceptable or used where exposed. Exposed concrete unit walls to have units uniform in size, texture, and color, including bond beam, lintel fractional and header blocks. 5% of exposed block units in place may have a maximum 3/8" chip in them.
- F. Install embedded steel and furnish and install non-shrink grout at all base plates (grout plates before any imposed loads on column are realized).
- G. All layout for this section to be done by this subcontractor.
- H. Temporary bracing of masonry walls shall be the responsibility of the masonry contractor and will conform to the National Concrete Masonry Associates Bracing Guidelines.
- I. Control joints to be located at 24'-0" (o.c. maximum) and as shown on Drawings.
- J. Furnish and install all anchor bolts integral to the masonry work.

END OF SECTION

04 43 13 STONE MASONRY VENEER (Accents, Lintels and Sills)

SCOPE OF WORK

Furnish and install all stone and accessories work as shown on Drawings or specified herein. This Work is to include but not be limited to the following items: Stone veneer at exterior of building, stone sills, stone accents, date stone, address stone, lintels and window sills.

Related sections or work specified elsewhere:

Section 01 33 23 Submittal Procedures

Section 01 51 00 Temporary Heat

Section 08 42 13 Aluminum-Framed Entrances and Windows

MATERIAL

- A. Building Veneer Stone: All veneer stone shall be cut Limestone, color as selected by Owner and Architect from readily available regional quarries.
 - 1. Mortar: The mortar for setting cut stone shall consist of one part Portland cement, one part hydrated lime or lime putty and six parts sand by volume. Mortar for pointing cut stone shall consist of one part white Portland cement, one part hydrated lime or lime putty and three parts clean white sand by volume. Add lime proof mortar color as required to match the color of the stone. Mix in a small amount in as stiff consistency as can be worked into joints. All mortar shall conform to latest A.S.T.M. standards.
 - 2. Anchors: Anchors and dowels as detailed shall be non-corrosive metal.
 - 3. See Sections 04 21 13 Brick Masonry and 04 05 23 Masonry Accessories for anchors, flashing and weeps.

- B. Date/Corner Stone and Address Stone: Provide an allowance of \$1,000 for engraving both stones. Font and letter height to be selected by Owner and Architect.

- C. Shop drawings required.

INSTALLATION

- A. Building Veneer Stone:
 - 1. Setting: Before setting, stone shall be brushed free of dust or other foreign matter and wetted sufficiently to take up surface absorption. No stone shall be set with a film of water or frost on the surface. All joints shall be a uniform ¼ inch. If necessary, to prevent displacement of mortar, plastic or lead spacers may be used. The stone shall be sponged completely free of mortar immediately after setting.
 - 2. Pointing: Carefully brush out joints before pointing. After wetting stone to take up surface absorption, work pointing mortar into joints, compacting thoroughly and tooling with finished joint slightly concave.

DIVISION 4 MASONRY

3. Cleaning: New stonework shall be kept as clean as possible as Work progresses. Upon completion, stone shall be thoroughly cleaned with soap and water and completely rinsed after scrubbing with fiber brushes. If necessary, fine white sand may be added to water to aid in cleaning. The use of acids or wire brushes will not be permitted. Existing stonework shall be cleaned with masonry cleaner per manufacturer's instruction sand in those areas shown on the building elevations.
4. Samples and Shop Drawings:
 - a. Samples: Representative samples of stone shall be submitted for the Architect's approval.
 - b. Shop Drawings and Processing: Cutting and setting drawings shall be furnished in triplicate for Architect's approval. Drawings shall clearly show jointing, anchoring, dimensions and finish of stone work. No stone shall be processed until the shop drawings have been approved by the Architect. All cut stone shall be accurately cut to shape as shown on approved shop drawings.

END OF SECTION

05 50 00 MISCELLANEOUS METAL FABRICATIONS

SCOPE OF WORK

Furnish all miscellaneous metal work shown on Drawings or specified herein for complete installation or Work. All items shall be supplied with all devices required to permanently secure them in their appropriate location. The following list is intended as a guide only.

- A. Brick lintels, canopy and soffit framing, and other miscellaneous framing to be installed by steel erecting contractor (see Drawings)
- B. All bearing plates, bolts, shoes and saddles
- C. Other items as shown on Drawings

MATERIALS

All materials shall be free from defects impairing strength, durability and appearance. Finishes on all exposed surfaces shall be free of scratches, weld slag or sharp edges.

- A. Steel: ASTM A-36
- B. Steel Square Tube: ASTM500 Grade B
- C. Fast Setting Cement: Por-Rox by Hallemite Mfg. Co. or approved equivalent

FABRICATION AND INSTALLATION

- A. All exposed welds shall be continuous and dressed flush and smooth.
- B. Do all cutting, punching, drilling, and tapping for attachment of Work to building structure.
- C. Thoroughly clean all surfaces to receive paint. Prime all items, except anchors to be set in concrete or galvanized, with one shop coat of rust inhibitive primer.
- D. Shop drawings are required. See Section 01 33 23
- E. Furnish steel lintels for miscellaneous openings. Furnish one angle not less than 4" x 3-1/2" x 5/16" (see schedule on drawings) for each 4" wythe of masonry. Furnish not less than 6" bearing each end.

DIVISION 5 METALS

- F. Supplier shall review the architectural and mechanical drawings to make sure he has included all required structural steel for lintels for all openings requiring the same regardless of whether or not they are shown on the structural drawings.

END OF SECTION

GENERAL REQUIREMENTS

Instructions to Bidders; Division 0, Conditions of the Contract; and Division 1, General Requirements, are part of this division and the Specification as if bound herein.

06 10 00 ROUGH CARPENTRY

SCOPE OF WORK

Furnish all rough carpentry work shown on Drawings or specified herein. The following list is a guide only and does not intend to be a complete tabulation of all items.

- A. Temporary work such as stairs, enclosures, runways, and guardrails.
- B. Furring and nailing strips.
- C. Wood blocking.
- D. All wood, nails, bolts, screws, framing anchors (as shown in architectural and structural drawings) and other rough hardware, and all other items needed for rough and finished carpentry in this work but not specifically described in other Divisions of these Specifications.
- E. Exterior Wall & Soffit Sheathing: Shall be 5/8" exterior grade gypsum sheathing for all applications EXCEPT behind Exterior Insulation Finish Systems.

Related work specified elsewhere:

Section 06 20 00 Finish Carpentry
Section 06 41 00 Architectural Woodwork
Section 07 27 00 Air Barrier
Section 08 11 13 Hollow Metal Doors and Frames
Section 08 14 16 Wood Doors and Frames
Section 08 31 13 Access Doors
Section 08 70 00 Door Hardware
Section 09 29 00 Gypsum Wallboard/Accessories
Section 10 21 13 Toilet Partitions

Miscellaneous: Furnish all miscellaneous wood members not specified elsewhere including all bracing, blocking, framing, etc. of all items shown on the Drawings and Specifications, and to secure items specified in but not limited to the following Sections:

Section 08 11 13 Hollow Metal Doors and Frames
Section 08 42 13 Aluminum-Framed Entrances
Section 09 84 13 Fixed Sound-Absorptive Panels
Section 10 28 13 Toilet Accessories
Plumbing Fixtures and Trim
Lighting Fixtures

DIVISION 6 WOODS

MATERIALS

- A. Lumber for rough carpentry shall be well seasoned, S4S, and kiln dried to moisture content not exceeding 19%. All materials of this Section, unless specifically otherwise approved in advance by the Architect, shall meet or exceed the following requirements:

ITEMS	DESCRIPTION
Treated sill plates and studs:	Zinc Borate treated engineered lumber. "iLevel" by Weyerhaeuser or approved equal. Copper Sulfate treated lumber is NOT acceptable.
Cant and blocking at roof edge:	Pressure treated Ponderosa Pine.
Studs (8 ft. max):	SPF stud grade.
Studs (more than 10 ft.):	SPF no. 2 – see also General Structural Notes on the Drawings.
Horizontal plates above grade:	SPF stud grade.
Beams; stringer and header:	SPF select structural with fiber stress of 875 min.
Plywood:	Softwood Plywood - National Research Board Report No. 108. Any plywood used as sheathing must be exterior type glue. Waferboard or oriented strand board may not be substituted for plywood. Refer to the Drawings.
Steel hardware:	ASTM A-7 or A-36 (use galvanized at exterior locations).
Machine bolts:	ASTM A-307.
Lag bolts:	Federal Specifications FF-B-561.
Nails:	Common (except as noted), Federal Specification FF-N-1-1 (use galvanized at exterior locations).
Joist hangers:	Simpson, or equivalent approved by Architect.
Specialty anchors:	Specialty anchors for lumber connections as shown in structural drawings.
Parallel Strand Lumber (PSL) And Laminated Veneer Lumber (LVL) Beams	LVL and PSL beams shall be as manufactured by Weyerhaeuser or equal. LVL and PSL beams shall be designed to meet the dimensions and loads indicated on the Drawings. All designs shall be in accordance with standard engineering practice. Material must meet the design properties specified for LVL as shown on the Structural Drawings. Drawings shall be furnished by the manufacturer for Architect's approval showing size and allowable loads prior to fabrication. LVL and PSL beams shall be protected from weather while in storage.

DIVISION 6 WOODS

- B. Grade Stamps
 - 1. Framing Lumber; identify all framing lumber by the grade stamp of the West Coast Lumber Inspection Bureau.
 - 2. Plywood: Identify all plywood as to species, grade, and glue type by the stamp of the American Plywood Association.
 - 3. All lumber shall have been stamped with Fire Retardant Rating when fire retardant wood is specified.

INSTALLATION

- A. Quality Assurance
 - 1. Quality of workmen: Provide sufficient skilled workmen and supervisors who shall be present at all times during execution of this portion of the Work and who shall be thoroughly familiar with the type of construction involved and the materials and techniques specified.
 - 2. Rejection: Poor quality work, whether due to poor materials or poor workmanship may be rejected at any time. Materials may be rejected by the Architect after installation.
- B. Product Handling
 - 1. Protection:
 - a. Store all material in such a manner as to ensure proper ventilation and drainage and to protect against damage and the weather.
 - b. Keep all material clearly identified with all grade marks legible; keep all damaged material clearly identified as damaged, and store separately to prevent its inadvertent use.
 - c. Do not allow installation of damaged or otherwise non-complying material.
 - d. Use all means necessary to protect the installed Work and materials of all other trades.
 - 2. Replacements: In the event of damage, immediately make all repairs and replacements necessary to the approval of the Architect and at no additional cost to the Owner.
- C. Inspection:
 - 1. Prior to all Work of this Section, carefully inspect the installed Work of all other trades and verify that all such Work is complete to the point where this installation may properly commence.
 - 2. Verify that rough carpentry may be performed in strict accordance with the original design and all pertinent codes and regulations.
 - 3. In the event of discrepancy, immediately notify the Architect.
 - 4. Do not proceed with installation in areas of discrepancy until all such discrepancies have been fully resolved.
- D. Workmanship
 - 1. General: All rough carpentry shall be true, tight, and well nailed with all members assembled in accordance with the Drawings and with all pertinent codes and regulations.

DIVISION 6 WOODS

2. Selection of lumber pieces:
 - a. Carefully select all members; select individual pieces so that knots and obvious defects will not interfere with placing bolts or proper nailing or making proper connections.
 - b. Cut out and discard all defects which will render a piece unable to serve its intended function; lumber may be rejected by the Architect, whether or not it has been installed, for excessive warp, twist, bow, crook, mildew, fungus, or mold, as well as for improper cutting and fitting.
3. Shimming: Do not shim sills, joists, short studs, trimmer, headers, lintels, or other framing components.

E. Treated Lumber

4. General: Use only treated lumber for all wood bucks and nailing grounds, etc., (other than Foundation grade Redwood) in, or in contact with concrete.
5. Treatment:
 - a. Treat all wood (except Redwood) with treatment preservative specified in this section or otherwise treat as approved in advance by the Architect.
 - b. Perform all treatment in strict accordance with the published recommendations of the manufacturer of the treatment preservative.

F. General Framing

- a. In addition to all framing operation normal to the fabrication and erection indicated on the Drawings, install all backing required for the Work of other trades.
- b. Set all horizontal or sloped members with crown up.
- c. Do not notch, bore, or cut members for pipe, ducts, conduits, or other reasons except as shown on the Drawings or as specifically approved in advance by the Architect. All such boring shall be on the center line of the structural members to be penetrated.
- d. Make all bearings full unless otherwise indicated on the Drawings.
- e. Finish all bearing surfaces on which structural members are to rest so as to give sure and even support; where framing members slope, cut or notch the ends as required to give uniform bearing surface.
- f. Brace walls and roof trusses as required, by code and standard practice.

G. Blocking and Bridging

- a. Install all blocking required to support all items of finish and to cut off all concealed draft openings, both vertical and horizontal, between ceiling and floor areas.
- b. Fire-blocks, when wood, shall be 2" (nominal) in thickness by the full width of the opening being blocked.
- c. Fire-block in the following specific locations:
 - i. In all stud walls at ceiling and floor levels.
 - ii. In all stud walls, including furred spaces, that the maximum dimension of each concealed space is not more than 10 ft. and un-insulated.
 - iii. All other locations where openings could afford passage for rodents or flames.
- d. Install wood cross bridging (not less than 2" x 3" nominal), metal cross bridging or equal strength, or solid blocking between joists where the span exceeds 8 ft.
- e. The distance between a line of bridging and a bearing shall not exceed 8 ft.

DIVISION 6 WOODS

- f. Cross bridging may be omitted for roof and ceiling joists 8" (nominal) in depth where the omission is permitted by code, except where otherwise indicated on the Drawings.
- g. Install solid blocking between joists at all points of support and wherever sheathing or flooring is discontinuous.
- h. Blocking may be omitted where joists rest on ribbons and are nailed to studs, and where joists are supported on metal hangars.

H. Fastening

- i. Nailing:
 - i. Use only common wire nails or spikes of the dimension shown on the Nailing Schedule, except where otherwise specifically noted in the Drawings.
 - ii. For conditions not covered in the Nailing Schedule, furnish penetration into the piece receiving the point of not less than ½ the length of the nail or spike furnished, however, that 16d nails may be used to connect two pieces of 2" (nominal) thickness.
 - iii. Do all nailing without splitting wood, preboring as required; replace all split members.
- j. Bolting:
 - i. Drill holes 1/16" larger in diameter than the bolts being used; drill straight and true from one side only.
 - ii. Bolt threads must not bear on wood; use washers under head and not of thread; enlarge holes to shank diameter under all nuts.
- k. Screws:
 - i. For lag-screws and wood-screws, pre-bore holes same diameter as root of thread; enlarge holes to shank diameter for length of shank.

I. Fastening Schedule (IBC Table 2304.10.1)

Unless otherwise indicated on the Drawing or required by pertinent codes and regulation, furnish at least the following nailing:

Joists to sill or girder:	3 - 8d, toe nailed 3 - 3" x 0.131" nails, toe nailed 3 - 3" x 14 gage staples, toe nailed
Bridging to joist:	2 - 8d, toe nailed each end 2 - 3" x 0.131" nails, toe nailed each end 2 - 3" x 14 gage staples, toe nailed each end
1" x 6" subfloor or less to joist:	2 - 8d, face nailed
Wider than 1" x 6" subfloor to joist:	3 - 8d, face nailed
2" subfloor to joist or girder:	2 - 16d, blind and face nail
Sole plate to joist or blocking:	16d @ 16" O.C., face nailed 3" x 0.131" nails @ 8" O.C., face nailed 3" x 14 gage staples @ 12" O.C.
At braced wall panels:	3 - 16d per 16" 4 - 3" x 0.131" nails per 16" O.C. 4 - 3" x 14 gage staples per 16" O.C.

DIVISION 6 WOODS

Top plate to stud:	2 - 16d, end nailed 3 - 3" x 0.131" nails, end nailed 3 - 3" x 14 gage staples, end nailed
Stud to sole plate:	4 - 8d, toe nailed 4 - 3" x 0.131" nails, toe nailed 3 - 3" x 14 gage staples, toe nailed 2 - 16d, end nailed 3 - 3" x 0.131" nails, end nailed 3 - 3" x 14 gage staples, end nailed
Double studs:	16d @ 24" O.C., face nailed 3" x 0.131" nail @ 8" O.C., face nailed 3" x 14 gage staple @ 8" O.C., face nailed
Double top plates:	16d @ 16" O.C., face nailed 3" x 0.131" nail @ 12" O.C., face nailed 3" x 14 gage staple @ 12" O.C., face nailed 8 - 16d, lap splice 12 - 3" x 0.131" nails, lap splice 12 - 3" x 14 gage staples, lap splice
Blocking between joist/rafters to top plate:	3 - 8d, toe nailed 3 - 3" x 0.131" nails, toe nailed 3 - 3" x 14 gage staples, toe nailed
Rim joist to top plate:	8d @ 6" O.C., toe nailed 3" x 0.131" nail @ 6" O.C., toe nailed 3" x 14 gage staple @ 6" O.C., toe nailed
Top plates, laps and intersections:	2 - 16d, face nailed 3 - 3" x 0.131" nails, face nailed 3 - 3" x 14 gage staples, face nailed
Continuous header, two pieces:	16d @ 16" O.C. along edge
Ceiling joists to plate:	3 - 8d, toe nailed 5 - 3" x 0.131" nails, toe nailed 5 - 3" x 14 gage staples, toe nailed
Continuous header to stud:	4 - 8d, toe nailed
Ceiling joists, laps over partitions: (see section 2308.10.4.1 Table 2308.10.4.1)	3 - 16d min., Table 2308.10.4.1, face nailed 4 - 3" x 0.131" nails, face nailed 4 - 3" x 14 gage staples, face nailed
Ceiling joists to parallel rafters: (see section 2308.10.4.1 Table 2308.10.4.1)	3 - 16d min. Table 2308.10.4.1, face nailed 4 - 3" x 0.131" nails, face nailed 4 - 3" x 14 gage staples, face nailed
Rafter to plate: (see section 2308.10.1 Table 2308.10.1)	3 - 8d, toe nailed 3 - 3" x 0.131" nails, toe nailed 3 - 3" x 14 gage staples, toe nailed
1" diagonal brace to ea. stud and plate:	2 - 8d, face nailed 2 - 3" x 0.131" nails, face nailed 3 - 3" x 14 gage staples, face nailed
1" x 8" sheathing to ea. bearing wall:	3 - 8d, face nailed
Wider than 1" x 8" sheathing to brg wall:	3 - 8d, face nailed

DIVISION 6 WOODS

Build-up corner studs:	16d @ 24" O.C. 3" x 0.131" nails @ 16" O.C. 3" x 14 gage staples @ 16" O.C.
Built up girder and beams:	20d @ 32" O.C., face nail at top and bottom staggered on opposite sides 3" x 0.131" nail @ 24" O.C., face nail at top and bottom staggered on opposite sides 3" x 14 gage staple @ 24" O.C., face nail at top and bottom staggered on opposite sides 2 - 20d, face nail at ends and at ea. splice 3 - 3" x 0.131"nails, face nail at ends and at ea. splice 3 - 3" x 14 gage staples, face nail at ends and at ea. splice
2" planks:	16d, at ea. bearing
Collar to tie rafter:	3 - 10d, face nailed 4 - 3" x 0.131" nails, face nailed 4 - 3" x 14 gage staples, face nailed
Jack rafter to hip:	3 - 10d, toe nailed 4 - 3" x 0.131" nails, toe nailed 4 - 3" x 14 gage staples, toe nailed 2 - 16d, face nailed 3 - 3" x 0.131" nails, face nailed 3 - 3" x 14gage staples, face nailed
Roof rafter to 2-by ridge beam:	2 - 16d, toe nailed 3 - 3" x 0.131" nails, toe nailed 3 - 3" x 14 gage staples, toe nailed 2 - 16d, face nailed 3 - 3" x 0.131" nails, face nailed 3 - 3" x 14 gage staples, face nailed
Joist to band joist:	3 - 16d, face nailed 5 - 3" x 0.131" nails, face nailed 5 - 3" x 14 gage staples, face nailed
Ledger strip:	3 - 16d, face nailed 4 - 3" x 0.131" nails, face nailed 4 - 3" x 14 gage staples, face nailed
Wood structural panels and particleboard subfloor, roof and wall sheathing (to framing): ^b	
1/2" and less:	6d ^{c,l} , toe nailed 2 3/8" x 0.131" nail ⁿ , toe nailed 1 3/4" x 16 gage ^o , toe nailed
19/32" to 3/4":	8d ^d or 6d ^e , toe nailed 2 3/8" x 0.131" nail ^p , toe nailed 2" x 16 gage ^p , toe nailed

DIVISION 6 WOODS

<p>7/8" to 1":</p> <p>1 1/8" to 1 1/4":</p> <p>Single floor (combination subfloor-underlayment to framing):</p> <p style="padding-left: 20px;">3/4" and less:</p> <p style="padding-left: 20px;">7/8" to 1":</p> <p style="padding-left: 20px;">1 1/8" to 1 1/4":</p> <p>Panel siding (to framing):</p> <p style="padding-left: 20px;">1/2" or less:</p> <p style="padding-left: 20px;">5/8":</p> <p>Fiberboard sheathing:^g</p> <p style="padding-left: 20px;">1/2":</p> <p style="padding-left: 40px;">25/32":</p> <p>Interior paneling:</p> <p style="padding-left: 20px;">1/4":</p> <p style="padding-left: 20px;">3/8":</p>	<p>8d^c, toe nailed</p> <p>10d^d or 8d^e</p> <p>6d^e</p> <p>8d^e</p> <p>10d^d or 8d^e</p> <p>6d^f</p> <p>8d^f</p> <p>No. 11 gage roofing nail^h</p> <p>6d</p> <p>No. 16 gage stapleⁱ</p> <p>No. 11 gage roofing nail^h</p> <p>8d</p> <p>No. 16 gage stapleⁱ</p> <p>4d^j</p> <p>6d^k</p>
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Footnotes:

- a. Common or box nails are permitted to be used except where otherwise stated.
- b. Nails spaced at 6" on center at edges, 12" at intermediate supports except 6" at supports where spans are 48" or more. For nailing of wood structural panel and particleboard diaphragms and shear walls. Refer to section 2305. Nails for wall sheathing are permitted to be common, box or casing.
- c. Common or deformed shank.
- d. Common.
- e. Deformed shank.
- f. Corrosion-resistant siding or casing nail.
- g. Fasteners space 3" on center at exterior edges and 6" on center at intermediate supports.
- h. Corrosion-resistant roofing nails with 7/16" dia. head and 1 1/2" length for 1/2" sheathing and 1 3/4" length for 25/32" sheathing.
- i. Corrosion-resistant staples with nominal 7/16" crown and 1 1/8" length for 1/2" sheathing and 1 1/2" length for 25/32" sheathing. Panel supports at 16" (20" if strength axis in the long direction of the panel, unless otherwise marked. Casing or finish nails spaced 6" on panel edges, 12" at intermediate supports.
- j. Panel supports at 24". Casing or finish nails spaced 6" on panel edge, 12" at intermediate supports.
- k. For roof sheathing applications, 8d nails are the minimum required for wood structural panels.
- l. Staples shall have a minimum crown width of 7/16".
- m. For roof sheathing applications, fasteners spaced 4" on center at edges, 8" at intermediate supports.

DIVISION 6 WOODS

- n. Fasteners spaced 4" on center at edges, 8" at intermediate supports for subfloor and wall sheathing and 3" on center at edges, 6" at intermediate supports for roof sheathing.
 - o. Fasteners spaced 4" on center at edges, 8" at intermediate supports for subfloor and wall sheathing and 3 " on center at edges, 6" at intermediate supports for roof sheathing.
 - p. Fasteners spaced 4" on center at edges, 8" at intermediate supports.
- E. Installation of Air Barrier: Install the specified air infiltration barrier over all exterior sheathing where siding is indicated to be installed lapping all joints to prevent penetration of water into the stud spaces, and securely fastening the barrier in place in accordance with the manufacturer's published recommendations.
- F. Clean Up
- 1. Keep the premises in a neat, safe, and orderly condition at all times during execution of this portion of the work, free from accumulation of sawdust, cut-end, and debris.
 - 2. At the end of each working day, or more often if necessary, thoroughly sweep all surfaces where refuse from this portion of the Work has settled.
 - 3. Remove the refuse to the area of the job site set aside for its storage.
 - 4. Upon completion of this portion of the Work, thoroughly broom clean all surfaces.

END OF SECTION

06 17 53 WOOD TRUSSES

SCOPE OF WORK

- A. Furnish all items under this section including trusses, connector plates, and material for all splices/piggyback trusses and bracing. Material for splicers and piggyback trusses to include dimensioned lumber, nuts, bolts, plywood etc. as required. Each individual truss shall be designed and supplied to independently bear the designed loads. No use of “bracing” to provide additional strength to chord and web members within an individual truss will be accepted, unless such “bracing” is supplied and installed by the truss manufacturer.
- B. Specification: Wood trusses shall be fabricated by an authorized Alpine Truss Manufacturer in accordance with designs prepared by Alpine Engineered Products, Inc. or an approved equivalent manufacturer. Engineering drawings conforming with the design load and deflection criteria contained in these Specifications shall be submitted for approval before fabrication. They shall bear the seal of a Registered Professional Engineer.
- C. Design Standards: Design standards shall conform with the applicable provision of the NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION, published by the National Forest Products Association, and the DESIGN SPECIFICATION FOR METAL PLATE CONNECTED WOOD TRUSSES, published by the Truss Plate Institute.
- D. Connector Plates: All connector plates shall be a minimum thickness of 0.036” and shall be manufactured from steel meeting the requirements of ASTM A446 Grade A, and shall be hot dip galvanized according to ASTM A525 Coating Designation G60. In highly corrosive environments or when fire retardant lumber is specified, stainless steel connector plates are required in lieu of galvanized.
- E. Quality Control: Lumber defects such as wane or knots occurring in the connector plate area or insufficient number of effective teeth required for each truss member shall be cause for rejection. Connector plates shall be applied to both faces of truss at each joint, and should provide firm even contact between the plate and the wood. All wood members shall be accurately cut and fabricated so that all members have good bearing and all completed truss units are uniform. See Truss Plate Institute QUALITY CONTROL MANUAL QCM-77 for tolerances and other special requirements.

DIVISION 6 WOODS

- F. Bracing: All trusses must be securely braced both during erection and after permanent installation in a building in accordance with BRACING WOOD TRUSSES: COMMENTARY AND RECOMMENDATIONS (BWT-76), as published by the Truss Plate Institute. Erection bracing shall hold trusses straight and plumb and in safe condition until decking and permanent truss bracing has been fastened forming a structurally sound roof framing system. All erection and permanent bracing shall be installed and all trusses permanently before application of any loads. Permanent structural cross bracing to ensure overall rigidity of the roof system shall be in accordance with the architectural/engineering plans for the building structure. See truss design drawings for any additional requirements. Materials used in bracing are to be furnished by the wood truss supplier.

END OF SECTION

06 20 00 FINISH CARPENTRY

SCOPE OF WORK

- A. Furnish and install items under this section including trim, base, shelving, handrail brackets and accessories as specified or as shown on Drawings.
- B. Also included in this section is installation of the following items supplied elsewhere in the specifications:

Section 06 41 00	Architectural Woodwork
Section 08 11 13	Hollow Metal Doors and Frames
Section 08 14 16	Wood Doors and Frames
Section 08 31 13	Access Doors
Section 08 33 00	Coiling Doors
Section 08 70 00	Door Hardware
Section 09 65 00	Resilient Flooring
Section 09 77 33	Fiberglass Reinforced Plastic Panels
Section 10 14 00	Signage
Section 10 21 13	Toilet Partitions
Section 10 28 13	Toilet Accessories
Section 10 57 13	Coat Racks
Section 10 44 13	Fire Extinguisher Cabinets

MATERIALS

- A. Hardwood: Hardwood for natural finish shall be solid Red Oak, AWI custom grade standard sanded, plain sawed, kiln dried and selected for uniformity of color and grain.
- B. Hardwood plywood: Shall be Red Oak, QSI grade AA, plain sliced veneer on MDF construction. Veneer on doors shall be matched, G15 where exposed to one side and G25 where exposed both faces. Manufacturer shall be U.S. Plywood Corp. or equivalent.
- C. Softwood: Ponderosa Pine, "B" or better, kiln dried.
- D. Softwood plywood: C-D INT. PTS.
- E. Base trim: Rubber baseboard shall be 3/8" x 4 1/2" high (8'-0" length) Mandalay MW-XX-H by Tarkett (See Section 09 65 00 Resilient Flooring).
- F. Closet shelves: White Pine, 1 x 12 #2 or better, on 1 x 4 White Pine continuous 3 sides.
- G. Closet poles: Douglas Fir, 1-3/8" diameter, with plastic sockets each end and Stanley 7045 steel bracket at center of all poles 48" long or longer.

DIVISION 6 WOODS

- H. Wood preservative: Pressure tested with zinc borate or approved equivalent.
- I. Plastic laminate: Installation only. See Section 06 41 00, Architectural Woodwork for material.
- J. Labeled fire-rated door and window frames shall be installed and designed in accordance with UL label code No. 63-11. Furnish butt hinges per Section 08 70 00 and Section 08 14 16.
- K. Shop drawings are required. See Section 01 33 23.

INSTALLATION

A. Quality Assurance

- 1. For actual cutting and fitting of trim and finish material, use only journeymen finish carpenters who are thoroughly trained and experienced in the skills required, who are completely familiar with the materials involved and the manufacturer's recommended methods of installation, and who are thoroughly familiar with the requirements of this Work.
- 2. Rejection: Poor quality Work, whether due to low quality materials or poor workmanship, may be rejected at any time. Materials may be rejected by the Architect after installation.

B. Storage and Delivery

- 1. Protection: Use all means necessary to protect the materials of this Section before, during, and after the installation and to protect the installed work and materials of all other trades. Finish materials are not to be stored in building so as to absorb moisture. All taping, painting, concrete work or other work causing excessive humidity shall be complete before materials are brought on site for installation. All millwork items to be stored off site until moisture conditions have stabilized and the millwork when brought on site and stored for ten (10) days will not exceed 19% moisture at time of installation.
- 2. Replacement: In the event of damage or material shrinkage due to excessive moisture at time of installation the contractor shall immediately make all repairs and replacements necessary for the approval of the Architect at no additional cost to the Owner.

C. Inspection:

- 1. Prior to all work of this Section, carefully inspect the installed Work of all other trades and verify that all such Work is complete to the point where this installation may properly commence.
- 2. Verify that finish carpentry may be completed in strict accordance with the original design and all pertinent codes and regulations.
- 3. In the event of discrepancy, immediately notify the Architect.
- 4. Do not proceed with the installation in areas of discrepancy until all such discrepancies have been fully resolved.

D. Workmanship:

- 1. General: All finish carpentry shall produce joints true, tight, and well nailed with all members assembled in accordance with the Drawings.

DIVISION 6 WOODS

2. Jointing:
 - a. Make all joints to conceal shrinkage; miter all exterior corners; cope all interior corners, miter or scarf all end-to-joints.
 - b. Install all trim in pieces as long as possible, jointing only where solid support is obtained.
 3. Fastening
 - a. Install all items straight, true, level, plumb, and firmly anchored in place; where blocking or backing is required, coordinate as necessary with other trades to ensure placement of all required backing and blocking in a timely manner.
 - b. Nail trim with finish nails of proper dimension to hold the member firmly in place without splitting wood.
 - c. Nail all exterior trim with galvanized nails, making all joints to exclude water and setting in waterproof glue to the caulking described in Section 07900 of these Specifications.
 - d. On exposed finish work, set all nails for putty.
 4. Ease edges of all wood trim that is likely to be touched. (i.e. wood capped guardrails).
- E. Installation of Other Items: Install all other items in strict accordance with the Drawings and the published recommendations of the manufacturer of the item, anchoring firmly in place at the described location, straight, plumb, level, and anchored for long life under hard use.
- F. Finishing: Sandpaper all finished wood surfaces thoroughly as required to provide a uniformly smooth surface, always sanding in the direction of the grain. Do not sand wood that is designed to be left rough. No coarse-grained sandpaper mark, hammer mark, or other imperfection will be accepted.
- G. Clean Up:
1. Keep the premises in a neat, safe, and orderly condition at all times during execution of this portion of the work, free from accumulation of sawdust, cut-ends, and debris.
 2. At the end of each working day, or more often if necessary, thoroughly sweep all surfaces where refuse from this portion of the Work has settled.
 3. Remove the refuse to the area of the job site set aside for its storage.
 4. Upon completion of this portion of the Work, thoroughly broom clean all surfaces.

END OF SECTION

06 41 00 ARCHITECTURAL CABINET WOODWORK

SCOPE OF WORK

Furnish the counter tops and sink vanities, as noted and detailed on the Drawings.

- A. Furnish Solid Surface custom quality finished Countertops, as shown on plans, in rooms #104, #105 & #108.
- B. Workmanship and materials shall conform to "AWI Quality Standards Illustrated 8th Edition", 2005, published by the Architectural Woodwork Institute, for a custom grade as indicated herein and on the drawings. Casework manufacturer shall be experienced in woodwork of the quality specified herein and shall be approved by the Architect.

SHOP DRAWINGS

Submit complete shop drawings, showing detailing of joints, connection of casework to adjacent construction, and other pertinent items. Dimensions of typical countertops to conform to industry standard for 24" deep base cabinets.

MATERIALS

- A. Countertops: ½" thick solid surface material (by Corian or equal) over
 ¾" Medium density Fiber Core Hardwood Plywood (MDF)
- B. Plastic laminate: 1/16" high-pressure plastic laminate-suede finish equivalent to
 Formica, Wilsonart or Nevamar.
- C. Furnish 2" diameter grommets (of ABS plastic) for (4) separate work stations at Room #108.

FABRICATION

- A. Counters and vanities shall be mill fabricated to the maximum extent possible. All millwork shall be built with hairline joints, which shall be adhered and supported according to solid surface manufacture's recommendations.
- B. A "back-out" shall be cut into the backs of all back and side splashes. All edges to be eased.

INSTALLATION

- A. Contractor shall verify all on-site dimensions and notify supplier of any variances or changes.
- B. Install counters as indicated on the drawings. Install plumb and level with all joints tight, in accordance with instructions shipped with cabinets.
- C. Shim cabinets as required and trim with molding to match cabinets.

DIVISION 6 WOODS

- D. Secure to walls with screws embedded 1" minimum in solid wood framing or blocking.
- E. Install miscellaneous hardware and accessories as indicated on the drawings. Locate grommets above electrical /data outlets and space evenly, in a uniform manner.
- F. Clean counters and leave in perfect operating order with all hardware aligned and plumb.

END OF SECTION

DIVISION 6 WOOD AND PLASTICS

06 52 10 FIBERGLASS COMPOSITE COLUMNS

SCOPE OF WORK

Furnish and install all fiberglass composite columns and/or column covers including all accessories for a completed column system as shown on the Drawings.

Related work specified elsewhere:

Section 01 33 23 Submittals

Section 06 10 10 Rough Carpentry

MATERIALS

- A. Fiberglass Composite Columns or column covers shall be Duraclassic by Melton Classics or approved equal
- B. Columns or column covers shall be "Tuscan" design, 12" diameter, see elevations and sections for height.
 - 1. Column materials shall comply with ASTM E 84-01 Class 1 test specifications for Flame Spread and Smoke Development.
 - a. Flame Spread Index (FSI) < 25
 - b. Smoke Developed Index (SDI) < 450
 - 2. Shaft thickness shall be approximately 3/8" to 5/8" depending on diameter
- C. Columns shafts, capitals and bases shall be manufactured from fiberglass reinforced polyester resin marble composite.
- D. Ornamental capitals and bases shall be included. Capitals and base/plinths shall be the manufacturers standard for the size and design indicated.

WARRANTY

- A. At project closeout, provide to Owner or Owners Representative a copy of the manufacturer's limited warranty outlining its terms and conditions.
- B. The columns shall be guaranteed by the manufacturer against defects in materials or workmanship for "Lifetime of Original Ownership" when installed and maintained according to the manufacturers installation and maintenance instructions. "Lifetime" is as long as the original owner owns the structure to which the columns are attached.

DIVISION 6 WOOD AND PLASTICS

SUBMITTALS

Submit shop drawings for approval showing plans, sections and details, and installation instructions covering erection, and installation hardware (per Section 01 33 23).

DELIVERY, STORAGE AND HANDLING

Transport and handle units in a manner that avoids excessive stresses or damage, and store on a level and clean surface.

PREPARATION

- A. Prior to manufacturing, dimensions and conditions not shown on the drawings will be checked by the erector for inclusion by the manufacturer.
- B. Prior to installation, the erector shall check job site dimensions. Any discrepancies between design and field dimensions shall be brought to the attention of the General Contractor. Work shall not proceed until these discrepancies are corrected.
- C. Lightly sand and thoroughly clean surfaces prior to installation to remove dirt and mold release prior to painting.
- D. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

INSTALLATION

- A. Installation shall be in accordance with the Drawings, the manufacturer's recommendations and detailed installation instructions, as shown on Drawings and in compliance with local codes
- B. Surface Preparation: Lightly sand all surfaces with 100 grit sand paper and clean thoroughly to remove dust.
- C. Primer: Acrylic based General Purpose Primer by Sherwin Williams.
- D. Finish Coat: Acrylic based Duration by Sherwin Williams or approved equal

END OF SECTION

DIVISION 7 THERMAL & MOISTURE PROTECTION

GENERAL REQUIREMENTS

Instructions to Bidders; Division 0, Conditions of the Contract; and Division 1, General Requirements, are part of this division of the specification as if bound herein.

07 11 00 DAMPPROOFING

SCOPE OF WORK

Include all labor and materials required to complete dampproofing at exterior of foundations, along walls where slabs are below grade, and where noted on plans.

MATERIALS

Spray applied dampproofing as manufactured by Karnak (#83) or equal. With a polyethylene film in 6 mil thickness, meeting Fed. Spec. UUP-147.

INSTALLATION

Wall dampproofing shall be installed on exterior of all foundation walls and at all walls where slabs are below grade. Cover wall surface from bottom of footing to grade line with cold setting cement, extend membrane to grade line and set in wall reglet. Seal all joints in membrane with mastic.

END OF SECTION

DIVISION 7 THERMAL & MOISTURE PROTECTION

GENERAL REQUIREMENTS

Instructions to Bidders; Division 0, Conditions of the Contract; and Division 1, General Requirements, are part of this division of the specification as if bound herein.

07 13 00 WATERPROOFING

SCOPE OF WORK

Furnish and install roof membrane waterproofing, and cementitious foundation waterproofing, as shown on the Drawings.

Related Sections:

07 21 00 Building Insulation

07 41 13 Metal Roof Panels

MATERIALS

- A. Roof Membrane Waterproofing: Ice and water shield by W.R. Grace Company or Carlisle CCW-WIP 400. Moisture guard by Tamko Roofing Products and Deck-Dri by Owens-Corning Company are approved equivalents. Refer to Section 07 31 00, Shingle Roofing (or Section 07 41 13 Metal Roof Panels).

INSTALLATION

- A. Roof Waterproofing: Install per manufacturer's recommendations and as shown on the Drawings with special attention regarding width of membrane at roof edge.

END OF SECTION

DIVISION 7 THERMAL & MOISTURE PROTECTION

07 21 16 BUILDING INSULATION

SCOPE OF WORK

Furnish all labor, material and equipment necessary and incidental to complete all Building Insulation Work as shown on Drawings and specified herein - EXCEPT for spray-applied polyurethane insulation to be installed at roof and at exterior walls (Base Bid), which is covered in Section 07 21 19. Fiberglass batt insulation at exterior walls shall be provided in place of spray-applied polyurethane at Exterior Walls (Alternate #2). Installation of perimeter insulation at exterior of foundation walls is covered by and included under Section 04 22 00 Concrete Unit Masonry.

This Section includes, but not limited to:

- A. Rigid insulation
- B. Safing insulation
- C. Exterior stud wall insulation (Alternate #2)
- D. Interior noise-barrier stud wall insulation
- E. Perimeter insulation at exterior of foundation walls.
- F. Miscellaneous insulation

Related sections or work specified elsewhere:

Section 01 23 00 Alternates

Section 01 33 23 Submittal Procedures

Section 04 22 00 Concrete Unit Masonry

Section 07 21 19 Spray-applied Polyurethane Insulation

MATERIALS AND WORKMANSHIP

- A. Rigid insulation is to be extruded polystyrene. Use Styrofoam as manufactured by Dow Chemical, Foamular 250 as manufactured by Owens Corning, or approved equivalent. R-value shall be minimum of R-5.0 per inch at 75° F.
- B. Safing insulation shall be USG Acoustical Products Co., Thermafiber Safing, 4" thickness, 24" wide or approved equivalent. Use USG "Firecode Compound" in conjunction with safing insulation at all penetrations through rated ceilings and walls.

DIVISION 7

THERMAL & MOISTURE PROTECTION

- C. Exterior Stud wall insulation: Owens Corning "Fiberglass", light density thermal insulation, glass fiber insulation, faced with kraft paper or approved equivalent. See Drawings for thickness and R value. Install as per manufacturer's recommendations. Blown-in insulation will not be accepted as a substitute for batt insulation on sloped surfaces when batt insulation is called for on the Drawings (Alternate #2 - See Section 07 21 19 Spray-applied polyurethane for Base Bid).
- D. Noise barrier batt insulation: Install in interior walls and ceilings where shown or noted on Drawings, full thickness of wall, or noted thickness in ceilings, equivalent to that as manufactured by Owens-Corning.
- E. Masonry contractor shall furnish and install extruded polystyrene insulation at foundation perimeter at masonry foundations. See Section 04 22 00 Concrete Unit Masonry.
- F. Miscellaneous insulation: Furnish as detailed, herein specified, or obviously required. To assure warm and weather-tight construction pack loose fill insulation in any voids around window, doors, etc. Batt insulation shall be "Fiberglass", as manufactured by Owens Corning Corp., or approved equivalent loose fiber type as best suited to job conditions in thickness or depth as shown on Drawings.
- G. Any substitution of insulation materials shall have no less R- value than those listed above.

END OF SECTION

DIVISION 7 THERMAL & MOISTURE PROTECTION

07 21 19 SPRAY-APPLIED POLYURETHANE INSULATION

SCOPE OF WORK

Furnish all labor, material and equipment necessary and incidental to complete all Spray-applied Polyurethane Insulation work (HFC 365/227-blown, closed cell, polyurethane spray foam insulation) as shown on Drawings and specified herein, to be installed at roof (base bid) and at exterior walls (Alternate #2).

This Section includes, but not limited to:

- A. Roof insulation
- B. Exterior stud wall insulation (Alternate #2)

Related sections or work specified elsewhere:

Section 01 23 00 Alternates
Section 01 33 23 Submittal Procedures
Section 07 21 16 Building Insulation

REFERENCES

American Society for Testing and Materials International (ASTM)

1. ASTM C 518: Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus
2. ASTM C 1338: Standard Test Method for Determining Fungi Resistance of Insulation Materials and Facings
3. ASTM E 84: Test Method for Surface Burning Characteristics of Building Materials
4. ASTM E 96: Standard Test Methods for Water Vapor Transmission of Materials
5. ASTM E119: Standard Test Methods for Fire Tests of Building Construction and Materials
6. ASTM E 2178: Standard Test Method for Air Permeance of Building Materials
7. NFPA 285: Standard Fire Test Method for Evaluation of Fire Propagation Characteristics of Exterior Non Load-Bearing Wall Assemblies Containing Combustible Components

MATERIALS

A. Spray-Applied Closed-cell Polyurethane Insulation at Roof shall include:

1. (2) applications/lifts of insulation to provide minimum of R-42 insulation value of Icynene ProSeal™ (MD-C-200v3) Spray Foam Insulation (or approved equivalent): Medium-density, HFC 365/227 blown, conforming to the following:

DIVISION 7

THERMAL & MOISTURE PROTECTION

- a. Thermal Resistance : Minimum R-6.8/inch @75 deg F:
ASTM 518; 7.1 hr.sq ft.degree F/BTU
 - b. Air Permeance (for 1 inch of material): ASTM E 2178: less than 0.02 L/s.m²
@75 Pa
 - c. Water Vapor Transmission (for 1.5 inches of material): ASTM E 96; 0.97 perm
 - d. Resistance to Fungal Growth: ASTM C 1338: no growth
 - e. Flame Spread and Smoke Developed Rating: ASTM E 84
 1. Flame Spread: 25 maximum
 2. Smoke Development: 450 maximum
2. International Fireproof Technology Inc. (or approved equivalent) DC-315: water-based, intumescent paint, conforming to the following:
- a. Full scale fire resistance test with Icynene ProSeal (MD-C-200v3) in accordance with NFPA 286: 24 wet mils (thermal barrier).
 - b. Finish: flat, grey color
 - c. VOC Content: 47 g/L
 - d. Volume Solids: 67%
 - e. Flash Point: none
 - f. Mechanism of cure: coalescence
 - g. Reducer/cleaner: water
 - h. Collaborative for High Performance Schools (CHPS) "Low-emitting" material per CA Section 01350 criteria.
- B. Spray-Applied Closed-cell Polyurethane Insulation at Exterior walls (Alternate #2) shall include:
1. (1) application/lift of insulation to provide minimum of R-19 insulation value of Icynene ProSeal™ (MD-C-200v3) Spray Foam Insulation (or approved equivalent): Medium-density, HFC 365/227 blown, conforming to the specifications listed above in Item A.1.
- C. Insulation product components produced in an ISO 9001 registered factory.

DIVISION 7

THERMAL & MOISTURE PROTECTION

EXECUTION

- A. Examine substrates and conditions, under which work is to be performed. Do not proceed until unsatisfactory conditions have been corrected.
- B. Review placement area to determine final location will not be within 3 inches of any heat source where the temperature will exceed 180 deg F per ASTM C 411 or in accordance with authorities having jurisdiction.
- C. Preparation: Clean substrates and cavities of loose materials capable of interfering with insulation placement.
- D. Application:
 - 1. Site mix liquid components supplied by Manufacturer and installed by Independent Dealer licensed by Manufacturer.
 - 2. Apply insulation to substrates in compliance with manufacturer's written instructions. Apply first pass to maximum of 3 inches. Additional passes to be 2 inches maximum.
 - 3. Apply insulation to produce thickness required for indicated R Value.
 - 4. Extend insulation in thickness indicated to envelop entire area to be insulated.
 - 5. Water-Piping Coordination: If water piping is located within insulated exterior walls, coordinate location of piping to ensure that it is placed on warm side of insulation and insulation encapsulates piping.
 - 6. Install DC-315 intumescent paint to required wet or dry mil thickness or coverage rate in accordance with manufacturer's instructions, by brush, roller, conventional or airless spray.
- E. Protection:

Protect installed insulation from damage due to harmful weather exposures, physical abuse, and other causes. Provide temporary coverings where insulation is subject to abuse.

END OF SECTION

DIVISION 7 THERMAL & MOISTURE PROTECTION

07 27 00 AIR BARRIER

GENERAL

Furnish and install "Tyvek" commercial wrap, exterior air infiltration barrier, as manufactured by DuPont or approved equal. Install over exterior sheathing at all exterior stud walls.

INSTALLATION

See Section 06 10 00 Rough Carpentry for installation instructions.

END OF SECTION

DIVISION 7

THERMAL & MOISTURE PROTECTION

07 41 13 METAL ROOF PANELS

SCOPE OF WORK

Furnish and install all metal roofing and fascia, including all connectors and accessories for a completed roof and fascia system, as shown on the Drawings.

MANUFACTURER

Roofing and Fascia System – Una-Clad UC-4 by Firestone, Berridge Tee-Panel Standing Seam Roofing as manufactured by Berridge Manufacturing Co., Mini-Batten Roofing by Metal Sales Manufacturing, Pac-Clad Snap-On Standing Seam Roofing by Petersen Aluminum, or approved equivalent.

MATERIALS

- A. Prefinished Steel – 24 gauge hot-dipped galvanized steel ASTM A446 G-90 coating ASTM 525.
- B. Finish:
 - 1. Finish shall be Kynar 500 Fluorocarbon coating with a top side film thickness of 0.70 to 0.90 mil over .025 to 0.35 mil prime coat to provide a total dry film thickness of 0.95 to 1.25 mil. Bottom side shall be coated with a primer with a dry film thickness of 0.25 mil. Finish shall conform to all tests for adhesion, flexibility and longevity as specified by Kynar 500 finish supplier.
 - 2. Color shall be determined by the Architect and to be selected from standard colors.
 - 3. Strippable coating shall be applied to the top side to protect the finish during fabrication, shipping and field handling. This strippable coating shall be removed before or IMMEDIATELY after installation.
 - 4. Field protection must be provided by the contractor at the job site so material is not exposed to weather and moisture.
- C. Panel Width: 12" (Smooth, with NO ribs or striations)
- D. Rib Height: 1" (minimum)
- E. Flashing: Unless otherwise specified all exposed adjacent flashing shall be of the same material and finish as the panel system.

DIVISION 7

THERMAL & MOISTURE PROTECTION

ROOF PREPARATION

- A. Roof deck must be solid sheathed and free of all objects which may puncture underlayment. Entire roof area must be covered with a manufacturer-approved underlayment, laid and lapped horizontally starting at the eave.
- B. All areas with slopes less than 5 in 12 pitch must be covered with self-adhered Membrane Waterproofing meeting ASTM D1970, with resistance to direct exposure for at least 42 days. Minimum high temperature resistance of 230 degrees Fahrenheit. Maximum water vapor permeance of 0.1 perms.

INSTALLATION

Panels and seams shall be roll-formed in continuous lengths. Installation shall be in accordance with the Drawings and the manufacturer's recommendations and written instructions. The strippable protective coating shall be removed before or IMMEDIATELY after installation.

WARRANTY

Contractor shall provide a 20-year manufacturer's warranty on roofing system and finish.

END OF SECTION

DIVISION 7 THERMAL & MOISTURE PROTECTION

07 42 33 PLASTIC COMPOSITE PANELS AND TRIM

SCOPE OF WORK

Furnish and install all plastic composite panel siding and trim (at porch gables, porch beam wrap, and other areas as shown on Drawings), including all accessories for a completed siding and trim system as shown on the Drawings.

MATERIALS

A. Plastic Composite Panel: Shall be Azek or Versatex 5/8" PVC panel with Traditional (smooth) texture, or approved equivalent. Provide 4' x 10' sheets to avoid any exposed joints at gable siding and porch beam wrap. Refer to 09 91 00 for paint finish.

B. Trim: Shall be Azek, or Versatex PVC Trimboard, 5/4 Boards Smooth (1" thick actual), or equivalent. Finish shall be factory primed or paint-ready. Refer to 09 91 00 for paint finish.

INSTALLATION

Installation shall be in accordance with the Drawings, the manufacturer's recommendations and written instructions and as shown on Drawings.

END OF SECTION

DIVISION 7 THERMAL & MOISTURE PROTECTION

07 62 00 SHEET METAL, FLASHING, TRIM, FASCIA, GUTTERS AND SOFFITS

SCOPE OF WORK

Furnish all sheet metal work shown on the Drawings and specified herein. All sheet metal work shall be prefinished metal unless noted otherwise on Drawings. The work of this Section includes, but is not limited to the following list:

- A. Reglets, counterflashing, flashing
- B. Rainleaders, gutters and overflow scuppers
- C. Prefinished metal fascia and soffits
- D. Work by others:
 - 1. Masonry contractor will furnish and install through wall flashing and reglets.
 - 2. Window contractor will furnish sheet or extruded metal flashing around windows as shown on Drawings.
 - 3. Roofing contractor shall install all sheet metal to complete installation of roofing, rainleaders and gutters.

MATERIALS

- A. Sheet Metal: 24-gauge hot dipped galvanized steel (G-90) with one side finished with Kynar based fluoropolymer coating, 1 mil thickness. ColorKlad by Vincent Metal, PacClad by Peterson Aluminum, Berridge, UNA-Clad by Firestone, Rollcom by Centria or approved equivalent.
- B. Plastic Cement: Fed. Spec. S3-C-153, trowel and knife grade with long fibers and pitch or approved equivalent.
- C. Prefinished Metal Trim, Fascia, Gutters and Soffit Panels: Shall be ABC Seamless Steel, Rollex Steel, or approved equivalent where indicated on Drawings. Color shall be determined by Architect and selected from standard colors.

DIVISION 7 THERMAL & MOISTURE PROTECTION

INSTALLATION

Make all exterior sheet metal with joints and in lengths to prevent buckling. All flashings, caps, and copings shall have covered slip joints, joint covers shall be a minimum of 6" wide with hemmed edges embedded in mastic and spaced a maximum of 10' apart. Secure coping and cap flashings with continuous keepers. Corner joints shall be mitered. Installed to conform in all respects to 20 year specifications approved roofing manufacturer and bondable if Owner desires. Roofing contractor shall guarantee roofing and sheet metal installation 100% labor and material for a period of ten (10) years from date of occupancy by the Owner.

END OF SECTION

DIVISION 7 THERMAL AND MOISTURE PROTECTION

07 84 00 FIRESTOPPING

SCOPE OF WORK

It is the responsibility of each trade to furnish and install fire-rated and temperature-rated firestopping (related to that trade's work) at all openings or penetrations in rated assemblies such as: fire-rated walls, shafts, floor/ceiling and roof/ceiling assemblies. These openings include but are not limited to; rated door thresholds, rated hollow metal frames, gaps between rated floor/ceiling and roof/ceiling assemblies and walls, expansion joints, open shaft, openings or penetrations created for ducts, pipes, conduits, cables, etc.

Related work specified elsewhere:

06 10 00 Rough Carpentry
07 92 00 Sealants
09 29 00 Gypsum Wallboard/Accessories
Mechanical
Electrical

MATERIALS

- A. Performance:
1. Fireproofing Material: Shall meet ASTM E119 and ASTM E814 (International Building Code, 2012 Edition, Section 714 "Penetrations") and shall achieve a fire rating as noted on Drawings.
 2. Fire-Rated Construction Joints: Shall meet ASTM E119 and UL 2079 (International Building Code, 2012 Edition, Section 715 "Fire-Resistant Joint Systems") and shall achieve a fire rating as noted on Drawings.
 3. Surface Burning Characteristics: Shall meet ASTM E84.
- B. Quality:
1. All material to be free of Asbestos, Lead, PCB's, Solvents, or any material requiring hazardous waste disposal.
 2. No firestopping material will be allowed to be used after its expiration date or after its self-life has been exceeded.
- C. Manufacturers:
1. Tremco Incorporated – Beachwood, Ohio
 2. 3M Company – St. Paul, Minnesota
 3. Pecora Corporation – Dallas, Texas
 4. Grace Construction Products – Cambridge, Massachusetts
 5. Architect approved equivalent

DIVISION 7

THERMAL AND MOISTURE PROTECTION

- D. Products:
1. Firestop Mortar
 - a. 3M Company Fire Barrier Mortar
 - b. Grace Flamesafe FSM22 Mortar Seal
 2. Caulking Compounds (at exposed penetrations)
 - a. Tremco Dymeric 511 (with color selected by architect)
 - b. Pecora Dynatrol II (with color selected by architect)
 3. Caulking Compounds (silicone)
 - a. 3M Company Fire Barrier 2000+
 - b. Tremco Tremstop Fyre-Sil
 4. Caulking Compounds (acrylic/latex)
 - a. Tremco Tremstop IA
 - b. 3M Company CP25WB
 - c. Pecora AC-20 FTR
 - d. Grace Flamesafe FS21900 Intumescent Elastomeric Sealant
 5. Putty
 - a. Tremco Tremstop FP
 - b. 3M Company MPS-2 Moldable Putty Stix or MPP-4S Moldable Putty Pads
 - c. Grace FSP 1000 Intumescent Putty
 6. Accessories
 - a. Backup/daming/forming material as required for opening and as recommended by manufacturer
 - b. Sealant/primmer/solvent cleaner as recommended by manufacturer.

INSTALLATION

- A. Install backup to provide satisfactory backing for caulking.
- B. Where sleeves are provided to serve multiple pipes, conduits or cables, provide firestopppng between the sleeve and the penetrated construction as well as between the sleeve and all the components penetrating through it.
- C. Provide firestopping at equal fire resistance for floor (or roof) assembly where exterior facing construction is continuous past a structural floor (or roof) and a gap in fire protection would otherwise be left between inner face of wall construction and outer perimeter edge of structural floor (or roof).
- D. All firestopping shall be used and applied in strict accordance with manufacturer's recommendations and instructions. All joints are to be clean and free of moisture prior to application. Joints in exposed areas shall be tooled to a neat, uniform finish.
- E. All work will remain accessible until required inspection by local code officials.

END OF SECTION

DIVISION 7 THERMAL & MOISTURE PROTECTION

07 92 00 SEALANTS

SCOPE OF WORK

Work of this section includes all labor, material and equipment necessary and incidental to furnish and install all caulking, sealants and related materials in accordance with the Drawings and Specifications.

Includes, but is not limited to:

- A. Concrete floor construction and control joints.
- B. Perimeter of exterior windows and frames.
- C. Perimeter joints at exterior siding and trim.
- D. Miscellaneous joints where "sealant" is indicated on the Drawings.
- E. Firestopping at floor and wall penetrations.

Related work specified elsewhere:

Section 03 30 53 Concrete Cast-In-Place
Section 04 21 13 Brick Masonry
Section 04 22 00 Concrete Unit Masonry
Section 06 20 00 Finish Carpentry
Section 07 84 00 Firestopping
Section 08 11 13 Hollow Metal Doors and Frames
Section 08 33 00 Coiling Doors
Section 08 42 13 Aluminum-Framed Entrances, Windows and Doors
Section 09 29 00 Gypsum Wallboard/Accessories
Section 09 91 00 Painting

MATERIALS

- A. Backup: Closed cell, polyethylene rod or sheet stock of size required by joint conditions.
- B. Caulking Compounds:
 - 1. Tremco "Dymeric," 2 part epoxy Modified Urethane Caulking Compound conforming to Federal Specification TT-S-00227E. Dynatrol II by Pecora, NP2 Sonolastic Sealant by Sonneborn is approved.
 - 2. Tremco THC-901 multi-component, semi-self-leveling joint sealant.

DIVISION 7 THERMAL & MOISTURE PROTECTION

SCHEDULE

- A. Dymeric at all wall junctions and control joints and exterior openings.
- B. THC-901 at exterior horizontal expansion joints with slope up to 10%.

INSTALLATION

Install backup at all appropriate locations to provide satisfactory backing for the caulking. The caulking shall be used and applied in strict accordance with the manufacturer's recommendations and instructions. All joints are to be clean and free of moisture prior to application. Caulking shall be forced to a minimum of ½" depth; joint shall be tooled to a neat, uniform finish.

END OF SECTION

DIVISION 8 DOORS AND WINDOWS

GENERAL REQUIREMENTS

Instructions to Bidders; Division 0, Conditions of the Contract; and Division 1, General Requirements, are part of this division of the Specification as if bound herein.

08 11 13 HOLLOW METAL DOORS AND FRAMES

SCOPE OF WORK

Furnish all hollow metal work as shown on Drawings and as specified herein.

Related Sections:

Section 06 10 10 Rough Carpentry

Section 08 70 00 Door Hardware

MATERIALS

- A. All materials used shall be free of defects impairing strength, durability or appearance. Frames and doors shall conform to Commercial Standard CS-242 or PS4-66. Hollow metal shall be by Amweld, Ceco, Mesker, Steelcraft, Curries, Sievert, Kewanee Corp. or approved equivalent.
- B. Frames for interior openings shall be 16-ga. Frames for exterior openings shall be 14-ga. Provide UL labels for the frames so denoted on the Drawings. All frames shall be mitered and continuously welded on face, spot-welded at corners to provide a neat rigid assembly. Knock-down frames will be permitted in existing stud wall locations.
- C. Provide standard bolt anchor with spacer or UL anchors as required by the Drawings and one welded-in floor anchor in each jamb.
- D. Frames shall be mortised, reinforced, drilled and tapped at the factory to receive hardware specified. Strike jambs shall be punched to receive two rubber bumper silencers.
- E. All frames shall be cleaned, bonderized and given one coat of baked shop coat primer.
- F. Doors shall be fabricated of 18-ga. full flush steel. Tops and bottoms shall be closed and reinforced with 18-ga. channels with Kraft honeycomb interior stiffener and sound deadener. All exterior doors to have flush, watertight top edge and insulation (0.2 Max U-Factor). Reinforce all doors or hardware, drilled and tapped to receive mortised hardware. Frilling and tapping for surface applied hardware shall be done in the field. Provide UL labels for all doors so noted on drawings. All exposed surfaces shall be cleaned and given one coat of factory applied primer.
- G. Shop drawings are required. See Section 01 33 23.

INSTALLATION

DIVISION 8 DOORS AND WINDOWS

- A. Frames shall be erected plumb and in true alignment. Frames shall be rigid and securely anchored in place.
- B. Frames anchored into existing masonry or concrete wall openings shall be punched and dimpled as required for screw fasteners. Fill anchor recess, sand smooth and prime for paint finish.
- C. Installation of labeled fire doors, including all operating characteristics, labeled frames, and UL listed builder's hardware, shall be in accordance with NFPA publication No. 80 and No. 101 and with the codes of local authorities having jurisdiction.

END OF SECTION

DIVISION 8 DOORS AND WINDOWS

08 14 16 - WOOD DOORS

SCOPE OF WORK

- A. Furnish all wood doors as shown on the Drawings and specified herein. Make provisions for glazed openings and finish hardware.
- B. Submit shop drawings in accordance with Section 01 33 23.
- C. Related Sections:
 - Section 06 20 00 - Finish Carpentry
 - Section 08 11 13 - Hollow Metal Doors & Frames
 - Section 08 70 00 - Door Hardware
 - Section 08 80 00 – Glazing
 - Section 09 91 00 - Painting
- D. All required doors shall be rated in compliance with the State Building Codes and Standards. All rated doors and frames shall bear the label of the agency issuing fire rating as indicated on the Door Schedule.
- E. Acceptable Rating Agencies
 - 1. Underwriters Laboratory (UL)
 - 2. Warnock / Hersey (WH)

MATERIALS

- A. Interior Flush Wood Doors
 - 1. Acceptable manufacturers
 - a. Algoma Hardwood, Inc.
 - b. Egger Hardwood Products
 - c. Marshfield Door Systems
 - d. VT Industries
 - e. Approved equivalent
 - 2. All materials used shall be free of defects impairing strength, durability or appearance. Doors shall conform to ANSI / WDMA I.S.1-A 2011.
 - 3. Transparent Finish Doors- flush wood doors shall be fabricated as follows:
 - a. construction: PC-5 bonded core / grade 1-LD-1
 - b. veneer specie: Red Oak suitable for transparent finish
 - c. face cut: Rift Cut
 - d. face assembly: Book Match
 - e. face symmetry: Running Match (single doors)
Pair Match (pair doors)
 - f. meeting edge: Option E2 – Bevel
 - g. blocking options: as required for all Finish Hardware (see 08 70 00)

DIVISION 8 DOORS AND WINDOWS

4. Opaque Finish Doors- flush wood doors shall be fabricated as follows:
 - a. construction: PC-5 bonded core / grade 1-LD-1
 - b. face material: High Density Overlay (HDO) faces
 - c. meeting edge: Option E2 – Bevel
 - d. blocking options: as required for all Finish Hardware (see 08700)

5. Fire Rated Doors- flush wood doors shall be fabricated as follows:
 - a. construction: FD-60 MIN-5 / bonded core / grade 1-LD-1
(60 minute rating)
FD-20 MIN-5 / bonded core / grade 1-LD-1
(20 minute rating)
 - b. Transparent Finish Doors: see #A.3 (above) for additional information
 - c. Opaque Finish Doors: see #A.4 (above) for additional information

6. Sound Rated Doors- flush wood doors shall be fabricated as follows:
 - a. STC rating of 39
 - b. Sound absorbent core
 - c. Include sound rated assembly for all vision lites (see Door Schedule)
 - d. Transparent Finish Doors: see #A.3 (above) for additional information
 - e. Opaque Finish Doors: see #A.4 (above) for additional information

7. General Door Standards
 - a. Premium grade architectural wood doors
 - b. Premium grade veneers for transparent finishes
 - c. 1/8" minimum hardwood crossbands, hot press applied to core - no exposed crossbanding allowed along any vertical edge (stile)
 - d. Vertical edges (stiles):
 1. Preferred- 1/4" hardwood of specie and grade to match face veneer over 1-3/8" (minimum) structural composite lumber (SCL)
 2. Accepted- 1 3/8" (minimum) SCL with hardwood veneer finish to match face veneer
 - e. Horizontal edges (top and bottom rails):
 1. Condition #1- 1 3/8" (minimum) SCL (no hardwood veneer finish required)
 2. Condition #2- 1 3/8" (minimum) SCL with hardwood veneer finish at top rail only
 - f. Particle board core shall meet or exceed ANSI 208.1 grade 1-LD-1
 - g. Veneers shall be applied to the cross-banded core in a hot press using type 1 exterior water resistant adhesive- 5 ply construction required
 - h. Fire rated doors (> 20-min) shall include solid hardwood outer stiles 1/4" minimum thickness of specie and grade to match face veneer; inner stiles shall meet requirements for fire ratings as listed in the Door Schedule (refer also to Finish Hardware in Section 08700 for hardware preparation requirements); rails shall be of material to meet or exceed fire-rating; core shall be non-combustible mineral board.

DIVISION 8 DOORS AND WINDOWS

8. Door Finish (transparent)
 - a. Stain color selected from manufacturer's standard options (submit samples)
 - b. Factory finish shall be TR-6 Catalyzed Polyurethane
 - c. Factory seal top and bottom rails not receiving face veneer finish
9. Door and Frame Finish (opaque)
 - a. Doors and frames shall be site finished under Section 09 91 00
- B. Doors receiving electrified hardware shall be coordinated with electrical requirements of Division 16 and shall maintain the integrity of all fire rated openings.
- C. Paired doors having a 20-minute smoke / draft rating shall have a rated meeting stile so that no astragal is required.
- D. All fire rated doors shall be constructed to meet UL 10C Category "A" and NFPA 252 guidelines for code required positive pressure ratings (no intumescent allowed on frame).
- E. Composite blocking is required for hardware at all mineral core doors such that fire-rating is maintained. Through bolting is not allowed.
- F. Doors shall be factory machined to prepare for all finish hardware (see Section 08 70 00). Verify templates with finish hardware supplier for correct application prior to machining process.
- G. Full-glass wood doors shall be wood stile and rail doors and shall meet or exceed WDMA standard I.S. 6-97 for 1 ¾" exterior french doors (#1501-620), as shown on Figure 1.

INSTALLATION

- A. All doors shall be stored off site until required at the site. No doors shall be delivered until a temperature of 70°F is maintained and at least 10 days have elapsed since any high humidity work was completed.
- B. Installation shall be completed under Section 06 20 00 – Finish Carpentry.
- C. Install all wood doors in strict accordance with all pertinent codes and regulations, the original design, and the referenced standards. Doors shall hang, square, plumb, straight and firmly anchored into position for long life under hard use.
- D. Install all finish hardware in strict accordance with manufacturer's recommendations, eliminating all hinge bound condition and making all items smoothly operating and anchored into position.
- E. Do not trim positive pressure rated doors for width. Follow current manufacturer's installation instructions.

END OF SECTION

DIVISION 8 DOORS AND WINDOWS

08 31 13 ACCESS DOORS

SCOPE OF WORK

Furnish and install access doors as shown on Drawings and as specified herein.

MANUFACTURER

Furnish prime-painted steel access door as manufactured by Milcor Co. or J.L. Industries is an approved equivalent.

MATERIAL

- A. Ceiling Access Door – Style UFR-3218-027
 1. Material – 16 gauge steel frame and 18 gauge panel
 2. Finish – Prime painted
 3. Continuous “piano-type” hinge- one (1) per door
 4. Self-closing mechanism – two (2) furnished per door
 5. Lock-key operated cylinder lock mounted flush with the ceramic fiberboard
 6. Shop drawings are required. See Section 01 33 23

- B. Wall Access Door – Style M3202-010
 1. Material – 14 gauge steel frame and door panel
 2. Finish – Prime painted
 3. Concealed spring hinges
 4. Recessed turn ring lock
 5. Shop drawings required. See Section 01 33 23

END OF SECTION

DIVISION 8 DOORS AND WINDOWS

08 33 00 COILING DOORS

SCOPE OF WORK

Furnish roll up counter door in Room 106 (Door #106C) equivalent to Cookson Type CD8-1. Cornell, Atlas, Kinnear, Metro, Raynor, Trac-Rite, and Overhead Door Company coiling doors are approved equivalents.

CD 8-1:

MATERIAL

- A. Manual operation, fingerlifts mounted in bottom bar. Thumb turn lock concealed in bottom bar.
- B. Curtain shall be No. 8 slat of extruded aluminum. Guides shall be extruded aluminum sections. Hoods shall be .04" aluminum.
- C. Curtain and hood shall have a 204-R clear anodized finish. All other exposed surfaces shall be given one shop coat of aluminum paint.
- D. Shop drawings are required. See Section 01 33 23.

END OF SECTION

DIVISION 8 DOORS AND WINDOWS

08 42 13 ALUMINUM-FRAMED ENTRANCES, WINDOWS AND DOORS

GENERAL REQUIREMENTS

- A. Instructions to Bidders, Division 0 – Conditions of the Contract and Division 1 – General Requirements are a part of this specification as if bound herein.
- B. Submit shop drawing product data, schedules and samples in accordance with Section 01 33 23. Follow hardware group formatting as listed herein.
- C. Check items specified for suitability and adaptability to the details and surrounding conditions as represented in these Construction Documents. Report unsuitable or incompatible items to the Architect immediately.
- D. All products under this section shall be packaged to guard against damage in transit and stored on-site until ready for installation. Each entrance and hardware set shall be packed separately and clearly marked to show its content and intended location.
- E. It shall be this supplier's responsibility to make certain the finish hardware fulfills the requirements of the current State Building Code according to the pertinent occupancy classification.
- F. Standard warranty required- two (2) years from date of shipment against defects in material and workmanship.

SCOPE OF WORK

Furnish and install all aluminum doors, door and window frames, hardware, glazing and sealant as shown on Drawings.

Related Sections:

Section 07 92 00 Sealants

Section 08 80 00 Glazing

MATERIAL

- A. Aluminum Entrances and Windows
 1. All aluminum Entrance Doors shall be Kawneer 350 – *Medium Stile* (with 10" high bottom rail) or approved equal. CRL-U.S. Aluminum, Tubelite and CMI Architectural are approved equivalent.
 2. All aluminum Entrance and Window Framing shall be Kawneer Trifab® VersaGlaze® 450 (interior) OR 451T (exterior) thermally broken aluminum entrance/window framing system or approved equivalent. CRL-U.S. Aluminum, Tubelite and CMI Architectural are approved equivalent. Framing section shall be 4½" deep with 1¾" OR 2" sightline.
 3. All exposed framing and hardware finish shall conform to Aluminum Association Standard AA-M12 C22 A42/44. Color to be No. 40 Dark Bronze, as selected by owner and architect.

DIVISION 8 DOORS AND WINDOWS

4. Finish Hardware:

- a) Finish hardware listed in groups below establishes a quality level of hardware selection. Substitutions will be allowed upon demonstration of compliance to this quality level.
- b) Finish shall be Dark Bronze (US10 to match framing).
- c) All hardware including hinges, closers, push-pulls, thresholds, exit devices (exit devices with cylinder dogging capability), gaskets, weather-stripping and optional bottom weather-stripping and attachment devices shall be supplied under this section.
- d) Cylinder locks shall be supplied under Section 08 70 00.
- e) Pivot hinges are not approved.

B. Glass and Glazing

- 1. Glass and glazing work shall be furnished and installed under Section 08 80 00 Glazing.
- 2. All fixed, insulated exterior window units will have a maximum U-factor of 0.25.
- 3. Refer to Door Frame Types and Window Types for glass types and tempered glass locations.

HARDWARE

Group #1.0 - Exterior Entrance (Pair Doors)

Door:	#100A & #111A	
hinges	type 1 (see Section 08 70 00)	EDO; quantity as required
exit devices	(1) VD CD-9847-NL-OP	EDO; leaf #1 (see drawings); US10
	(1) VD CD-9847-EO	EDO; leaf #2; US10
cylinders	(4) by section 8700	US26D
door pulls	(2) IV 8190 x 10"	EDO; standard mounting; US10
closers	(2) LCN 4110	EDO; standard powder coat- aluminum
overhead stop	(2) GJ 100S	EDO; US10
threshold	PEM #170A	EDO
weather-stripping	PEM #292PAV	EDO
sweep	(2) PEM #315CN	EDO

NOTES: 1) Coordinate with Security Equipment Supplier/Installer for Security System requirements and with Electrical Contractor as required.

DIVISION 8 DOORS AND WINDOWS

Group #2.0 - Interior Vestibule (Pair Doors)

Door:	#100B & 111B		
hinges		type 2 (see Section 08 70 00)	quantity as required
door trim (push / pull)		(2) IV 9190 x 10"	type "N" & standard mounting
closers		(2) LCN 4110	standard powder coat- aluminum
overhead stops		(2) GJ 100S	US10

Abbreviations:

- 1) Lockset/latchset function designations taken from Schlage catalog (Sch)
VonDuprin exit devices & associated trim (VD)
- 2) Ives (IV)
- 3) Pemko (PEM)
- 4) Glynn-Johnson (GJ)

INSTALLATION

- A. All items under this heading shall be set in their correct locations as shown in the details and shall be level, square, plumb, and at proper elevations and in alignment with other Work in accordance with the manufacturers installation instructions and approved shop drawings. All joints between entrance framing and the building structure shall be sealed in order to secure a watertight installation.
- B. All frame materials shall be fastened in place using backing, masonry plugs, or anchor straps as required.
- C. Upon completion of the entrance installation, it shall be this contractor's responsibility to make all necessary final adjustments to attain normal operation of each door and its mechanical hardware.
- D. Windows shall be installed, glazed and adjusted by experienced workmen in accordance with the manufacturer's installation instructions and approved shop drawings.
- E. After installation all metal surfaces shall be cleaned to remove mortar, plaster, paint or other contaminants. After cleaning, all work shall be protected against damage until it is accepted by the General Contractor.
- F. This contractor shall provide any extra reinforcing required to secure door frames for proper installation. Members shall be sufficiently strong to withstand all lateral loads, impact loads and other loads imposed, without deflections beyond industry standards.

END OF SECTION

DIVISION 8 DOORS AND WINDOWS

08 71 00 - DOOR HARDWARE

GENERAL REQUIREMENTS

- A. Instructions to Bidders, Division 0 – Conditions of the Contract and Division 1 – General Requirements are a part of this specification as if bound herein.
- B. Submit shop drawing product data, schedules and samples in accordance with Section 01 33 23. Follow hardware group formatting as listed herein.
- C. Check items specified for suitability and adaptability to the details and surrounding conditions as represented in these Construction Documents. Report unsuitable or incompatible items to the Architect immediately.
- D. Finish Hardware shall be packed to guard against damage in transit. Each set shall be packed separately and clearly marked to show its content and intended location.
- E. It shall be the Finish Hardware supplier's responsibility to make certain the Finish Hardware fulfills the requirements of the current State Building Code according to the pertinent occupancy classification.
- F. Furnish fire-rated Finish Hardware listed for fire-rated openings in conformance with requirements for the class of opening scheduled. Fire rating agency's requirements take precedence over this specification should any conflict arise. Recognized agencies:
 - 1. Underwriters Laboratory (UL)
 - 2. Warnock-Hersey (WH)

SCOPE OF WORK

- A. Furnish all Finish Hardware items required to complete the work. Provide templates to hollow metal and wood door suppliers. Identically trim each leaf of a pair, unless otherwise noted.
- B. Cylinders shall be factory keyed per the approved keying system. All cylinders shall be 6-pin interchangeable cores. Include construction cores for all cylinders. Supply keys as follows- Change Keys (3) per cylinder or like keyed groups, Control Keys (2), key blanks (50), Master Keys (6) per master key group, Construction Control Keys (2) and Construction Keys (15).
- C. Finish Hardware shall be installed under Section 06 20 00 - Finish Carpentry.
- D. Related Sections:
 - Section 06 20 00 - Finish Carpentry
 - Section 08 11 13 – Hollow Metal Doors and Frames
 - Section 08 14 16 - Wood Doors

DIVISION 8 DOORS AND WINDOWS

PRODUCTS AND FINISH

Numbers in this schedule are taken from catalogs of numerous manufacturers, thereby establishing a level of quality expected for this Project. Use the manufacturers indicated or approved equivalent. Hardware shall be of finish indicated herein. All goods shall be new and free from any defect or surface blemish and include all necessary fastening devices.

A. Butts: All doors (through 90" in height) shall be 1-1/2 pair butts of the type specified below unless stated otherwise in the schedule of Finish Hardware. Finish shall be **US26D** unless noted otherwise.

1. The following table of butts types, listed in manufacturer's catalog numbers, is available for acceptable substitution:

	<u>HAGER</u>	<u>MCKINNEY</u>	<u>STANLEY</u>	<u>PBB</u>	<u>BOMMER</u>
Type 1	BB1199	T4B3386	FBB199	4B21/4B51	BB5005/BB5006
Type 2	BB1168	T4A3786	FBB168	4B81	BB5004
Type 3	BB1279	TB2714	FBB179	BB81	BB5000
Type 4	1279	T2714	179	PB81	5000

2. Include the following features for all hinges unless noted otherwise in the Hardware Schedule:

- 1¾" doors- 4½" x 4½" (square corners)
- Hinge width shall clear trim for full door swing (180° or per Drawings)
- Hinges at out-swinging lockable doors shall have non-removable pins (NRP)- all other hinges shall have non-rising pins.
- All hinges shall have flat button tips unless noted otherwise

B. Exit Devices: Provide panic hardware as indicated in the Hardware Schedule. Finish shall be **US26D** unless noted otherwise (see Section 08 32 14 Aluminum Framed Entrances).

1. The following exit devices, listed by manufacturer's catalog name/number, shall be acceptable (substitutions by other manufacturers will not be accepted):

SCHLAGE
98 Rim
9827
9847

- Coordinate specified push/pulls for compatibility.
- Include cylinder dogging on all lockable doors equipped with panic hardware.

DIVISION 8 DOORS AND WINDOWS

- C. Cylinder Locks: All cylinder locks shall be master keyed as required by the Owner. Finish shall be **US26D** unless noted otherwise (see Section 08 32 14 Aluminum Framed Entrances).
- D. Latchsets/Locksets/Dummy Handles Deadbolt Locks: Provide lever handle latchset and locksets as indicated in the Hardware Schedule. Provide keying system to allow Owner complete security upon the occupancy of the building and distribution of lock change keys. Finish shall be **US26D** unless noted otherwise (see Section 08 32 14 Aluminum Framed Entrances).
1. The following heavy-duty, grade 1 cylindrical lock / latch types, listed by manufacturer's catalog name/number, shall be acceptable (substitutions by other manufacturers will not be accepted):
SCHLAGE
ND Series
 2. Lever design for all lock/latch sets: Schlage "Sparta" design (SPA)
 3. Provide 2¾" backset unless noted otherwise
 4. Provide 4-7/8" x 1¼" ANSI strike at hollow metal doors / frames
 5. Furnish abrasive coating on outside levers leading to loading docks, stages, platforms, any non-exit stairway or other hazardous locations
- E. Door Trim: Include push / pulls as listed in the Hardware Schedule. Finish shall be **US26D** unless noted otherwise (see Section 08 32 14 Aluminum Framed Entrances).
1. The following table of push / pulls, listed in manufacturer's catalog numbers, is available for acceptable substitution:

<u>IVES</u>	<u>TRIMCO</u>	<u>HIAWATHA</u>	<u>BURNS</u>	<u>HAGER</u>
8190 x 10"	1191-3	658A	39C	12J
9190 x 10"	1737	1081LBP x 658A	422 x 39C	159
 2. The following table of push plates, listed in manufacturer's catalog numbers, is available for acceptable substitution:

<u>HIAWATHA</u>	<u>TRIMCO</u>	<u>BURNS</u>	<u>HAGER</u>
200F	1001-3	54	30S
- F. Closers: All closers to be barrier-free with low opening resistance as required by A.D.A. accessibility code. Finish shall be **US26D** unless noted otherwise. The following table of closer types, listed in manufacturer's catalog numbers, is available for acceptable substitution:
1. Regular action closers:

<u>LCN</u>	<u>DORMA</u>	<u>NORTON</u>	<u>SARGENT</u>	<u>YALE</u>
4110	8900	7500	350	4400
4110 H-CUSH	8900 DS	CLP7500	350 PS	CLP4400

DIVISION 8 DOORS AND WINDOWS

- G. Wall Stops/Door Holders: Include wall stops/door holders as listed in the Hardware Schedule. Comparable list of manufacturers for is as follows-
1. Wall Stop- heavy-duty 3¾" projection:

<u>IVES</u>	<u>DOOR CONTROLS INT'L</u>	<u>TRIMCO</u>
WS11 (GWB)	3260X	1205
WS11X (masonry)	3260X	1205
 3. Furnish wall stops as specified in the Hardware Schedule. Where the specified wall stop is not applicable, supply the correct wall stop or overhead stop for Architect's review/approval.
 4. Wall stops shall not be mounted to casework, cabinet work, sidelights or equipment. Certain locations require this wall stop to be mounted on wood doors (see Hardware Schedule).
 5. Finish shall be **US26D** unless noted otherwise.
- H. Protective Plates: Furnish all protective plates as listed in the Hardware Schedule-
1. Kick Plates-
 - i. Hiawatha 18 gage (minimum) or approved equivalent
 - ii. Height as indicated on the Drawings
 - iii. Width shall be 2" less than scheduled door width
 2. Mop Plates-
 - i. Hiawatha 18 gage (minimum) or approved equivalent
 - ii. Height as indicated on the Drawings
 - iii. Width shall be 2" less than scheduled door width
 3. Refer to Drawings for size and location of plates.
- I. Threshold: Pemko #170A (National Guard and Reese lines are equivalent to Pemko- typ.)
- J. Weather-stripping: Pemko #292PAV or equivalent
- K. Sweep: Pemko #315CN or equivalent
- L. Manual Flush Bolts: Ives #FB458 or Ives #FB358 (US26D) or equivalent
- M. Silencers:
1. Hollow Metal Frames: Neoprene, friction-mounted inserts – (2) per leaf
 2. Wood Frames: 3/8" diameter x 1/16" thick, self-adhesive felt pads – (2) per leaf

DIVISION 8 DOORS AND WINDOWS

HARDWARE SCHEDULE

Abbreviations:

EDO – Each Door Opening
GJ - Glynn-Johnson
HIA - Hiawatha
IV - Ives
PEM - Pemko
Sch - Lockset/latchset function designations taken from Schlage catalog
VD - VonDuprin exit devices & associated trim

Group #1.0 - Exterior Entrance

Door: #100A & #111A
cylinder (1) to match exit device EDO

ALL OTHER HARDWARE BY ALUMINUM DOOR SUPPLIER - SEE SECTION 08 42 13

Group #2.0 - Vestibule

Door: #100B & #111B

ALL HARDWARE BY ALUMINUM DOOR SUPPLIER - SEE SECTION 08 42 13

Group #3.0 - Exterior Entrance

Door: #106A
hinges type 2 quantity as required US26D; EDO
exit device (1) VD CD 98 x NL-OP EDO; US26D
cylinder (1) to match exit device EDO
lever (1) VD 996-NL EDO; US32D
closer (1) LCN 4110 standard powder coat- aluminum
threshold PEM #170A EDO
weather-stripping PEM #292PAV EDO
sweep PEM #315BN EDO
drip cap PEM #346C EDO

EDO; US26D

Group #4.0 – Office/General Interior

Door: #102A, #108, #109A & #110A
hinges type 3 EDO; quantity as required
lockset (lever) (1) Sch ND10S- SPA EDO; function- Office; US26D
closer (1) LCN 4110 EDO; standard powder coat- aluminum
stop (1) IV WS11 EDO; US26D

Group #5.0 – Storage (Paired)

Door: #103
hinges type 3 EDO; quantity as required
lockset (lever) (1) Sch ND80PD- SPA EDO; active leaf, function- Storeroom; US26D
manual flush bolt (2) IV FB458 inactive leaf; US26D
stop (1) IV WS11 each leaf; US26D

DIVISION 8 DOORS AND WINDOWS

Group #6.0 - Restroom/Public

Door: #104 & #105		
hinges	type 3	EDO; quantity as required
push	(1)	US26D
pull	(1)	US26D
closer w/stop	(1) LCN 4110 H Cush	EDO; standard powder coat- aluminum

Group #7.0 – Kitchen

Door: #106B		
hinges	type 3	EDO; quantity as required
lockset (lever)	(1) Sch ND10S- SPA	EDO; function- Office; US26D
closer w/stop	(1) LCN 4110 H Cush	EDO; standard powder coat- aluminum

Group #8.0 – Storage/Mechanical

Door: #107		
hinges	type 3	EDO; quantity as required
lockset (lever)	(1) Sch ND80PD- SPA	EDO; function- Storeroom; US26D
closer	(1) LCN 4110	EDO; standard powder coat- aluminum
stop	(1) IV WS11	EDO; US26D
smoke gaskets		

Group #9.0 – Coiling Door

Door: #106C

ALL HARDWARE BY COILING DOOR SUPPLIER - SEE SECTION 08 33 00

END OF SECTION

DIVISION 8 DOORS AND WINDOWS

08 80 00 GLAZING

SCOPE OF WORK

Furnish and install all glass as shown on Drawings and as specified in this Division.

MATERIALS

- A. Insulated Glass Assembly (IGA): Shall be 1" thick sealed units, with bronze-tinted exterior pane, clear interior pane with Low-E coating at exterior surface of interior pane (or equivalent).
1. Exterior pane shall be "Solarbronze®" by Vitro Architectural Glass.
 2. Interior pane shall be clear (transparent) Float Glass, sputter-coated on exterior surface with Low-E coating.
 3. Low-E coating shall be "Sungate400®" by Vitro Architectural Glass.
 4. An alternate assembly of "Activ™" Bronze (exterior pane) with "K Glass™" (interior pane) by Pilkington (or other approved equivalent) will also be acceptable.
 5. Insulated glass Assembly (IGA) shall conform to ASTM E773 and E774, shall be of sizes as shown on Drawings, shall be tempered as required by code and shall have maximum U-factor of 0.32, minimum SHGF of 0.63, and approximate VT of 0.48.
- B. Single glass shall be ¼" clear float glass, conforming to ASTM A1036, and of sizes shown on Drawings.
- C. Tempered interior glass shall be ¼" clear float glass, conforming to ASTM A1048, and of sizes shown on Drawings, and where required by code.
- D. Mirrors shall be ¼" clear plate glass, No. 1 quality, exposed hangers, finished edges. All toilet room mirrors over vanity lavatories shall be 36" high, see the Drawings for width. Install tilted mirror assembly at accessible lavatories.
- E. Safety glass: Install as per state and local codes. Supplier must install safety glass as directed by local building official.

INSTALLATION

- A. Store and handle glass carefully to prevent breakage, damage, or scratching.
- B. Install glass as shown on the Drawings and in accordance with the recommendations of the frame and glass manufacturers. Properly place all gaskets, setting blocks, glazing stops, etc. to provide a watertight and weathertight installation.
- C. Clean all glass after installation and protect from damage for the remainder of the construction period.

END OF SECTION

DIVISION 8 DOORS AND WINDOWS

08 90 00 LOUVERS AND VENTS

SCOPE OF WORK

Furnish all custom architectural louvers as shown on Drawings and as herein specified. Louvers used for attic ventilation or decoration only to be installed by General Contractor. Louvers to be installed in coordination with Mechanical Contractor (if associated with mechanical ductwork) shall be coordinated with Mechanical Drawings.

MATERIALS

- A. Frames and blades: Aluminum 6063 Alloy .081" (2.06mm) thick
- B. Structural design: Structural supports designed to carry a wind load of 20 PSF
- C. Bird screen: ½" mesh removable mill finish aluminum
- D. Finish: Kynar-based fluoropolymer coating, color to be selected by architect from manufacturer's standard selections.
- E. Standard fixed louvers: For attic ventilation or decorative louver, Model ELF40V, as manufactured by Ruskin shall be used, or approved equal. Construction Specialties, Inc., Greenheck, Reliable, are approved equivalent.

END OF SECTION

GENERAL REQUIREMENTS

Instructions to Bidders; Division 0, Conditions of the Contract; and Division 1, General Requirements, are part of this division of the specification as if bound herein.

09 29 00 GYPSUM WALLBOARD/ACCESSORIES

SCOPE OF WORK

Furnish gypsum board, textured ceiling and metal stud framing for fire protection of steel structure as shown on Drawings and as specified herein.

Refer to the related Sections:

Section 06 10 00 Rough Carpentry

Section 07 21 00 Building Insulation

Section 08 11 13 Hollow Metal Doors and Frames

Section 09 30 13 Ceramic Tile

Section 09 91 00 Painting

MATERIALS

Materials are noted with USG numbers to establish the level of quality. Other acceptable manufacturers include Genstar, Georgia-Pacific, or approved equivalents.

- A. Face Panel (see Drawings for areas of use):
 - 1. USG 5/8" Sheetrock Firecode Gypsum Board.
 - 2. USG 5/8" Sheetrock W/R Gypsum Board (as backer at ceramic tile, shower room and toilet rooms).

- B. Fasteners: Drywall screws, Type S (no nailing authorized).

- C. Trim Accessories: Corner Bead, No. 103 1-1/4" x 1-1/4", zinc control joint No. 093, steel casing No. 200-A 1/2" or 5/8" (see plans). All metal trim mentioned above shall be finished with joint compound. USG reveal type trim No. 400 series shall be allowed only where indicated on Drawings. Vinyl trim is not acceptable.

- D. Drywall Mastic: USG Durabond Joint Compound 210 or 90 for direct lamination to masonry backup.

- E. Studs for Fire Protection of Steel Structure: Shall be screw type steel studs of a size indicated on the Drawings and in conformance with the manufacturer's recommendations.
 - 1. Interior non-bearing studs: Non-loading bearing type steel studs with the corresponding runner channels for interior application, 25 ga., "C" type.

- F. Truss bracing at 1 hr. rated, insulated floor-ceiling and roof-ceiling assemblies shall be Alpine FR-System 3, FR-Quik channel sets. Follow manufacturer's installation details and written instructions.

DIVISION 9 FINISHES

INSTALLATION

- A. Gypsum Board Installation
1. Position all ends and edges of all gypsum panels over framing members, except when joints are at right angles to framing members as in perpendicular application or when end joints are back-blocked.
 2. Apply gypsum panels first to the ceiling and then to the walls. Extend ceiling board into corners and make firm contact with top plate. To minimize end joints, use panels of maximum practical lengths. Fit ends and edges closely, but not forced together. Stagger end joints in successive courses with joints on opposite sides of a partition placed on different studs.
 3. Attach panels to framing supports by power driven screws. Space fasteners not less than 3/8" from edges and ends of panels and drive as recommended for specified fastening method. Drive fasteners in field of panels first, working toward end and edges. Hold panel in firm contact with framing while driving fasteners. Drive fasteners heads slightly below surface of gypsum panels in a uniform dimple without breaking face paper.
 4. Cut ends, edges, scribe or make cutouts within field of panels in a proper manner.
 5. Install trim at all internal and external angles formed by the intersection of either panel surfaces or other surfaces. Apply corner bead to all vertical or horizontal external corners in accordance with manufacturer's directions.
- B. Accessories Installation
1. Corner Bead: Reinforce all vertical and horizontal exterior corner with corner bead fastened with 9/16" galvanized staples 9" o.c. on both flanges along entire length of bead.
 2. Metal Trim: Where assembly terminates against masonry or other dissimilar material, apply metal trim over panel edge and fasten with 9/16" galvanized staples 9" o.c.
 3. Joint System: Finish all face panel joints and internal angles with a Joint System installed according to manufacturer's directions. Spot exposed fasteners on face layers and finish corner bead, control joints and trim as required, with at least three coats of joint compound, feathered out onto panel faces and sanded smooth. Leave surfaces smooth and ready for other finishes.
 4. Control Joints: Locate control joints as shown on drawings or at 30'-0" o.c. maximum if not shown on drawings.

END OF SECTION

09 30 13 CERAMIC TILE

SCOPE OF WORK

Furnish and install all thin set unglazed ceramic and glazed ceramic tile at toilet room walls (to ceiling) as shown on plans and specified in this division. Colors will be selected by the Architect from the manufacturer's standard colors. Leave a quantity equal to at least 3% of the surface area (for each tile) on site after completion of all work.

Refer to the related Sections:
Section 12960 Building Entrance Mat

MATERIALS

All tile products shall meet the requirements of ANSI A137.1. Acceptable manufacturers include American Olean, Dal-Tile, Florida Tile, US Ceramic, Crossville Ceramics or approved equivalent.

- A. Glazed ceramic wall tile: 9" x 12" x 3/8", 'Pozzalo' by American Olean, or 'Heathland' by Daltile, or approved equivalent, to be laid horizontally in running bond pattern. See Room Finish Schedule on Drawings
- B. Grout: meeting the requirements of ANSI A-118.6.
- C. Latex-Portland cement mortar, meeting the requirements of ANSI A-118.4.

INSTALLATION

- A. Inspection of surfaces must be flat and level with a maximum variation of 1/8" in 8'-0" for wall and 1/8" in 10'-0" for floors. Report any discrepancies to the Architect and do not proceed until the surfaces to be tiled are acceptable.
- B. Preparation: Prior to installing tile, remove dust, oil and other foreign substances from surfaces. Where tile is to be thin-set over existing surfaces remove oil, wax, adhesive residues or other finishes to provide a clean roughened surface for bonding.
- C. Layout
 - 1. Determine locations of all movement joints before starting tile work.
 - 2. Layout all tile work so as to minimize cuts less than one-half tile in size.
 - 3. Locate tile cuts in both walls and floors so as to be least conspicuous.
 - 4. Align all floor joints to give straight uniform grout lines, parallel with walls and floor.
- D. Workmanship
 - 1. All tile work shall be installed by experienced tile-setters and shall conform to high standards of workmanship. Poor workmanship may be rejected by the Architect, removed and replaced at Contractor's expense.
 - 2. Use all products in strict accordance with recommendations and directions of manufacturer.
 - 3. Proportion all mixes in accordance with latest ANSI Standard Specifications.

DIVISION 9 FINISHES

- E. Setting Methods
 - 1. Install tile in accordance with the reference standards and Tile Council of America “Handbook for Ceramic Tile Installation” reference installation Methods.
 - 2. Cement Mortar Installations: ANSI A108.5.
 - a. Walls: Masonry – Method W202; Gypsum Board – Method W243.

- F. Grouting
 - 1. Follow grout manufacturer’s recommendations as to grouting procedures and precautions. Install in accordance with ANSI 108.10.
 - 2. Remove all grout haze, observing grout manufacturer’s recommendations as to use of acid and chemical cleaners.
 - 3. Rinse tile work thoroughly with clean water before and after chemical cleaners.

END OF SECTION

09 51 13 ACOUSTICAL CEILINGS

SCOPE OF WORK

Furnish and install fire-rated and non-fire-rated acoustical ceiling panels and suspension systems and related accessories as shown on the Drawings and as specified herein. Subcontractor shall leave one (1) full carton of each type of ceiling panel with the Owner at completion of the job.

MATERIALS

- A. Ceiling Suspension System, meeting the requirements of ASTM C635. Chicago Metallic numbers are used to establish quality, but other manufacturers may be used if approved by the Architect as equivalent. Donn DXL by USG Interiors and Celotex products are approved.
 - 1. Typical rated ceiling: 250 Snap-Grid System
 - 2. Typical unrated ceiling: 200 Snap-Grid System
 - 3. All necessary hanger wire and connectors shall be by ceiling suspension system installer

- B. Acoustical ceiling panels shall be Type III, Class A or fire-rated (as shown on Drawings), meeting the requirements of Federal Specification SS-S-118B.
 - 1. Type "A" shall be USG Eclipse (Glacier) , shadow line edge, 24" x 24" x 3/4".
 - a. Or approved equivalent
 - 2. Type "B" shall be USG vinyl faced gypsum board, stipple pattern, 24" x 24" x 1/2".
 - a. Certaineed 'VinylShield A' is approved equivalent
 - b. Sheetrock "Clima Plus Vinyl" by USG is approved equivalent

- C. Hold down clips, USG No. 20428.

INSTALLATION

- A. All materials shall be delivered in their original unopened packages and stored in an enclosed shelter providing protection from damage and exposure to the elements. Damaged or deteriorated materials shall be removed from the premises. Immediately prior to installation, tile and panels shall be stored for a sufficient time to stabilize temperature and humidity conditions ambient during installation, and anticipated for occupancy.

DIVISION 9 FINISHES

- B. Installation of acoustical tile or panels shall not begin until building is enclosed, permanent heating and cooling equipment in operation, and residual moist plaster, concrete or drywall work dissipated. Installation shall not begin in an exterior application until protection from direct exposure to water and weather has been provided.
- C. Install suspension system according to ASTM C636, "Recommended Practice for Installation of Metal Ceiling Suspension Systems for Acoustical Tile and Lay-In Panels".
- D. Support suspension system by 12-gauge hanger wires.
- E. Install acoustical tile and panels according to manufacturer's recommendations.
- F. Install hold down clips at ceilings in Vestibules or within 10 feet of an exterior door with no Vestibule.

END OF SECTION

09 65 00 RESILIENT FLOORING

SCOPE OF WORK

Furnish and install resilient flooring as shown on the Room Finish Schedule and included herein. Work shall include vinyl base. Color selection shall be made by Architect. Leave a quantity equivalent to at least 3% of the surface area on site after completion of all Work.

MATERIALS

- A. Base: Rubber Millwork, Mandalay-XX-H 4 1/2" base, as manufactured by Tarkett or approved equivalent. Vinyl base to be applied in continuous 96" lengths, as often as possible.
- B. Vinyl Composition Tile (V.C.T.): Marbleized 12" x 12" tile, 1/8" thick as made by Kentile, Armstrong, Tarkett or Azrock.
- C. Luxury Vinyl Tile: Armstrong Vivero Collection with Diamond 10 technology ("Better" product); Mannington Commercial Nature's Paths; Venue Wood or Even Heritage Plank by Centiva; or approved equivalent. Product to be smooth in texture and suitable for direct glue-down installation with 5-year minimum warranty for commercial applications. Color to be selected by Owner/Architect from complete range of manufacturer's options.
- D. Adhesive: As recommended by the manufacturer of materials to be applied.

INSTALLATION

Carefully examine all surfaces on which materials are to be applied. Starting work constitutes acceptance of surface and assumes responsibility for quality of finish. Install all material in accordance with manufacturer's recommendations.

END OF SECTION

09 77 33 FIBERGLASS REINFORCED PLASTIC PANELING

SCOPE OF WORK

Furnish fiberglass reinforced plastic paneling where scheduled and shown on the Drawings as manufactured by Crane Composites, Inc., Sequentia and Structoglas by Crane Composites, and Marlite are approved equivalent. Installation is under Section 06 20 00.

MATERIALS

Panels shall be 'Glasbord,' embossed, 4' x 8' x 0.09" sheets; white color.

INSTALLATION

Apply directly to unpainted gypsum wall board with adhesive as recommended by manufacturer. At janitor sinks, product should be applied to pre-painted gypsum wall board. Butt all edges. Seal corners.

END OF SECTION

09 91 00 PAINTING

SCOPE OF WORK

- A. Furnish all equipment, labor, and material necessary to complete all items of painting and decorating as required.
- B. Aluminum and other non-ferrous metal will not be painted, except as noted in schedule. Paint piping, ductwork and mechanical equipment in finished spaces.
- C. Parking lot striping, covered under Section 32 10 00, is by the paving contractor.
- D. Acoustic tile will not be painted.
- E. Subcontractor to leave all unopened cans of paint with Owner at completion of job.

MATERIALS

- A. Paint, varnish, stains, and fillers shall be Benjamin Moore, DeVoe, Diamond Vogel, ICI Dulux, Pittsburgh, Pratt & Lambert, Sherwin Williams, or Valspar unless otherwise indicated in the Schedule of Painting. ICI products are used in the Schedule of Painting to establish the quality to be used.
- B. Paint and mixtures, such as shellac, turpentine, linseed oil, etc., shall be of quality standards of the ASTM Specifications for these. Use only those admixtures recommended by paint product manufacturer.

COLOR AND SAMPLES

- A. Paint colors will be selected by Architect before any work is done. The Architect will furnish Painting Contractor with a color slide or list of color numbers. Painting Contractor shall then prepare samples as required, until colors and textures are satisfactory.
- B. Colors may be selected from complete line available.

DIVISION 9 FINISHES

GENERAL REQUIREMENTS

- A. Exposed piping (includes sprinkler piping), conduit, registers, convectors, covers, ductwork (metal brackets for glued laminated beams), etc., generally will be painted to harmonize with walls or ceilings adjacent thereto, or as specified. Walls behind radiation covers are to be painted. Galvanized roof metal is to be painted to match existing.
- B. Metal door frames, etc., generally may be painted to contrast with walls or ceilings adjacent to them.
- C. Exposed structural steel lintels generally will be painted color to match walls or ceiling adjacent to them.
- D. Each coat of paint shall be slightly darker than preceding coat, unless otherwise directed. Undercoats shall be tinted a distinct shade but similar to finish coats. Wall primers must be kept off metal or other materials requiring a different primer.
- E. Treat all galvanized metal that is not factory primed or bonderized with suitable cleaning, degreasing and chemical neutralizing compounds before applying primer. Remove rust and scale, touch-up marred spots on shop applied primers.
- F. Carefully examine masonry or concrete walls to assure that excess mortar, joint fins, mortar blemishes and voids are cleaned or repaired prior to start of work. Start of Work constitutes acceptance of surface and responsibility for acceptable finish.
- G. All custom (not pre-finished) cabinets under Architectural Woodwork Section 06 41 00 shall be finished under this Section.
- H. The painter shall inspect walls for damaged or defective gypsum board walls/ceilings. Such walls/ceilings shall be repaired prior to finishing, by Section 09 29 00. Painter shall be responsible for minor patching.
- I. Protect Work of other trades against damage or injury by materials, tools, utensils used. Work damaged as a result of this contract shall be repaired at this contractor's expense, or if in the opinion of the Architect it cannot be properly repaired, it shall be replaced with new work by this contractor without additional compensation beyond contract amount.
- J. Store and mix materials only in such rooms as may be assigned for this purpose, and take necessary precautions to prevent fire. Any mixing or thinning of material shall be by manufacturer's recommendation or approval only.
- K. At completion, the painting contractor shall assume responsibility for normal touch up and restoration and leave all painted surfaces in good condition.
- L. Stain and varnish all wood doors, including tops and bottoms.

DIVISION 9 FINISHES

SCHEDULE OF PAINTING

The number of coats listed herein are field-applied coats, and all coats will be required even though surfaces have been factory primed. A factory-applied one-coat combination primer-finish shall be considered as a prime coat only.

A. Exterior

1. Exterior ungalvanized ferrous metal shall have:
 - a. 1 – coat Devguard 4100-7100 alkyd metal primer
 - b. 2 - coats Devguard 4308-XXXX alkyd industrial gloss enamel
2. Exterior galvanized metal shall have:
 - a. 1 – coat Devguard 4120-1000 all purpose metal & galvanized primer
 - b. 2 – coats Devguard 4308-XXXX alkyd industrial primer
3. Exterior wood:
 - a. 2 – coats semi-transparent stain
4. Plastic composite panels and trim
 - a. 1- prime coat to be 100% acrylic
 - b. 2- top coats paint to be 100% acrylic

B. Interior

1. Interior ferrous metals:
 - a. 1 – coat Devguard 4100-4700 alkyd metal primer
 - b. 2 – coats Ultra-Hyde 1516-XXXX alkyd semi-gloss at bar joists (exposed), one (1) coat dry fog 1380-1220 (flat) or dry fog 1582-1200 (eggshell only if noted). (Note: Field paint all brackets, hangers and bolts associated with glue-laminated beams.)
2. Interior galvanized metal shall have:
 - a. 1 – coat Devguard 4120-1000 all purpose metal & galvanized primer finish coat(s) to match adjacent surface
3. Interior hardwoods (except hardwood floor)
 - a. 1 – coat 1700-XXXX wood pride interior oil stain
 - b. 1 – coat 1908-0000 wood pride gloss polyurethane
 - c. 2 – coats 1902-0000 wood pride stain polyurethane

DIVISION 9 FINISHES

4. Interior hardwoods (for premium grade factory finish)
 - a. Factory finish in accordance with AWI Premium Quality Standards Section 1500. [stain color as specified and selected per sample approval]
 - b. Horizontal surfaces
 - I. stain – color as selected by Architect
 - II. vinyl washcoat
 - III. filler
 - IV. vinyl sealer
 - V. sand (220 grit)
 - VI. 2–coats Krystal #C145 conversion varnish, or DuraVar #C142 Post-catalyzed Lacquer, semi gloss
 - a. Vertical surfaces
 - I. stain – color as selected by Architect
 - II. vinyl sealer
 - III. sand (220 grit)
 - IV. 2–coats Krystal #C145 conversion varnish, or DuraVar #C142 Post-catalyzed Lacquer, semi gloss
 5. Interior softwoods:
 - a. Painted:
 - I. 1 – coat 1120-1200 prep & prime solvent-based primer
 - II. 2 – coats 1902-0000 wood pride satin polyurethane
 - b. Stained: (including wood windows)
 - I. Same as hardwoods
 6. Interior gypsum board:
 - a. 1 – coat 1000-1200 prep & prime Hi-hide primer sealer
 - b. 1 – coat 1412-XXXX ultra-hide latex eggshell
- C. Mechanical and Electrical Work
1. Exterior mechanical and electrical material and equipment shall be painted as specified above for exterior work and the respective type of material.
 2. Interior mechanical and electrical material and equipment to be painted shall be painted as specified above for interior work and the respective type of material. Small items such as grilles and registers occurring in painted walls and ceilings shall have the same type of finish as the wall or ceiling.

DIVISION 9 FINISHES

EXECUTION

- A. Condition of surfaces: Do not proceed until any discovered defects such as cracks and other surface imperfections have been corrected and surfaces are acceptable to receive the specified products.

- B. Preparation of new surfaces:
 - 1. Prepare surfaces to receive scheduled work as set forth below.

 - 2. Unfinished wood and plywood:
 - a. Remove surface dirt and grit with a detergent solution followed by a thorough rinsing with clear water. Allow surface to dry completely before coating.
 - b. Remove all pencil marks and grade stamps before sanding when a semi-transparent finish is to be applied. All loose wood fibers or dust should be removed by brushing.

 - 3. Galvanized Metal: Remove all dirt, oil, grease and other foreign matter. Wash thoroughly with a solvent such as mineral spirits. If rusted, wire brush or sand clean and apply primer.

 - 4. Concrete, Masonry, Stucco: Allow to age at least one (1) month. Remove dirt, grease, loose sand particles, and other foreign material with a solution of one cup detergent in one gallon warm water. Where efflorescence has occurred, wash with a 10% muriatic acid solution; rinse thoroughly with clear water and allow to dry. When dry, remove all residual dust and allow at least one week prior to coating to see if efflorescence reappears. If so, repeat treatment. In hot weather prewet surface with water and apply coating while still damp.

- C. Mixing
 - 1. General: Furnish coatings ready-mixed unless otherwise specified, in accordance with manufacturer's directions.

 - 2. Fully mix paint or stain pigments to maintain a soft paste consistency in the vehicle during storage that can be dispersed readily and uniformly to a homogeneous mixture and shall have good flowing and brushing properties, to dry or cure free of streaks or sags and to yield the desired finish specified.

- D. Application
 - 1. General: Apply paint, stain or finish by methods generally accepted by the trade to achieve approved results. Do not apply finishes on surfaces that are not sufficiently dry. Make sure each coat of finish is dry and hard before a following coat is applied unless the manufacturer's direction states otherwise. Where applicable, tint filler to match stain when clear interior finishes are specified; work filler well into grain and, before it has set, working perpendicularly to the grain, wipe the excess from the surface.

- E. Factory Applied finish application
 - 1. General: Sand just prior to staining. Apply paint, stain or finish by methods generally accepted by the trade to achieve approved results. Do not apply finishes on surfaces that are not sufficiently dry. Make sure each coat of finish is dry and hard before a following coat is applied unless the manufacturer's direction states otherwise. Where applicable, tint

DIVISION 9 FINISHES

filler to match stain when clear interior finishes are specified; work filler well into grain and, before it has set, working perpendicularly to the grain, wipe the excess from the surface.

2. Priming new exterior wood surfaces
 - a. For surfaces to receive paint or latex stain finish: Prime with exterior wood primer all exposed wood surfaces including faces, edges, and ends before installation by other trades. After exterior doors are fit to frames, but prior to their installation by other trades, apply not less than one coat of wood primer and one coat of finish paint or stain to top, bottom and edges of each door.
 - b. For surfaces to receive stain finish: Prime and backprime with finish coat, faces, edges and ends prior to installation by other trades. After exterior doors are fit to frames but prior to their installation by other trades, apply two coats of stain to top, bottom, and edges of each door.
3. Brushing: For oil-based products, use a high-quality natural bristle brush. For latex products use a nylon or synthetic bristle brush. In all brushing, maintain a wet edge to avoid lap marks. On horizontal siding, begin at one edge of several boards and apply the coating all the way across to a logical break, such as a door, window, other trim, or corner. On vertical siding, begin at the top of several boards and work down. When brushing, work the material into the surface for maximum durability.
4. Rolling: Rolling can be used for applying to rough or resawn surfaces. Use medium or deep pile rollers on rough surfaces. Use a short nap roller to apply paint to smooth surfaces.
5. Spraying:
 - a. Use either airless or conventional air atomizing high-pressure spraying equipment. Take steps to ensure that an adequate amount of coating is applied to the surface. Use at 40° to 60° fan angle.
 - b. Follow spray application of oil-based products with a dry brush or roller pass to ensure even distribution of the material over the surface and to force the coating into the wood surface. Spray application of latex products does not require dry brushing or rolling.
 - c. Follow proper safety and health precautions during all spray applications.
 - d. Follow specific manufacturer's recommendations for spray application.

F. Cleaning

1. General: As the Work proceeds, and upon completion of the Work, promptly remove all coatings where spilled, splashed or splattered in a manner as not to damage the surface from which it is removed. During the progress of the work, keep the premises free from any unnecessary accumulation of tools, equipment, surplus materials and debris resulting from the work under this section. At the conclusion of the work, leave the premises neat and clean to the satisfaction of the Architect or General Contractor.

END OF SECTION

09 93 00 CONCRETE STAINING AND TRANSPARENT FINISHING

SCOPE OF WORK

Furnish all decorative/stained concrete work shown on Drawings. Refer to ROOM FINISH SCHEDULE for extent of stained and/or sealed concrete floors.

Section Includes:

- A. Concrete Floor Stain.
- B. Concrete Floor Sealer.

Related work specified elsewhere:
Section 03 31 00 Structural Concrete

SUBMITTALS

- A. Submit under provisions of Section 01 33 23.
- B. Product Data: Manufacturer's data sheets on each product to be used, including:
 - 1. Preparation instructions and recommendations.
 - 2. Storage and handling requirements and recommendations.
 - 3. Installation methods.
 - 4. Maintenance Instructions.
- C. Selection Samples: For each finish product specified, a sample of the manufacturer's full range of available colors and patterns.

MATERIAL

- A. Concrete Stain: Kemiko Stone Tone Stain: Combination of acid solution, wetting agents, and metallic ions. When mixed with water and applied to Portland cement, chemically combines to form permanent color. Substitutions to be considered by Architect as delineated under Section 01630.
- B. Concrete Sealer: Substitutions to be considered by Architect as delineated under Section 01630.
 - 1. Stone Tone Sealer: Acrylic water-based, non-yellowing urethane clear sealer. Substitutions to be considered by Architect as delineated under Section 01630.
 - a. Solids (By Volume): 30 percent.
 - b. Gloss: High gloss

DIVISION 9 FINISHES

- c. Resistant to blush.
 - d. VOC: Less than 50 g/L. Meets final SCAQMD Rule 1113 (2008).
 - e. Pencil Hardness, ASTM D 3363: 2H.
 - f. Dry Tape Adhesion, ASTM D 3359: 5A-5B.
 - g. Dry Time at 70F (21C) with 50 percent RH:
 - (a) Recoat: 1 hour.
 - (b)Foot Traffic: 4 hours.
 - (c) Full Cure: 48 hours.
2. Kemiko Stone Tone Buff-On Wax: Non-yellowing, fast drying, aliphatic petroleum wax.
- a. Dry Time at 70F (21C) with 50 percent RH: 20 -30 Minutes.
 - b. Coverage: 250 to 350 sq ft per gallon
- C. Warranty: At project closeout, provide to Owner or Owners Representative an executed copy of the manufacturer's standard limited warranty against manufacturing defect, outlining its terms, conditions, and exclusions from coverage.

EXECUTION

A. General:

- 1. Manufacturer Qualifications: All primary products specified in this section will be supplied by a single manufacturer with a minimum of ten (10) years experience.
- 2. Installer Qualifications: All products listed in this section are to be installed by a single installer with demonstrated experience in installing products of the same type and scope as specified.
- 3. Pre-installation Meeting: Convene a pre-installation meeting before start of Work. Require attendance of parties directly affecting work of this section, including Contractor, Architect, and Applicator. Review surface preparation, application, protection, and coordination with adjacent surfaces
- 4. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
 - a. Mock-up areas designated by Architect.
 - b. Do not proceed with remaining work until workmanship, color, and sheen are approved by Architect.
 - c. Refinish mock-up area as required to produce acceptable completed project.

DIVISION 9 FINISHES

5. Storage and Handling:
 - a. Store products in manufacturer's unopened packaging until ready for installation. Store materials in a clean, dry area indoors in accordance with manufacturer's instructions. Keep containers sealed until ready for use.
 - b. Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction.

 6. Project Conditions: Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits. Do not apply materials in wet weather.
- B. Examination:
1. Do not begin installation until substrates have been properly prepared.
 2. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.
- C. Preparation:
1. Clean surfaces thoroughly, in accordance with manufacturer's instructions.
 2. Prepare concrete surface and apply concrete stain after all other interior work is completed but before installation of wall base.
 3. Protection:
 - a. Protect walls and surrounding surfaces not to receive concrete floor stain.
 - b. Do not allow stain to come in contact with wood or metal surfaces.
 4. Prepare concrete surface in accordance with manufacturer's instructions.
 5. Concrete shall be as specified in Section 03300. Ensure concrete is a minimum of 28 days old.
 6. Ensure surface is clean, dry, structurally sound, and free from dirt, dust, oil, grease, solvents, paint, wax, asphalt, concrete curing compounds, sealing compounds, surface hardeners, bond breakers, adhesive residue, and other surface contaminants.

DIVISION 9 FINISHES

7. Do not acid wash or use heavy alkali cleaners.

D. Installation:

1. Install in accordance with manufacturer's instructions.
2. Apply stain in accordance with manufacturer's instructions at locations indicated on the drawings.
3. Control depth of color by adjusting volume of stain applied.
4. Apply 2 coats of stain. Allow to completely dry after each coat. Do not scrub clean between coats.
5. After area has completely dried, scrub off residue in accordance with manufacturer's instructions. Allow to completely dry.
6. Concrete Floor Sealer: Apply concrete floor sealer over concrete floor stain in accordance with manufacturer's instructions.
1. Concrete Buff-On Floor Wax: Apply concrete floor wax over sealed interior concrete floor in accordance with manufacturer's instructions.
2. Keep material containers closed when not in use to avoid contamination.

E. Protection

- a. Protect stained surfaces from damage during construction.
- b. Protect surfaces from foot traffic for a minimum of 24 hours.
- c. Do not wash surfaces for a minimum of 48 hours.

END OF SECTION

GENERAL REQUIREMENTS

Instructions to Bidders; Division 0, Conditions of the Contract; and Division 1, General Requirements, are part of this division of the Specification as if bound herein.

10 14 00 CODE REQUIRED SIGNAGE

SCOPE OF WORK

Furnish signage as specified and shown on the Drawings, including but not limited to: ADA compliant parking signs, Braille and raised-text signs for accessible entrances, fire-fighting equipment, toilet rooms, and mechanical rooms, as required by the International Building Code 2015, the Americans with Disabilities Act, and all other applicable codes. Installation is included under Section 06 20 00.

SHOP DRAWINGS

Submit as specified in Section 01 33 23.

MATERIALS

- A. Exterior parking signage: Shall be as shown on the Drawings and required by code and shall be '12x18 Diamond Grade' by TrafficSigns.com (<https://www.trafficsigns.com/r7-8-ky-kentucky-handicap-parking-signs>), Earl F. Andersen, Inc., Lakeville, Minnesota (<http://www.efa-mn.com/signs/> phone: 1-800-862-6026) or approved equivalent.
- B. Interior signage: Shall be as shown on the Drawings and required by code (e.g. occupancy signage, accessibility signage, egress and fire protection signage, etc. See relevant code sections listed below under Installation); per Building and Office Sign Company (www.officesigncompany.com) or approved equivalent.
1. Toilet Room Signs: Shall be "Premium Braille ADA 9"x9" Office Sign' with black text on 'Brushed Silver' background (officesigncompany.com/Cool_ADA_Signs.aspx) by Office Sign Company, or approved equivalent.
 2. Stair Signs: Shall be "Premium Braille ADA Stairs 6"x9" Office Sign' with black text on 'Brushed Silver' background (officesigncompany.com/stairs-sign-braille.aspx) by Office Sign Company, or approved equivalent.
 3. Mechanical Room and Assembly Occupancy Signs: shall be 'ADA Contemporary Braille Signs with Metal Finish' (officesigncompany.com/braille-office-signs.aspx), by Office Sign Company, or approved equivalent.

INSTALLATION

See IBC Sections: 905.7.1, 1004.3, 1009.9, 1009.11, 1010.1.9.3, 1013.1, 1111 and ICC A117.1

END OF SECTION

10 14 33 ILLUMINATED SIGNAGE

SCOPE OF WORK

Furnish all internally-illuminated monument-mounted, internally illuminated post and panel (or cabinet) signs, as specified and shown on the Drawings.

1. Base bid shall include 2-sided cabinet sign with BRONZE baked enamel aluminum case and BRONZE baked enamel aluminum faces with laser-cut lettering to reveal frosted acrylic layer behind.
2. Add Alternate #1 shall downgrade the 2 laminated acrylic faces to frosted acrylic faces with backlit solid lettering laminated into face.

SHOP DRAWINGS

Submit as specified in Section 01 33 23.

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes the following:

1. Base bid shall include 2-sided cabinet sign with BRONZE baked enamel aluminum case and frosted acrylic faces with backlit solid lettering laminated into face.
2. Add Alternate #1 shall upgrade the 2 laminated acrylic faces to BRONZE baked enamel aluminum faces with laser-cut lettering to reveal frosted acrylic layer behind.

1.2 PERFORMANCE REQUIREMENTS

A. Structural Performance: Provide panel signs capable of withstanding the effects of gravity loads and the following loads and stresses within limits and under conditions indicated:

1. Wind Loads: Determine loads based on governing codes.
2. Seismic Performance: Determine loads based on governing codes.

B. Thermal Movements: Provide panel signs that allow for thermal movements resulting from the following maximum change (range) in ambient and surface temperatures by preventing buckling, opening of joints, overstressing of components, failure of connections, and other detrimental effects. Base engineering calculation on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.

1. Temperature Change (Range): 120 deg F (67 deg C), ambient; 180 deg F (100 deg C), material Surfaces.

DIVISION 10 SPECIALTIES

1.3 SUBMITTALS

- A. Submit as specified in Section 01 33 23. Provide product Data: For each type of product indicated.
- B. Shop Drawings: Show fabrication and installation details for post and panel/cabinet signage.
1. Include plans, elevations, sections, details, and attachments to other work.
 2. Provide message list, typestyles, graphic elements, and layout for each sign at least half size and full-size details of graphics.
 - a. Include full-size templates for cutout characters and graphic symbols.
 3. Show locations of electrical service connections.
 4. For installed products indicated to comply with design loads, include structural analysis data a signed and sealed by the qualified professional engineer responsible for their preparation.
- C. Samples for Initial Selection: Manufacturer's color charts consisting of actual units or sections of units showing the full range of colors available for the following:
1. Aluminum.
 2. Acrylic sheet.
 3. Die-cut vinyl characters and graphic symbols. Include representative samples of available typestyles and graphic symbols.

1.4 QUALITY ASSURANCE

- A. Source Limitations for Signs: Obtain each sign type indicated from one source from a single manufacturer.
- B. Regulatory Requirements: Comply with applicable provisions in ADA-ABA Accessibility Guidelines and ICC A117.1. C. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.

1.5 PROJECT CONDITIONS

- A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit installation of signs to be performed according to manufacturers' written instructions and warranty requirements.
- B. Field Measurements: Indicate measurements on Shop Drawings.

1.6 COORDINATION

- A. Coordinate installation of anchorages for post and panel/pylon signage. Furnish setting drawings, templates, and directions for installing anchorages and other items that are to be embedded in concrete.

1.7 WARRANTY

A. Manufacturer's Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of post and panel and pylon signs that fail in materials or workmanship within specified warranty period.

1. Failures include, but are not limited to, the following:
 - a. Deterioration of metal and polymer finishes beyond normal weathering.
 - b. Deterioration of embedded graphic image colors and sign lamination.

2. Warranty Period: Five years from date of Substantial Completion.

B. Sign contractor / vendor warranty.

1. Warranty Period: 2 years for labor and installation from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Aluminum Sheet and Plate: ASTM B 209 (ASTM B 209M), alloy and temper recommended by aluminum producer and finisher for type of use and finish indicated, and with at least the strength and durability properties of Alloy 5005-H32.

B. Aluminum Extrusions: ASTM B 221 (ASTM B 221M), alloy and temper recommended by aluminum producer and finisher for type of use and finish indicated, and with at least the strength and durability properties of Alloy 6063-T5.

C. Steel:

1. Galvanized Steel Sheet: ASTM A 653/A 653M, G90 (Z275) coating, either commercial or forming steel.
2. Steel Sheet: electrolytic zinc-coated, ASTM A 591/A 591M, with steel sheet substrate complying with ASTM A 1008/A 1008M, commercial steel, exposed.
3. Hot-Rolled Structural-Steel Shapes: ASTM A 36/A 36M or ASTM A 529/A 529M.
4. Steel Tubing or Pipe: ASTM A 500, Grade B.
5. Steel Members Fabricated from Plate or Bar Stock: ASTM A 529/A 529M or ASTM A 572/A 572M, 42,000-psi (290-MPa) minimum yield strength.
6. Bolts for Steel Framing: ASTM A 307 or ASTM A 325 (ASTM A 325M) as necessary for design loads and connection details.
7. For steel exposed to view on completion, provide materials having flat, smooth surfaces without blemishes. Do not use materials whose surfaces exhibit pitting, seam marks, roller marks, rolled trade names, or roughness.

D. Acrylic Sheet: ASTM D 4802, Category A-1 (cell-cast sheet), Type UVA (UV absorbing).

E. Applied Vinyl: Die-cut characters from vinyl film of nominal thickness of 3 mils (0.076 mm) with pressure-sensitive adhesive backing, suitable for exterior applications.

DIVISION 10 SPECIALTIES

F. Colored Coatings for Acrylic Sheet: For copy and background colors, provide colored coatings, including inks, dyes, and paints, that are recommended by acrylic manufacturers for optimum adherence to acrylic surface and that are UV and water resistant for five years for application intended.

1. Custom Paint Colors: Match Pantone color matching system.

G. Color: As selected from manufacturer's full range.

2.2 POST AND PANEL / CABINET SIGNS

A. Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

1. Allen Industries Architectural Signage.
2. APCO Graphics, Inc.
3. Best Sign Systems Inc.
4. Bunting Graphics, Inc.
5. Howard Industries Architectural signage
6. Innerface Architectural Signage, Inc
7. Signature Signs, Incorporated.
8. Supersine Company (The).
9. Vomar Products, Inc.

2.3 PANEL SIGNS

A. Sign Message Panels: Provide smooth sign panel surfaces constructed to remain flat under installed conditions within a tolerance of plus or minus 1/16 inch (1.5 mm) measured diagonally from corner to corner.

1. Coordinate dimensions and attachment methods to produce message panels with closely fitting joints. Align edges and surfaces with one another in the relationship indicated.
2. Increase metal thickness or reinforce with concealed stiffeners or backing materials as needed to produce surfaces without distortion, buckles, warp, or other surface deformations.
3. Continuously weld joints and seams unless other methods are indicated; grind, fill, and dress welds to produce smooth, flush, exposed surfaces with welds invisible after final finishing.

B. Message Panel Materials:

1. Aluminum Sheet: 0.080 inch (2.03 mm) thick.
 - a. Panel Finish: Baked enamel or Class I, color anodic finish.
 - b. Color: As selected from manufacturer's full range.
2. Composite Aluminum-Faced Sheet: 0.020-inch- (0.51-mm-) thick, aluminum sheet facings laminated to each side of 0.394-inch- (10.0-mm-) thick, phenolic core.
 - a. Panel Finish: Baked enamel or Class I, color anodic finish.
 - b. Color: As selected from manufacturer's full range.

3. Acrylic Sheet: Translucent or Opaque 0.250 inch (6.354 mm) thick.

- a. Color: As selected from manufacturer's full range.

4. Edge Condition: Square cut

5. Corner Condition: Square.

6. Color: As selected from manufacturer's full range.

C. Laminated Panel Signs: Solid phenolic panel core with graphic image covered with thermosetting resin face layer.

1. Surface Finish: As indicated, UV resistant, outdoor.
2. Edge Condition: As indicated.
3. Corner Condition: As indicated.
4. Thickness: 1/4 inch (6 mm).

D. Panel Sign Frames:

1. Extruded-Aluminum Frames: Mitered with concealed anchors and welded.
2. Steel Sheet: Painted, not less than 0.050 inch (1.27 mm) thick for face and 0.031 inch (0.78 mm) thick for returns.
 - a. Color: As selected from manufacturer's full range.

E. Hollow-Box-Type Panel Signs: Frame message panel with formed aluminum sheet or extruded hollow-box-type frame with ends flanged to engage slots in posts or attached to posts with extruded-aluminum fittings. Close top and bottom edges of panels with manufacturer's standard welded seams or extrusions.

1. Message Panel Materials:

- a. Aluminum Sheet: 0.080 inch (2.03 mm) thick.
 - 1) Panel Finish: Baked enamel Class I, color anodic finish.
 - 2) Color: As selected from manufacturer's full range.
- b. Composite Aluminum-Faced Panel: 0.020-inch- (0.51-mm-) thick, aluminum sheet facings laminated to each side of 0.394-inch- (10.0-mm-) thick, phenolic core.
 - 1) Panel Finish: [Baked enamel or Class I, color anodic finish.
 - 2) Color: As selected from manufacturer's full range.
- c. Acrylic Sheet: Translucent or Opaque 0.250 inch (6.354 mm) thick.
 - 1) Color: As selected manufacturer's full range.

2. Hollow-Box Depth: As indicated on drawings.

- a. Corner Condition: As indicated.
- b. Finish: As indicated.
- c. Color: As selected from manufacturer's full range.

3. Mounting: As indicated.

- a. Manufacturer's standard non-corroding anchors for substrates encountered.
- b. Provide clips welded to back of panels for installation without visible fasteners.

4. Illuminated-Sign Units: Manufacturer's standard lighting including transformers, insulators, and other components. Make provisions for servicing and concealing connections to building electrical system.

2.4 POSTS

DIVISION 10 SPECIALTIES

- A. General: Fabricate posts to lengths required for mounting method indicated.
1. Direct-Burial Method: Provide posts 36 inches (910 mm) longer than height of sign to permit direct embedment in concrete foundations.
 2. Baseplate Method: Provide posts with baseplates, flanges, or other fittings, welded to bottom of posts. Drill holes in baseplate for anchor-bolt connection.
 - a. Provide anchor bolts of size required for connecting posts to concrete foundations.
 3. Reverse Sleeve Method: Provide inserts recommended by manufacturer, sized for close fit inside posts. Size inserts for direct embedment in concrete foundations and to attach sign posts securely and prevent sign from overturning when subjected to normal loading conditions prevailing at Project site, but not less than 1/3 of post height plus 36 inches (910 mm) for embedment. Drill posts and inserts for through bolts for fastening them together.
 - a. Provide bolts for fastening posts to inserts.
- B. Aluminum Posts: Manufacturer's standard 0.125-inch- (3.18-mm-) thick, extruded-aluminum tubing, with vertical slots to engage sign panels. Provide stop blocks in slots to hold panels in position. Include post caps, fillers, spacers, junction boxes, access panels, and related accessories required for complete installation.
1. Square Posts: As indicated on drawings.
 2. Rectangular Posts: As indicated on drawings.
 3. Post Finish: Match sign panel face.
 4. Color: As selected from manufacturer's full range.
- C. Steel Posts: Fabricate from 0.120-inch- (3.05-mm-) thick, square steel tubing. Include post caps, fillers, spacers, junction boxes, access panels, and related accessories required for complete installation. Hot-dip galvanized post assemblies after fabrication to comply with ASTM A 123/ A 123M.
1. Post Size: As indicated on drawings.
 2. Post Finish: Baked enamel matching sign panel face.
 3. Color: As selected from manufacturer's full range.

2.5 ACCESSORIES

- A. Anchors and Inserts: Provide nonferrous-metal or hot-dip galvanized anchors and inserts for exterior installations and elsewhere as required for corrosion resistance. Use toothed steel or lead expansion-bolt devices for drilled-in-place anchors. Furnish inserts, as required, to be set into concrete or masonry work.

2.6 FABRICATION

- A. General: Provide manufacturer's standard post and panel pylon signs of configurations indicated.
1. Welded Connections: Comply with AWS standards for recommended practices in shop welding. Provide welds behind finished surfaces without distortion or discoloration of exposed side. Clean exposed welded surfaces of welding flux and dress exposed and contact surfaces.
 2. Mill joints to tight, hairline fit. Form joints exposed to weather to exclude water penetration.
 3. Preassemble signs in the shop to greatest extent possible. Disassemble signs only as necessary for shipping and handling limitations. Clearly mark units for reassembly and installation, in location not exposed to view after final assembly.
 4. Conceal fasteners if possible; otherwise, locate fasteners where they will be inconspicuous.

DIVISION 10 SPECIALTIES

2.7 FINISHES, GENERAL

- A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
- B. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.
- C. Appearance of Finished Work: Variations in appearance of abutting or adjacent pieces are acceptable if they are within one-half of the range of approved Samples. Noticeable variations in the same piece are not acceptable. Variations in appearance of other components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

2.8 ALUMINUM FINISHES

- A. Baked-Enamel Finish: AA-C12C42R1x
(Chemical Finish: cleaned with inhibited chemicals; Chemical Finish: acid-chromate-fluoride-phosphate conversion coating; Organic Coating: as specified below). Apply baked enamel complying with paint manufacturer's written instructions for cleaning, conversion coating, and painting.
 - 1. Organic Coating: Thermosetting, modified-acrylic enamel primer/topcoat system complying with AAMA 2603 except with a minimum dry film thickness of 1.5 mils (0.04 mm), medium gloss.

2.9 STEEL FINISHES

- A. Surface Preparation: Remove mill scale and rust, if present, from uncoated steel, complying with SSPCSP 5/NACENo. 1, "White Metal Blast Cleaning," or SSPC-SP 8, "Pickling."
- B. Factory Priming for Field-Painted Finish: Apply shop primer specified below immediately after surface preparation and pretreatment.
 - 1. Shop Primer: Manufacturer's or fabricator's standard, fast-curing, lead- and chromate-free, universal primer, selected for resistance to normal atmospheric corrosion, for compatibility with substrate and fieldapplied finish paint system indicated, and for capability to provide a sound foundation for field-applied topcoats despite prolonged exposure.
- C. Baked-Enamel Finish: Immediately after cleaning and pretreating, apply manufacturer's standard two-coat, baked-enamel finish consisting of prime coat and thermosetting topcoat. Comply with paint manufacturer's written instructions for applying and baking to achieve a minimum dry film thickness of 2 mils (0.05 mm).

PART 3 - EXECUTION

DIVISION 10 SPECIALTIES

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of work.
- B. Verify that items, including anchor inserts, and electrical power are sized and located to accommodate signs.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. Excavation: Excavate for sign foundation to elevations and dimensions indicated. Reconstruct subgrade that is not firm, undisturbed, or compacted soil, or that is damaged by freezing temperatures, frost, rain, accumulated water, or construction activities by excavating a further 12 inches (300 mm), backfilling with satisfactory soil, and compacting to original subgrade elevation.
 - 1. Excavate hole depths approximately 39 inches (990 mm)] below finished grade.
- B. Set anchor bolts and other embedded items required for installation of signs. Use templates furnished by suppliers of items to be attached.
 - 1. Protect portion of posts, inserts, pylons above ground from concrete splatter.
- C. Locate signs and accessories where indicated, using mounting methods of types described and complying with manufacturer's written instructions.
 - 1. Install signs level, plumb, and at heights indicated, with sign surfaces free of distortion and other defects in appearance.
 - 2. Mechanical Fasteners: Use non-removable mechanical fasteners placed through predrilled holes. Attach signs with fasteners and anchors suitable for secure attachment to substrate as recommended in writing by sign manufacturer.

3.3 CLEANING AND PROTECTION

- A. After installation, clean soiled sign surfaces according to manufacturer's written instructions. Protect signs from damage until acceptance by Owner

END OF SECTION

10 21 13 TOILET PARTITIONS

SCOPE OF WORK

Furnish all toilet partitions and related items as indicated on the Drawings and as herein specified. Installation is under Section 06 20 00.

SUBMITTALS

Submit shop drawings showing partition layout and conditions with instructions for installation, per Section 01 33 23.

MANUFACTURER

Units shall be complete assemblies as manufactured by Accurate, American Sanitary, General Partition, Global, Metpar, or Sanymetal meeting the specification for overhead braced floor-mounted units.

MATERIALS

- A. Minimum Zinc Galvanizing: .00015 each side
- B. Pilasters: 1-1/4" thick, 20 gauge
- C. Flush Partitions: 1" thick minimum 22 gauge
- D. Flush Doors: minimum 22 gauge
- E. Brackets: minimum 2 1/2" deep anodized aluminum stainless fasteners
- F. Partition, Door, and Stile Corners: galvanized, stainless steel cover
- G. Steel: galvanized, bonderized stretches leveled furniture steel
- H. Bases and Caps: stainless steel
- I. Grab Bars: provide reinforcement necessary to support grab bars
- J. Toilet Paper Holder: each stall equal to Bobrick B-686 (B-2740 in school applications)
- K. Urinal Screen: wall mounted, 24" x 42", same material and finish as toilet partitions
- L. Coat Hook: each stall to have a stainless steel coat hook with rubber bumper

FINISH

Clean and degrease and apply on rust-inhibitive prime bonding paint coat and one or more finish coats of synthetic baking enamel electrostatically applied and baked at high temperature.

DIVISION 10 SPECIALTIES

HARDWARE

All operating hardware shall be chrome plated hardware or stainless steel, other hardware anodized aluminum.

- A. Hinges: shall be gravity type, surfaced mounted

- B. Latch: shall be positive privacy lift-free latch, brass with stainless bolt, emergency access feature, rubber bumper, and rubber tipped bumper coat hook.

END OF SECTION

10 28 13 TOILET ACCESSORIES

SCOPE OF WORK

Furnish and install all toilet accessories, including shower accessories as shown on the Drawings and as specified in this Division.

MATERIALS

- A. Grab bars: 1-1/2" diameter stainless steel, equal to Bobrick B-6806 series or Gamco, sizes shown on Drawings.
- B. Surface mounted toilet paper holder equal to Bobrick B-686 (Rooms #104 & #105).
- C. Mirrors (including tilted, ADA-compliant at accessible lavatories) of sizes as shown on Drawings.
- D. Soap dispenser to be Bobrick B-8226 (in counter), liquid. Provide (1) per lavatory.
- E. All other accessories by Owner.

INSTALLATION

Install in accordance with the Drawings, manufacturer's recommendations, and state and local codes. Shop drawings are required. See Section 01 33 23.

END OF SECTION

10 44 13 FIRE EXTINGUISHER CABINETS

SCOPE OF WORK

Furnish all fire extinguisher cabinets as shown on the Drawings. Installation is under Section 06 20 00.

MATERIALS

J.L. Industries, Ambassador 1017F10, with 3" rolled trim, semi-recessed or approved equal. Cabinet shall have a painted steel frame and full size glass window in door.

INSTALLATION

Install in wall recess as shown on Drawings and in accordance with manufacturer's recommendations. Shop drawings are required. See Section 01 33 23.

END OF SECTION

10 57 13 COAT RACKS

SCOPE OF WORK

Furnish all coat racks as shown on drawings and specified herein. Installation under Section 06 20 00.

MATERIALS

- A. Wall mounted coat rack; DS-H Series, single rod and tubular steel shelf rails, as manufactured by Magnuson Group. Woodridge, Illinois, 1-888-329-5275, www.magnusongroup.com. The construction shall be one piece welded tubular steel shapes, powder-coated bronze metallic finish, rectangular tube mounting brackets, (4)-tubular steel shelf rails and (1)- 1" diameter tubular steel hanger rod.

- B. Wall mounted coat rack with hooks; DS-K Series, tubular steel shelf rails with coat hooks, as manufactured by Magnuson Group. Woodridge, Illinois, 1-888-329-5275, www.magnusongroup.com. The construction shall be one piece welded tubular steel shapes, powder-coated bronze metallic finish, rectangular tube mounting brackets, (4)-tubular steel shelf rails with triple-prong powder-coated steel coat hooks spaced per manufacturer's specifications (approx 2 hooks per linear foot).

INSTALLATION

Mount directly to wall as per manufacturer's recommendations. See Drawings for location of accessible coat rack and mounting heights. Provide finished end caps for all coat racks with exposed ends.

END OF SECTION

DIVISION 32 SITE IMPROVEMENTS

GENERAL REQUIREMENTS

Instructions to Bidders; Division 0, Conditions of the Contract; and Division 1, General Requirements, are part of this division and the Specification as if bound herein.

31 22 00 SITE GRADING

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

- B. Grading Outside Building Lines
 - 1. Grade areas adjacent to building lines to drain away from structure and to prevent ponding.

- C. Walks
 - 1. Shape surface of areas under walks to line, grade and cross-section, with finish surface not more than 2" above or below required subgrade elevation.

- D. Pavements
 - 1. Shape surface of areas under pavement to line, grade and cross-section, with finish surface not more than 1" above or below the required subgrade elevation.

- E. Grading Surface of Fill under Building Slabs
 - 1. Grade, smooth and even, free of voids, compacted as specified, and to required elevation. Provide final grades within a tolerance of 1" above or below required subgrade elevation.

- F. Reconditioning Compacted Areas
 - 1. Where completed areas are disturbed by subsequent construction operation or adverse weather, scarify surface, reshape, and compact to required density prior to further construction.

- G. The earthwork contractor shall be responsible to provide material as necessary to install and maintain job site access roads and any erosion control measures required by code.

END OF SECTION

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31 23 00 EXCAVATING, BACKFILL AND COMPACTION

SCOPE OF WORK

The excavation contract shall include excavation of basement, footings and foundation areas; testing of soil bearing capacity at footings; backfill and fill; placement and compaction; drain pipe and sump pit.

Related Sections:

Section 00 41 13 Description of Unit Prices on Bid Form
Section 01 45 23 Testing
Section 32 93 00 Landscaping

A. Excavating

1. Excavation consists of removal and/or disposal of material encountered to obtain substrate elevations. Refer to soil boring report and conform to recommendations given.
2. Take precautions to prevent slides or cave-ins when excavations are made in locations and adjacent to backfilled excavations, when sides of excavations are subjected to vibrations from the operation of machinery, or any other source.
3. Perform earthwork in a manner to prevent surface water and subsurface or groundwater from flowing into excavations, and to prevent water from flooding project site and surrounding area.
4. Do not allow water to accumulate in excavations. Remove water by using dewatering methods which will prevent softening of foundation bottoms, undercutting of footings, and soil changes detrimental to stability of subgrades and foundation. Furnish and maintain pumps, sumps, suction and discharge lines, and other dewatering system components necessary to convey water away from excavations.
5. Dispose of excess soil material and waste materials such as unsatisfactory excavated soil material, trash and debris.
6. Excavation for Structures
 - a. Conform to elevations and dimensions shown within a tolerance of plus or minus 0.10', and extending a sufficient distance from footings and foundations to permit placing and removal of concrete formwork, installation of services, other construction required, and for inspection.
 - b. In excavating for footings and foundation, take care not to disturb bottom of excavation. Excavate by hand to final grade just before concrete is placed. Trim bottoms to required lines and grades to leave solid base to receive concrete.

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- c. After footings and foundation walls have been placed, the excavation contractor shall backfill and compact up to underside of slab on grade with an approved granular fill.
 7. Excavation for other trades: Excavation for subcontractors such as plumbing, heating and electrical contractors will be done by the respective contractor.
- B. Testing
 1. Excavation contract shall include testing of soils at footings to verify bearing capacity to conform to design requirements of Structural Drawings and Specifications.
- C. Backfill and Fill
 1. Where fill is required to raise the existing grades outside of building areas to the new subgrade elevation indicated on Drawings, the excavation contractor shall furnish, haul, spread and compact earth as shown and as necessary, all according to the following recommendations. The quality of fill material shall be approved by the Architect.
 2. Remove debris subject to termite attack, rot, corrosion and all other deleterious materials from areas to be filled. Prior to placing fill material, the surface of the ground shall be scarified to a depth of 6" and the moisture content of the loosened material shall be such that it will readily bond with the first layer of fill material.
 3. Backfill excavations as promptly as work permits, but not until completion of the following:
 - a. Inspection, testing approval and recording locations of underground utilities.
 - b. Removal of concrete formwork.
 - c. Removal of trash and debris.
 4. Fill Material
 - a. Furnish naturally or artificially graded mixture of natural or crushed gravel, crushed stone, natural or crushed sand, as acceptable to the General Contractor.
 - b. Furnish for placement over areas excavated for footing bearing, below slabs-on-grade, and under paved areas to be filled as hereafter noted.
 - c. Fill under grassed areas, walks, and pavements.
 - d. Furnish for raising substrate, generally beyond building foundation lines. Furnish acceptable soil materials for backfill and fill, free of clay, rock or gravel larger than 2" in any dimension, debris, waste, frozen material, vegetable material, and other deleterious material. Excavated material may be used for this material.
 - e. Stockpile existing topsoil and regrade to 4" depth over all disturbed area for final grading. If sufficient existing topsoil is not available to reach 4"

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depth then distribute evenly that which is available or furnish new if required in Section 32 93 00 Landscaping.

D. Placement and Compaction

1. Place backfill and fill materials in layers not more than 8" in loose depth. Compact each layer to required percentage of maximum density for each area classification. Do not place backfill or fill material on surfaces that are muddy, frozen, or contain frost or ice.
2. Control soil compaction during construction for compliance with percentage of maximum density specified for each area classification.
3. Furnish not less than the following percentages of maximum density of the same soil material compacted at optimum moisture content, for the actual density of each layer of soil material in place.
 - a. Structures
 - I. Proof roll subgrade and each layer of backfill or fill material at 95% maximum density, determined by the standard Procter (ASTM D698).
 - b. Building Slabs and Steps
 - I. 98% maximum density for each layer of backfill or fill material.
 - c. Lawn or Unpaved Areas
 - I. 90% maximum density for each layer of backfill or fill material.
 - d. Pavements
 - I. Proof roll substrate and each layer of backfill or fill material to 95% maximum density.
4. Where subgrade or layer of soil material must be moisture conditioned before compaction, uniformly apply water to surface of subgrade, or layer of soil material, to prevent free water appearing on surface during subsequent to compaction operations.
5. Remove and replace, or scarify and air dry, soil material that is too wet to permit compaction to specified density.
6. Compaction density will be verified by soil compaction tests performed as required by an approved testing agency. Cost of compaction tests will be charged to the subcontractor doing the affected soil work.

E. Foundation Drain Tile and Sump Pit

1. Excavation contractor to furnish and install foundation drain pipe and sump pit as shown in architectural, structural, and/or mechanical drawings.

END OF SECTION

31 31 16 TERMITE CONTROL

PART 1 - GENERAL

SCOPE OF WORK

Provide chemical termite control treatment at soils below slabs and at foundations around all building perimeters to 5'-0" outside of building footprint. Treatment to be applied by properly licensed/certified applicator to meet Manufacturer's requirements and the requirements of all local, state and federal agencies having regulatory authority over the project.

Related Sections:

Section 31 22 00 Site Grading
Section 31 23 00 Excavating, Backfill, and Compaction
Section 32 93 00 Landscaping

PART 2 – PRODUCTS

2.1 MATERIALS

- A. Emulsible Concentrate Termiticide shall be one of the following approved products (or equivalent if approved by Architect):
1. Demon TC by Syngenta
 2. Dursban TC by Dow AgroSciences
 3. Permethrin SFR by Control Solutions, Inc
 4. Premise 75 by Bayer Environmental Science
 5. Prevail FT by FMC Corporation
 6. Permethrin SFR by Control Solutions, Inc
 7. Prevail FT by FMC Corporation
 8. Termidor by BASF Corporation
- B. The termiticide shall be selected to be compatible with soil and climactic conditions at the site.

2.1 MIX

- A. Termiticide shall be mixed at the Manufacture's maximum recommended concentration with WATER ONLY. Petroleum products, oils, or other chemicals shall NOT be used to dilute the product.

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PART 3 – EXECUTION

3.1 PREPARATION

- A. Protection:
1. Do not treat soil that is frozen or water-saturated.
 2. Take measures and use procedures to prevent overflow or backflow to protect personnel, neighboring sites, and water sources from contamination.
 3. Identify locations of any under-slab floor ducts, vents, sewer or water lines, and take precautions to avoid contaminating these areas.
 4. Place warning signage/flags at locations treated with toxicant.
 5. Apply toxicant at least 12 hours prior to resumption of construction activities and The installation of vapor barriers in order to allow drying. Remove warning signage/flags at areas where toxicant has been applied, only after it has dried or been encapsulated in subsequent construction.
- B. Safety Documentation: In case of spillage or accident, contractor shall keep on site information/documentation of:
1. Product of type of chemical used (MSDS)
 2. Concentrations and locations applied
 3. Contact information for authorities that shall be contacted

3.2 APPLICATION

- A. For areas to be treated, establish complete and unbroken vertical and horizontal soil poison barriers between the soil and all portions of the intended structure which may allow termite access to wood and wood related products. Make applications to crawl spaces in accordance with label directions. Applications to crawl space areas that are used as plenum air spaces will not be permitted.
- B. Use approved toxicant/chemical as water emulsion in the maximum concentration as specified by manufacturer and as appropriate for permeability of soil, to ensure consistent concentration of insecticide in soils where applied.
- C. Application Methods:
1. Surface Application: Use surface application for establishing horizontal barriers. Apply surface applicants as a coarse spray and provide uniform distribution over the soil surface. Termiticide must penetrate a minimum of 25 mm 1 inch into the soil, or as recommended by the manufacturer. If soils are treated to a depth less than specified or approved, repeat work performed to the depth specified at no additional cost to the Owner.

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2. Rodding and Trenching: Use rodding and trenching for establishing vertical soil barriers. Trenching must be to the depth of the foundation footing. Width of trench must be as recommended by the manufacturer, or as indicated. Rodding or other approved method may be implemented for saturating the base of the trench with termiticide. Backfill the trench immediately after termiticide has reached maximum penetration as recommended by the manufacturer. If maximum penetration is not achieved, as recommended by the manufacturer, repeat work performed to maximum penetration as recommended by the manufacturer at no additional cost to the Owner. Backfill in 6 inch rises or layers. Treat each rise or layer with termiticide.

3.3 DISTURBANCE OF TREATED SOILS

Re-treat soil and fill material disturbed after treatment before placement of slabs or other covering structures.

3.4 CLEAN UP

- A. Clean the site of all material associated with the treatment measures, according to label instructions, and as indicated. Remove and dispose of excess and waste material off Government property.
- B. Dispose of residual termiticides and containers off OF Owners property, and in accordance with label instructions and EPA criteria.

END OF SECTION

32 10 00 PAVING

SCOPE OF WORK

Parking lot areas, where shown on Drawings, shall be graded and paved to drain property and to conform to the contours shown. Striping of parking stalls and access aisle markings will be provided.

MATERIAL

- A. Paving sub-base shall be: 8" thickness of compacted DGA (dense graded aggregate).
- B. Asphalt Base coat and Surface coat shall be in conformance with KYTC Standard Specifications and Kentucky Department of Highways Hot-Mix Asphalt Bid Item Selection List (items cited below). See Civil Engineered Drawings for thicknesses of each.
 - 1. Base Coat mixture: CL2 ASPH Base 1.00D PG64-22 (item code 00212)
 - 2. Surface Coat mixture: CL2 ASPH Surf 0.38B PG64-22 (item code 00307)
- C. Parking lot striping shall be by paving contractor. Stripes shall be 4" wide, white reflective paint, and shall include accessibility symbol at accessible stalls, hatching and 8" high "NO PARKING" lettering at accessible parking stall access lanes.

EXECUTION

- A. General: All rock and asphalt operations shall meet the requirements of the current addition of the KYTC Standard Specification Book.
- B. Compaction:
 - 1. Subgrade and base shall be compacted as noted on Civil Drawings, and shall comply with the following section of the KYTC Standard Specification:

206.03.03 Compaction. Compact the embankment foundations and embankment to a density of at least 95 percent of maximum density as determined according to KM 64-511. The Engineer will check density according to KM 64-002. During compaction, maintain the moisture content of embankment or subgrade material within ± 2 percent of the optimum moisture content as determined according to KM 64-511. Compact each lift as required before depositing material for the next lift. Provide equipment that will satisfy the density requirements at all times. Run the hauling equipment, as much as possible, along the full width of the cross section
 - 2. Follow all recommendations of the attached geotechnical evaluation.

DIVISION 2 SITE WORK

3. As the geotechnical evaluation does not comprehensively cover all areas to be paved, the condition of the existing subgrade may vary. In areas to receive new asphalt paving, prior to placing rock, all areas shall be run over with fully loaded, single axle dump truck, in both directions. Any areas that rut shall be removed and replaced with either rock or select fill and the process repeated until no ruts are evident.

- C. Thoroughly clean all asphalt before application of striping.

END OF SECTION

32 31 13 CHAIN LINK FENCES AND GATES

SCOPE OF WORK

Fenced areas, where shown on Drawings, shall be enclosed with vinyl-coated galvanized chain link fencing fabric with vinyl privacy slats and prefinished tubular steel fence framing/posts and lockable gates with all hinges and hardware shall be provided and installed in accordance with the Drawings and this section.

MATERIAL

- A. Fence Fabric – Shall be Polymer Coated Steel Fabric with 2” mesh and 9 gauge wire: ASTM F668, wire gauge specified is that of the metallic coated steel core wire.
- B. Tubular Steel Pipe Posts/Framing: Shall be Schedule 40 standard weight pipe, in accordance with ASTM F1083, 1.8 oz/ ft² (550 g/m²) hot dip galvanized zinc exterior and 1.8 oz/ft² (550 g/m²) hot dip galvanized zinc interior coating.
 - 1. Line, End, Corner, Pull posts shall be 3 in. nominal outside dimension.
 - 2. Top, brace, and intermediate rails shall be 1 5/8 in. nominal outside dimension.
- C. Coating at Pipe Posts/Framing: Shall be polymer coated pipe with a PVC or Polyester coating fused and adhered to the exterior zinc coating of the galvanized pipe in accordance with ASTM F1043. The minimum thickness of the PVC coating shall be 10-mils (0.254 mm), for polyester 3 mils (0.0076 mm). Color to match fabric (as selected by Owner and Architect from Manufacturer’s standard selection) per ASTM F934.
- D. Tension Wire: Shall be Polymer Coated Steel Tension Wire with 7 gauge core (0.177 in.) complying with ASTM F1664.
- E. Fittings: All fittings shall be polymer coated in compliance with ASTM F626, minimum coating thickness 0.006 in. (0.152 mm) fused and adhered to the zinc coated fittings. Color to fence system.
- F. Privacy Slats: Shall be extruded PVC in color to fence system.
- G. Swing Gates and Hardware: Galvanized steel pipe welded fabrication in compliance with ASTM F900. Gate frame members to be 2 in. nominal outside dimension (ASTM F 1083 schedule 40 galvanized steel pipe). Welded joints to be protected by applying zinc-rich paint in accordance with ASTM Practice A780. Positive locking gate latch, pressed steel galvanized after fabrication. Galvanized malleable iron or heavy gauge pressed steel post and frame hinges.

DIVISION 2 SITE WORK

EXECUTION

- A. General: Surveying, clearing, grubbing, grading and removal of debris for the fence line or any required clear areas adjacent to the fence are included in the earthwork contractor's contract under the provisions of Division 31 - Earthwork. However, it is the responsibility of the fence contractor to verify and correct the conditions as necessary to install the fence system per Drawings and this specification. The contract drawings indicate the extent of the area to be cleared and grubbed. Shop drawings and product submittal are required.
- B. Framework Installation: Posts shall be set plumb in concrete footings in accordance with ASTM F567. Minimum footing depth shall be 24 in. plus an additional 3 in. depth for each 1 ft. increase in the fence height over 4 ft. Minimum footing diameter four times the largest cross section of the post up to a 4 in. dimension. Local codes, site soil conditions, local frost depth, fence height and wind load may require larger diameter or deeper footings - See Chain Link Manufactures Institute – Product Guide and Wind Load Guide CLFMI: WLG 2445. Top of concrete footing to be 6 inches below grade and posts to be installed BEFORE concrete patio slab. Line posts shall installed at intervals not exceeding 8ft. on center.
- C. Top rail: Install 21 ft. lengths of rail continuous thru the line post or barb arm loop top. Splice rail using top rail sleeves minimum 6 in. long. Rail shall be secured to the terminal post by a brace band and rail end. Bottom rail or intermediate rail shall be field cut and secured to the line posts using boulevard clamps or brace band with rail end.
- D. Terminal posts: End, corner, pull and gate posts shall be braced and trussed for fence 6 ft. and higher and for fences 5 ft. (1.5 m) in height not having a top rail. The horizontal brace rail and diagonal truss rod shall be installed in accordance with ASTM F567.
- E. Tension wire: Shall be installed 4 in. up from the bottom of the fabric. Tension wire to be stretched taut, independently and prior to the fabric, between the terminal posts and secured to the terminal post using a brace band. Secure the tension wire to each line post with a tie wire.
- F. Chain Link Fabric: Install fabric to outside of the framework maintaining a ground clearance of no more than 2 inches. Attach fabric to the terminal post by threading the tension bar through the fabric; secure the tension bar to the terminal post with tension bands and 5/16 in. carriage bolts spaced no greater than 12 inches on center. Chain link fabric to be stretched taut free of sag. Fabric to be secured to the line post with tie wires spaced no greater than 12 inches on center and to horizontal rail spaced no greater than 18 inches on center. Secure the fabric to the tension wire by crimping hogs rings around a fabric wire picket and tension wire.

DIVISION 2 SITE WORK

- G. **Swing Gates:** Installation of swing gates and gateposts shall be in compliance with ASTM F 567. Direction of swing shall be as shown on Drawings. Gates shall be plumb in the closed position having a bottom clearance of 3 in. grade permitting. Hinge and latch offset opening space shall be no greater than 3 in. in the closed position. Double gate drop bar receivers shall be set in a concrete footing minimum 6 in. diameter 24 in. deep. Gate leaf holdbacks shall be installed for all double gates.
- H. **Nuts and Bolts:** Carriage bolts used for fittings shall be installed with the head on the secure side of the fence. All bolts shall be peened over to prevent removal of the nut.
- I. **Clean Up:** The area of the fence line shall be left neat and free of any debris caused by the installation of the fence.

END OF SECTION

DIVISION 32 SITE IMPROVEMENTS

32 32 15 PRECAST CONCRETE RETAINING WALL – ALTERNATE #3

SUMMARY

- A. This Section includes furnishing all materials and labor required for the design and construction of a precast concrete modular block (PMB) retaining wall without geosynthetic reinforcement. Precast modular block retaining wall blocks under this section shall be cast utilizing a wet-cast concrete mix and exhibit a final handling weight in excess of 1,000 pounds (450 kg) per unit. This section represents work that is EXCLUDED from the Base Bid, but is included for reference and for Alternate Bid (Alternate #3). Unit prices for required excavation or remediation of substrate soils shall be included in any bid.
- B. Scope of Work: The work shall consist of furnishing materials, labor, equipment and supervision for the preparing foundation soil, furnishing and installing leveling pad, unit fill and backfill, and construction of a precast modular block (PMB) retaining wall structure in accordance with the requirements of this section and in acceptable conformity with the lines, grades, design and dimensions shown in the project Drawings.
- C. Drawings and General Provisions of the Contract, including General and Supplementary Conditions also apply to this Section.

MATERIALS

- A. Definitions:
1. Modular Unit- a concrete retaining wall element made from portland cement, water, and aggregates
 2. Structural Geogrid - a structural element formed by a regular network of integrally connected tensile elements with apertures of sufficient size to allow interlocking with surrounding soil, rock, or earth and function primarily as reinforcement
 3. Unit Drainage Fill - drainage aggregate which is placed within and immediately behind the modular concrete units
 4. Reinforced Backfil - compacted soil which is placed within the reinforced soil volume as outlined on the Drawings
- B. Modular Precast Concrete Retaining Wall Units
1. Preapproved Manufacturers:
Manufacturers of Redi-Rock Retaining Wall Systems as licensed by Redi-Rock International, LLC, 05481 US 31 South, Charlevoix, MI 49720 USA; telephone (866) 222-8400; website www.redi-rock.com.

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2. Approved Product:
 - a. Redi-Rock 28" deep standard batter Gravity block with "cobblestone" texture and nominal height of 18".
 - b. Redi-Rock 28" deep, 6" high, 2-sided cap block

3. Substitutions: Technical information demonstrating conformance with the requirements of this specification for an alternative precast modular block retaining wall system must be submitted for preapproval at least 14 calendar days prior to the bid date. Acceptable alternative PMB retaining wall systems, otherwise found to be in conformance with this specification, shall be approved in writing by the owner 7 days prior to the bid date. The Owner's Representative reserves the right to provide no response to submissions made out of the time requirements of this section or to submissions of block retaining wall systems that are determined to be unacceptable to the owner.

4. The block pattern and color shall be selected by the owner from the available range available from the PMB manufacturer.

5. Shear connectors as required by design and site conditions. The precast modular block units shall be manufactured with an integrally cast shear knobs that establishes a standard horizontal set-back for subsequent block courses

C. Geotextile

1. Nonwoven geotextile fabric shall be placed as indicated on the retaining wall construction shop drawings. Additionally, the nonwoven geotextile fabric shall be placed in the v-shaped joint between adjacent block units on the same course. The nonwoven geotextile fabric shall meet the requirements Class 3 construction survivability in accordance with AASHTO M 288.

2. Preapproved Nonwoven Geotextile Products:
 - a. Mirafi 140N
 - b. Propex Geotex 451
 - c. Skaps GT-142
 - d. Thrace-Linq 140EX
 - e. Carthage Mills FX-40HS
 - f. Stratatex ST 142

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- D. Granular Fill: Drainage aggregate (and wall infill for retaining walls designed as modular gravity structures) shall be a durable crushed stone conforming to No. 57 size per ASTM C33 with the following particle-size distribution requirements per ASTM D6913

:

U.S. Standard Sieve Size	% Passing
1-½" (38 mm)	100
1" (25 mm)	95-100
½" (13 mm)	25-60
No. 4 (4.76 mm)	0-10
No. 8 (2.38 mm)	0-5

E. Leveling Pad

1. The precast modular block units shall be placed on a leveling pad constructed from crushed stone or unreinforced concrete. The leveling pad shall be constructed to the dimensions and limits shown on the retaining wall design drawings prepared by the Retaining Wall Design Engineer.
2. Crushed stone used for construction of a granular leveling pad shall meet the requirements of the drainage aggregate and wall infill in section 2.04 or a preapproved alternate material.
3. Concrete used for construction of an unreinforced concrete leveling pad shall satisfy the criteria for AASHTO Class B. The concrete should be cured a minimum of 12 hours prior to placement of the precast modular block wall retaining units and exhibit a minimum 28-day compressive strength of 2,500 psi (17.2 MPa).

F. Drainage

1. Drainage Pipe

- a. Drainage collection pipe shall be a 4" (100 mm) diameter, 3-hole perforated, HDPE pipe with a minimum pipe stiffness of 22 psi (152 kPa) per ASTM D2412.
- b. The drainage pipe shall be manufactured in accordance with ASTM D1248 for HDPE pipe and fittings.

2. Preapproved Drainage Pipe Products

- a. ADS 3000 Triple Wall pipe as manufactured by Advanced Drainage Systems.

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EXECUTION

- A. Examination: Prior to construction, the General Contractor, Grading Contractor, Retaining Wall Installation Contractor and Inspection Engineer shall examine the areas in which the retaining wall will be constructed to evaluate compliance with the requirements for installation tolerances, worker safety and any site conditions affecting performance of the completed structure. Installation shall proceed only after unsatisfactory conditions have been corrected.
- B. Excavation
1. The Grading Contractor shall excavate to the lines and grades required for construction of the precast modular block retaining wall as shown on the construction drawings. The Grading Contractor shall minimize over-excavation. Excavation support, if required, shall be the responsibility of the Grading Contractor.
 2. Over-excavation and replacement of unsuitable foundation soils and replacement with approved compacted fill will be part of this Work. Over-excavated soil shall be replaced with compacted fill in conformance with the specifications of the Retaining Wall Design Engineer and "Division 31, Section 31 20 00 – Earthmoving" of these project specifications.
 3. Embankment excavations shall be bench cut as directed by the project Geotechnical Engineer and inspected by the Inspection Engineer for compliance.
- C. Foundation Preparation.
1. Prior to construction of the precast modular block retaining wall, the leveling pad area and undercut zone (if applicable) shall be cleared and grubbed. All topsoil, brush, frozen soil and organic material shall be removed. Additional foundation soils found to be unsatisfactory beyond the specified undercut limits shall be undercut and replaced with approved fill as directed by the project Geotechnical Engineer. The Inspection Engineer shall ensure that the undercut limits are consistent with the requirements of the project Geotechnical Engineer and that all soil fill material is properly compacted according project specifications. The Inspection Engineer shall document the volume of undercut and replacement.
 2. Following excavation for the leveling pad and undercut zone (if applicable), the Inspection Engineer shall evaluate the in-situ soil in the foundation and retained soil zones.
 - a. The Inspection Engineer shall verify that the shear strength of the in-situ soil assumed by the Retaining Wall Design Engineer is appropriate. The Inspection Engineer shall immediately stop work and notify the Owner if the in-situ shear strength is found to be inconsistent with the retaining wall design assumptions.
 - b. The Inspection Engineer shall verify that the foundation soil exhibits sufficient

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ultimate bearing capacity to satisfy the requirements indicated on the retaining wall construction shop drawings per paragraph 1.06 I of this section.

D. Base Leveling Pad

1. The leveling pad shall be constructed to provide a level, hard surface on which to place the first course of precast modular block units. The leveling pad shall be placed in the dimensions shown on the retaining wall construction drawings and extend to the limits indicated.
2. **Crushed Stone Leveling Pad.** Crushed stone shall be placed in uniform maximum lifts of 6" (150 mm). The crushed stone shall be compacted by a minimum of 3 passes of a vibratory compactor capable of exerting 2,000 lb (8.9 kN) of centrifugal force and to the satisfaction of the Inspection Engineer.
3. **Unreinforced Concrete Leveling Pad.** The concrete shall be placed in the same dimensions as those required for the crushed stone leveling pad. The Retaining Wall Installation Contractor shall erect proper forms as required to ensure the accurate placement of the concrete leveling pad according to the retaining wall construction drawings.

E. Precast Modular Block Wall System Installation

1. The first course of block units shall be placed with the front face edges tightly abutted together on adjacent blocks, on the prepared leveling pad at the locations and elevations shown on the construction drawings. The Retaining Wall Installation Contractor shall take special care to ensure that the bottom course of block units are in full contact with the leveling pad, are set level and true and are properly aligned according to the locations shown on the construction drawings.
2. Backfill shall be placed in front of the bottom course of blocks prior to placement of subsequent block courses. Nonwoven geotextile fabric shall be placed in the V-shaped joints between adjacent blocks. Drainage aggregate shall be placed in the V-shaped joints between adjacent blocks, and extend to a minimum distance of 12" (300 mm) behind the block unit.
3. Drainage aggregate shall be placed in 9 inch maximum lifts and compacted by a minimum of three (3) passes of a vibratory plate compactor capable exerting a minimum of 2,000 lb (8.9 kN) of centrifugal force.
4. Unit core fill shall be placed in the precast modular block unit vertical core slot. The

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core fill shall completely fill the slot to the level of the top of the block unit. The top of the block unit shall be broom-cleaned prior to placement of subsequent block courses. No additional courses of precast modular blocks may be stacked before the unit core fill is installed in the blocks on the course below.

5. Base course blocks for gravity wall designs (without geosynthetic soil reinforcement) may be furnished without vertical core slots. If so, disregard item 4 above, for the base course blocks in this application.
6. Nonwoven geotextile fabric shall be placed between the drainage aggregate and the retained soil (gravity wall design) if required on the retaining wall construction drawings.
7. Subsequent courses of block units shall be installed with a running bond (half block horizontal course-to-course offset). With the exception of 90 degree corner units, the shear channel of the upper block shall be fully engaged with the shear knobs of the block course below. The upper block course shall be pushed forward to fully engage the interface shear key between the blocks and to ensure consistent face batter and wall alignment. Drainage aggregate, unit core fill, geotextile and properly compacted backfill shall be complete and in-place for each course of block units before the next course of blocks is stacked.
8. The elevation of retained soil fill shall not be less than 1 block course (18" (457 mm)) below the elevation of the retained backfill throughout the construction of the retaining wall.
9. If included as part of the precast modular block wall design, cap units shall be secured with an adhesive in accordance with the precast modular block manufacturer's recommendation.

F. Wall Infill and Backfill Placement

1. Backfill material placed immediately behind the drainage aggregate shall be compacted as follows:
 - a. 98% of maximum dry density at \pm 2% optimum moisture content per ASTM D698 standard proctor or 85% relative density per ASTM D4254.
2. Compactive effort within 3' (0.9 m) of the back of the precast modular blocks should be accomplished with walk-behind compactors. Compaction in this zone shall be within 95% of maximum dry density as measured in accordance with ASTM D698 standard proctor or 80% relative density per ASTM D 4254. Heavy equipment should not be operated within 3' (0.9 m) of the back of the precast modular blocks.
3. Backfill material shall be installed in lifts that do not exceed a compacted thickness of 9" (230 mm).

DIVISION 32 SITE IMPROVEMENTS

4. At the end of each work day, the Retaining Wall Installation Contractor shall grade the surface of the last lift of the granular wall infill to a $3\% \pm 1\%$ slope away from the precast modular block wall face and compact it.
5. The General Contractor shall direct the Grading Contractor to protect the precast modular block wall structure against surface water runoff at all times through the use of berms, diversion ditches, silt fence, temporary drains and/or any other necessary measures to prevent soil staining of the wall face, scour of the retaining wall foundation or erosion of the reinforced backfill or wall infill.

G. Completion

1. For walls supporting unpaved areas, a minimum of 12" (300 mm) of compacted, low-permeability fill shall be placed over the granular wall infill zone of the precast modular block retaining wall structure. The adjacent retained soil shall be graded to prevent ponding of water behind the completed retaining wall.
2. For retaining walls with crest slopes of 5H:1V or steeper, silt fence shall be installed along the wall crest immediately following construction. The silt fence shall be located 3' to 4' (0.9 m to 1.2 m) behind the uppermost precast modular block unit. The crest slope above the wall shall be immediately seeded to establish vegetation. The General Contractor shall ensure that the seeded slope receives adequate irrigation and erosion protection to support germination and growth.
3. The General Contractor shall confirm that the as-built precast modular block wall geometries conform to the requirements of this section. The General Contractor shall notify the Owner of any deviations.

END OF SECTION

DIVISION 2 SITE WORK

32 93 00 LANDSCAPING

All landscaping, including trees, shrubs and sodding shall be by landscape subcontractor and as shown on Drawings.

- A. Sod to be cultured (3/4") sod placed on minimum 4" topsoil.
- B. Topsoil shall be fertile, friable loam, free of twigs, roots and stones larger than 1" round.
- C. Where surface areas (walks and bituminous) are shown and require fill, use granular fill materials.
- D. Required fill at turf areas may be common borrow capped with 4" topsoil.
- E. Apply starter fertilizer over all areas indicated to receive sodding. Peg sod where subject to movement or erosion in area where slope exceeds 4:1. Fertilize at a rate 20 lbs. per 1,000 square feet. Watering will be limited to one initial thorough watering at time of sodding.
- F. Plant material to be of size and species as indicated on the plans. All plant materials shall be guaranteed for a minimum of one full growing season and will be replaced by landscaping subcontractor if they fail before that time.

END OF SECTION

END OF DIVISION

GENERAL REQUIREMENTS

Instructions to Bidders; Division 0, Conditions of the Contract; And Division 1, General Requirements, are part of this division of the Specification as if bound herein.

33 10 00 WATER UTILITIES

- A. This contractor shall furnish and install the domestic water from the street utility to the water meter.
- B. The system shall be installed to conform to all city requirements or a minimum of 7'-0" below grade at paved areas.
- C. This contractor shall be responsible for any and all repairs to public property including street paving, curb and gutter, and sidewalks, etc. removed and/or damaged for utility installation.

33 30 00 SANITARY SEWERAGE

- A. This contractor shall furnish and install the sanitary waste to within 5'-0" of the building or as shown on mechanical drawings.
- B. This contractor shall make all connections to street utilities. The General Contractor shall coordinate payment for all sewer access and water access charges.
- C. The system shall be installed to conform to all city requirements or a minimum of 7'-0" below grade at paved areas.
- D. This contractor shall be responsible for any and all repairs to public property including street paving, curb and gutter, and sidewalks, etc. removed and/or damaged for utility installation.

33 40 00 STORMWATER UTILITIES

- A. This contractor shall furnish and install the stormwater structures and pipe, as described on Drawings.
- B. The system shall be installed to conform to all applicable codes and requirements.
- C. This contractor shall be responsible for any and all repairs to public property including street paving, curb and gutter, and sidewalks, etc. removed and/or damaged for utility installation.

END OF SECTION

CITY OF LEBANON SENIOR CENTER

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED ARCHITECT UNDER THE LAWS OF THE STATE OF KENTUCKY
DATE: NO. 6605

DATE: 02/09/2021
DRAWN BY: DCH
CHECKED BY: DCH
REVISIONS:
PROJECT NUMBER: 2012



RENDERINGS FOR REFERENCE ONLY. IMAGES SHOWN MAY VARY FROM ACTUAL CONSTRUCTION DOCUMENTS

1 APPROXIMATE RENDERING (VIEW FROM NE)
T-1 NO SALE

2 APPROXIMATE RENDERING (VIEW FROM NW)
T-1 NO SALE

PROJECT TEAM

Owner City of Lebanon P.O. Box 840 Lebanon, Kentucky 40033	Architect David C. Hennen, Architect 343 East Main Street Lebanon, Kentucky 40033 (270) 465-8153 dchennen@yahoo.com	Civil Engineer KWM Engineering & Land Surveying 555 Mercer Avenue Lebanon, Kentucky 40033 (270) 692-0089 Contact: Nathan King nathan@mykwm.net	Structural Engineer Rhody Engineering, LLC 1111 Westwood Drive Lawrenceburg, Kentucky 40342 (502) 343-8518 Contact: Monty Rhody, P.E. montyrhody@gmail.com	Mechanical/Plumbing/Electrical Engineer Harvard B. Johnson, PE 336 Collett Bridge Road Alvaton, Kentucky 42122 harvardbeneng@gmail.com
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ABBREVIATIONS

A & ABV ACP ADD AFF ALT ALUM	AND ABOVE ACOUSTIC CEILING PANEL ADDENDUM ABOVE FINISH FLOOR ALTERNATE ALUMINUM	D DEMO DET DF DIA DIM DN DR	DEMOLITION DETAIL DRINKING FOUNTAIN DIAMETER DIMENSION DOWN DOOR	G GA GAL GALV GB GEN GRD GYP	GAUGE GALLON GALVANIZED GYPSUM BOARD GENERAL GRADE GYPSUM	L LAV LF LVR	LAVATORY LINEAL FOOT LOUVER	M MAS MAX MECH MFR MIN MISC MNTD	MASONRY MAXIMUM MECHANICAL MANUFACTURER MINIMUM MISCELLANEOUS MOUNTED	N N N/A NIC NO NTS	NONE NOT APPLICABLE NOT IN CONTRACT NUMBER NOT TO SCALE	P PL PLAM PLBG PLYWD PR PT PVG	PLATE PLASTIC LAMINATE PLUMBING PLYWOOD PAIR PAINT PAVING	Q QTY	QUANTITY	R REINF REF REQ RM RO	REINFORCED REFRIGERATOR REQUIRED ROOM ROUGH OPENING	S SF SCHED SIM SPEC STL STR STRUCT SUSP	SQUARE FOOT SCHEDULE SIMILAR SPECIFICATION STEEL STRUCTURE STRUCTURAL SUSPENDED	T T TEMP TO TYP	TOILET TEMPORARY TOP OF TYPICAL	U UNO	UNLESS NOTED OTHERWISE	V VCT VERT VEST VIF VTR VYL	VINYL COMPOSITION TILE VERTICAL VESTIBULE VERIFY IN FIELD VENT THROUGH ROOF VINYL	W W/ WC WD WH W/O	WITH WATER CLOSET WOOD WATER HEATER WITHOUT
B BD BF BLDG BLKG BLW BOT B.R.	BOARD BARRIER FREE BUILDING BLOCKING BLW BOTTOM BACKER ROD	E (E) EA EL EQ EXT	EXISTING EACH ELEVATION EQUAL EXTERIOR	H HB HC HD HM HORIZ HDWR	HOSE BIB HANDICAPPED HEAD HOLLOW METAL HORIZONTAL HARDWARE	I ID IN INCL INSUL INT	INSIDE DIMENSION INCH INCLUDE INSULATION INTERIOR	O OPP OPNG	ON CENTER OPPOSITE OPENING	K KIT	KITCHEN																
C CL CLG CMU COL CONC CONT CT CTR	CENTER LINE CEILING CONCRETE MASONRY UNIT COLUMN CONCRETE CONTINUOUS CERAMIC TILE CENTER	F FD FIN FLR FLSHG FNDDN FO FOM FOS FRP FTG	FLOOR DRAIN FINISH FLOOR FLASHING FOUNDATION FACE OF FACE OF MASONRY FACE OF STUD FIBERGLASS REINFORCED PANEL FOOTING	K KIT	KITCHEN																						

SYMBOLS

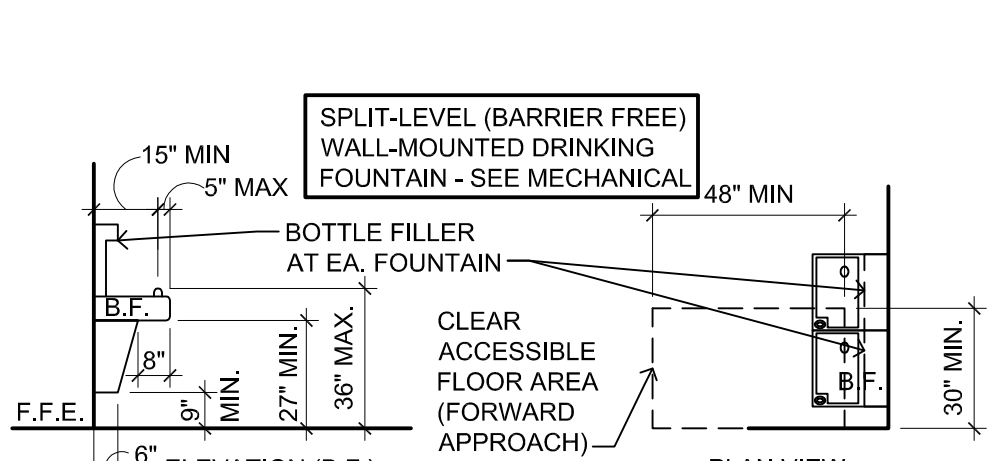
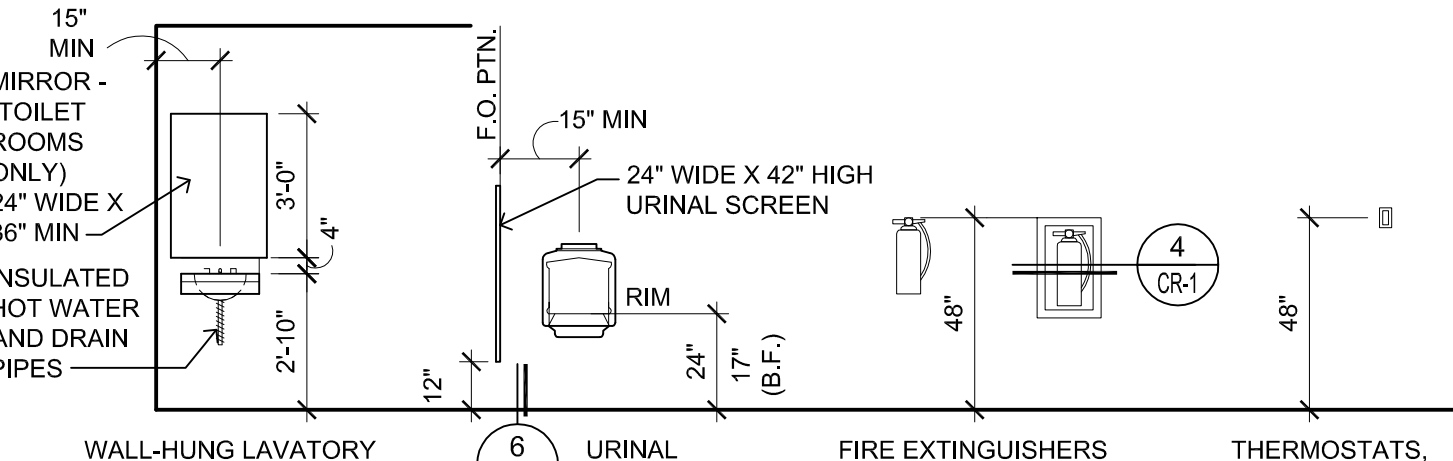
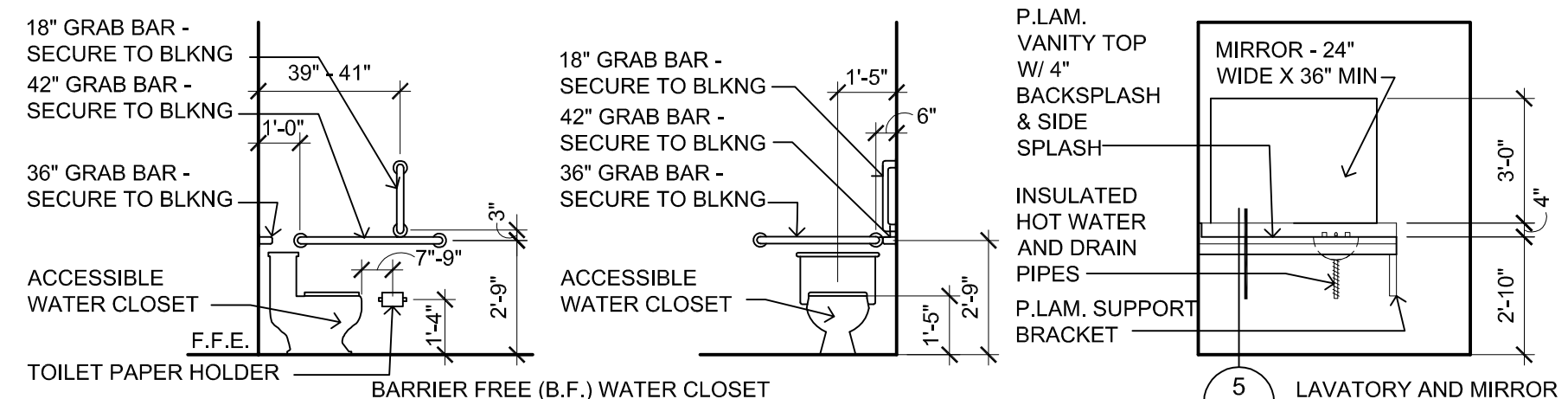
	DETAIL/DRAWING NO. SHEET ON WHICH DRAWING/DETAIL APPEARS		INTERIOR ELEVATION REFERENCE
	EXTERIOR ELEVATION REFERENCE		ELEVATION LEVEL OR DATUM POINT XXX EL. XXX
	KEYED NOTE		ROOM NAME ROOM NUMBER
	DOOR NUMBER		WINDOW TYPE
	INTERIOR FURRING OR PARTITION TYPE		

SHEET INDEX

T-1	TITLE SHEET / SHEET INDEX / SYMBOLS / ABBREVIATIONS
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CR-2	CODE REFERENCE SITE LAYOUT
CIVIL - SEE CIVIL	
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A-2	REFLECTED CEILING PLAN, ROOM FINISH SCHEDULE & DETAILS
A-3	ROOF PLAN & DETAILS
A-4	EXTERIOR ELEVATIONS & DETAILS
A-5	BUILDING SECTIONS & DETAILS
STRUCTURAL	
S-1	FOUNDATION PLAN
S-2	FOUNDATION DETAILS & NOTES
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M-1	FLOOR PLAN - HVAC
M-2	FLOOR PLAN - GAS PIPING
M-3	HVAC SCHEDULES
M-4	HVAC DETAILS AND SPECIFICATIONS
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ELECTRICAL	
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E-1	FLOOR PLAN - LIGHTING
E-2	FLOOR PLAN - POWER & SYSTEMS
E-3	ELECTRICAL SCHEDULES
E-4	ELECTRICAL SPECIFICATIONS

NEW FACILITY FOR:
CITY OF LEBANON
SENIOR CENTER
100 West Mulberry Street, Lebanon, Kentucky 40033

TITLE PAGE
SHEET INDEX, ABBREVIATION
AND EXTERIOR RENDERING



REQUIRED SPECIAL INSPECTIONS

The following periodic special inspections shall be performed (or confirmed) by David C. Hennen, Architect (the registered design professional in responsible charge) or by a qualified third-party inspector as selected and engaged directly by the Owner.

- Prior to placing footing or foundation concrete, a visual observation shall be performed to ensure proper size and placement of steel reinforcement. Concrete testing shall be reviewed (as performed by the Contractor, in accordance with the contract specifications).
- Prior to enclosure of load bearing walls, a visual observation shall be made to ensure proper attachment of wall to foundation and trusses to walls.
- Prior to the enclosure of columns, a visual observation of base plate/anchorage and connection to roof structure shall be made for proper attachment.

SITE LAYOUT LEGEND:

- NEW DOOR 36" WIDE, TYP.
- ACCESSIBLE CLEARANCE 30" X 42", TYP.
- ACCESSIBLE PARKING STALL (8'X20') W/ SIGN - SEE DETAIL 2/CR-2
- OCCUPANT LOAD
- NO. OF OCCUPANTS EXITING
- REQ'D. EXIT WIDTH (INCHES)
- ACTUAL EXIT WIDTH (INCHES)

CODE REFERENCE NOTES:

- FIRE EXTINGUISHER LOCATION- SEE 2/CR-1 & 4/CR-1
- ACCESSIBLE TOILET LOCATION- SEE 2/CR-1
- ACCESSIBLE URINAL LOCATION- SEE 2/CR-1
- ACCESSIBLE LAVATORY LOCATION- SEE 2/CR-1
- ACCESSIBLE HI-LO WATER COOLER W/ BOTTLE FILLERS - SEE 3/CR-1
- UTILITY SINK LOCATION
- HOSE BIB
- 3-COMPARTMENT SINK W/ GREASE TRAP
- RESIDENTIAL RANGE AND MICROWAVE FOR WARMING OF PRE-PREPARED FOODS

CODE SUMMARY per IBC 2015/2018 KBC & 2015 IEBC

Building is provided with Automatic Fire Suppression System
CONSTRUCTION TYPE: V-B (non-rated per IBC Section 602.2)

Fire-Resistance Rating	Rating	UL Assembly or Item # for Elements (Table 601)	from IBC Table 720.1
Structural Frame	0	N/A	
Bearing Walls	0	N/A	
Non-Bearing Walls (Inter.)	0	N/A	
Floor Construction	0	N/A	
Roof Construction	0	N/A	

ALLOWABLE AREA:	Allowed	Designed
A-3 Occupancy (per table 506.2 = NS)	6,000 sf	3,670 sf
Total Allowable Area (Calculated)**	10,260 sf	W/ Porches

Calculations | A=6,000; NS=6,000; F=232; P=232
Sa = 1; L1= 166'; L2 = 70'; W1= 23'; W2 = 30'; W=28.4' *
If = ((F/P-0.25) W/30) = ((232/232 - 0.25) 28.4/30) = 0.71
W = (L1 x W1 + L2 x W2)/F
Aa = [At + (NS x If)] x Sa

*W = [166(30) + (70(23)) / 232 = (4980 + 1610) / 232 = 28.4 ft
**A-3: Aa = [6,000 + (6,000 x 0.71)] x 1 = (6,000 + 4,260) x 1 = 10,260 sf

ALLOWABLE HEIGHT:	Allowed	Designed
A-3 (per table 504.4 non-sprink)	1 Story	1 Story
R (per table 504.3 Sprinkled)	40 feet	~ 30 feet

FIRE PROTECTION SYSTEM (IBC 903.2.1.3)
The building is NOT equipped with an automatic sprinkler system, as the fire area does NOT exceed 12,000 sf, and there is no fire area located on a floor other than the level of exit discharge serving the assembly occupancy.

OCCUPANCY SEPARATION (KBC Table 508.4)
Separation of occupancies is not required as the designed building area is within the allowable area as computed for the MOST RESTRICTIVE use: Assembly A-3 (per Section 508.3.3).

OCCUPANT LOAD FACTORS (KBC Table 1004.1.2)
Assembly (unconcentrated) = 15 sf/occupant (tables and chairs)
Business = 100 sf/occupant
Kitchen = 200 sf/occupant
Exercise = 50 sf/occupant
Storage/Mechanical = 300 sf/occupant

Occupancy Calculations:
Assembly = 1471 sf / 15 = 98 Occupants
Business = 350 sf / 100 = 4 Occupants
Kitchen = 200 sf / 200 = 1 Occupant
Exercise = 384 sf / 50 = 8 Occupants
Storage/Mechanical = 229 sf / 300 = 1 Occupant
Total Occupancy = 112 Occupants

Exit Width Factors (w/o sprinklers): Doors = 0.2, Stairs = 0.3
Exit access travel distance = 200 ft MAX (per IBC Table 1017.2)

Number of Exits Required (Table 1006.3.1 and Section 1006.3.1)
Number of Occupants Exiting Main Floor = 117 (Asmby/Bsness/Exercise)
2 Exits Required (per IBC Table 1006.3.1) 117 < 500 (2 provided)

Interior Exit Corridor Rating
Exit Corridors serving 30 or more occupants are required to be fire-resistance rated (IBC Table 1020.1, 1 hour w/o sprinkler system). NO NEW Exit Corridors provided.

MANUAL FIRE ALARM SYSTEM
The building doesn't need to be equipped throughout with a manual fire alarm system, as Assembly occupancy (117) is less than 300 (KBC 907.2.1).

PLUMBING FIXTURE REQUIREMENTS: (per 815 KAR 20:191)
Fixture requirements are calculated for Assembly (Section 5)
56 Males: 1 WC, 1 Urinal (Section 5, 1.a.1 & 5, 1.b.1), 1 & 1 provided
Males: 1 Lavatory (Section 5, 3.a), 3 provided
56 Females: 2 WCs (Section 5, 2.b), 2 provided
Females: 1 Lavatory (Section 5, 3.a), 2 provided
Drinking Fountains: 1 (Section 5, 6), 2 provided

ACCESSIBLE PARKING REQUIREMENTS: (Table 1106.1)
Total number of parking spaces provided 43 (max)
Required number of accessible parking spaces 2

2 FIXTURE MOUNTING HEIGHTS

SCALE: 1/4" = 1'-0"

3 DRINKING FOUNTAIN

SCALE: 1/4" = 1'-0"

6 CERAMIC TILE DETAIL

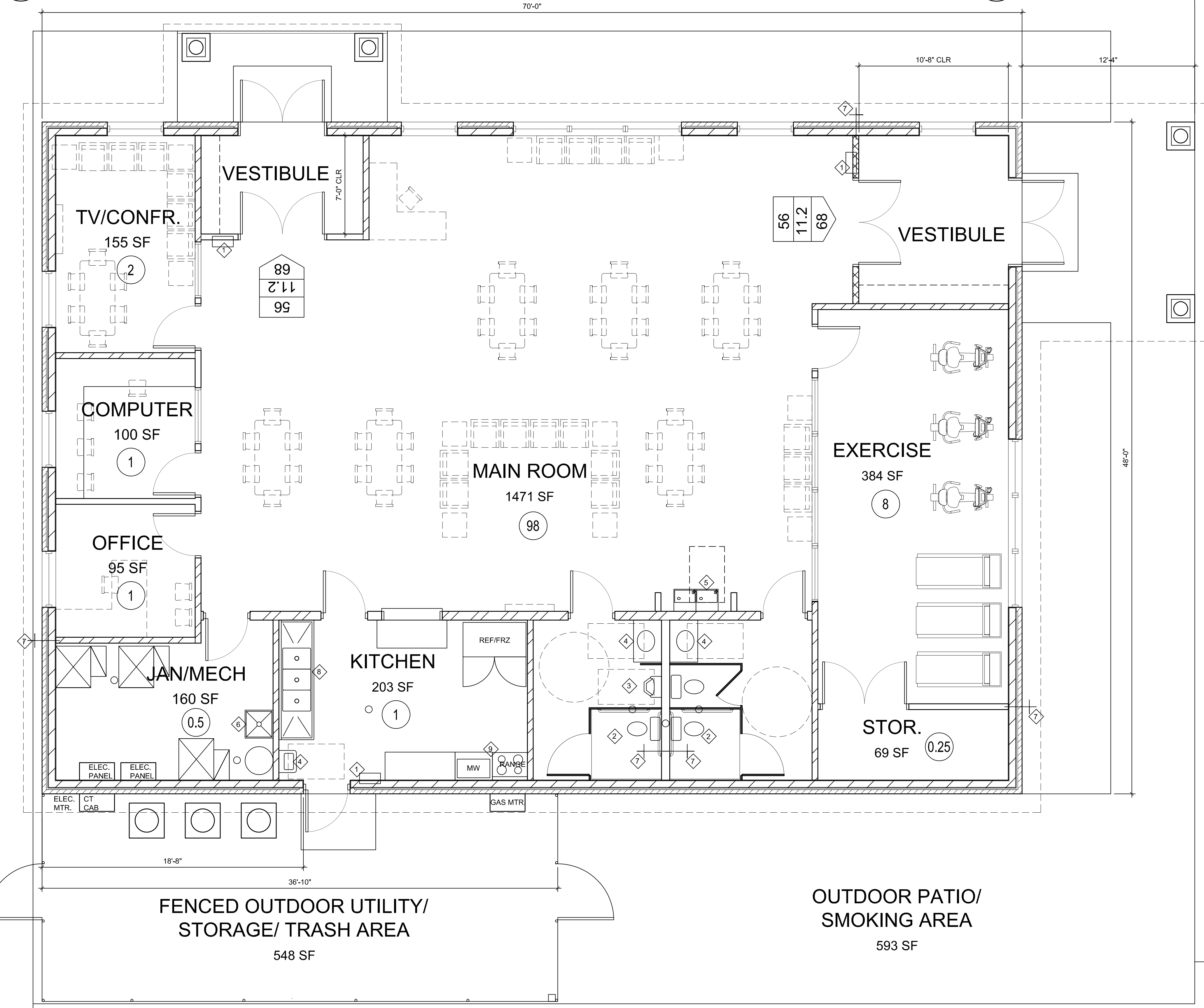
SCALE: 6" = 1'-0"

5 VANITY DETAIL

SCALE: 1 1/2" = 1'-0"

4 FIRE EXTINGUISHER CABINET

SCALE: 3" = 1'-0"



1 FLOOR PLAN - CODE REFERENCE

SCALE: 1/4" = 1'-0"

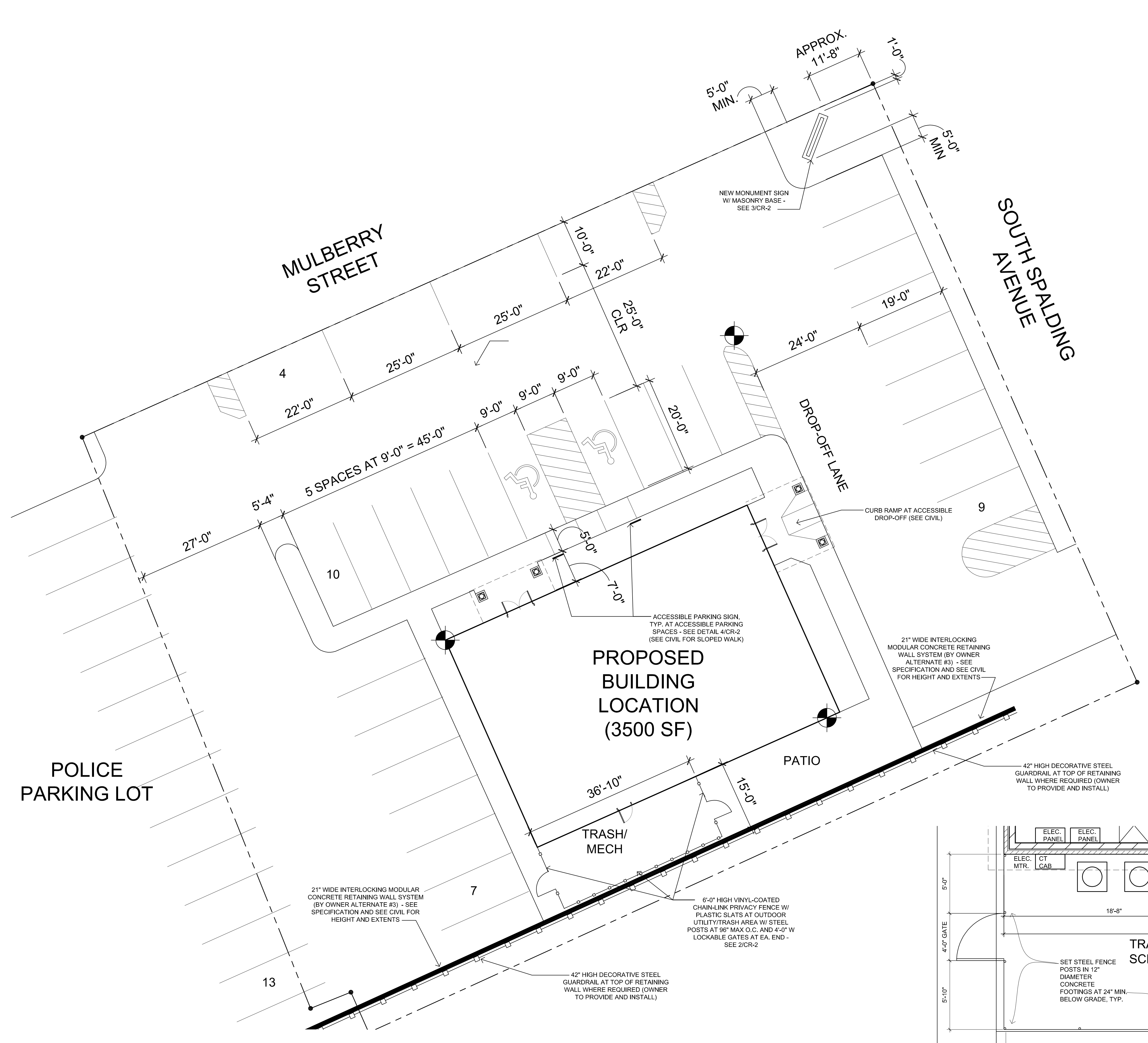
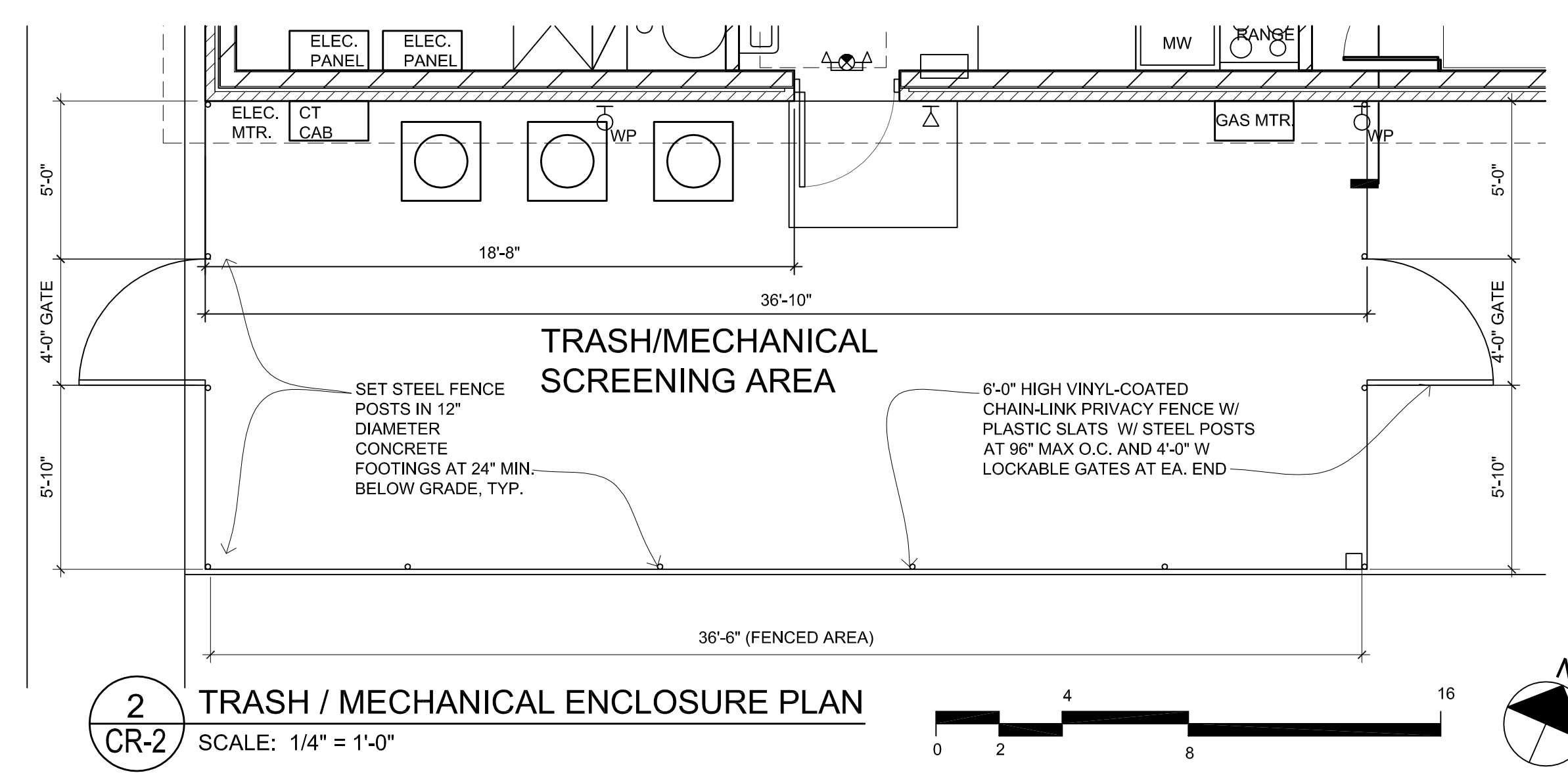
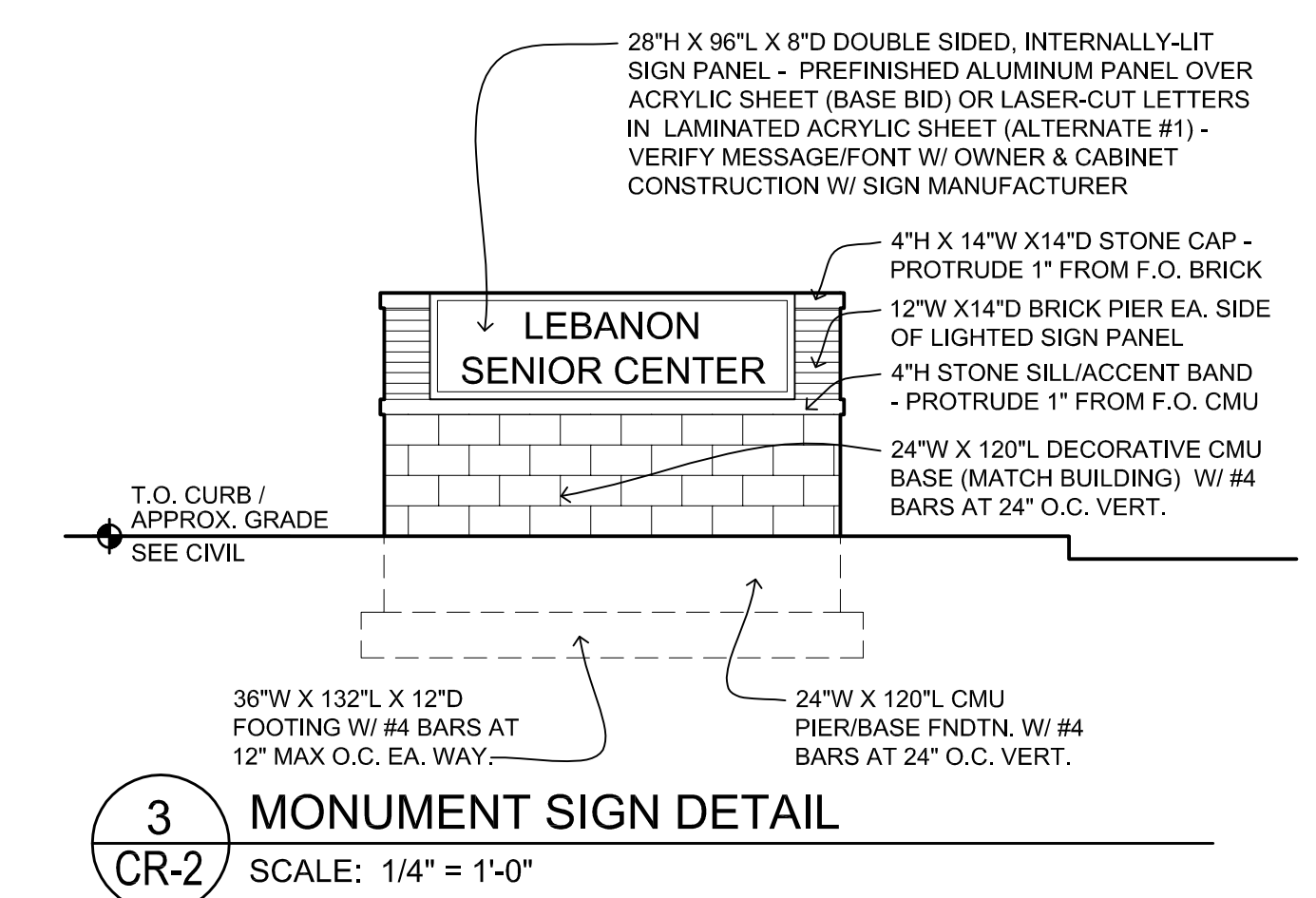
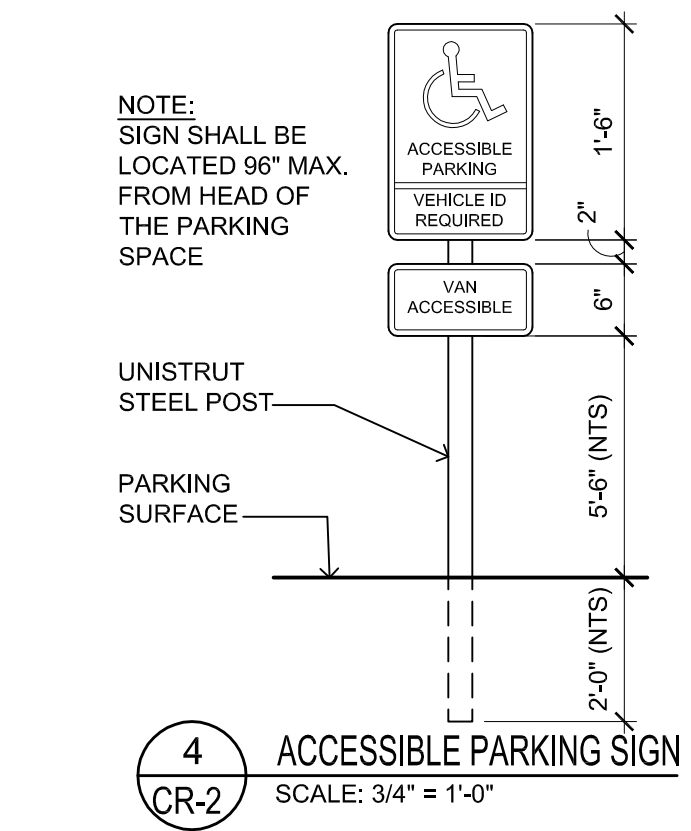


GENERAL NOTES:
THIS SITE LAYOUT IS FOR GENERAL DESIGN INFORMATION AND REFERENCE ONLY. REFER TO SURVEY AND CIVIL ENGINEERED DRAWINGS FOR FINAL SITE DESIGN AND DIMENSIONS.

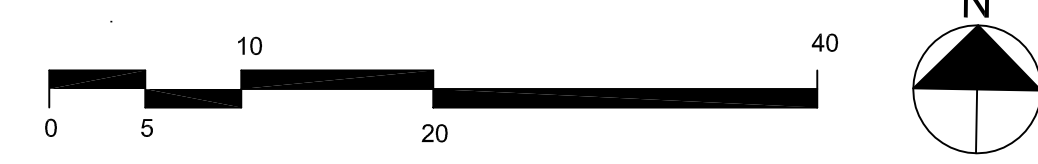
PARKING SPACE SIZE IS 9'-0" X 20'-0", U.N.O. 43 NEW PARKING SPACES PROVIDED (MAX). 2 VAN ACCESSIBLE SPACES PROVIDED

SITE LAYOUT LEGEND:

- PROPERTY LINE
- PROPOSED BUILDING FOOTPRINT
- PROPOSED 6-FOOT PRIVACY FENCE
- NEW DOOR, 36" WIDE, TYP.
- ACCESSIBLE CLEARANCE 30' X 42', TYP.
- ACCESSIBLE PARKING STALL (8'X20') W/ SIGN - SEE DETAIL 2/CR-2
- APPROXIMATE SOIL BORING LOCATION

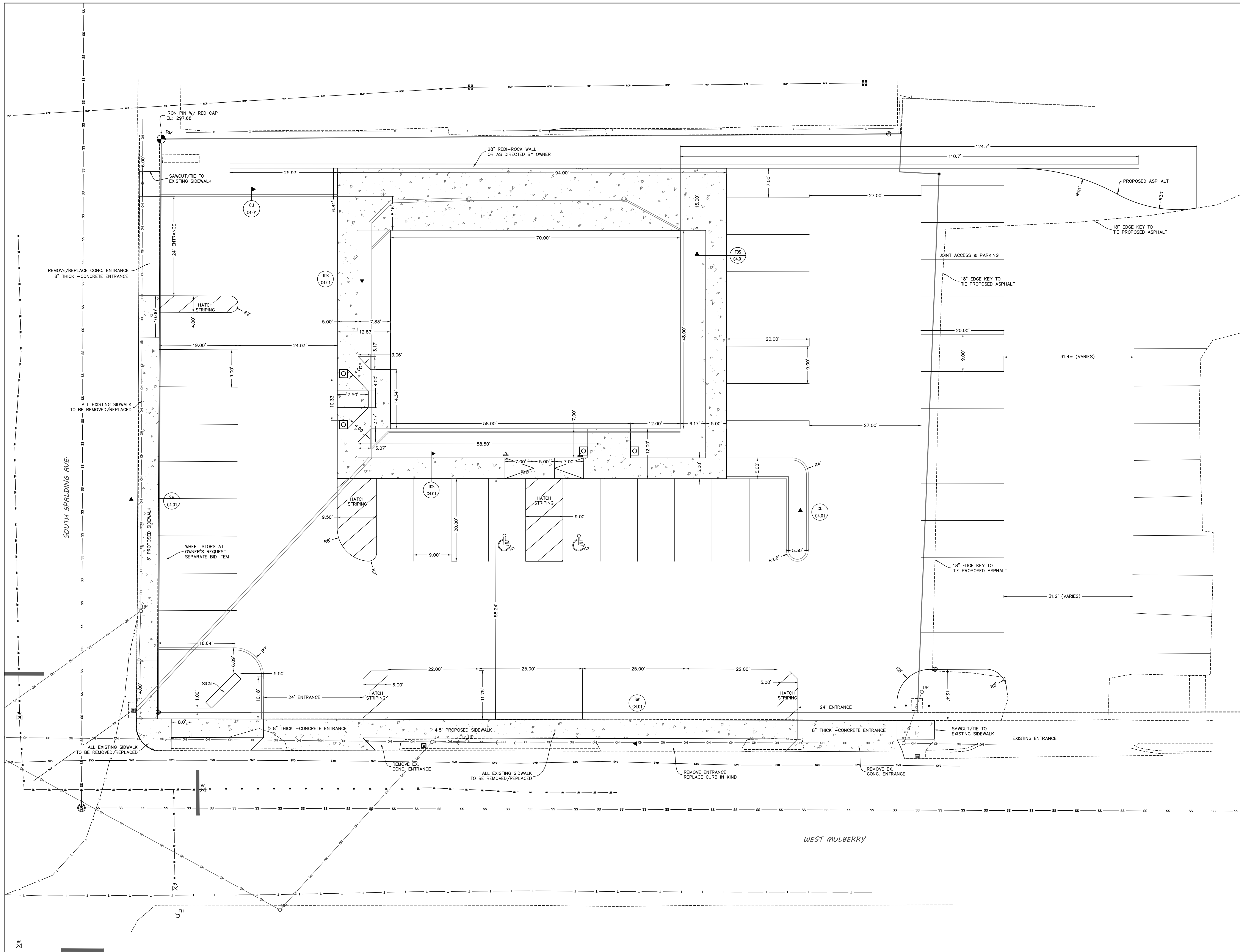


1
CR-2 **SITE LAYOUT DIAGRAM - CODE REFERENCE**
SCALE: 1" = 10'



2
CR-2 **TRASH / MECHANICAL ENCLOSURE PLAN**
SCALE: 1/4" = 1'-0"

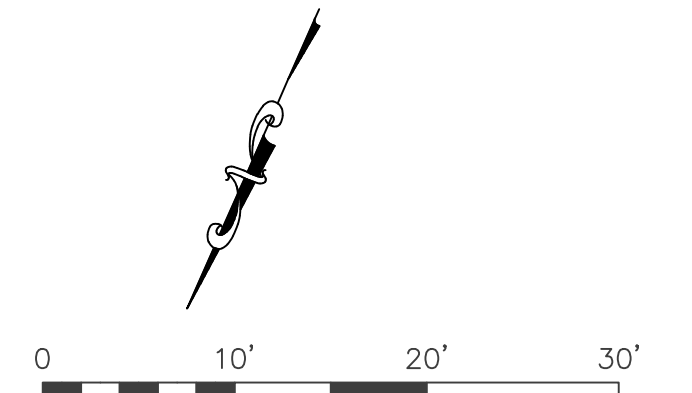




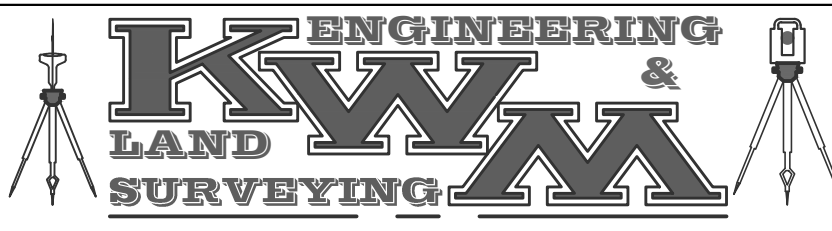
- NOTES:**
1. PRIOR TO CONSTRUCTION, THE CONTRACTOR IS RESPONSIBLE FOR ENSURING ALL REQUIRED PERMITS AND APPROVALS HAVE BEEN OBTAINED. NO CONSTRUCTION SHALL BEGIN PRIOR TO THE CONTRACTOR RECEIVING AND REVIEWING THE REQUIRED PERMITS AND APPROVALS.
 2. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING DRAINAGE AND UTILITY CONNECTIONS TO ENSURE THEY CAN BE PROPERLY CONNECTED.
 3. NO DISTURBANCE TO THE NATURAL GROUND SHALL TAKE PLACE PRIOR TO HAVING THE PROPOSED EROSION CONTROL PLAN APPROVED AND IN PLACE.
 4. IN THE EVENT OF A CONFLICT BETWEEN THIS DRAWING AND ANY OTHER DRAWING AND/OR SPECIFICATION, THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY FOR CLARIFICATION.
 5. UNLESS NOTED OTHERWISE THE SPOT ELEVATIONS SHOWN ARE TO THE BOTTOM FACE OF CURB OR SIDEWALK.
 6. THE AGGREGATE BASE & ASPHALT COURSES SHALL MEET THE MATERIALS, EQUIPMENT, CONSTRUCTION, & TESTING REQUIREMENTS OF THESE DRAWINGS AND THE CURRENT EDITION OF THE KENTUCKY TRANSPORTATION CABINET STANDARD SPECIFICATIONS.
 7. ALL SETBACKS SHALL BE IN ACCORDANCE WITH THE LOCAL ZONING ORDINANCE.
 8. THE LOCATIONS OF THE EXISTING UTILITIES SHOWN ON THESE DRAWINGS ARE APPROXIMATE. THE EXACT LOCATIONS SHALL BE DETERMINED IN THE FIELD BY COORDINATING WITH THE RESPECTIVE UTILITY COMPANIES INVOLVED. PROVIDE ALL NECESSARY PROTECTIVE MEASURES TO SAFEGUARD THE EXISTING UTILITIES FROM DAMAGE DURING THE CONSTRUCTION OF THIS PROJECT.
 9. THE CONTRACTOR SHALL VERIFY POSITIVE FLOW FOR ALL STORM SEWER PIPE. DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER IMMEDIATELY.
 10. ALL DISTURBED AREAS OUTSIDE THE PROJECT LIMITS, INCLUDING ADJOINING PROPERTIES AND/OR RIGHT-OF-WAY SHALL BE REPAIRED, SEEDED, AND STRAWED.

SITE LEGEND

- BM = BENCHMARK
- +690.00 = PROPOSED GRADE SPOT SHOT
- +690.00 = INDICATES TOP OF CURB/SIDEWALK
- +690.00 = EXISTING GRADE SPOT SHOT
- = PROPOSED STORM PIPE
- = CONCRETE AREA
- = PROPERTY LINES
- 690 --- = EXISTING CONTOURS
- 690 --- = PROPOSED CONTOURS
- = DISTURB LIMITS



**CITY OF LEBANON
SENIOR CENTER
100 W. MULBERRY STREET**



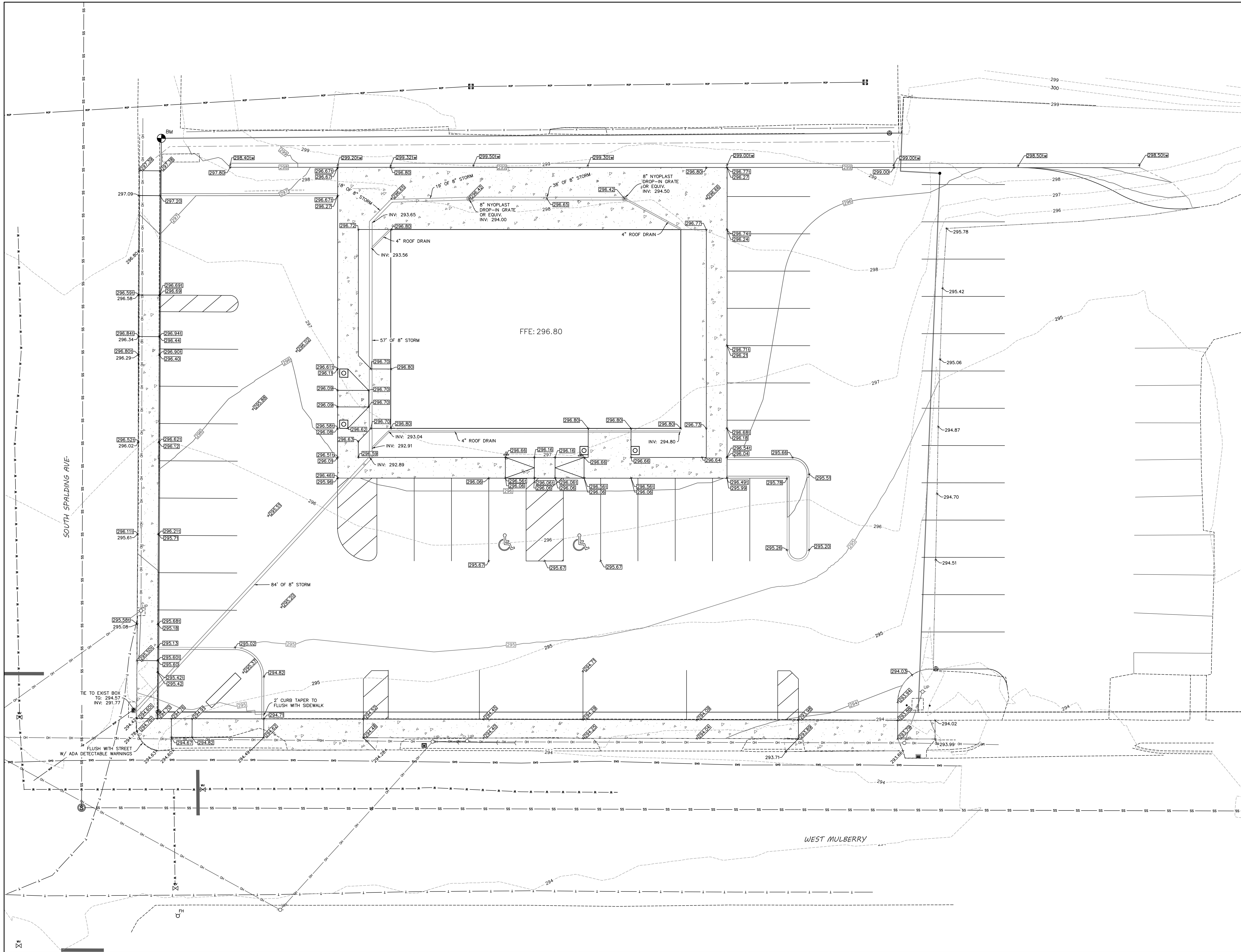
LEBANON OFFICE:
335 N. WOODLAWN AVE.
LEBANON, KY 40033

NATHAN ALLAN KING
P.E. #24283 P.L.S. #3831
BUSINESS: (270) 692-0089
MOBILE: (270) 590-4603
Nathan@kwm.net

REVISIONS:	DATE:

SCALE: 1" = 10' DATE: 12-08-2020

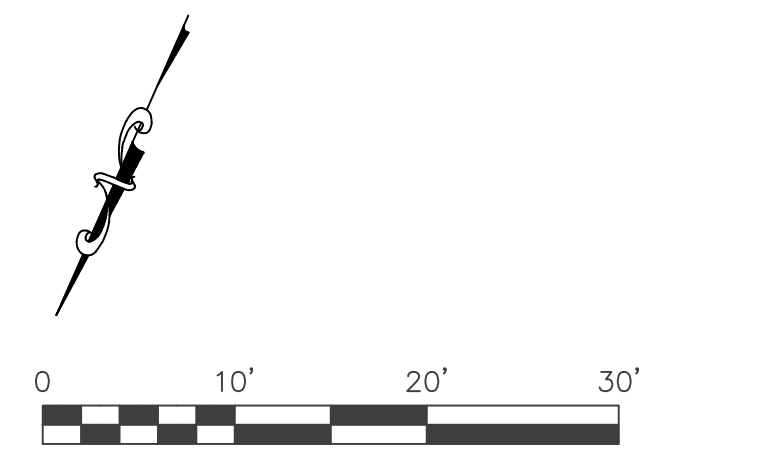
SHEET: **PROPOSED LAYOUT C1.01**



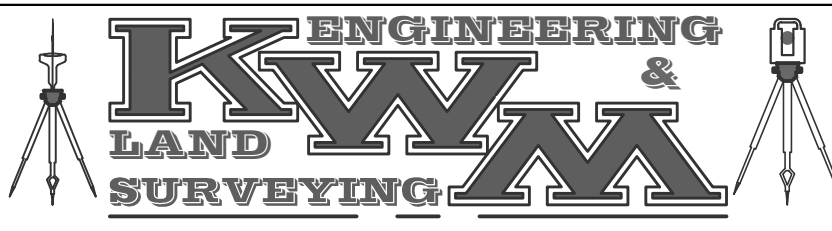
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 11. ALL CURB STOPS AND CURB CUTS ABUTTING TRAVELED WAYS SHALL TAPER TO ASPHALT GRADE AT A MIN. 4:1 SLOPE.

SITE LEGEND

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**CITY OF LEBANON
SENIOR CENTER
100 W. MULBERRY STREET**



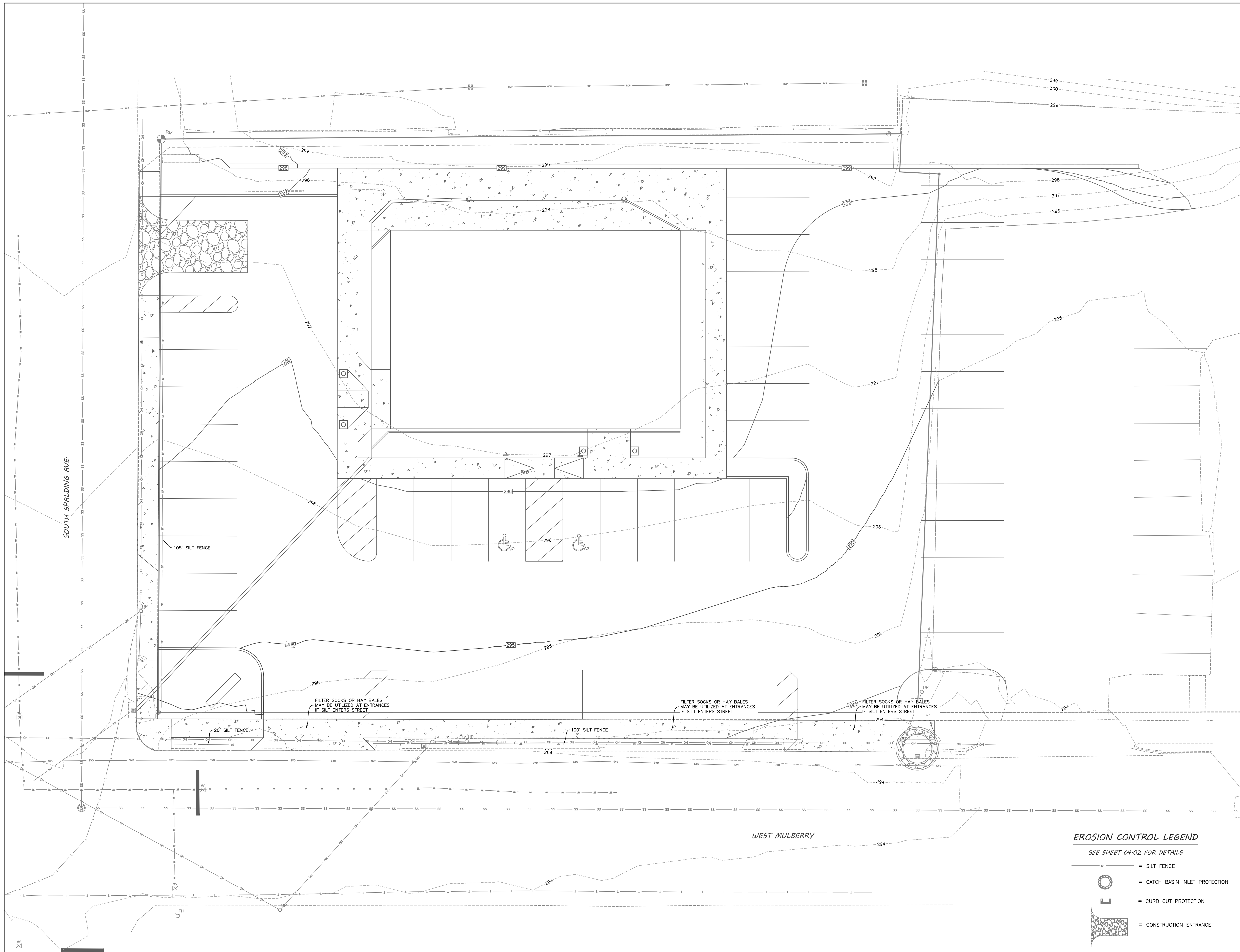
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Nathan@kwm.net

REVISIONS:	DATE:

SCALE: 1" = 10' DATE: 12-08-2020

SHEET: GRADING & DRAINAGE **C2.01**



EROSION CONTROL NOTES:

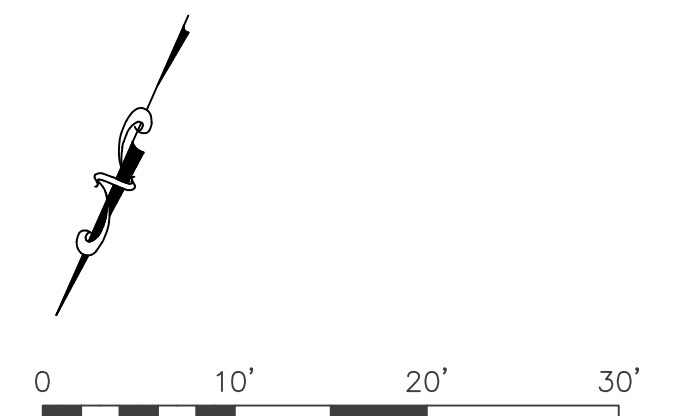
1. AS A MINIMUM, ALL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CONSTRUCTED AND MAINTAINED ACCORDING TO THE LOCAL STORMWATER ORDINANCES, AND AS REQUIRED BY STATE AND FEDERAL LAWS.
2. A COPY OF THE APPROVED EROSION PREVENTION AND SEDIMENT CONTROL PLANS SHALL BE MAINTAINED AT THE PROJECT SITE AT ALL TIMES. THIS COPY SHALL BE PRESENTED TO THE LOCAL AND STATE REGULATORY REPRESENTATIVES UPON REQUEST.
3. ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO OR AS THE FIRST STEP IN CLEARING AND GRUBBING AS NEEDED TO CONTROL SEDIMENT LEAVING THE SITE. THE CONTRACTOR HAS THE ABILITY TO ALTER THE PLAN SHOWN HEREON BASED ON PHASING AND CONSTRUCTION PRACTICES. THE CONTRACTOR IS RESPONSIBLE FOR ANY ADDITIONAL EROSION CONTROL MEASURES NECESSARY TO PREVENT EROSION AND SEDIMENT FROM LEAVING THE SITE.
4. TEMPORARY SEDIMENT TRAPS WITH ROCK OR EARTHEN DIKES OR OTHER APPROVED CONTROLS SHALL BE INSTALLED DOWNGRADIENT OF HEAVILY ERODED AREAS AS NEEDED TO PREVENT SEDIMENT FROM LEAVING THE SITE.
5. ACTIONS MUST BE TAKEN TO MINIMIZE THE TRACKING OF MUD, SOIL, AND ROCK FROM CONSTRUCTION AREAS ONTO PUBLIC ROADWAYS. SOIL AND ROCK TRACKED ONTO THE ROADWAY SHALL BE REMOVED DAILY.
6. SOIL STOCKPILES SHALL BE LOCATED AWAY FROM STREAMS, PONDS, SWALES AND CATCH BASINS. STOCKPILES SHALL BE SEEDED, MULCHED, AND ADEQUATELY CONTAINED THROUGH THE USE OF SILT FENCE.
7. GOOD HOUSEKEEPING PRACTICES SHALL BE APPLIED TO PREVENT CONTAMINATED RUNOFF OR OTHER IMPACTS FROM PAINT OR CONCRETE WASTES, FUELS AND OILS, TRASH AND LITTER, OR OTHER MATERIALS.
8. ALL BARE SOIL AREAS NOT SUBJECT TO ACTIVE CLEARING, EXCAVATION, GRADING, OR FILL ACTIVITIES SHALL BE STABILIZED WITH TEMPORARY OR PERMANENT SEEDING AND/OR MULCHING WITHIN 14 DAYS IF NO WORK IS PLANNED IN THAT AREA DURING THE NEXT WEEK.
9. SILT FENCES, DITCH CHECKS, NON-PERMANENT SEDIMENT TRAPS, AND OTHER TEMPORARY CONTROLS SHALL BE REMOVED AFTER VEGETATION IN UPGRADIENT AREAS IS ESTABLISHED AND DITCHES ARE STABLE.
10. THE CONTRACTOR SHALL INSPECT ALL EROSION AND SEDIMENT CONTROL DEVICES AT LEAST ONCE A WEEK AND AT LEAST ONCE A DAY DURING RAINFALL EVENTS. THE CONTRACTOR SHALL PERFORM ANY REPAIRS OR MAINTENANCE IMMEDIATELY IN ORDER TO ENSURE EFFECTIVE EROSION AND SEDIMENT CONTROL.
11. THE CONTRACTOR SHALL MAINTAIN A RECORD OF ALL INSPECTIONS AND MAINTENANCE ACTIVITIES AT THE PROJECT SITE. THIS RECORD SHALL BE MADE AVAILABLE TO THE LOCAL CITY OFFICIALS UPON REQUEST.
12. OFFSITE WASTE AREAS SHALL BE PROTECTED WITH SILT FENCE AND/OR SEEDED AND MULCHED TO PREVENT EROSION.

BEST MANAGEMENT PRACTICES:

1. IT IS THE INTENTION OF THIS PLAN TO EFFECTIVELY CONTROL EROSION OF DISTURBED SOILS. HOWEVER NO PLAN CAN BE MADE THAT DETAILS ALL POSSIBLE CONTROL MEASURES THROUGHOUT CONSTRUCTION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MINIMIZE ALL EROSION USING THESE MEASURES AS WELL AS ANY ADDITIONAL MEASURES REQUIRED TO CONTROL RUNOFF.
2. THE CONTRACTOR IS TO TAKE IMMEDIATE ACTION TO CLEAN UP SPILLS OF ILLICIT MATERIAL AND MUST MAINTAIN OIL AND GREASE ABSORBING MATERIALS ON-SITE. RUBBISH, TRASH, GARBAGE, LITTER, ETC. ARE TO BE DEPOSITED IN SEALED CONTAINERS. THE CONTRACTOR IS TO CONTROL DUST FROM THE SITE. IF CONCRETE TRUCKS WASH OUT ON SITE, THE WASH WATER SHALL BE PLACED IN AN AREA WHERE IT CAN NOT MAKE ITS OFF SITE.
3. CONTRACTOR SHALL SECURE THE K.P.A.'S NOTIFICATION OF COVERAGE PRIOR TO LAND DISTURBING ACTIVITIES. THE NOI MUST BE SUBMITTED AS REQUIRED BY THE KENTUCKY DIVISION OF WATER (KDOW).
4. THE CONTRACTOR IS TO KEEP A SIGNED AND SEALED EROSION CONTROL PLAN ON SITE AND MAKE IT AVAILABLE TO INSPECTORS AS REQUIRED.
5. ANY DEVIATIONS FROM THIS PLAN SHALL BE MARKED ON SAME WITH AN EXPLANATION OF WHY IT WAS NEEDED.
6. IF A SPILL OF AN ILLICIT MATERIAL ENTER A WATERWAY OR STORM SEWER, CONTACT THE KDOW 502-564-2380.

SITE LEGEND

- BM = BENCHMARK
- +690.00 = PROPOSED GRADE SPOT SHOT
- +690.001 = INDICATES TOP OF CURB/SIDEWALK
- +690.00 = EXISTING GRADE SPOT SHOT
- [Symbol] = PROPOSED STORM PIPE
- [Symbol] = CONCRETE AREA
- [Symbol] = PROPERTY LINES
- 690 = EXISTING CONTOURS
- 690 = PROPOSED CONTOURS
- [Symbol] = DISTURB LIMITS



**CITY OF LEBANON
SENIOR CENTER
100 W. MULBERRY STREET**



LEBANON OFFICE:
335 N. WOODLAWN AVE.
LEBANON, KY 40033

NATHAN ALLAN KING
P.E. #24283 P.L.S. #3831
BUSINESS: (270) 692-0089
MOBILES: (270) 590-4603
Nathan@kwm.net

REVISIONS:	DATE:

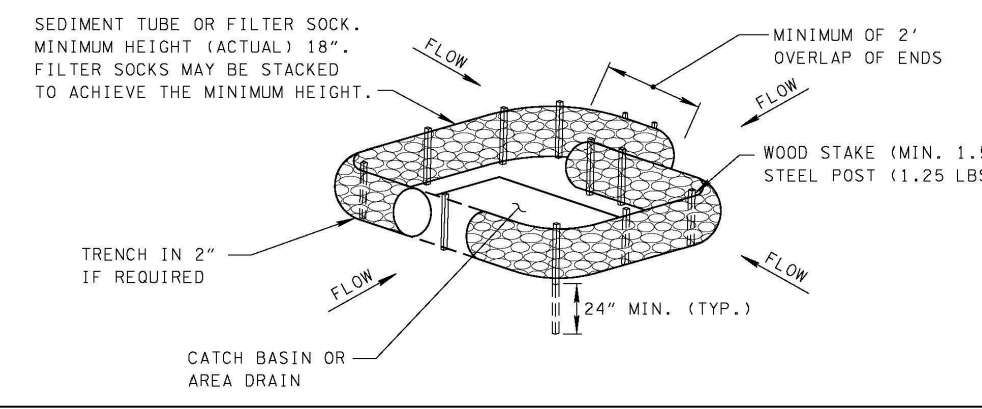
SCALE: 1" = 10' DATE: 12-08-2020

SHEET: **EROSION CONTROL C3.01**

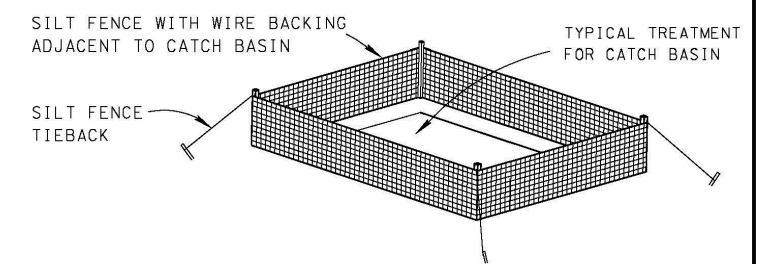
EROSION CONTROL LEGEND

- SEE SHEET C4-02 FOR DETAILS
- [Symbol] = SILT FENCE
 - [Symbol] = CATCH BASIN INLET PROTECTION
 - [Symbol] = CURB CUT PROTECTION
 - [Symbol] = CONSTRUCTION ENTRANCE

CATCH BASIN PROTECTION (TYPE D)

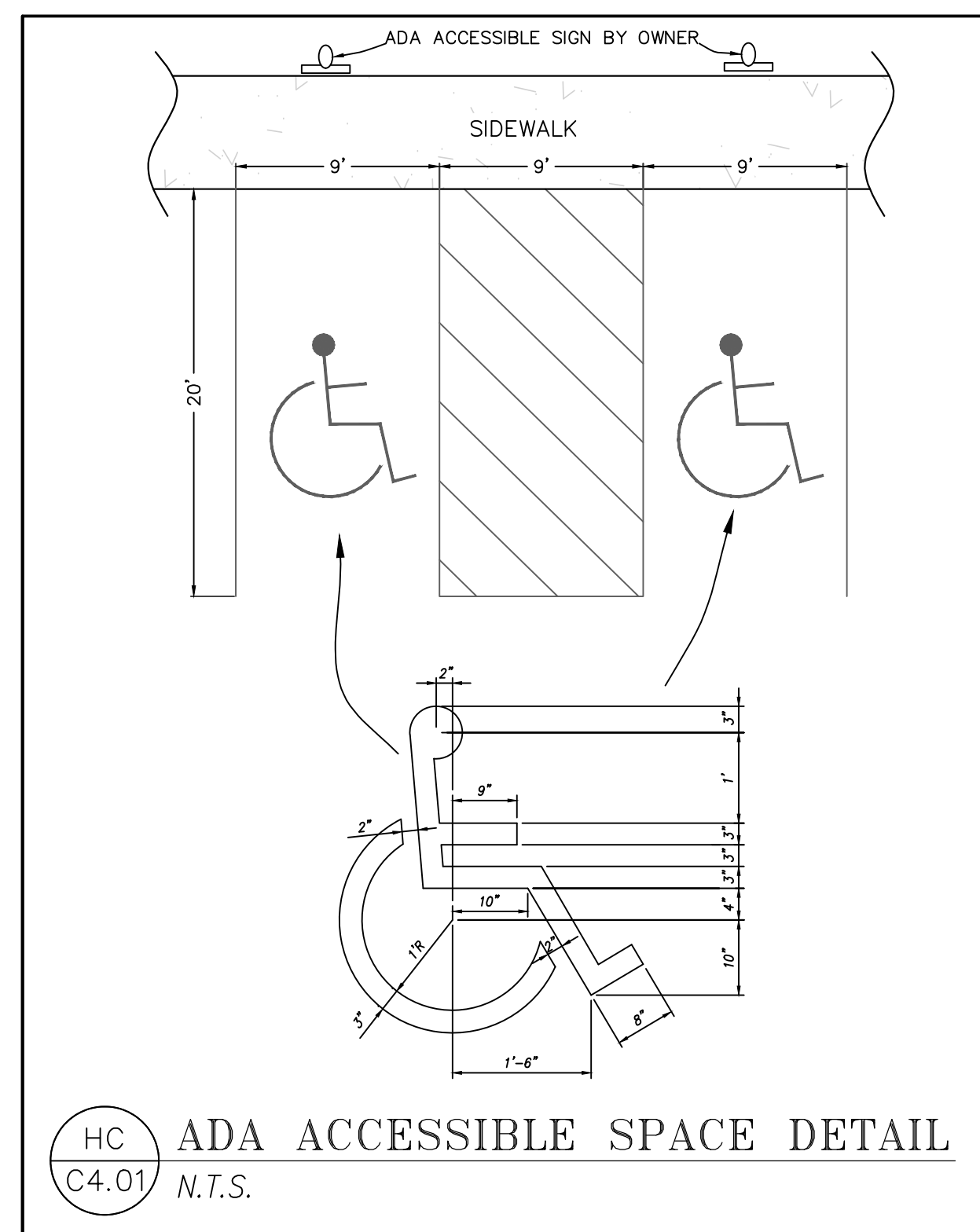
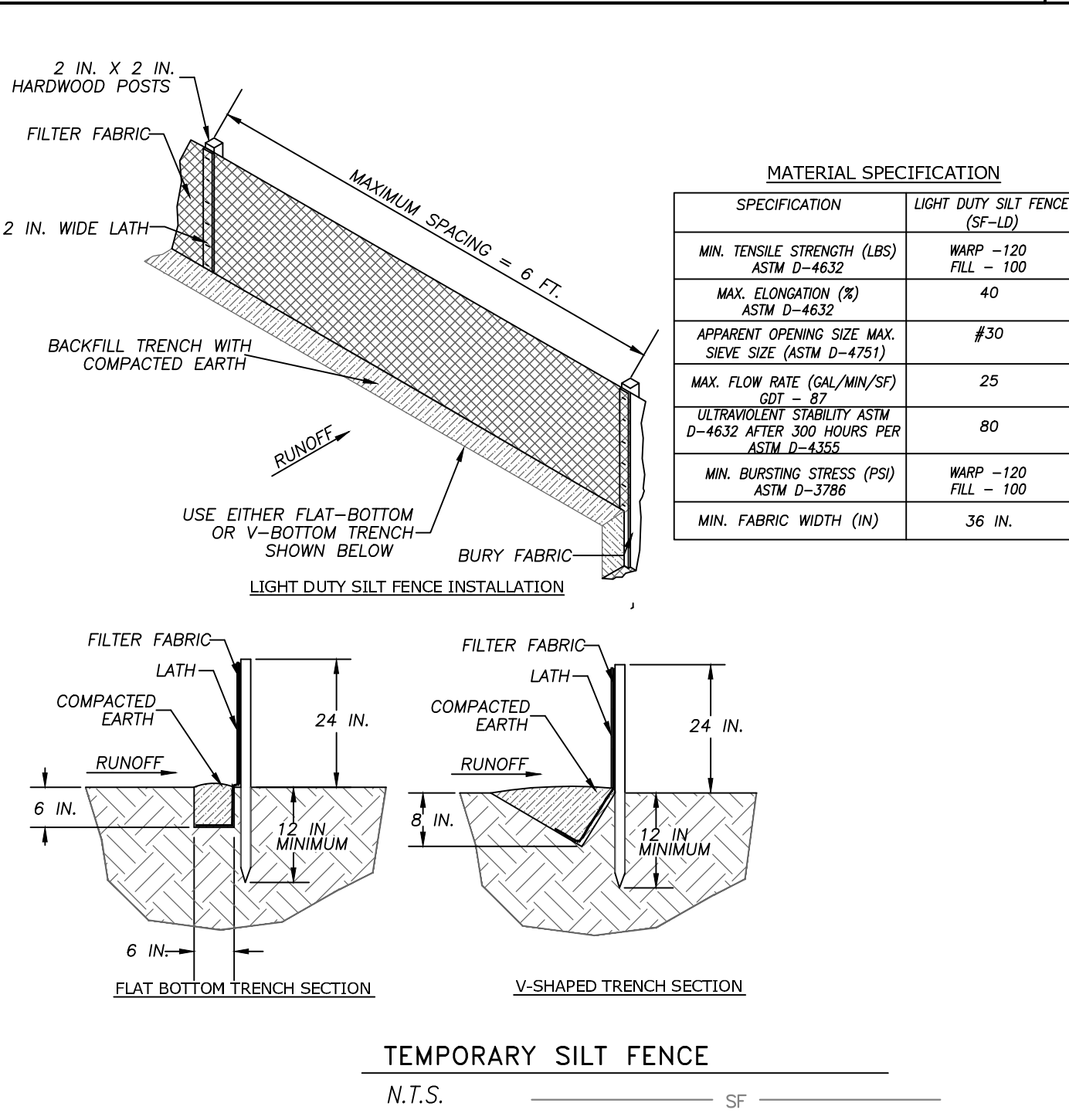
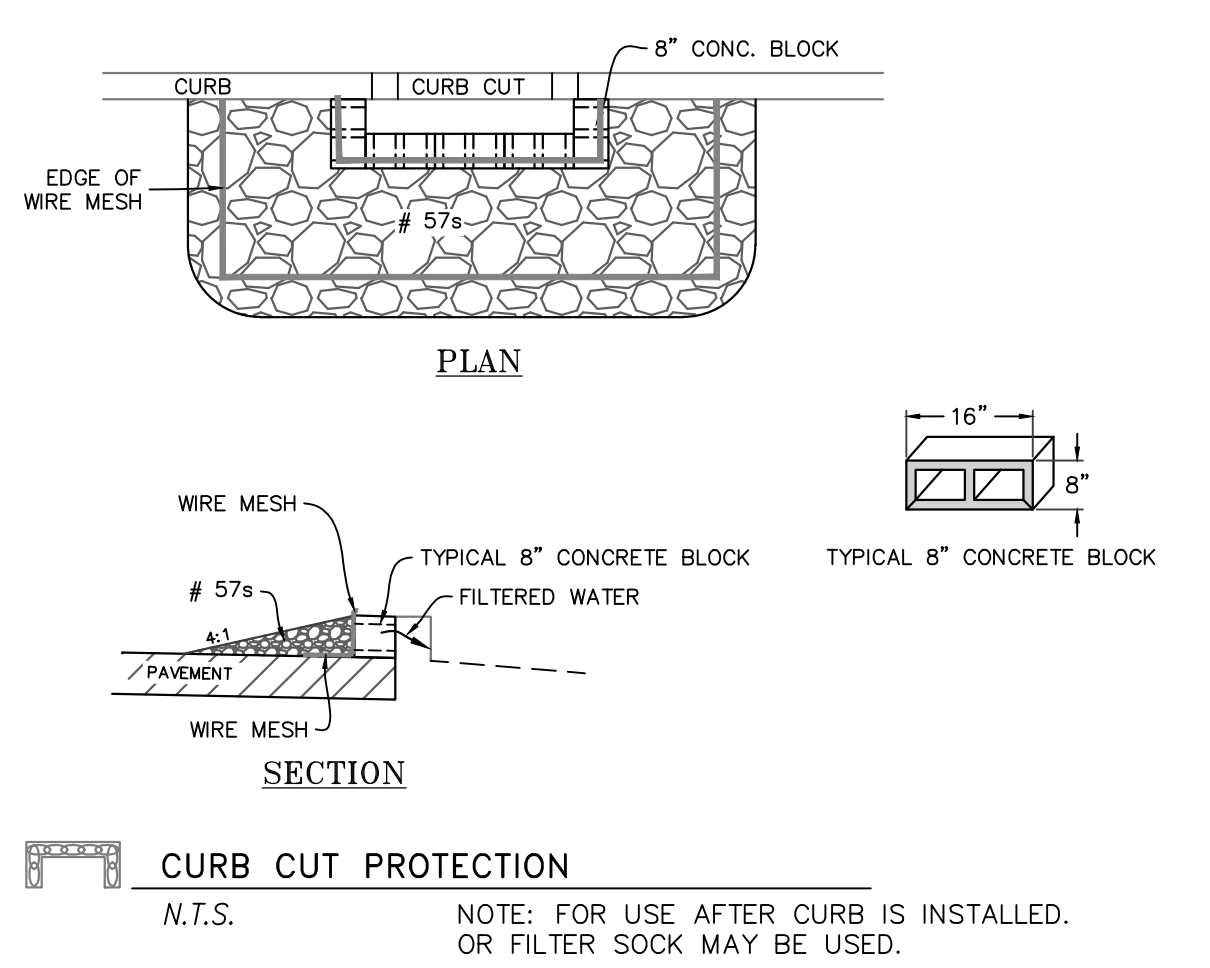
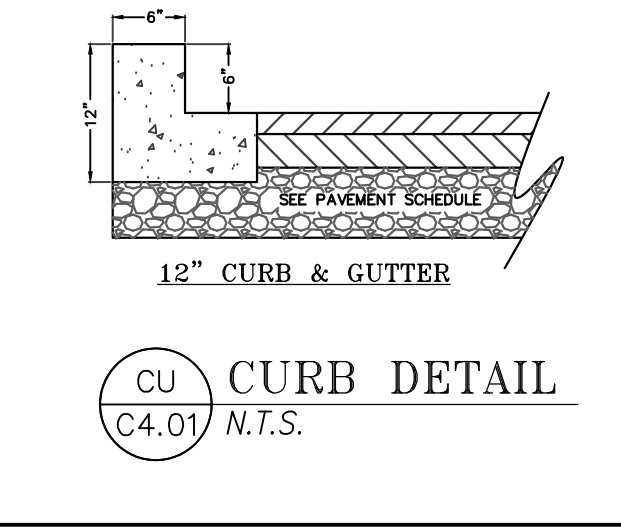
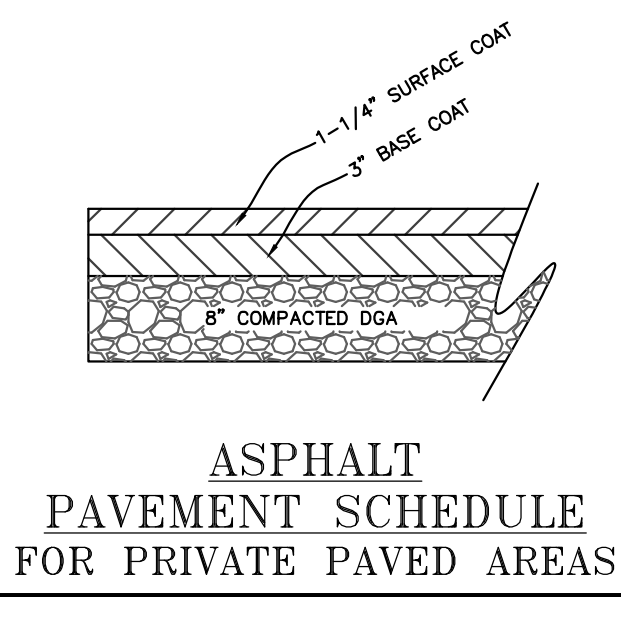
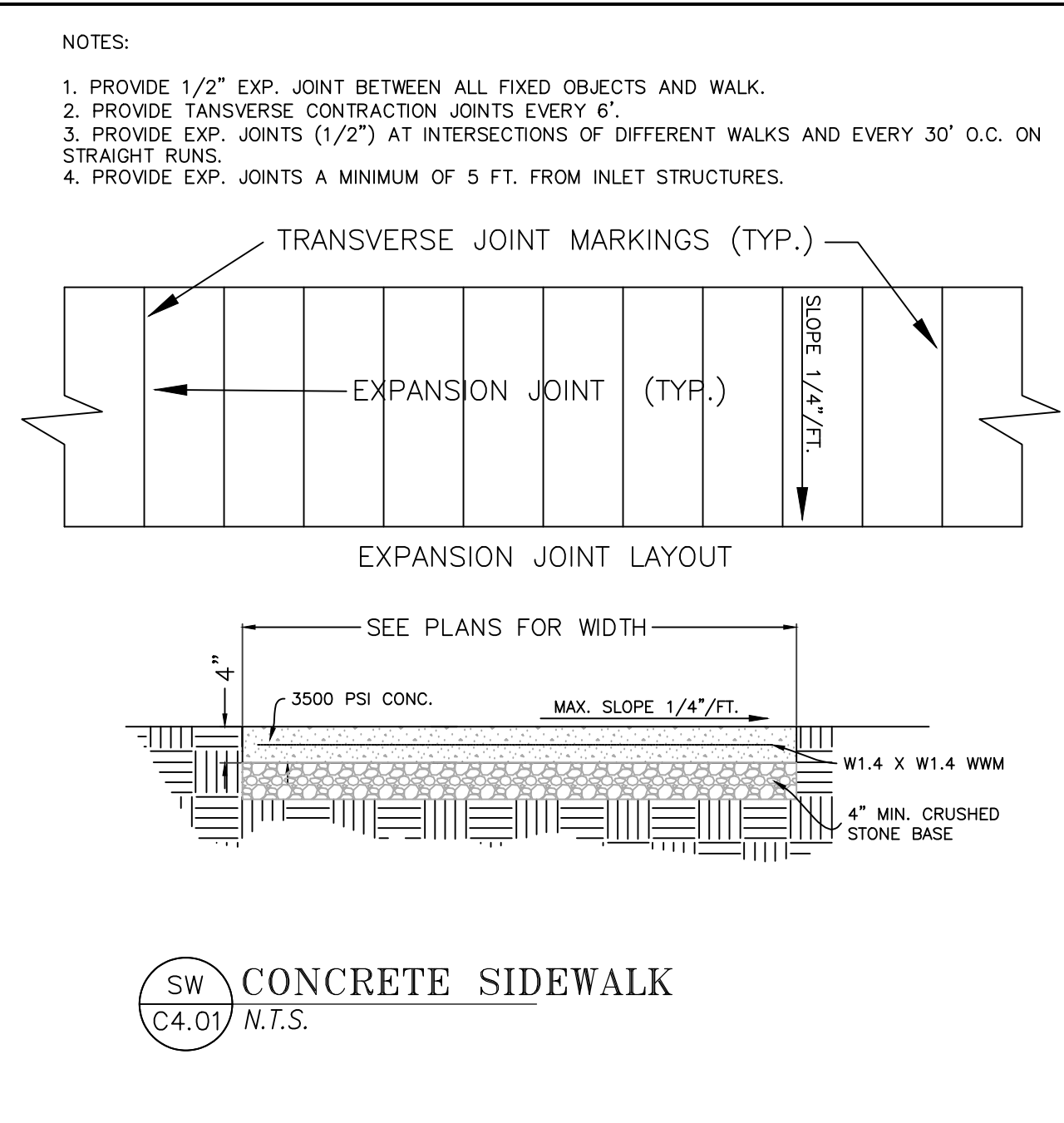
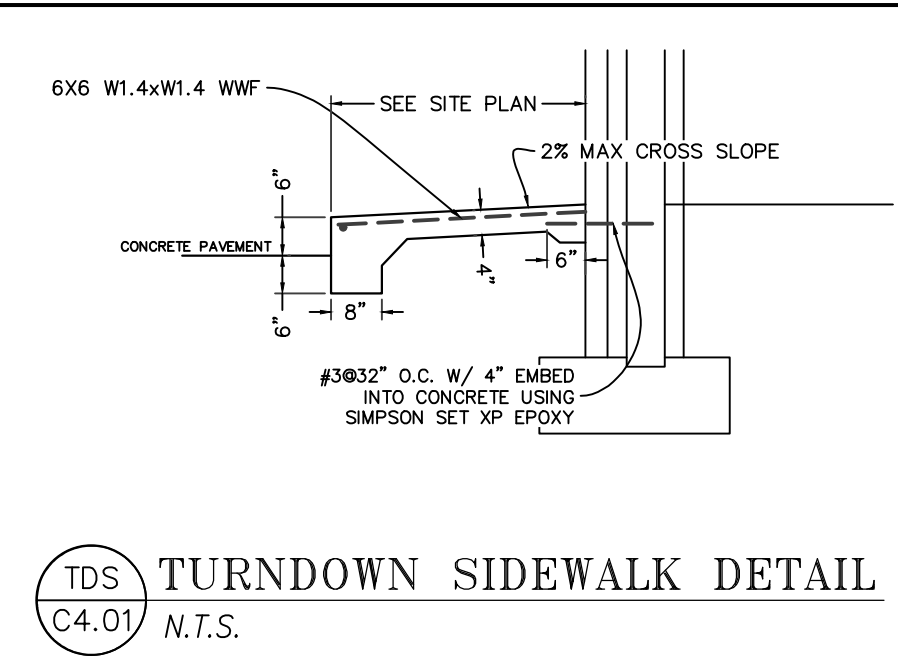
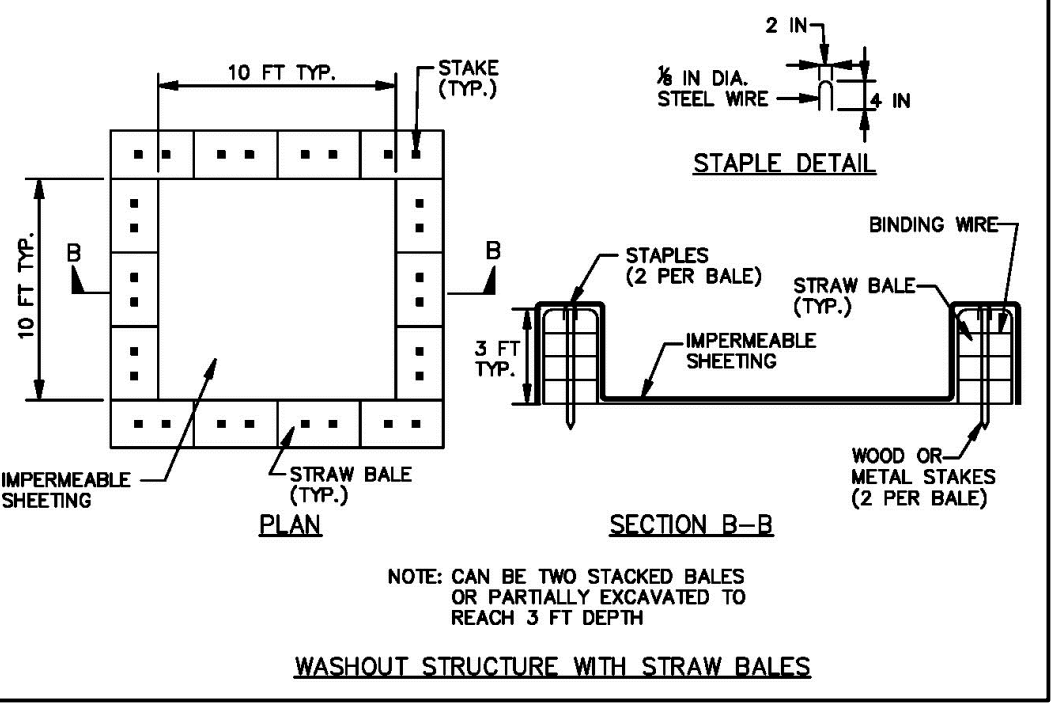
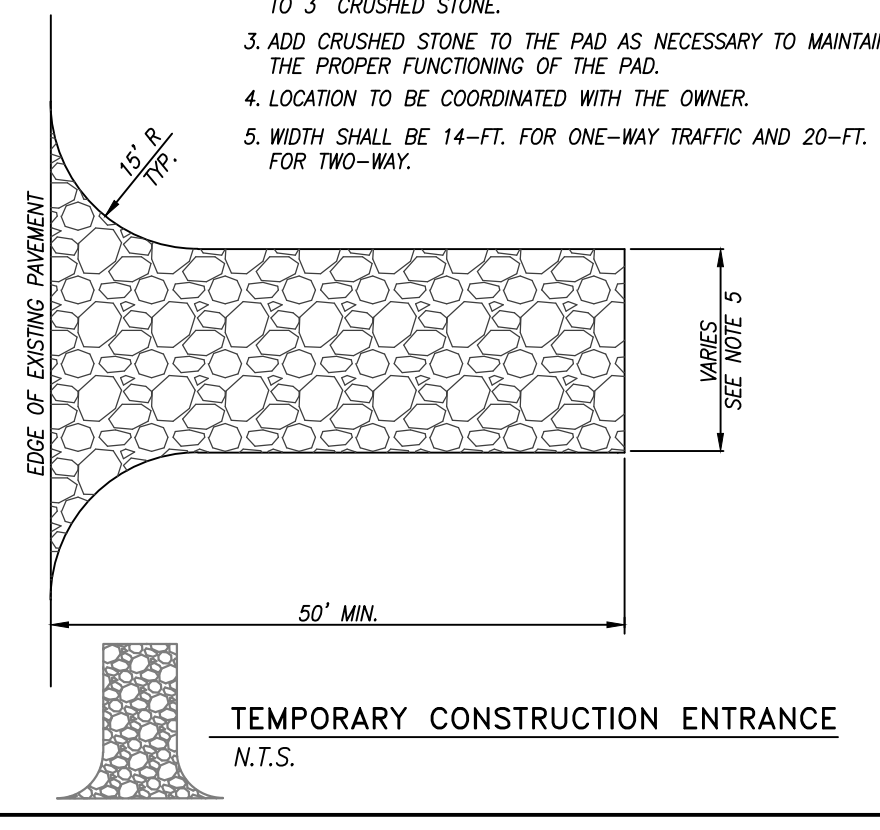


CATCH BASIN PROTECTION (TYPE E)

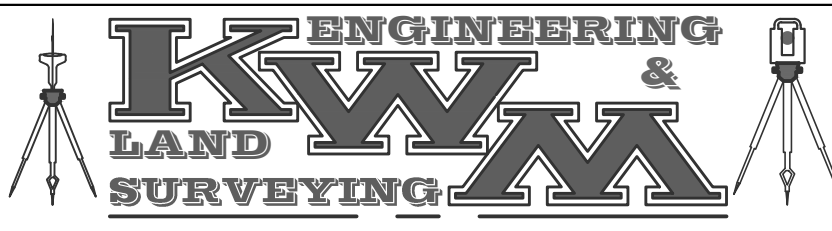


CATCH BASIN INLET PROTECTION
N.T.S.

- NOTES:**
1. THE PURPOSE OF THE STABILIZED CONSTRUCTION ENTRANCE IS TO AID THE CONTRACTOR IN ELIMINATING TRACKING OF SILT ONTO PUBLIC STREETS. THIS DETAIL DOES NOT LIMIT THIS RESPONSIBILITY. OTHER METHODS OF SEDIMENT REMOVAL SHALL BE IMPLEMENTED IF THIS DOES NOT ADEQUATELY REMOVE THE SILT.
 2. CONSTRUCT THE PAD WITH A 6" (MIN.) THICKNESS OF 2" TO 3" CRUSHED STONE.
 3. ADD CRUSHED STONE TO THE PAD AS NECESSARY TO MAINTAIN THE PROPER FUNCTIONING OF THE PAD.
 4. LOCATION TO BE COORDINATED WITH THE OWNER.
 5. WIDTH SHALL BE 14-FT. FOR ONE-WAY TRAFFIC AND 20-FT. FOR TWO-WAY.



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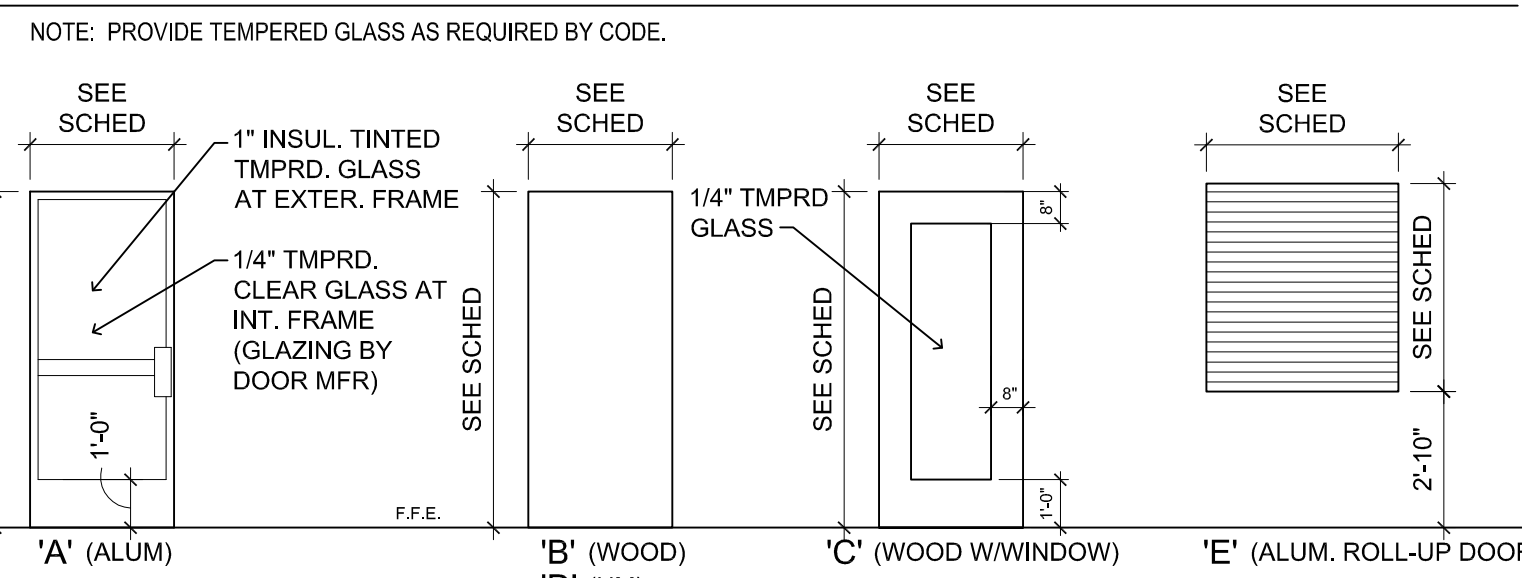
SHEET: C4.01

DETAILS

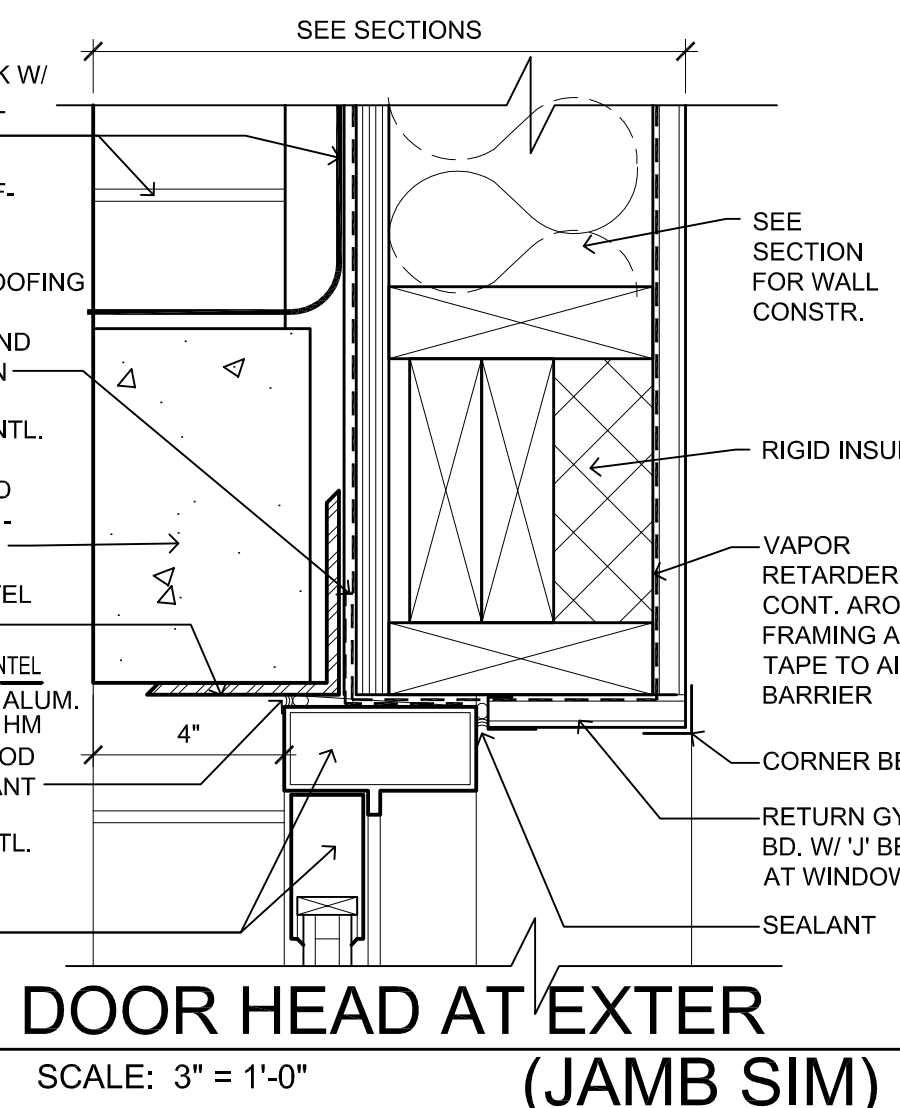
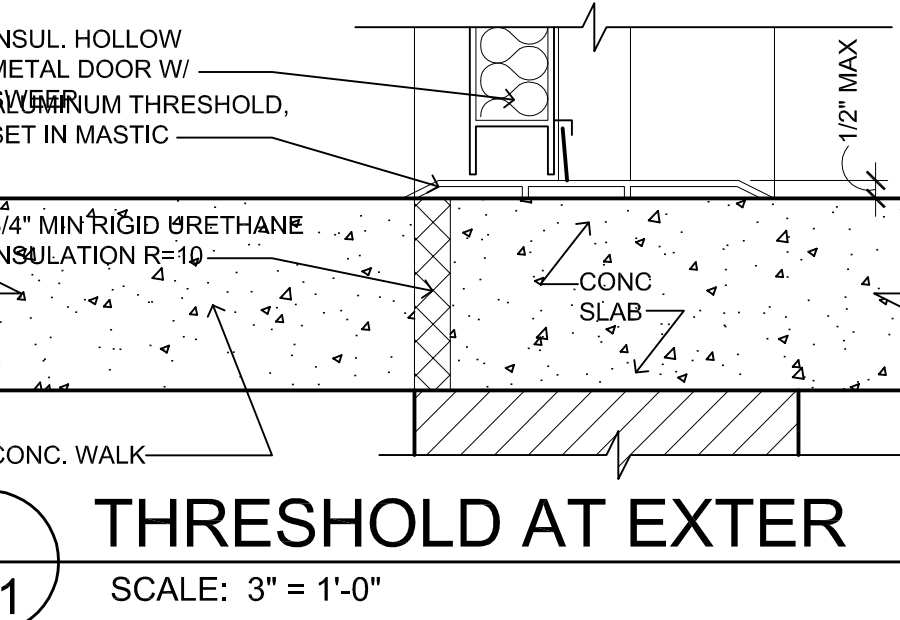
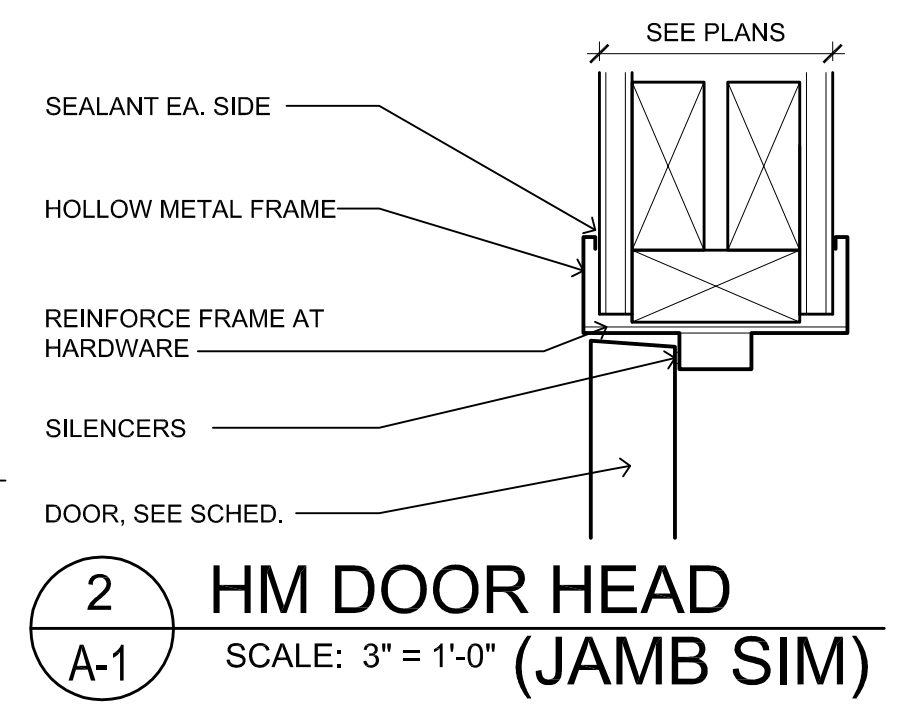
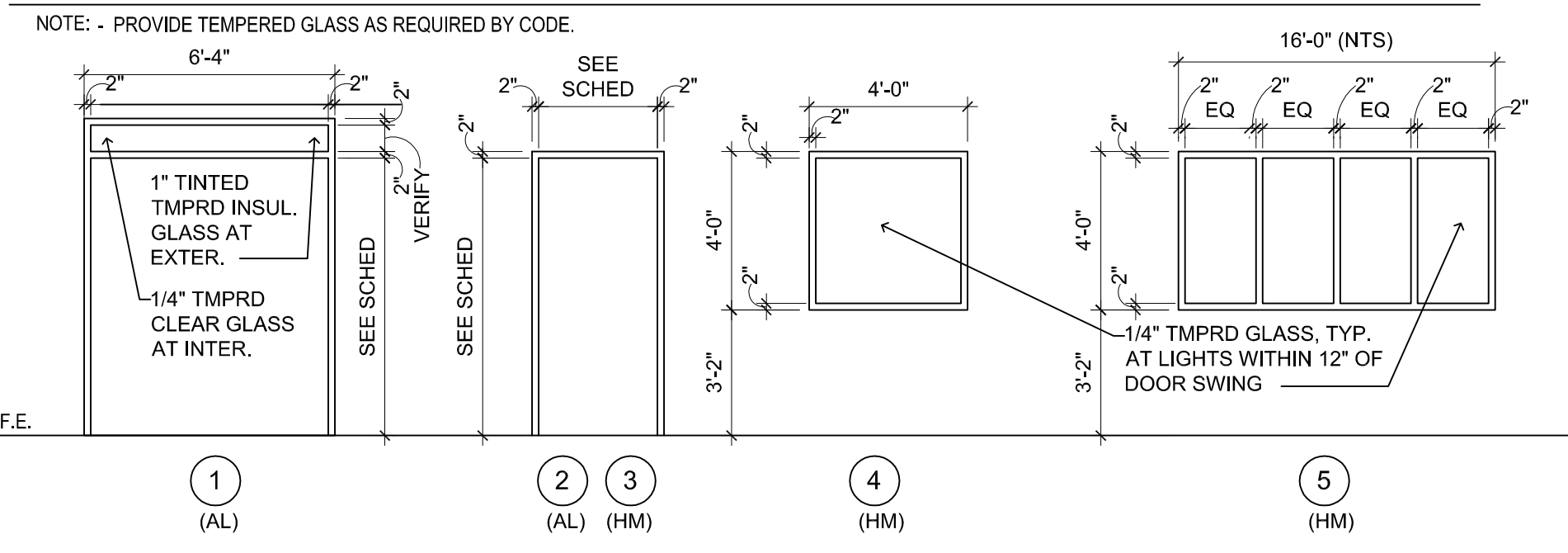
DOOR & FRAME SCHEDULE

DOOR #	100A	100B	102A	102B	103	104	105	106A	106B	106C	107	108	108A	108B	110A	110B	111A	111B	
DOOR/ LIGHT SIZE & TYPE	PAIR 3'-0" X 7'-0" X 1 3/4"	AA	AA			BB		B	B	D	B	B	B	C	C		AA	AA	
	3'-0" X 7'-0" X 1 3/4"		C																
	4'-0" X 4'-0" SIDELITE																		
	16'-0" X 4'-0" SIDELITE																		
	4'-0" X 4'-4" ROLL-UP DOOR																		
FRAME TYPE	1	2	3	5	3	3	3	3	3	3	3	3	3	3	4	3	4	1	2
NOTES	UNDERCUT DOOR 3/4"																		
DETAILS (S)=SIM																			
HEAD	4	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	4	2	2
JAMB	4(S)	2(S)	2(S)	2(S)	2(S)	2(S)	2(S)	2(S)	2(S)	2(S)	2(S)	2(S)	2(S)	2(S)	2(S)	2(S)	4(S)	2(S)	2(S)
THRESHOLD/SILL	3																		
HARDWARE GROUP (SEE SPECIFICATION)	1	2	4		5	6	6	3	7	9	8	4	4		4		1	2	

DOOR TYPES:



DOOR AND SIDELIGHT FRAME TYPES:



GENERAL NOTES:

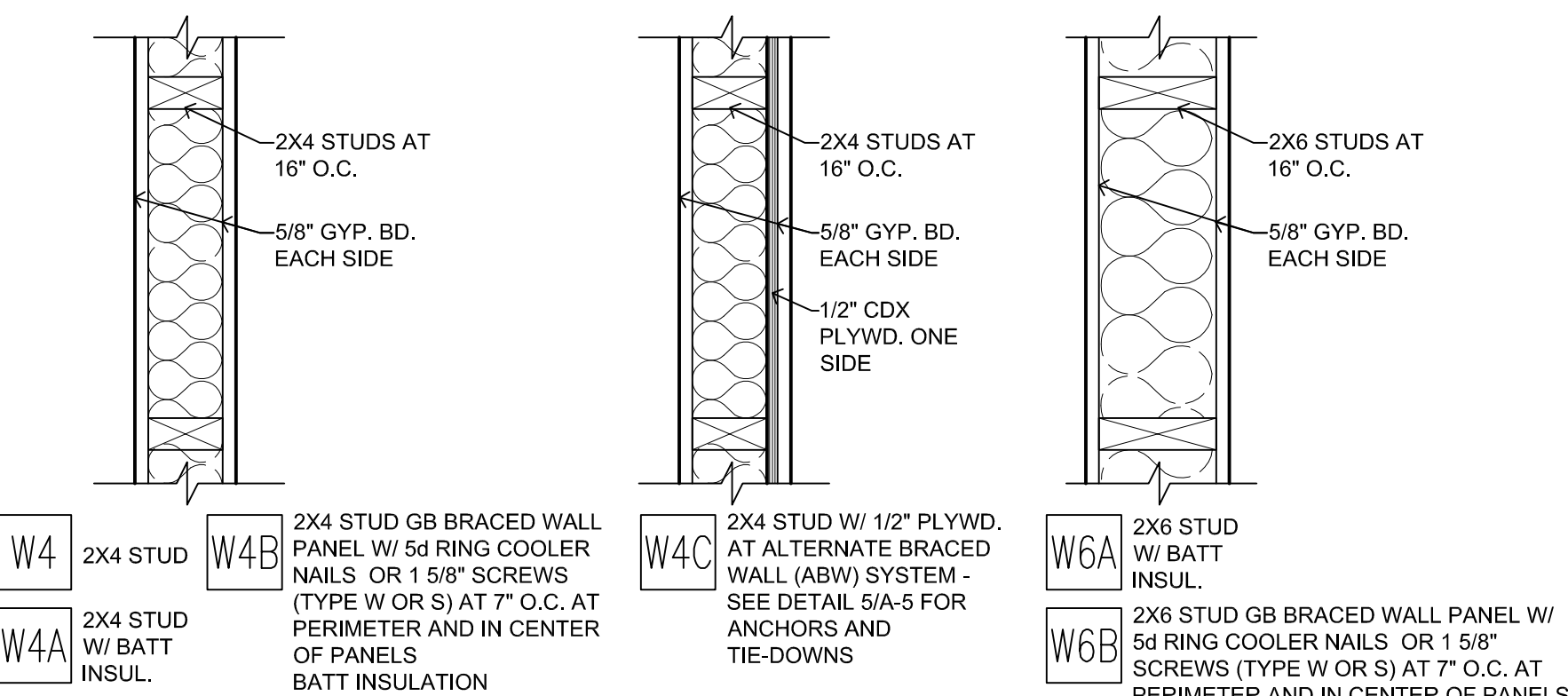
- ALL EXTERIOR DIMENSIONS FROM FACE OF MASONRY.
- ALL INTERIOR DIMENSIONS FROM INTERIOR FACE OF EXTERIOR WALL FRAMING TO FACE OF INTERIOR WALL FRAMING, UNLESS NOTED OTHERWISE.
- ALL EXTERIOR WINDOWS WILL HAVE FIXED THERMAL PANES (WITH 0.32 MAX U-FACTOR) UNLESS NOTED OTHERWISE.
- ALL DOORS ARE 36" WIDE UNLESS NOTED OTHERWISE.

FLOOR PLAN NOTES:

- 1 SEMI-RECESSED FIRE EXTINGUISHER CABINET LOCATION - SEE DETAIL 4/CR-1
- 2 ACCESSIBLE TOILET - SEE 2/CR-1
- 3 ACCESSIBLE URINAL - SEE 2/CR-1
- 4 ACCESSIBLE LAVATORY IN VANITY - SEE 2/CR-1
- 5 ACCESSIBLE HI-LO WATER COOLER W/ BOTTLE FILLERS - SEE DETAIL 3/CR-1
- 6 UTILITY SINK LOCATION - SEE PLUMBING
- 7 HOSE BIB - SEE PLUMBING
- 8 3-COMPARTMENT SINK W/ GREASE TRAP - SEE PLUMBING
- 9 MICROWAVE AND RESIDENTIAL RANGE FOR WARMING ONLY - NO COMMERCIAL HOOD PROVIDED
- 10 ACCESSIBLE WALL-HUNG LAVATORY - SEE DETAIL 2/CR-1
- 11 EQUIPMENT THIS AREA BY KITCHEN EQUIPMENT SUPPLIER (EXCEPT FOR MICROWAVE AND RANGE FOR WARMING USE)
- 12 METAL OR FRP PANELING AT ALL WALLS BEHIND FOOD PREPARATION AND DISH CLEANING AREAS
- 13 STAINLESS STEEL SERVING COUNTER WITH SURFACE AT ACCESSIBLE HEIGHT (34" A.F.F.)
- 14 FURNACE/AIR-HANDLER UNIT - SEE MECH'L.
- 15 HVAC CONDENSING UNIT - SEE MECH'L.
- 16 ELECTRICAL SERVICE PANEL LOCATION - SEE ELECTRICAL
- 17 PROVIDE MINIMUM 5'-4" X 4'-0" X 6" THICK CONCRETE SLAB LANDING AT EXTERIOR DOOR
- 18 PROVIDE MINIMUM 7'-0" X 4'-0" X 6" THICK CONCRETE SLAB LANDING AT EXTERIOR DOUBLE DOOR
- 19 6'-0" H CEDAR FENCING ON 4X4 STEEL BOLLARDS W/ 48" WIDE GATES - SEE 3/CR-2 AND CIVIL FOR DIMENSIONS
- 20 PROVIDE 5'-4" OF 2XB BLOCKING IN WALL FOR TELEVISION MOUNTING AT 48" A.F.F. AND 72" A.F.F.
- 21 COAT RACK WITH SHELF AT 4'-8" MAX. A.F.F. - PROVIDE ADDITIONAL BLOCKING IN WALL AS REQUIRED BY MANUF.
- 22 PROVIDE 24" DEEP SOLID SURFACE COUNTER AT 30" A.F.F. - SEE DETAIL 5/CR-1 (SIMILAR)
- 23 SEE ELECTRICAL PLANS FOR DUPLEX POWER AND DATA RECEPTICLES IN CONCRETE FLOOR THIS AREA

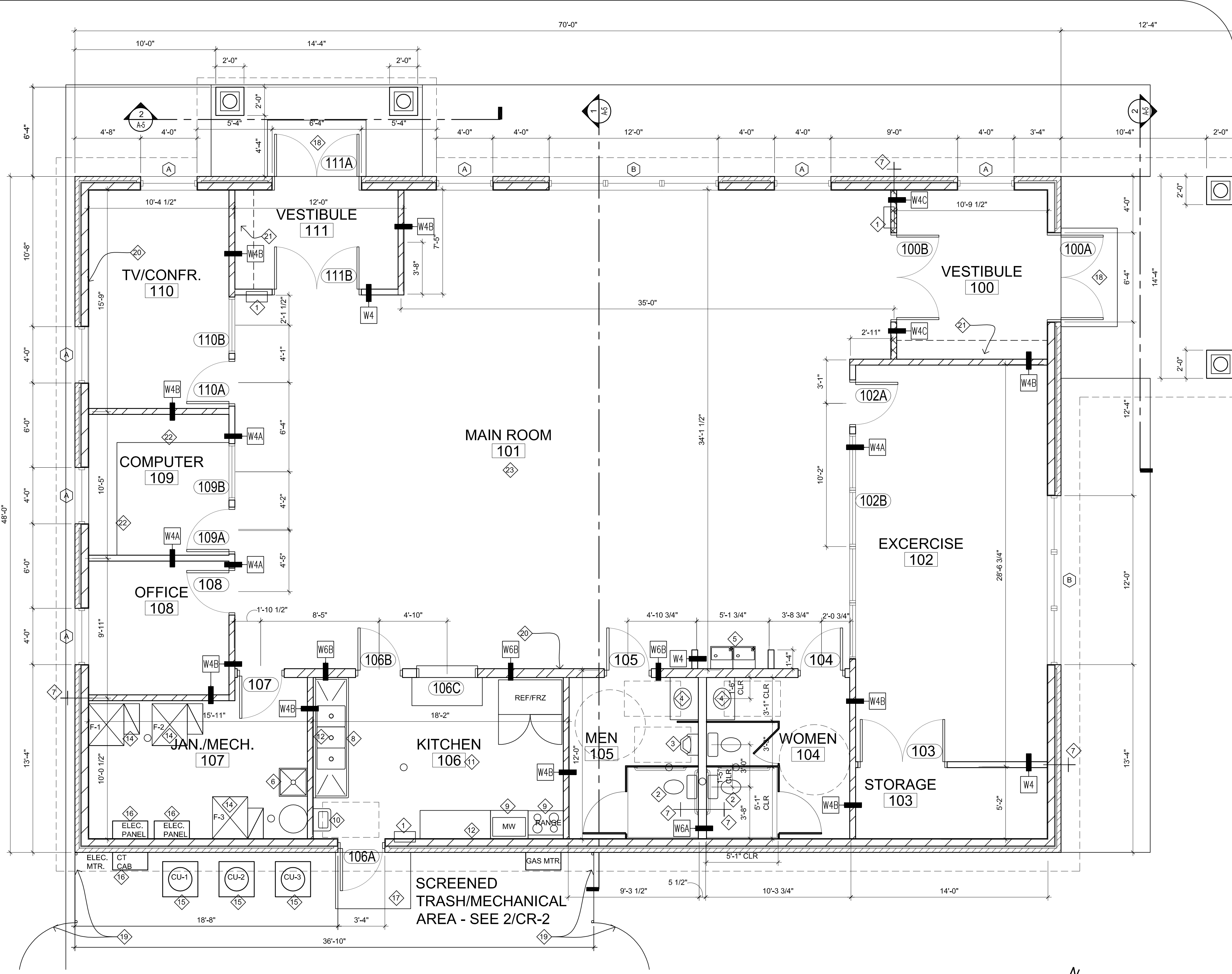
BRACED WALL PANEL KEY

- WSP BRACED W/ 1/2" PLYWD. SHTG. - ONE (1) SIDE
- GB BRACED W/ 5/8" GYP. BD. - TWO (2) SIDES
- ABW BRACED W/ 1/2" PLYWD. - ONE (1) SIDE



INTERIOR FURRING AND PARTITION TYPES

NOTE: SEE BRACED PANEL KEY AND PLAN FOR BRACED WALL PANEL LOCATIONS.



1 ENLARGED FLOOR PLAN - KITCHEN AND TOILETS
SCALE: 1/4" = 1'-0"



I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED ARCHITECT UNDER THE LAWS OF THE STATE OF KENTUCKY.

DATE: 02/09/2021
DRAWN BY: DCH
CHECKED BY: DCH
REVISIONS:

PROJECT NUMBER: 2012

NEW FACILITY FOR:
CITY OF LEBANON SENIOR CENTER
100 West Mulberry Street, Lebanon, Kentucky 40033

FLOOR PLAN DOOR SCHEDULE & DETAILS

SHEET
A-1

CEILING/LIGHTING SYMBOL LEGEND

- ALL LIGHTING FIXTURES TO BE SELECTED BY OWNER. APPROXIMATE WATTAGES LISTED FOR REFERENCE. FINAL WATTAGES TO BE DETERMINED.
- 2x4 LAY-IN LED LIGHT FIXTURE IN SUSPENDED CEILING GRID - SEE ELECTRICAL
 - RECESSED LED CAN LIGHT - SEE ELECTRICAL
 - WALL-MOUNTED LED WALL PACK LIGHT - SEE ELECTRICAL
 - 4-FOOT STRIP LED LIGHT - SEE ELECTRICAL
 - LED EMERGENCY LIGHT - SEE ELECTRICAL
 - LED EXIT LIGHT - SEE ELECTRICAL
 - LED EXIT/EMERGENCY LIGHT - SEE ELECTRICAL
 - EXTERIOR EMERGENCY LIGHT - SEE ELECTRICAL
 - CEILING TYPE (SEE LIST BELOW)
 - CEILING HEIGHT
 - HVAC SUPPLY/RETURN/AIR HANDLER LOCATIONS

CEILING TYPES:

- (A) ACOUSTIC OR VINYL-FACED LAY-IN CEILING SYSTEM - SEE ROOM FINISH SCHEDULE
- (B) GYPSUM BOARD - PAINTED
- (C) PREFIN. METAL SOFFIT, TYP. AT EXTERIOR

CEILING NOTES:

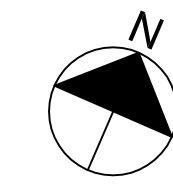
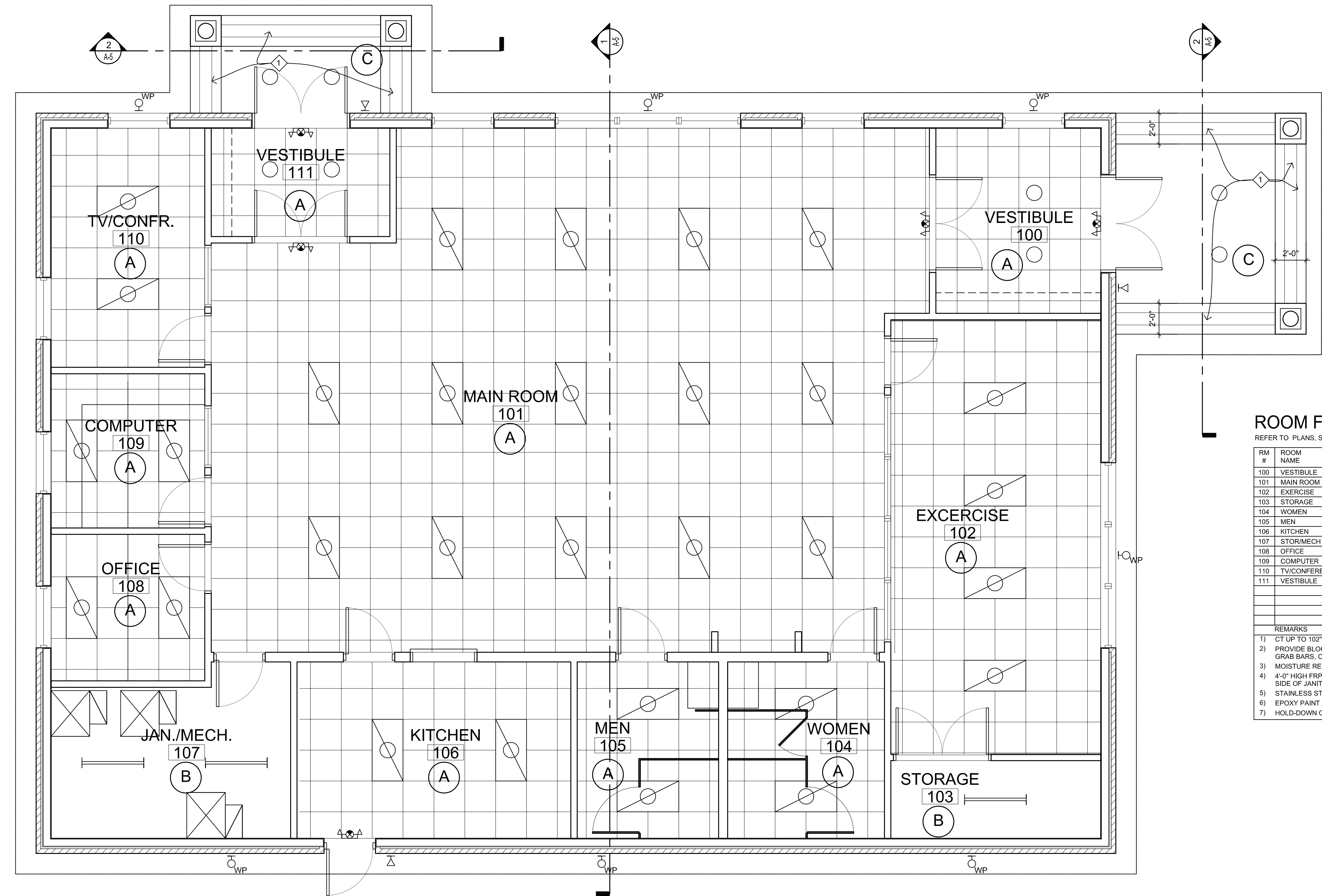
- 1 1X PLASTIC COMPOSITE BEAM WRAP, TYP. AT PORCH

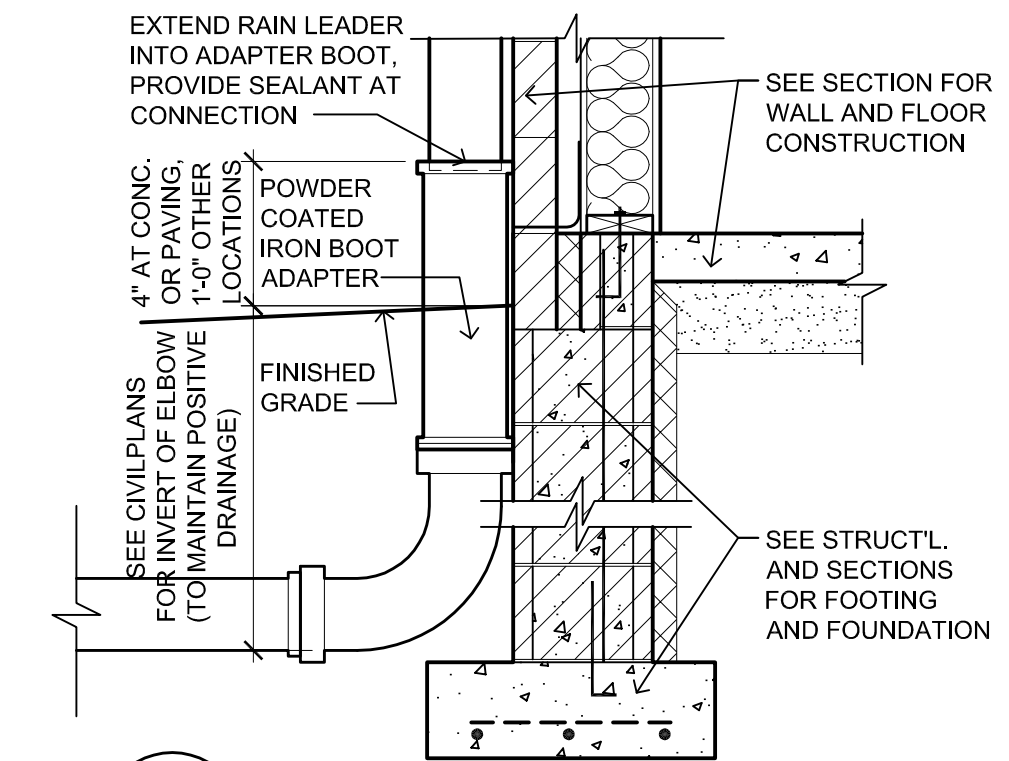
ROOM FINISH SCHEDULE

REFER TO PLANS, SECTIONS AND DETAILS FOR EXTENT OF FINISHES

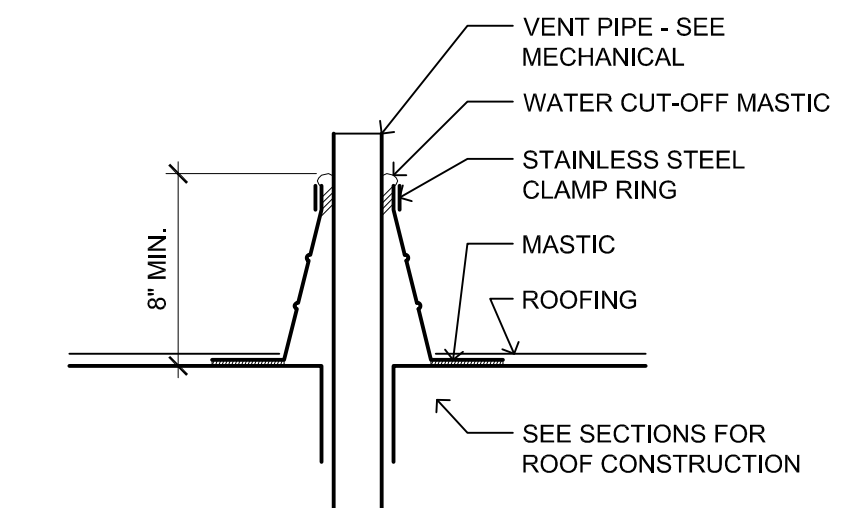
RM #	ROOM NAME	FLOOR		BASE		NORTH WALL		EAST WALL		SOUTH WALL		WEST WALL		CEILING	REMARKS	
		MAT.	FIN.	MAT.	FIN.	MAT.	FIN.	MAT.	FIN.	MAT.	FIN.	MAT.	FIN.			
100	VESTIBULE	CONC.	LVT	RB	N	GB	PTD	GB	PTD	GB	PTD	GB	PTD	ACPA	9'-0"	7
101	MAIN ROOM	CONC.	LVT	RB	N	GB	PTD	GB	PTD	GB	PTD	GB	PTD	ACPA	9'-0"	2
102	EXERCISE	CONC.	LVT	RB	N	GB	PTD	GB	PTD	GB	PTD	GB	PTD	ACPA	9'-0"	
103	STORAGE	CONC.	LVT	RB	N	GB	PTD	GB	PTD	GB	PTD	GB	PTD	ACPA	8'-6"	
104	WOMEN	CONC.	STNSLD	CT	N	GB	CT	GB	CT	GB	CT	GB	CT	ACPB	8'-6"	1, 2, 3
105	MEN	CONC.	STNSLD	CT	N	GB	CT	GB	CT	GB	CT	GB	CT	ACPB	8'-6"	1, 2, 3
106	KITCHEN	CONC.	STNSLD	RB	N	GB	PTD	GB	PTD/SS	GB	PTD/SS	GB	PTD	ACPB	8'-6"	5, 6
107	STOR/MECH	CONC.	SLD	VB	N	GB	PTD	GB	PTD	GB	PTD	GB	PTD	GB	10'-0"	4
108	OFFICE	CONC.	LVT	RB	N	GB	PTD	GB	PTD	GB	PTD	GB	PTD	ACPA	8'-6"	
109	COMPUTER	CONC.	LVT	RB	N	GB	PTD	GB	PTD	GB	PTD	GB	PTD	ACPA	8'-6"	2
110	TV/CONFERENCE	CONC.	LVT	RB	N	GB	PTD	GB	PTD	GB	PTD	GB	PTD	ACPA	8'-6"	2
111	VESTIBULE	CONC.	LVT	RB	N	GB	PTD	GB	PTD	GB	PTD	GB	PTD	ACPA	9'-0"	2, 7

REMARKS	ABBREVIATIONS
1) CT UP TO 102" AT ALL WALLS INCLUDING BEHIND MIRRORS	ACPA ACOUSTIC CEILING PANEL
2) PROVIDE BLOCKING FOR ALL WALL-HUNG FIXTURES SUCH AS GRAB BARS, COUNTERTOPS, CABINETS, ETC.	ACPB VINYL-FACED CEILING PANEL
3) MOISTURE RESISTANT GYP. BD. ALL WET WALLS (EXCEPT AT CMU)	CT CERAMIC TILE
4) 4" HIGH FRP WAINSCOT EXTENDING 2'-0" FROM CORNER EACH SIDE OF JANITOR SINK	CONC CONCRETE
5) STAINLESS STEEL PANELS AT WALLS BELOW EXHAUST HOOD	CMU CONCRETE MASONRY UNIT
6) EPOXY PAINT AT WALLS WITHOUT SS OR FRP PANELS	FRP FIBERGLASS REINFORCED PANEL
7) HOLD-DOWN CLIPS AT ACOUSTIC CEILING PANELS THIS AREA	GB GYPSUM BOARD
	LVT LUXURY VINYL TILE
	N NONE
	PTD PAINTED
	RB RUBBER MILLWORK BASE BOARD
	SLD SEALED
	SS STAINLESS STEEL PANEL
	STN STAINED
	STR EXPOSED STRUCTURE
	VB VINYL BASE
	VCT VINYL COMPOSITION TILE





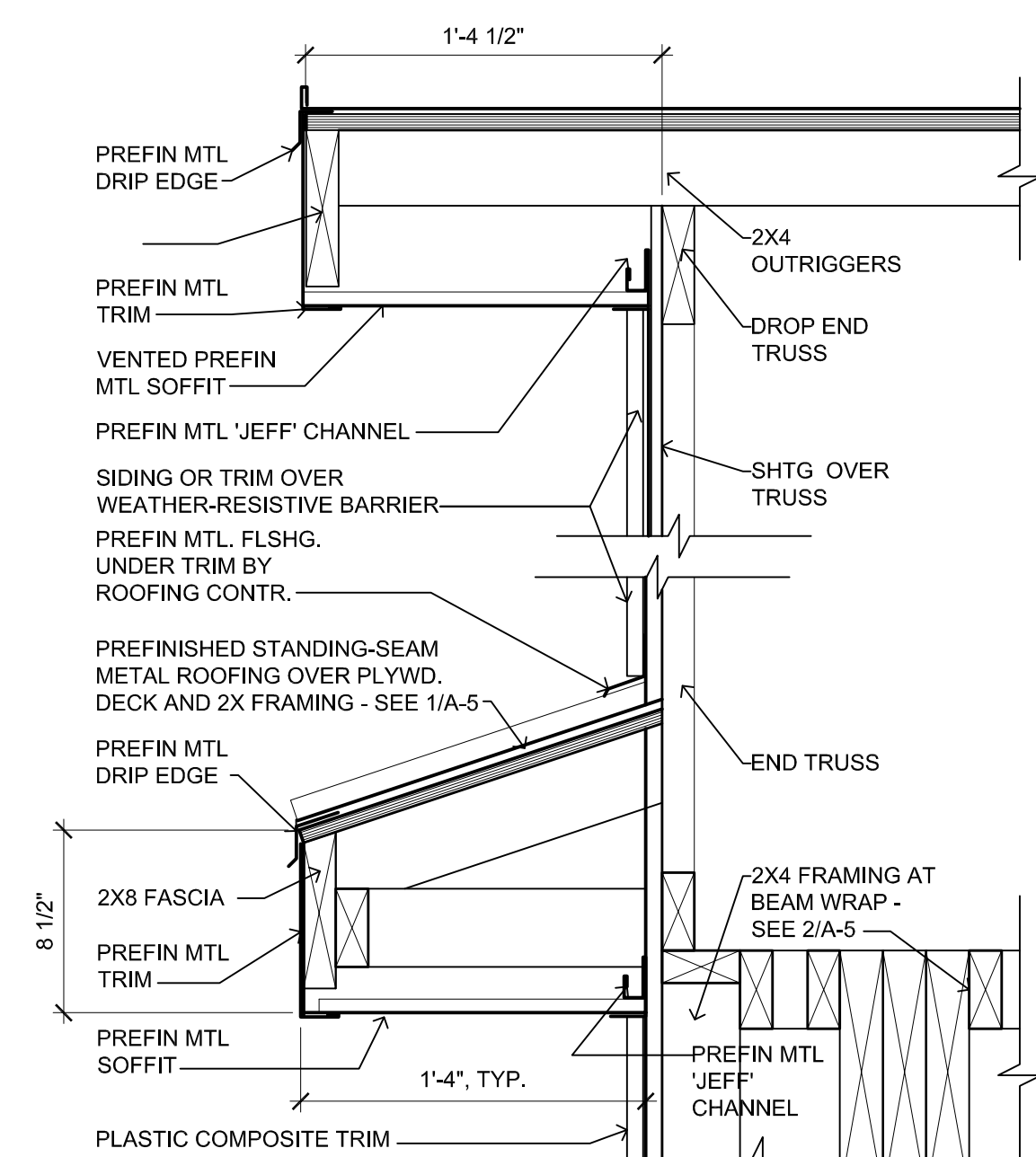
4 RAIN LEADER COLLECTOR
SCALE: 3/4" = 1'-0"



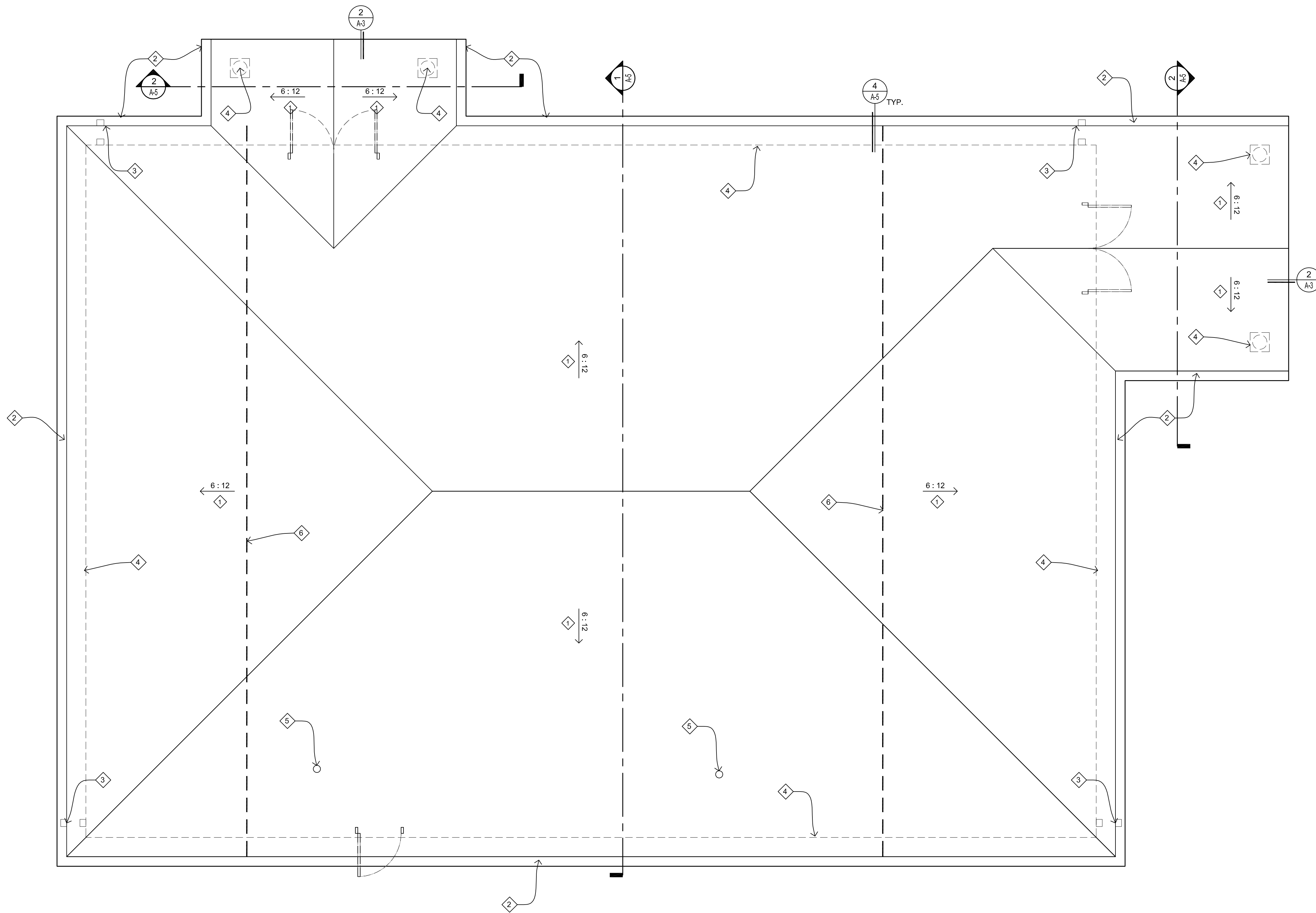
3 VENT THRU ROOF
SCALE: 1 1/2" = 1'-0"

ROOF PLAN NOTES:

- 1 PREFINISHED STANDING SEAM METAL ROOFING SYSTEM (UNA-CLAD UC-4 OR APPROVED EQUAL) - SEE SECTIONS AND SPECIFICATION
- 2 6" MIN. PREFINISHED METAL GUTTER SYSTEM
NEW PREFIN. MTL. RAINLEADER TO POWDER COATED IRON COLLECTOR CONNECTED TO STORM DRAIN - SEE 4/A-3 AND CIVIL ENGINEERED DRAWINGS
- 3 LINE OF WALL OR COLUMN BELOW
- 4 TYPICAL VENT THROUGH ROOF PENETRATION - SEE DETAIL 3/A-3 AND SEE PLUMBING PLANS FOR LOCATION
- 5 GIRDER TRUSS LOCATION - ALIGN WITH INTERIOR WALL BELOW

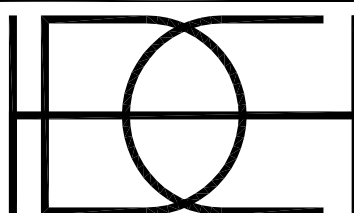


2 ROOF RAKE AT PORCH
SCALE: 1 1/2" = 1'-0"



1 ROOF PLAN
SCALE: 1/4" = 1'-0"





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ARCHITECT

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I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED ARCHITECT UNDER THE LAWS OF THE STATE OF KENTUCKY

NO. 6605

DATE:

DATE: 02/09/2021

DRAWN BY: DCH

CHECKED BY: DCH

REVISIONS:

PROJECT NUMBER: 2012

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SENIOR CENTER**
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EXTERIOR ELEVATIONS

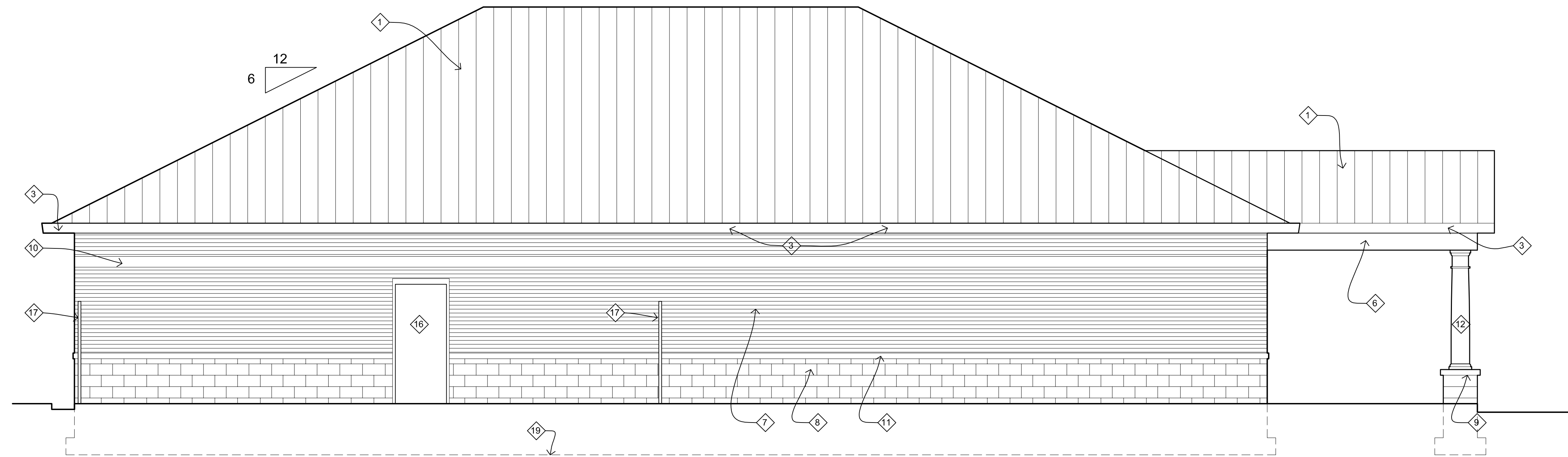
SHEET

A-4

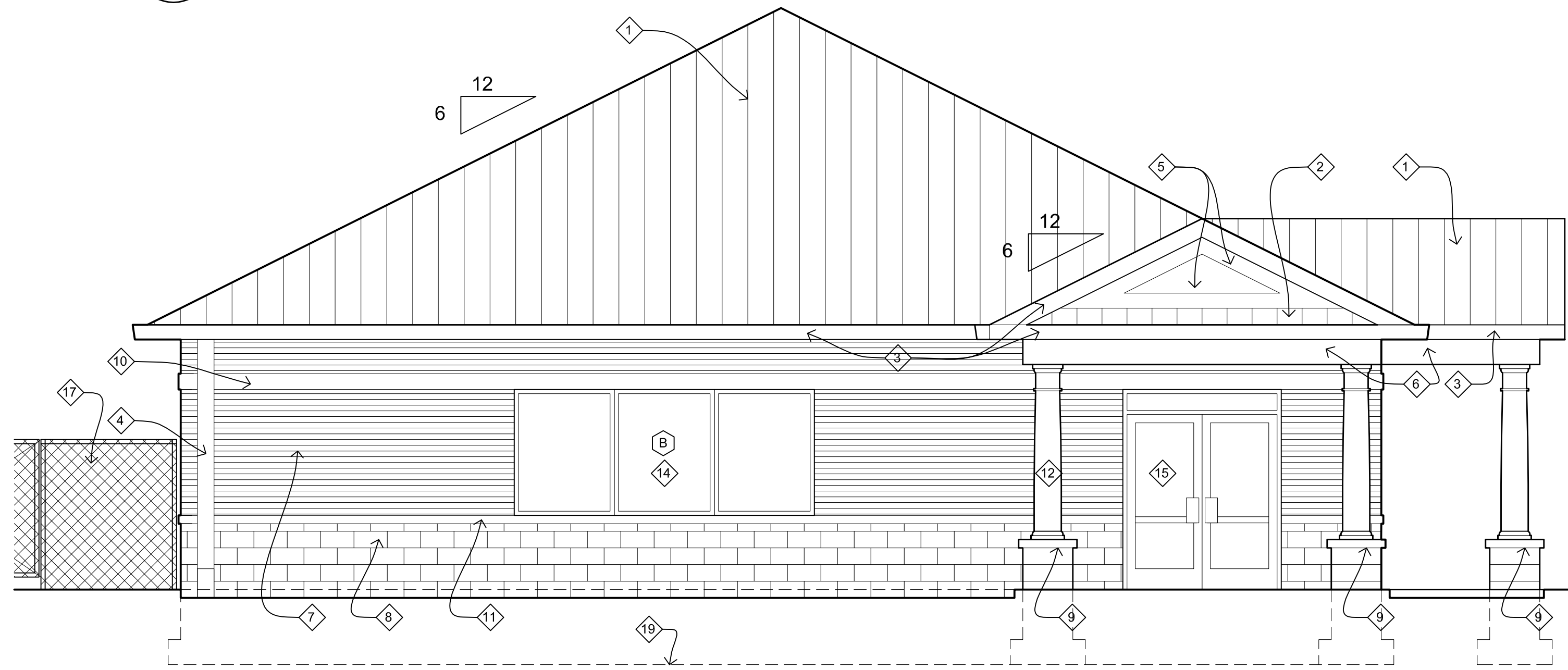
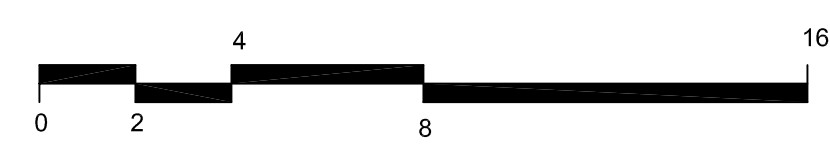
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ELEVATION NOTES:

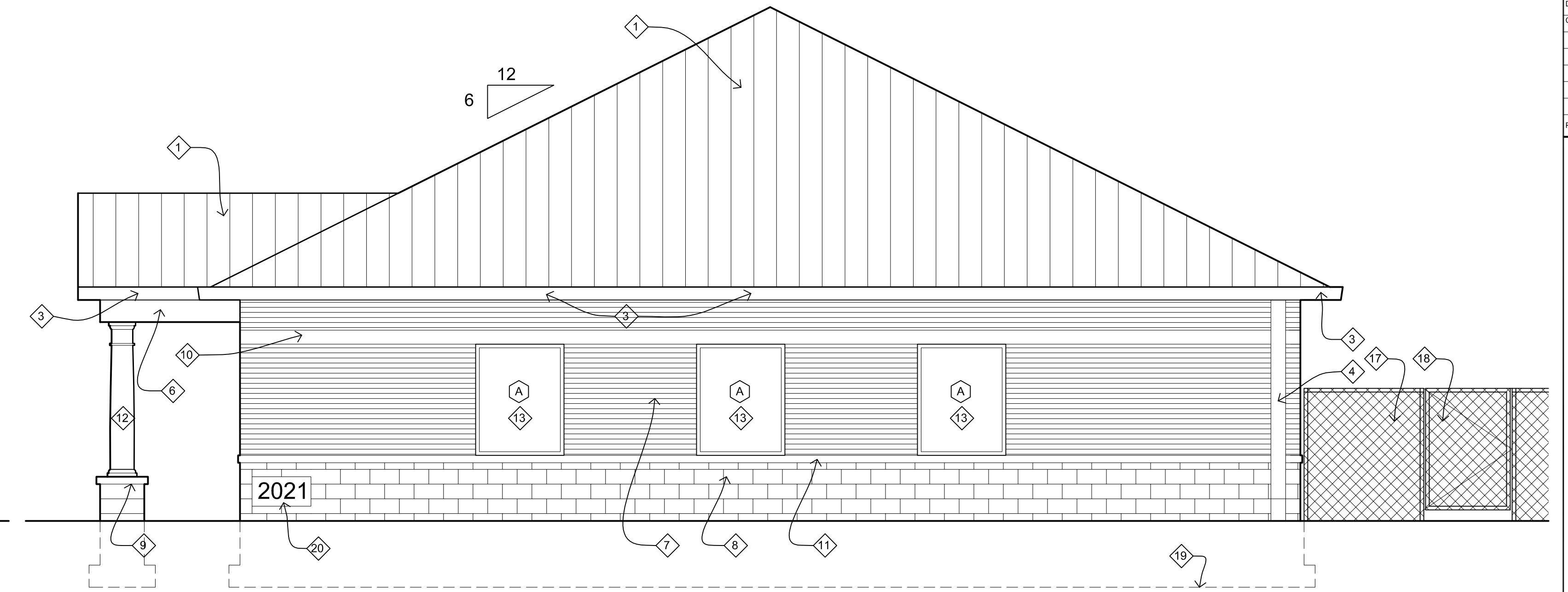
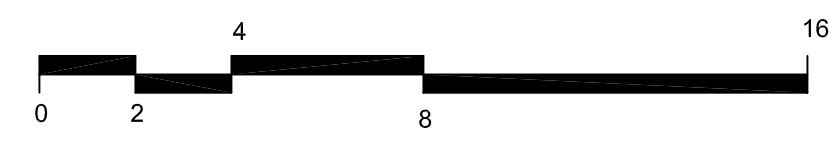
- 1 PREFINISHED STANDING SEAM METAL ROOFING
- 2 METAL ROOF CORNICE AT GABLED END OF ROOF TO MATCH MAIN ROOF MATERIAL
- 3 PREFINISHED METAL GUTTER FASCIA/TRIM
- 4 5X6 PREFINISHED METAL RAIN LEADER W/ POWDER-COATED BOOT ADAPTOR TO MATCH COLOR - SEE 4/A-3 AND CIVIL PLANS FOR CONNECTION TO STORM SEWER
- 5 PLASTIC COMPOSITE PANEL WITH 1X8 TRIM AT PERIMETER
- 6 1X12 PLASTIC COMPOSITE BEAM WRAP
- 7 BRICK VENEER
- 8 DECORATIVE CMU VENEER
- 9 DECORATIVE CMU COLUMN BASE WITH LIMESTONE CAP
- 10 8" HIGH LIMESTONE ACCENT BAND, TYP.
- 11 4" HIGH STONE SILL OR ACCENT BAND, TYP.
- 12 7'-0" HIGH FIBERGLASS TUSCAN COLUMN WRAP SYSTEM - SHAFT WIDTH/DIAMETER 12"-16"
- 13 FIXED ALUMINUM WINDOW SYSTEM - 48"WX60"H MASONRY OPENING
- 14 FIXED ALUMINUM WINDOW SYSTEM - 144"WX60"H MASONRY OPENING
- 15 ALUMINUM ENTRANCE DOOR AND TRANSOM WITH TINTED INSUL. GLASS
- 16 INSULATED HOLLOW METAL DOOR AND FRAME
- 17 6'-0"H PRIVACY FENCE SYSTEM
- 18 4'-0"W GATE IN PRIVACY FENCE SYSTEM W/ LOCK
- 19 LINE OF FOUNDATION BELOW - SEE STRUCTURAL
- 20 32"W X 16"H LIMESTONE DATE STONE TO READ "2021" (DATE, FONT AND FONT SIZE AS APPROVED BY OWNER AND ARCHITECT)
- 21 32"W X 16"H LIMESTONE ADDRESS STONE TO READ "100 W MULBERRY" (DATE, FONT AND FONT SIZES AS APPROVED BY OWNER AND ARCHITECT)



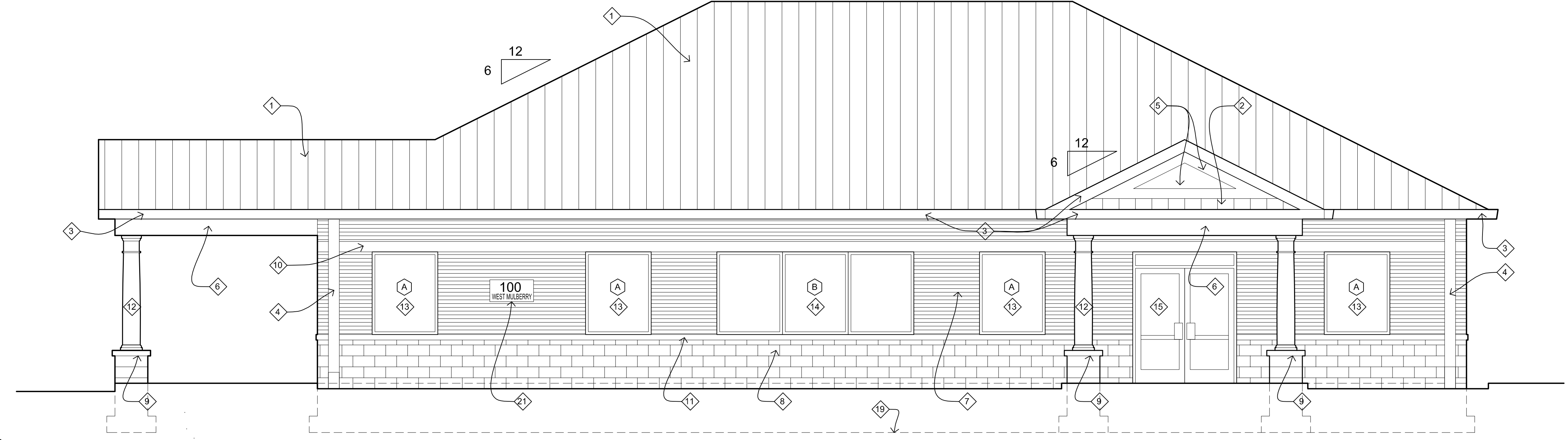
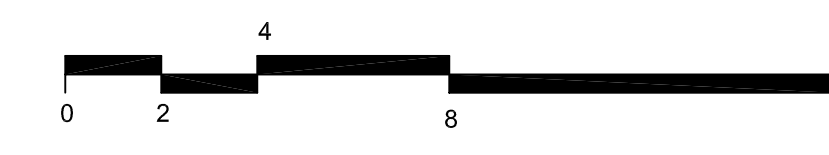
4 SOUTH ELEVATION
A-4 SCALE: 1/4" = 1'-0"



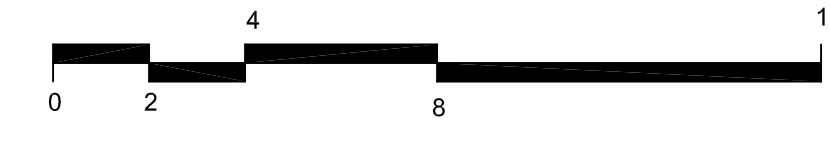
2 EAST ELEVATION
A-4 SCALE: 1/4" = 1'-0"



3 WEST ELEVATION
A-4 SCALE: 1/4" = 1'-0"



1 NORTH ELEVATION
A-4 SCALE: 1/4" = 1'-0"



BRICK LINTEL SCHEDULE

REFER TO PLANS, SECTIONS AND DETAILS FOR OPENING SIZES

LINTEL SIZE	SPAN RANGE (MASONRY OPENING)
L 4 X 3 1/2 X 5/16	3'-0" UP TO 8'-0"
L 5 X 3 1/2 X 5/16	8'-0" UP TO 10'-0"
L 6 X 3 1/2 X 5/16	10'-0" UP TO 14'-0"

BEAM & HEADER SCHEDULE

REFER TO PLANS, SECTIONS AND DETAILS FOR OPENING SIZES

LINTEL SIZE	SPAN RANGE	NUMBER OF JACK STUDS REQUIRED (AT WALLS)
(2) 2X8	3'-0" UP TO 8'-0"	1
(2) 2X12	8'-0" UP TO 10'-0"	2
5 1/4 x 11 7/8 LVL	10'-0" UP TO 14'-0"	2

FRAMING NOTES:

DESIGN LOADS:
(FROM STRUCTURAL SHEET S-2)

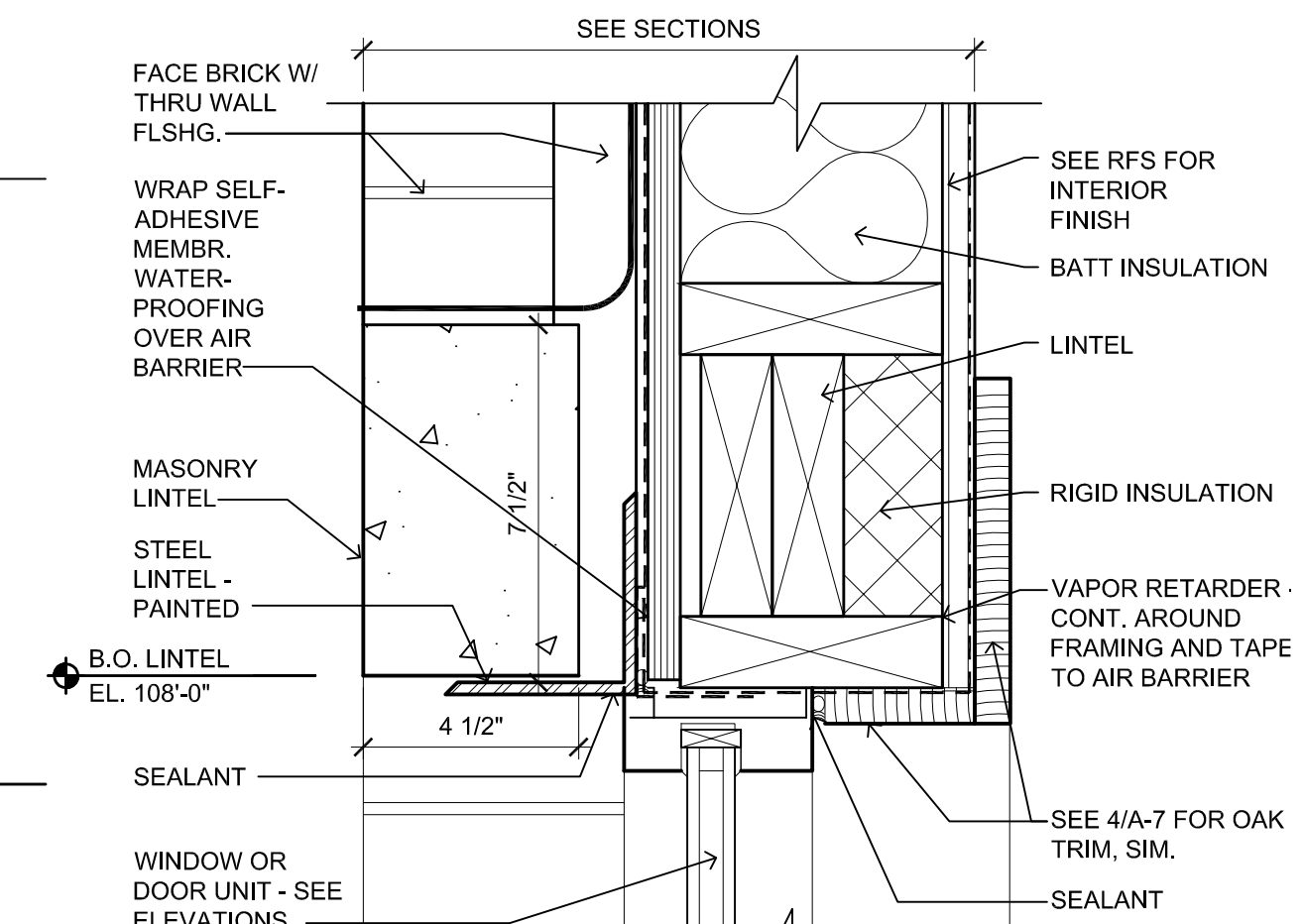
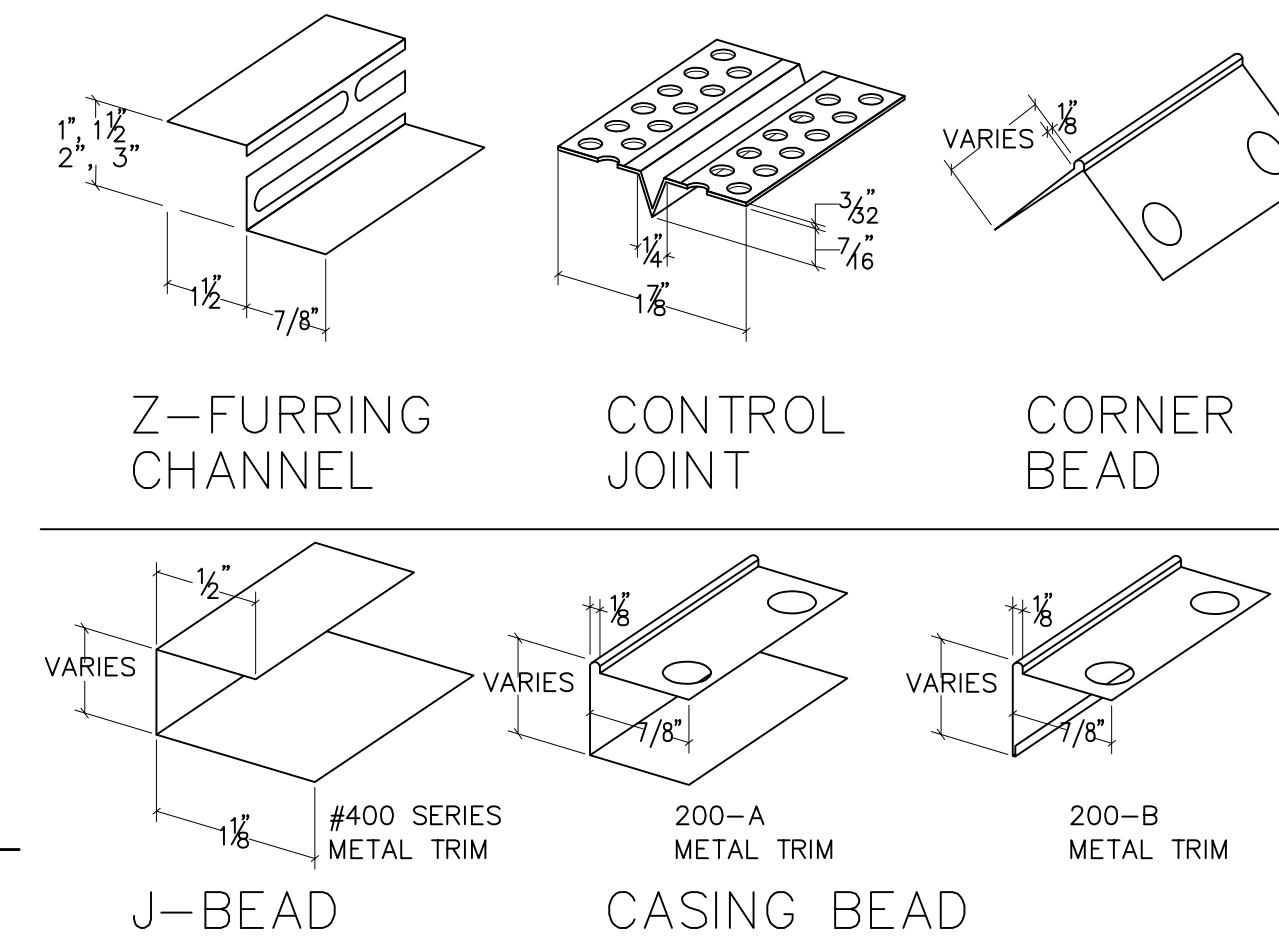
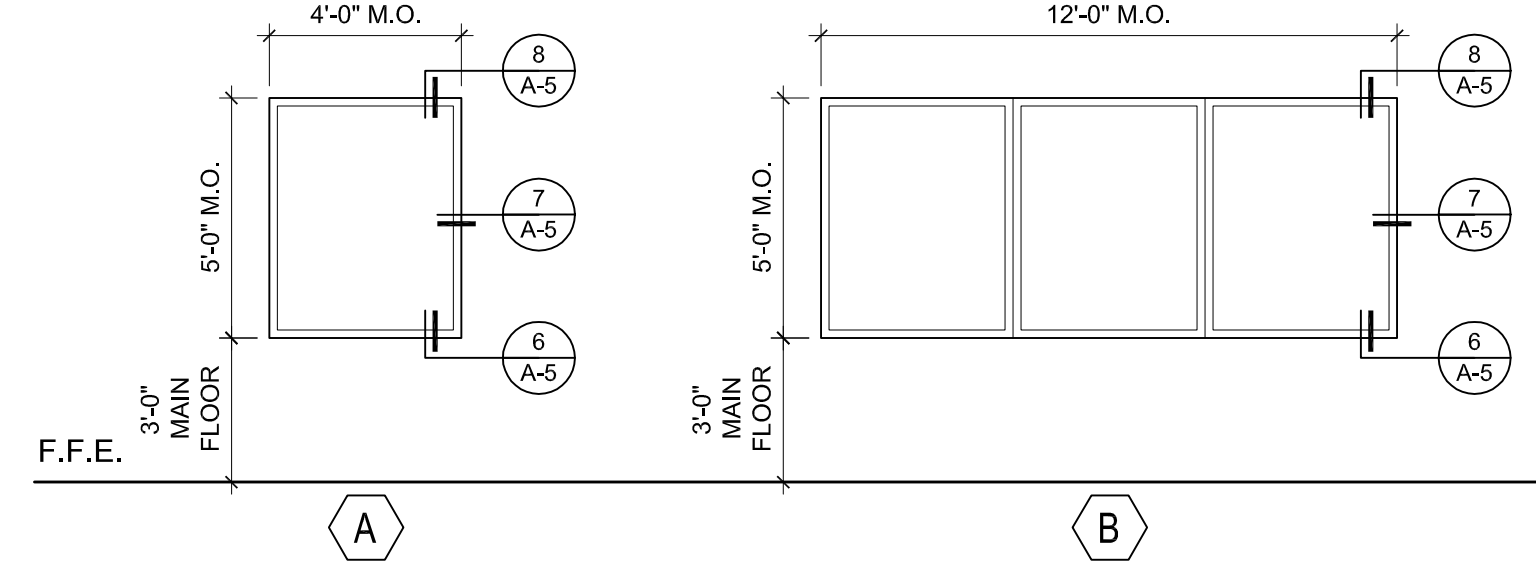
- ROOF LOADS:
 - ROOF LIVE LOAD 20 PSF
 - ROOF DEAD LOAD 15 PSF
 - SNOW LOAD 10 PSF
- WIND LOADS:
 - ULTIMATE DESIGN WIND SPEED: 115 MPH
 - RISK CATEGORY: II
 - EXPOSURE: B
- SEISMIC DESIGN CATEGORY: C
SITE CLASS: D
OCCUPANCY CATEGORY: II
(SEE S-2 FOR SPECTRAL RESPONSE COEFFICIENTS)

EXTERIOR WALL:
1/2" CDX PLYWOOD OVER
2X6 STUDS AT 16" ON CENTER
WALLS TO HAVE DOUBLE 2X6 TOP PLATE

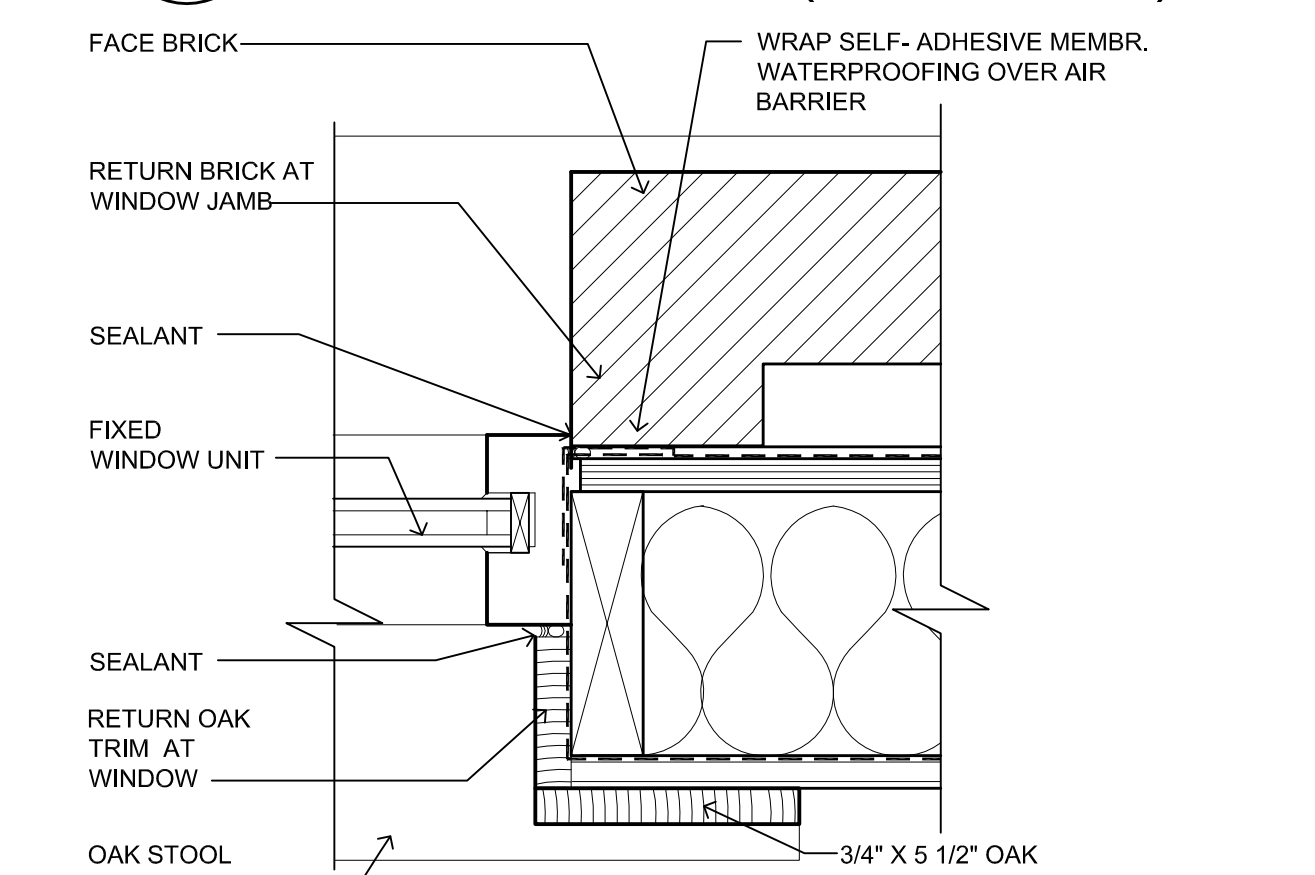
ROOF:
22 GA PREFIN. METAL STANDING SEAM ROOFING ON:
PRE-ENGINEERED ROOF TRUSSES AT 24" O.C.
- TO BE ENGINEERED
BY TRUSS MANUFACTURER TO MEET ALL
LOADING REQUIREMENTS
ALL TRUSSES TO BE ATTACHED W/ (2) SIMPSON H3
CLIPS TO WALL FRAMING AT EACH END,
ATTACHED W/ (4) 8d NAILS EACH, TYP.

WINDOW TYPES:

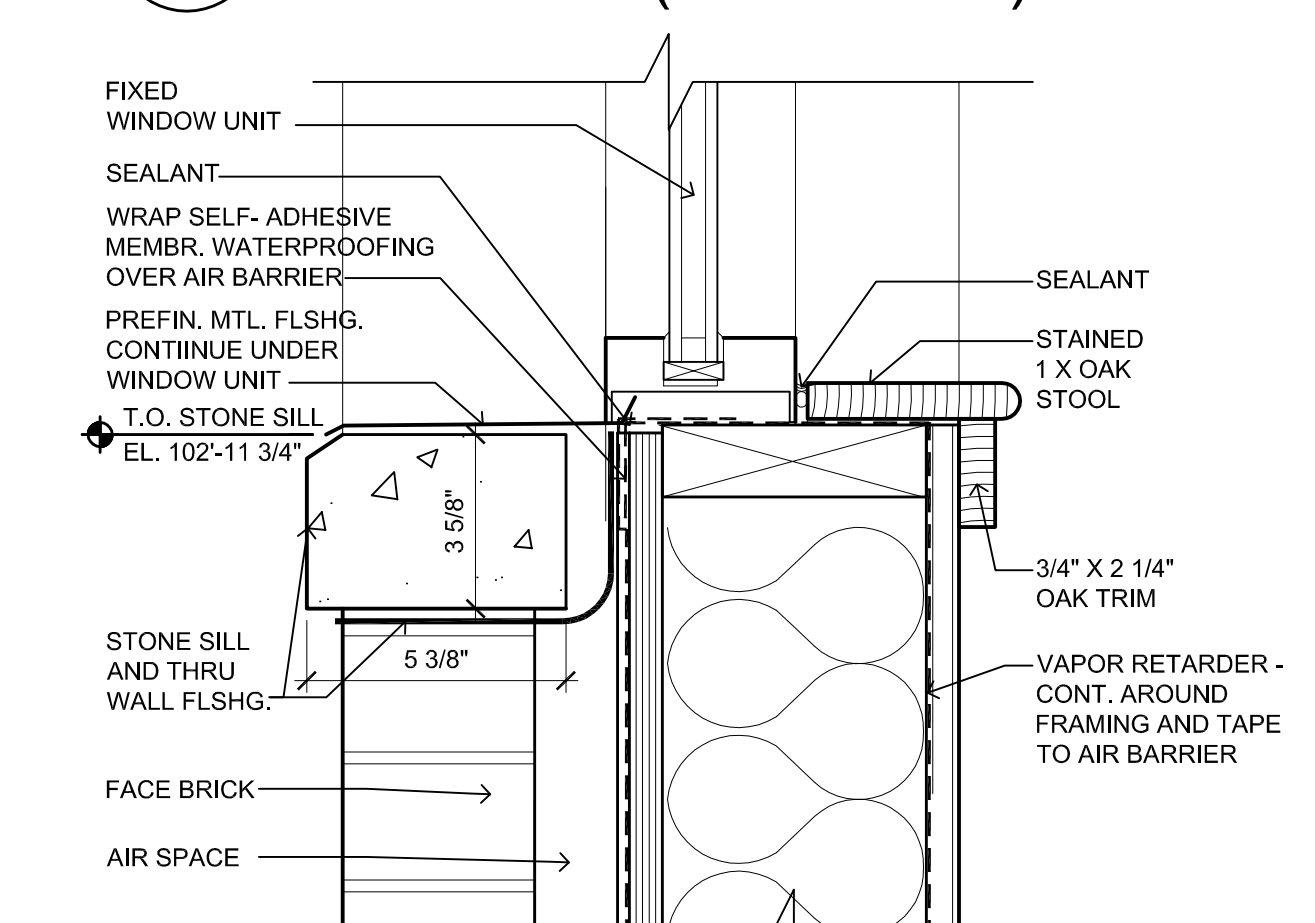
NOTE: - ALL EXTERIOR WINDOWS ARE FIXED ALUMINUM FRAMED WINDOWS W/ LOW-E, BRONZE-TINTED INSULATING GLASS.
- ALL INSULATED GLASS ASSEMBLIES SHALL HAVE A MAXIMUM U-FACTOR OF 0.32
- PROVIDE TEMPERED GLASS AS REQUIRED BY CODE.



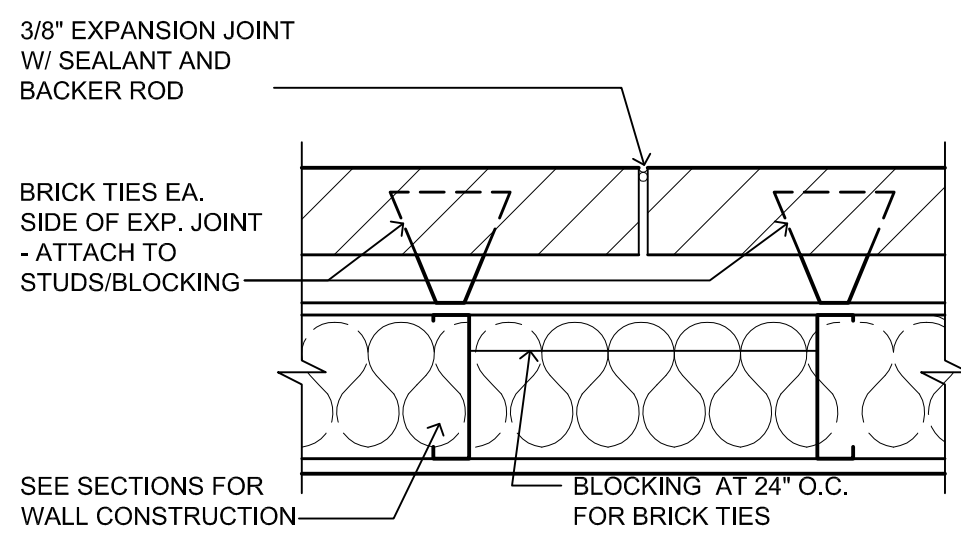
8 WINDOW HEAD AT BRICK (DOOR SIM)
SCALE: 3" = 1'-0"



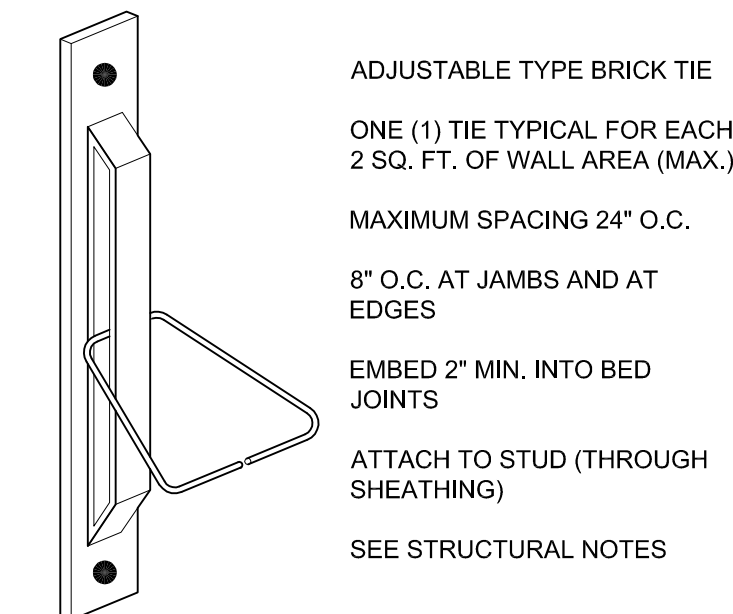
7 WINDOW JAMB (BRICK) (DOOR SIM)
SCALE: 3" = 1'-0"



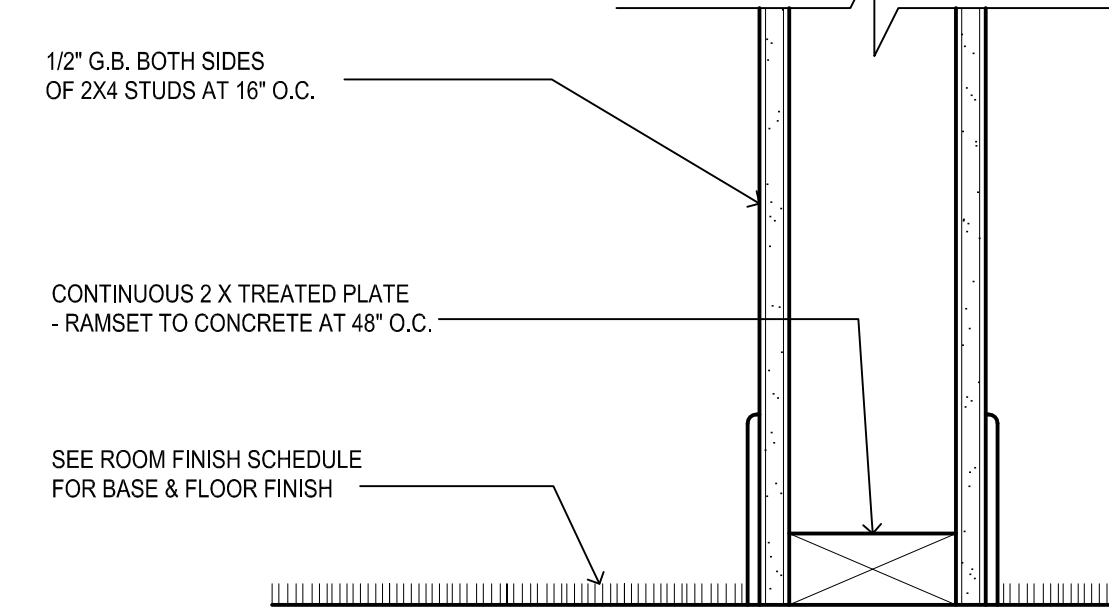
6 WINDOW SILL (AT MASONRY)
SCALE: 3" = 1'-0"



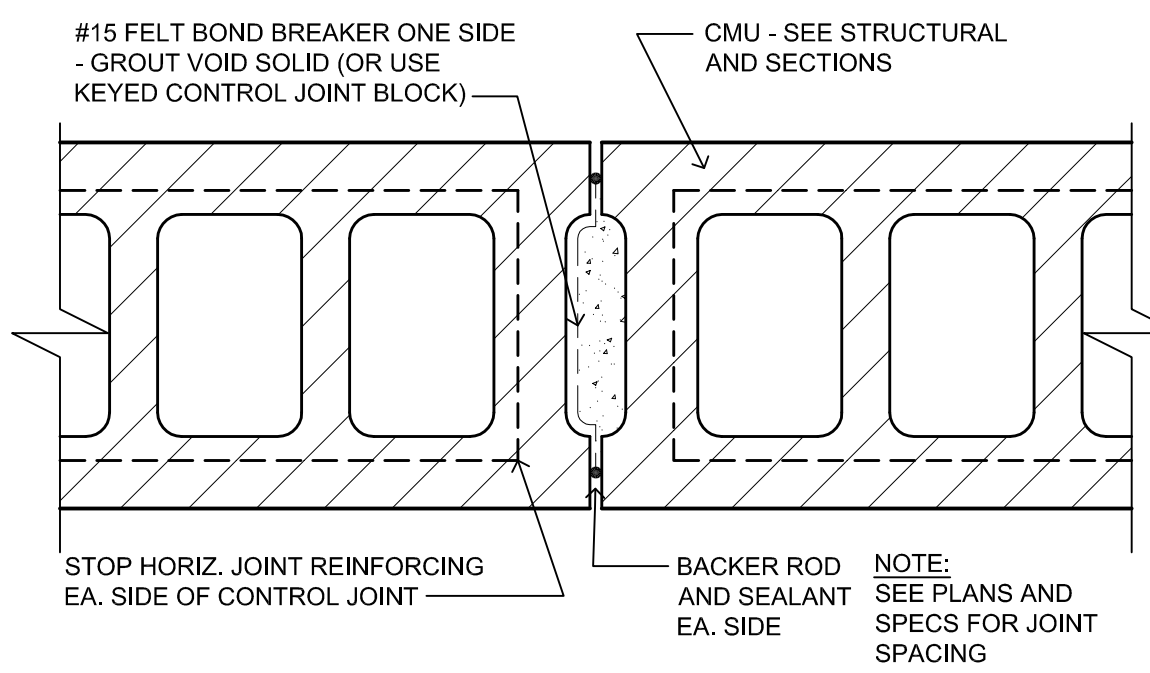
10 BRICK VENEER AND C. J.
SCALE: 1 1/2" = 1'-0"



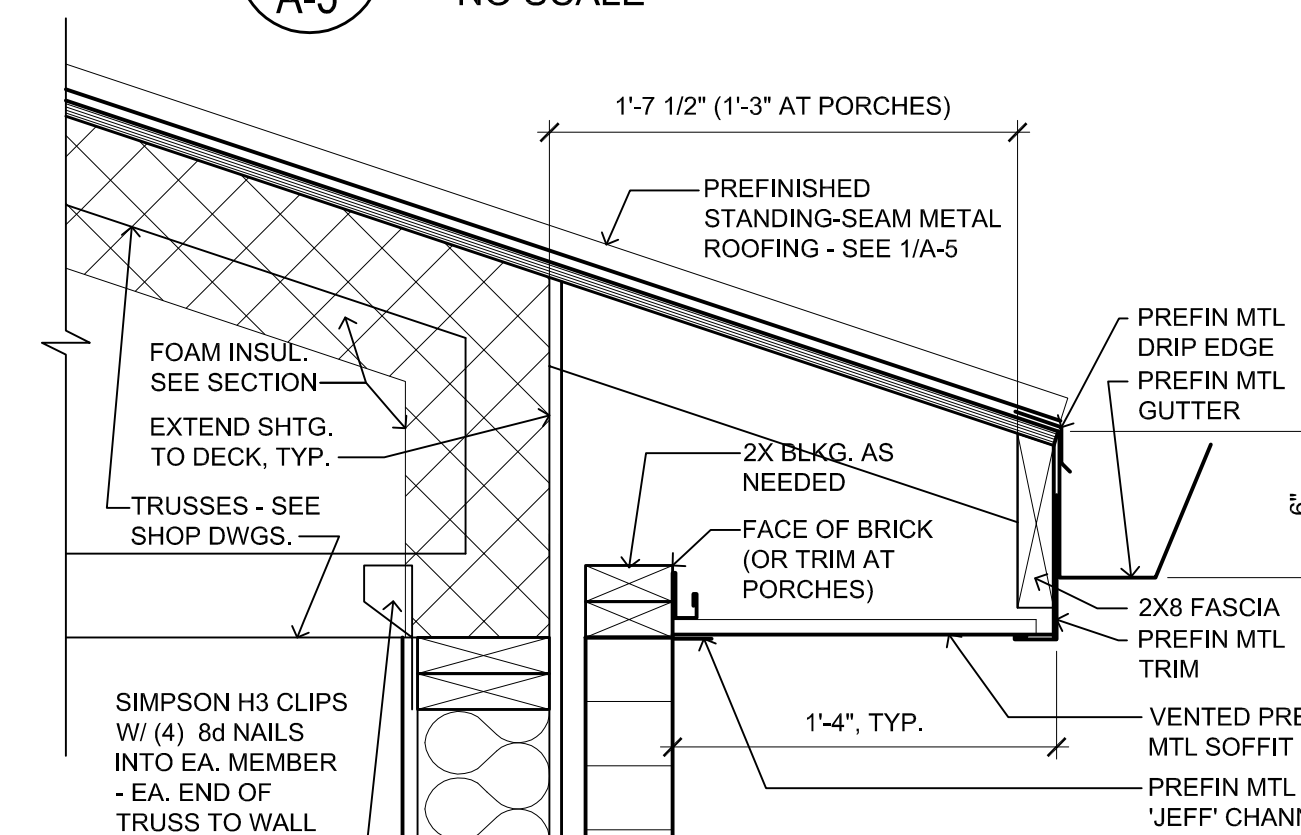
11 BRICK TIE
NO SCALE



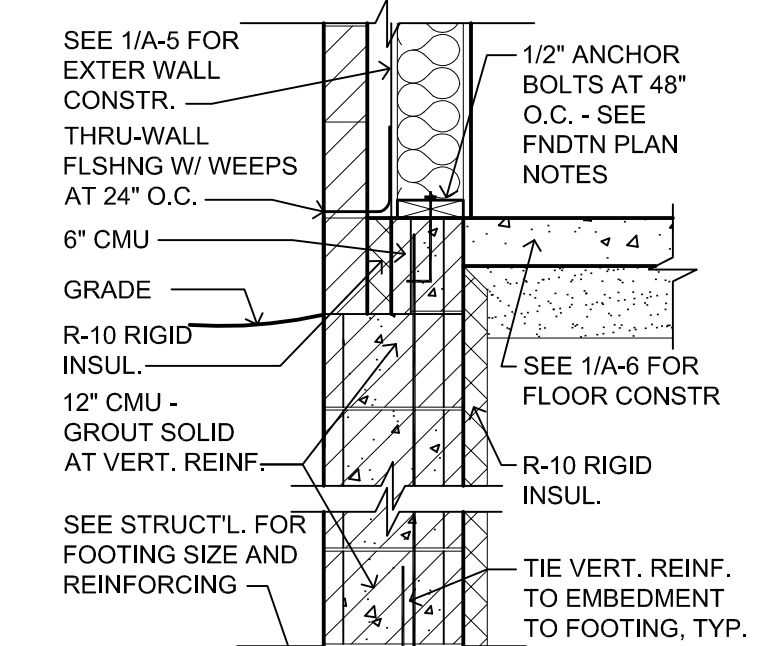
12 TYP. NON-BEARING WALL
SCALE: 1 1/2" = 1'-0"



9 CMU CONTROL JOINT
SCALE: 3" = 1'-0"

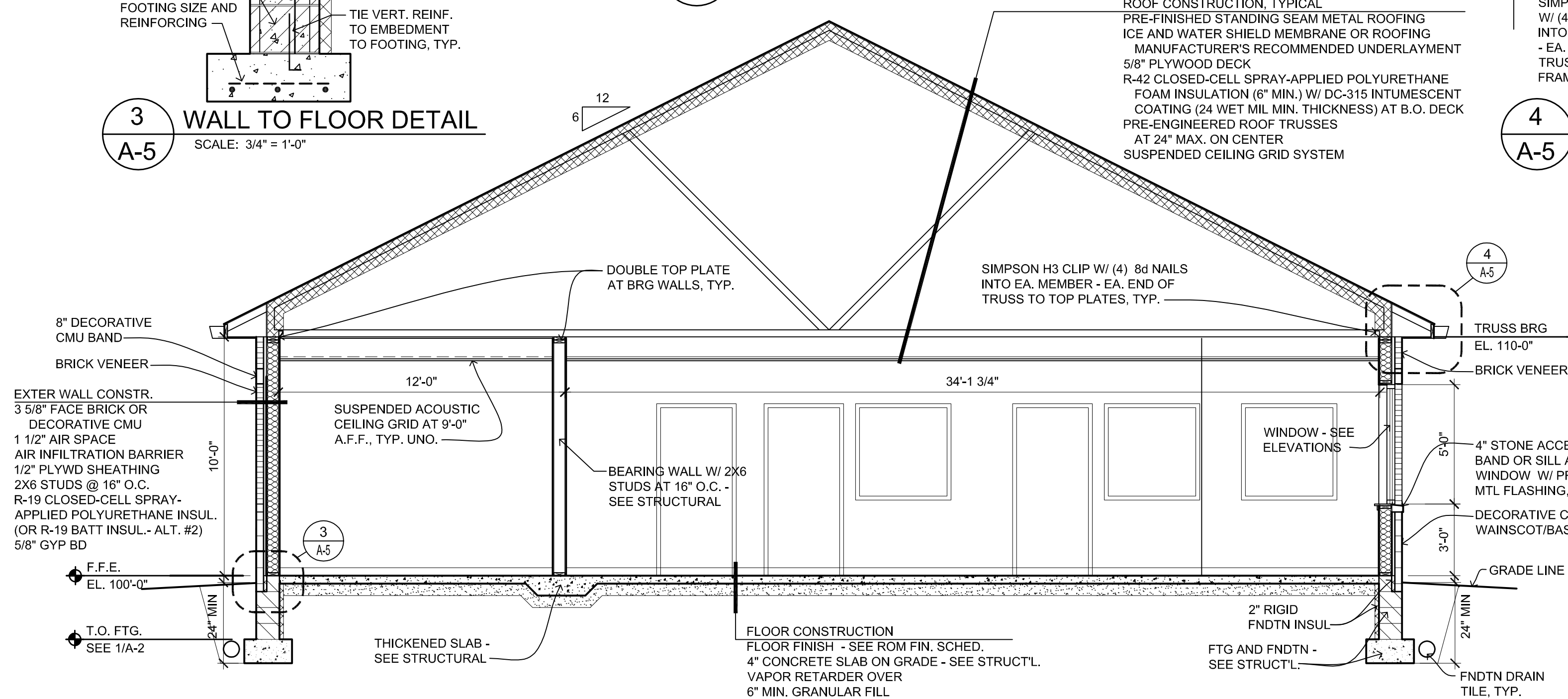


4 TYPICAL EAVE DETAIL
SCALE: 1 1/2" = 1'-0"

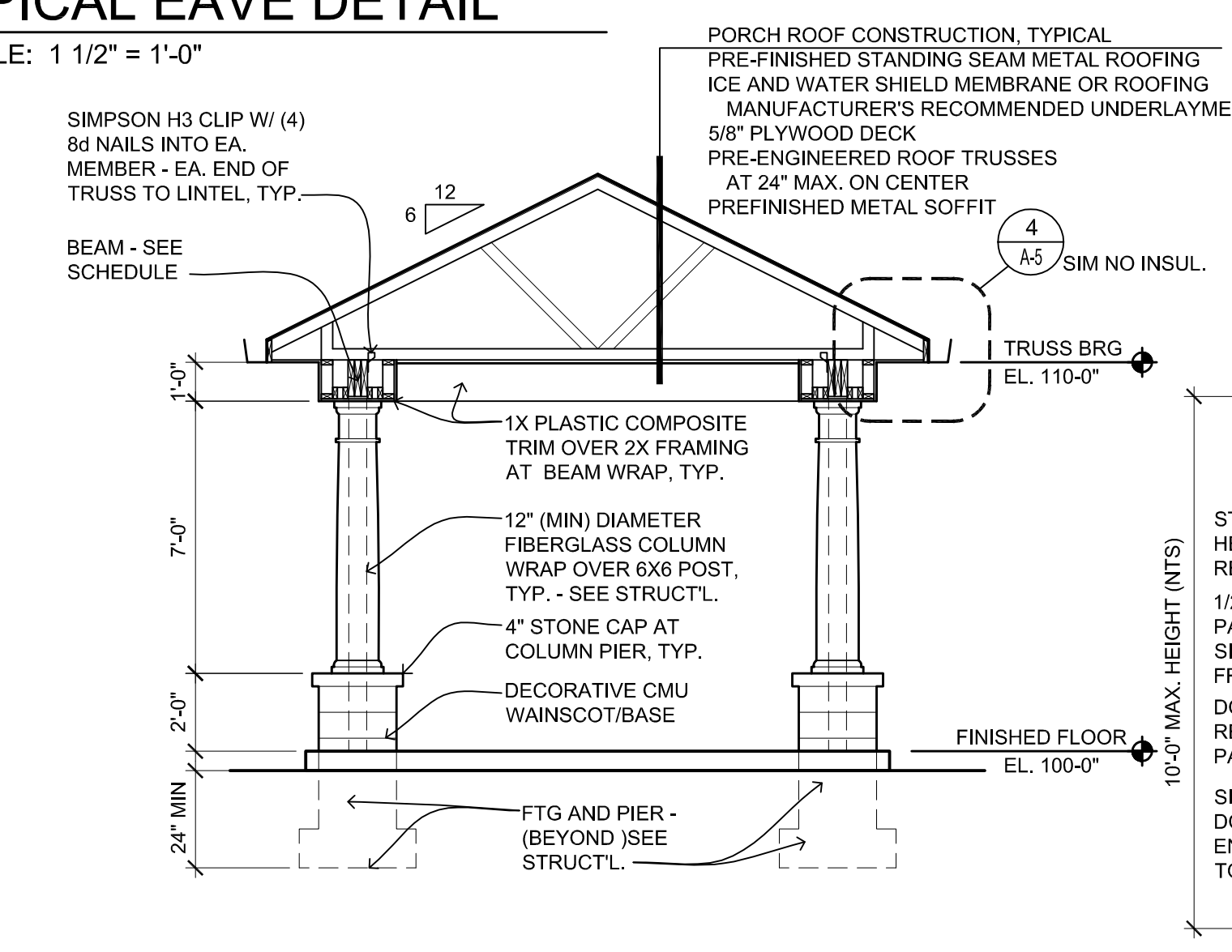


3 WALL TO FLOOR DETAIL
SCALE: 3/4" = 1'-0"

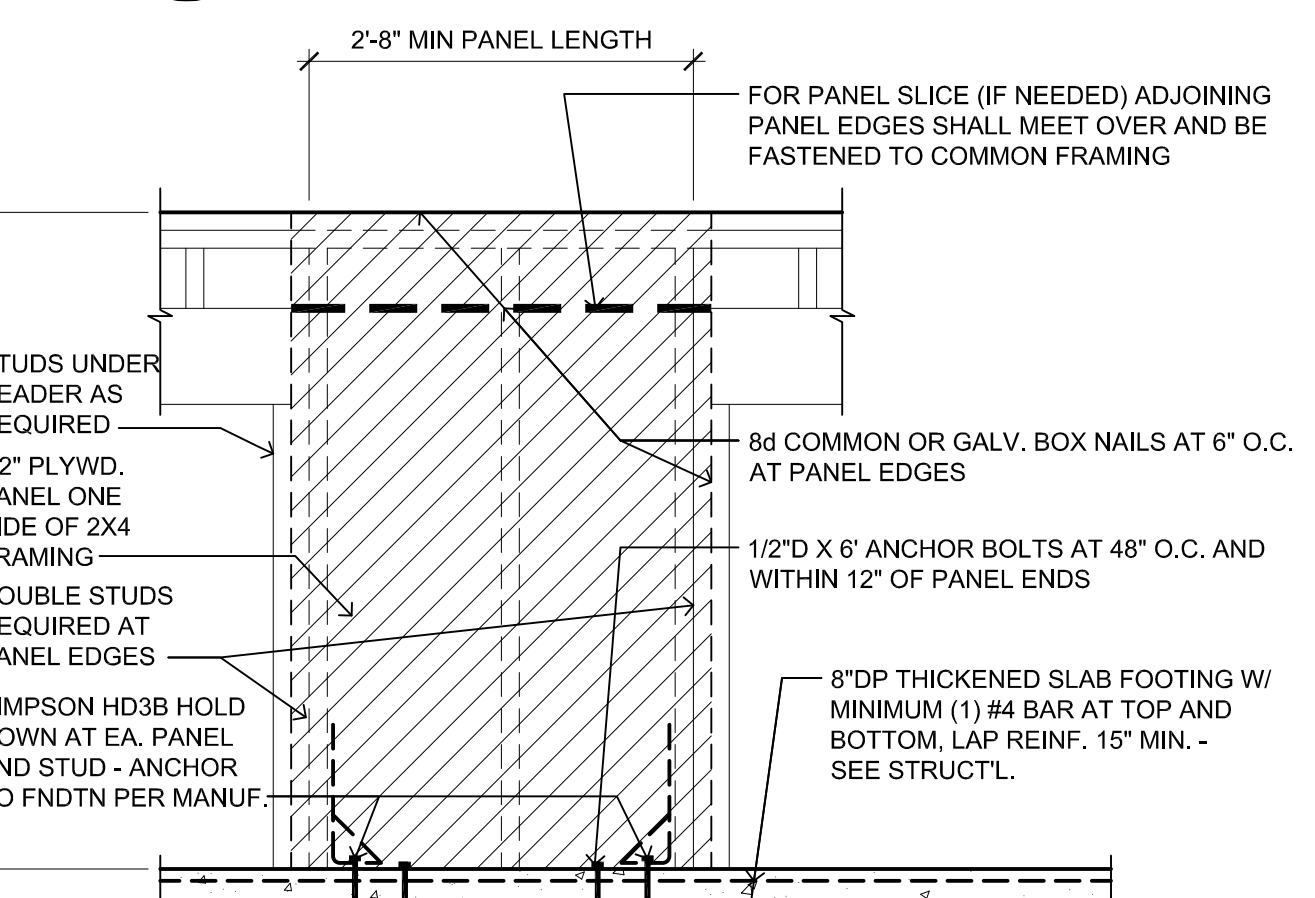
ROOF CONSTRUCTION, TYPICAL
PRE-FINISHED STANDING SEAM METAL ROOFING
ICE AND WATER SHIELD MEMBRANE OR ROOFING
MANUFACTURER'S RECOMMENDED UNDERLAYMENT
5/8" PLYWOOD DECK
R-42 CLOSED-CELL SPRAY-APPLIED POLYURETHANE
FOAM INSULATION (6" MIN.) W/ DC-315 INTUMESCENT
COATING (24 WET MIL MIN. THICKNESS) AT B.O. DECK
PRE-ENGINEERED ROOF TRUSSES
AT 24" MAX. ON CENTER
SUSPENDED CEILING GRID SYSTEM



1 BUILDING SECTION
SCALE: 1/4" = 1'-0"



2 PORCH SECTION
SCALE: 1/4" = 1'-0"



5 ALTERNATE BRACED WALL DETAIL
SCALE: 3/4" = 1'-0" (BASED ON 2015 IBC FIGURE 2308.6.5.1 - SINGLE STORY)

DAVID C. HENNING ARCHITECT
343 East Main Street, Lebanon KY 40033
270.634.8153 dchenning@yahoo.com

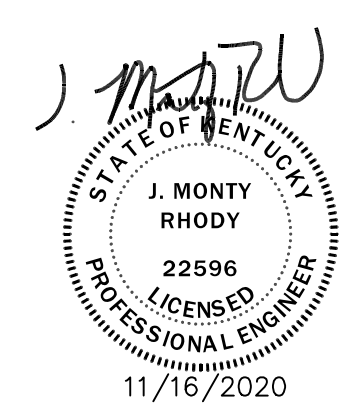
DATE: 02/09/2021
DRAWN BY: DCH
CHECKED BY: DCH
REVISIONS:

PROJECT NUMBER: 2012

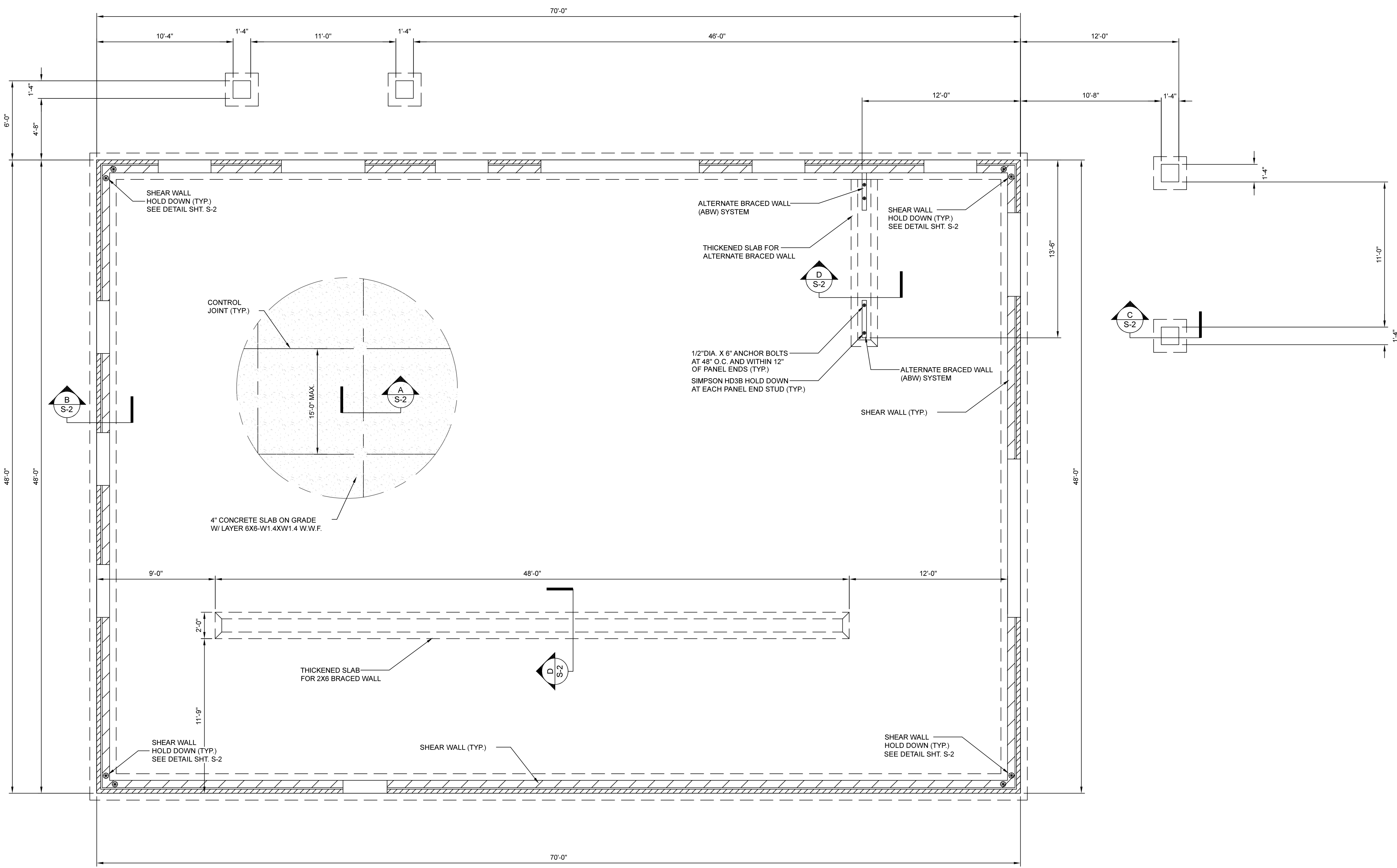
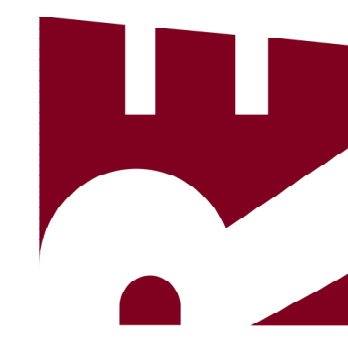
NEW FACILITY FOR:
CITY OF LEBANON SENIOR CENTER
100 West Mulberry Street, Lebanon, Kentucky 40033

BUILDING SECTIONS WINDOW TYPES & DETAILS

SHEET
A-5

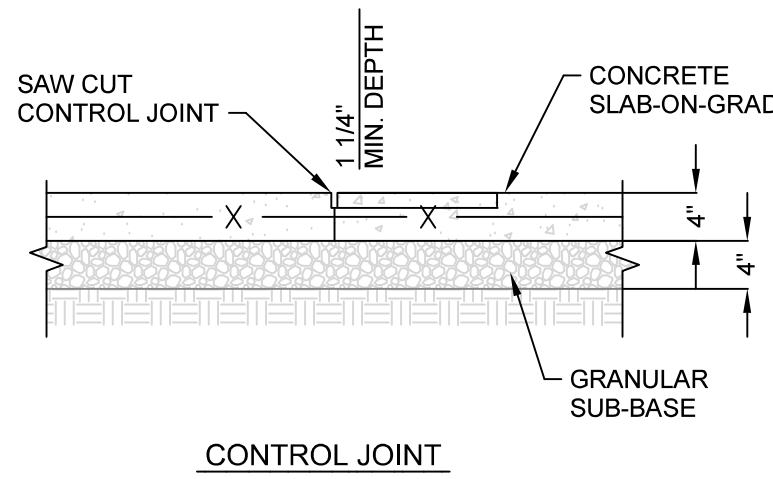
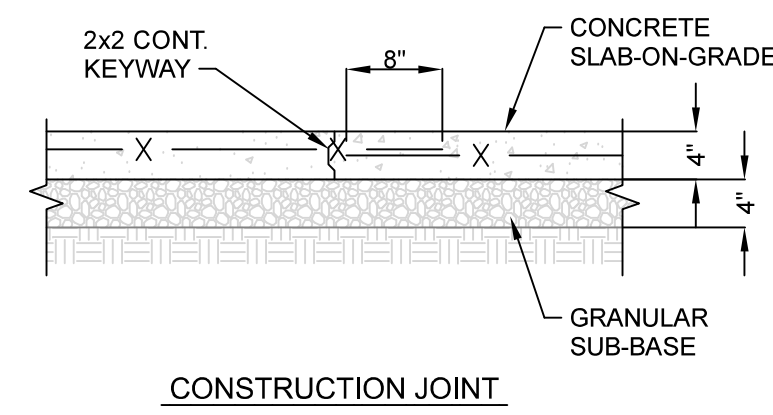


Rhody | ENGINEERING
Civil Engineering Services
1111 Westwood Drive, Lawrenceburg, KY 40342
Phone: 502-343-8518



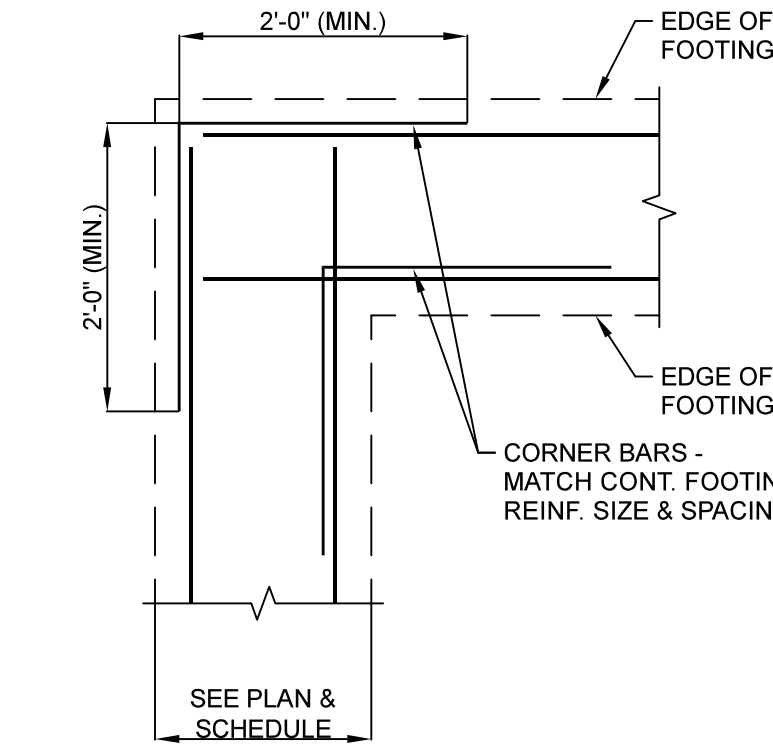
1 FOUNDATION PLAN
S-1 SCALE: 1/4" = 1'-0"



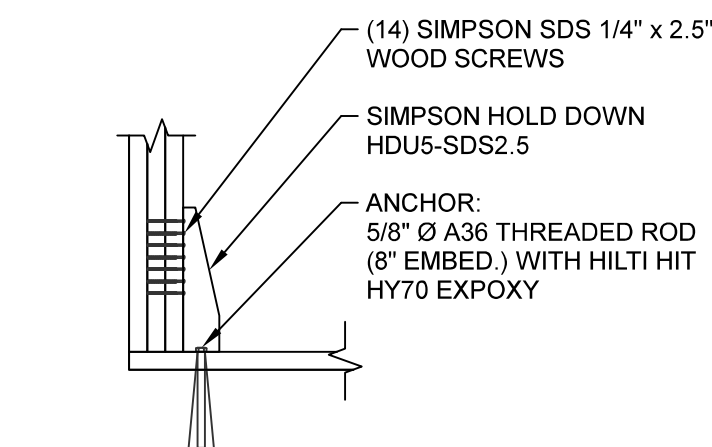


- NOTES:
1. MAXIMUM SPACING OF CONTROL JOINTS SHALL BE 15'-0" O.C.
 2. LOCATE CONTROL JOINTS AS SPECIFIED ON ARCHITECTURAL DRAWINGS (WHEN APPLICABLE).
 3. PROVIDE 6 MIL VAPOR BARRIER BELOW SLAB

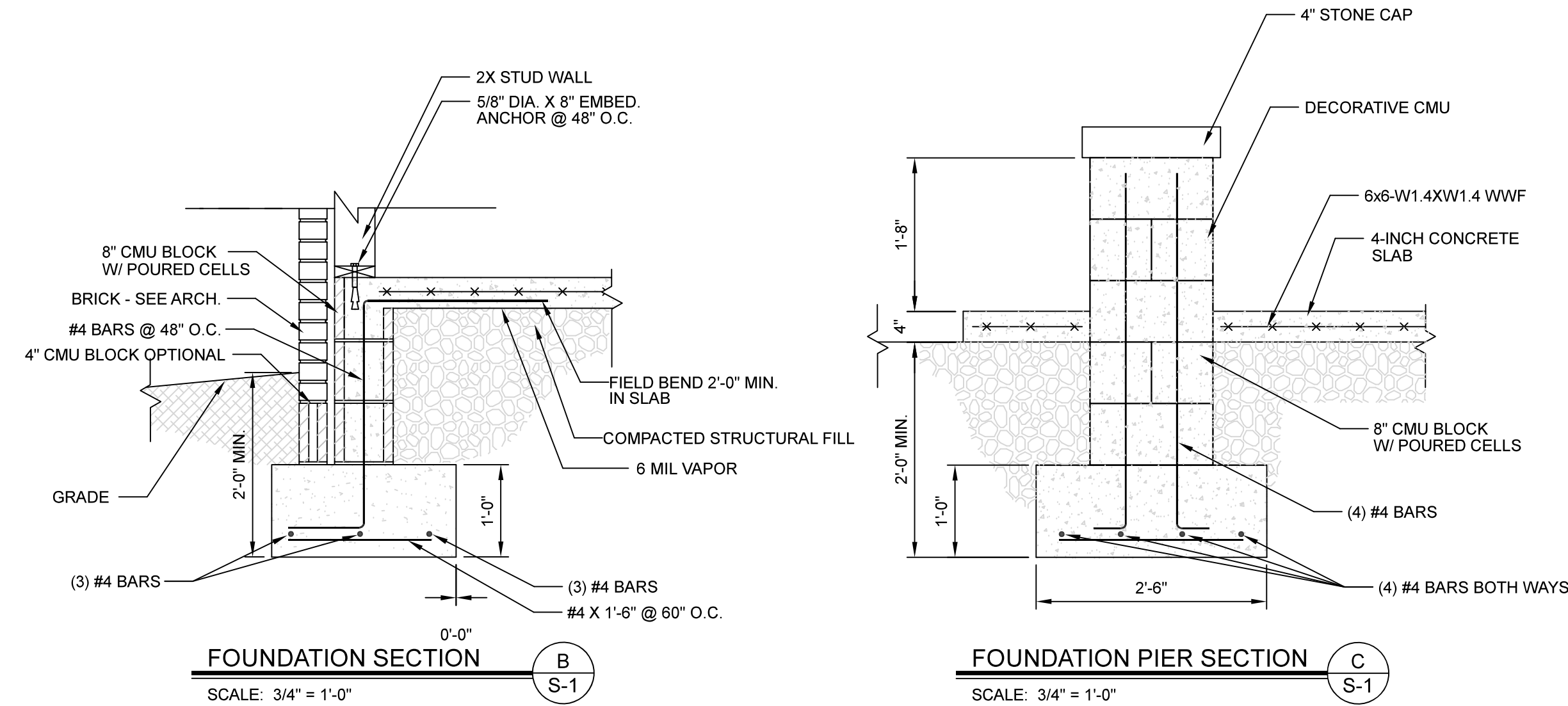
SLAB-ON-GRADE DETAILS
SCALE: 3/4" = 1'-0"



TYP. CONT. CORNER FOOTING DETAIL
SCALE: 3/4" = 1'-0"

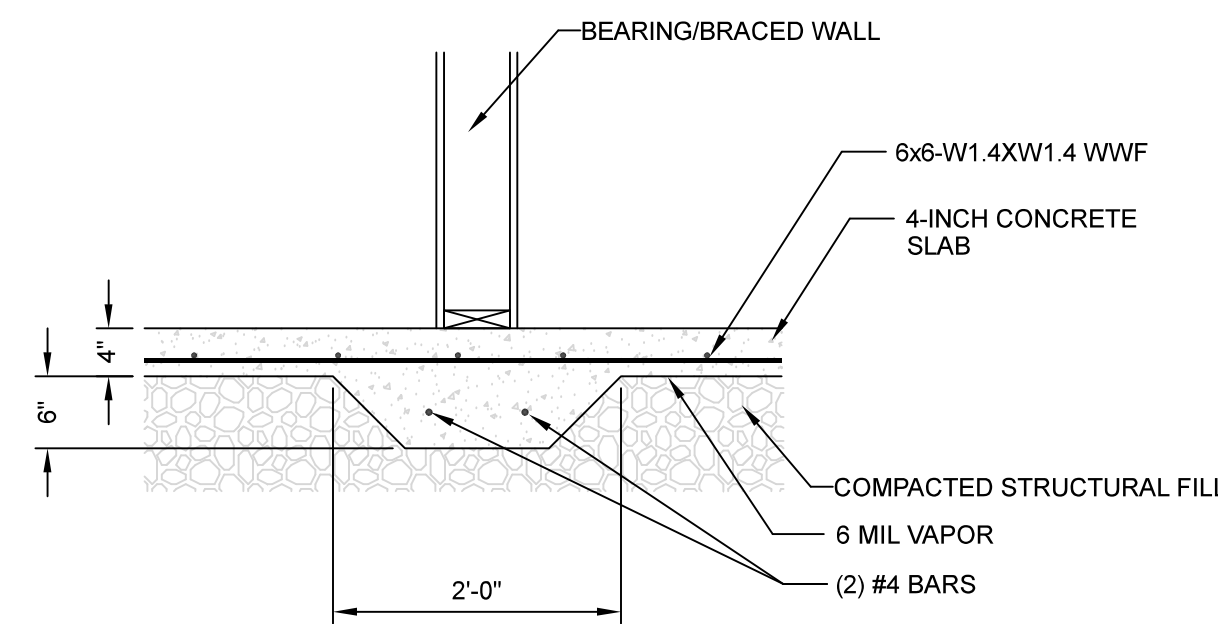


SHEAR WALL HOLD DOWN DETAIL
SCALE: 3/4" = 1'-0"

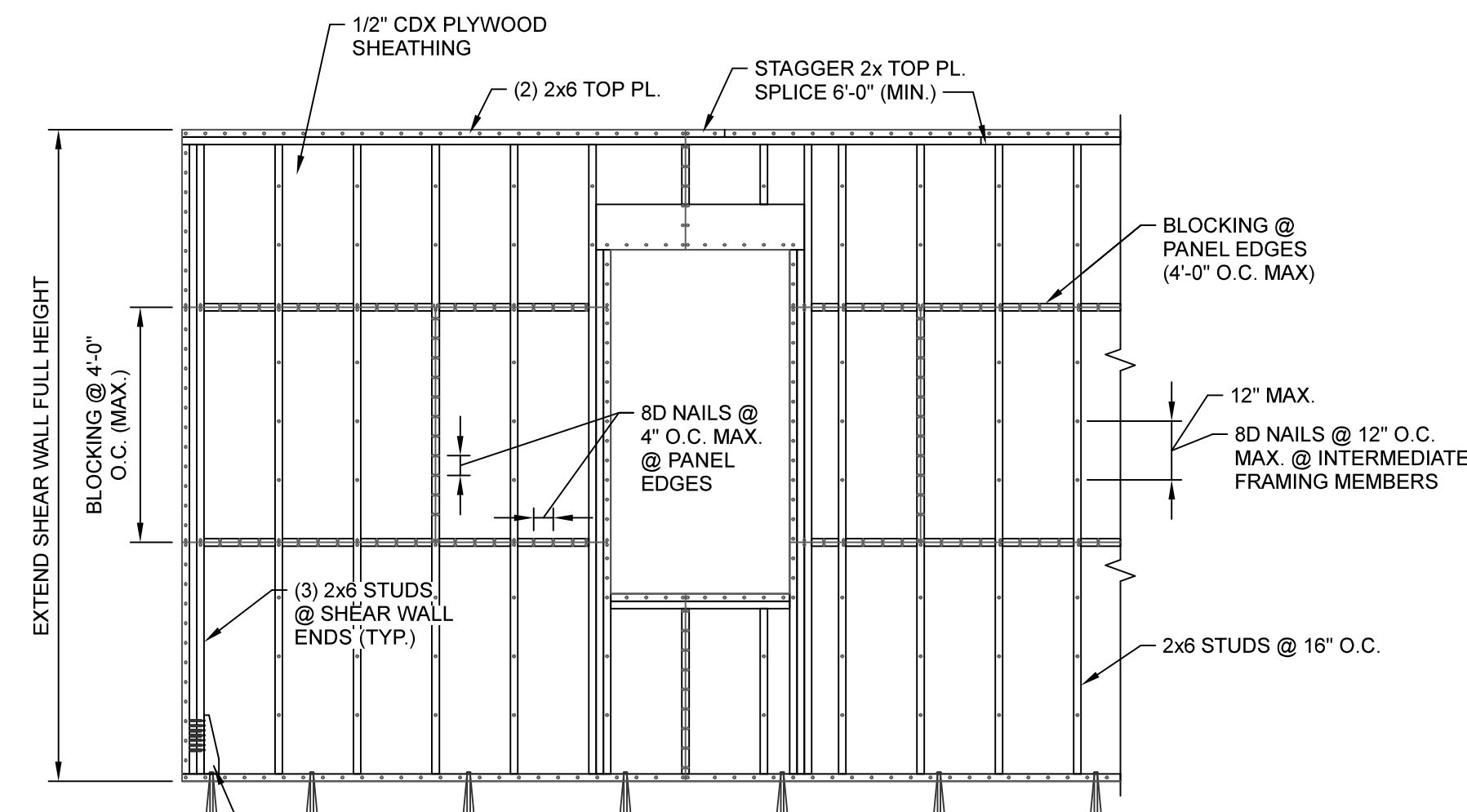


FOUNDATION SECTION
SCALE: 3/4" = 1'-0"

FOUNDATION PIER SECTION
SCALE: 3/4" = 1'-0"



THICKENED SLAB DETAIL
SCALE: 3/4" = 1'-0"



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

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 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 ACI CODE.

8. LAP ALL SPLICES AS SPECIFICALLY CALLED FOR, BUT AT LEAST 36 BAR DIAMETERS (12 IN. MINIMUM), UNLESS OTHERWISE NOTED. LAP ALL SPLICES IN MASONRY REINFORCEMENT AN MINIMUM OF 48 BAR DIAMETERS.

STRUCTURAL STEEL:
9. ALL STRUCTURAL STEEL MADE FROM W-SHAPES, SHALL CONFORM TO A992/A572-50; OTHER STEEL, EXCEPT 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.

10. ALL BOLTS FOR STRUCTURAL STEEL JOINT FASTENERS SHALL BE 3/4" DIAMETER 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 1,800 PSF. THIS VALUE SHALL BE FIELD VERIFIED.

DESIGN LOADS:

ROOF LIVE LOAD----- 20 PSF
ROOF DEAD LOAD----- 15 PSF
SNOW LOAD----- 10 PSF

WIND LOAD:
WIND SPEED----- 115 MPH
RISK CATEGORY----- II
EXPOSURE----- B

SEISMIC LOADS:
OCCUPANCY CATEGORY----- II
SPECTRAL RESPONSE COEF.----- Ss=0.200
SI=0.098
Sds=0.213
Sd1=0.144

SITE SOIL CLASS----- D
SEISMIC DESIGN CATEGORY----- C

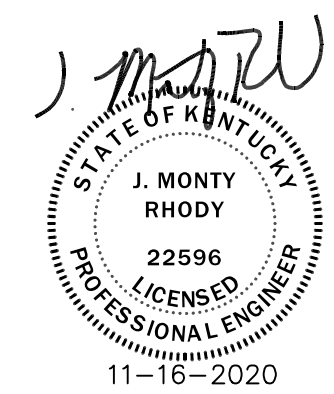
NOTE TO CONTRACTOR:

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.

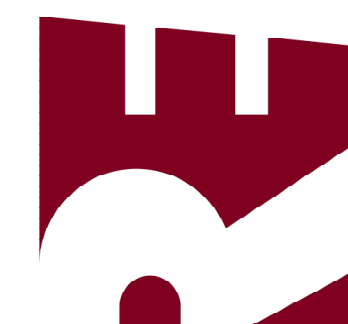
SPECIAL INSPECTIONS

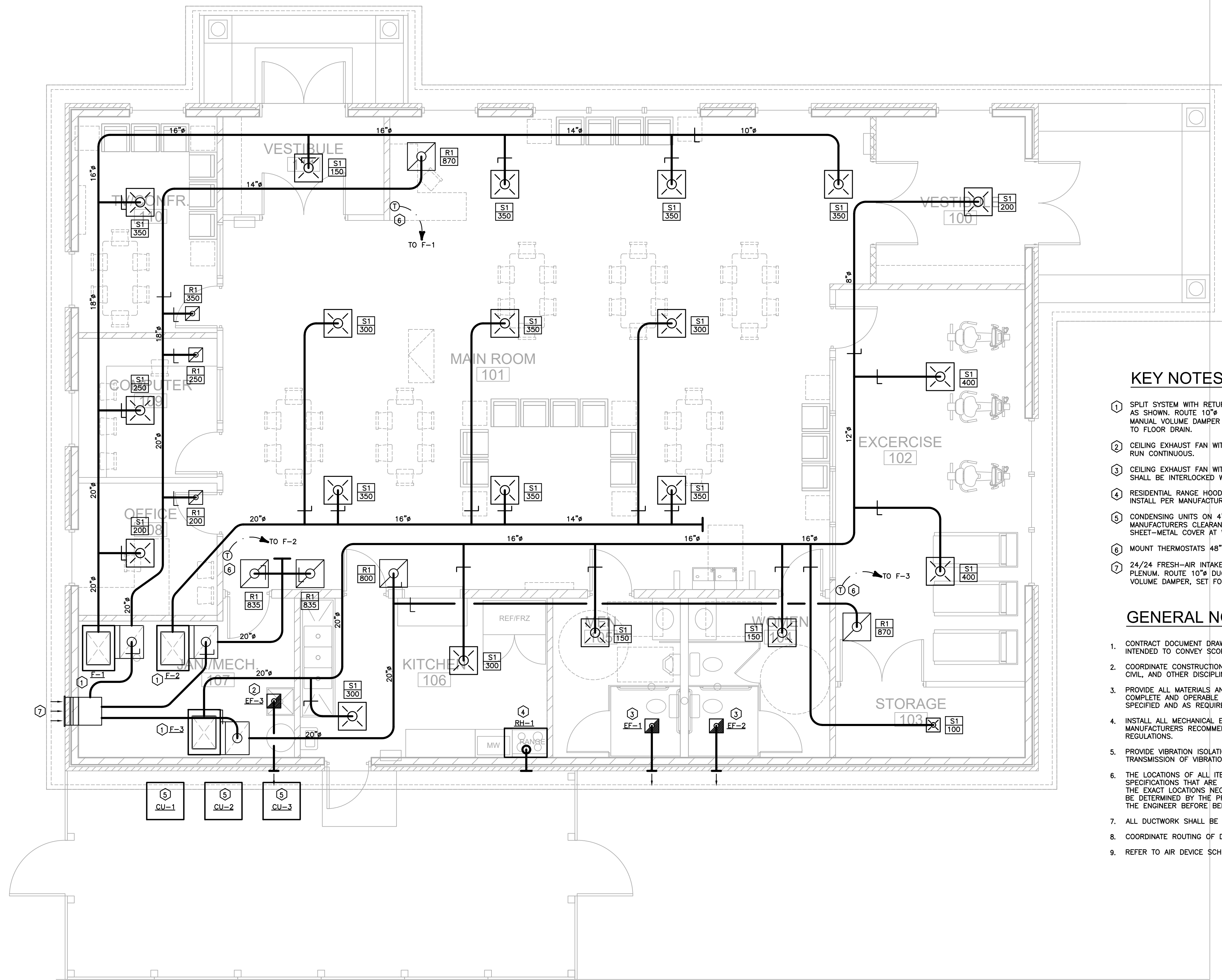
1. SPECIAL INSPECTIONS AS DEFINED IN SECTION 1704.0 OF THE KENTUCKY BUILDING CODE ARE REQUIRED.
2. SPECIAL INSPECTIONS SHALL BE PERFORMED BY A QUALIFIED TESTING AGENCY APPROVED BY THE ARCHITECT AND PAID FOR BY THE GENERAL CONTRACTOR.
3. THE INSPECTOR SHALL OBSERVE WORK FOR CONFORMANCE WITH THE APPROVED STRUCTURAL DRAWINGS AND SPECIFICATIONS AND PREPARE INSPECTION REPORTS STATING HIS/HER OBSERVATIONS.
4. ALL DISCREPANCIES BETWEEN THE CONSTRUCTION DOCUMENTS AND THE WORK BEING PERFORMED SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION. IF THE DISCREPANCIES ARE NOT CORRECTED, THE DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO THE COMPLETION OF THAT PHASE OF THE WORK.
5. THE SPECIAL INSPECTOR SHALL SUBMIT A FINAL REPORT OF INSPECTIONS DOCUMENTING COMPLETION OF ALL REQUIRED SPECIAL INSPECTIONS AND CORRECTION OF ANY DISCREPANCIES NOTED IN THE INSPECTIONS.
6. SPECIAL INSPECTIONS ARE REQUIRED FOR THE FOLLOWING WORK:

CONCRETE CONSTRUCTION
WOOD CONSTRUCTION
SOILS CONSTRUCTION



Rhody Engineering
Civil Engineering Services
1111 Westwood Drive, Lawrenceburg, KY 40342
Phone: 502-343-8518





KEY NOTES:

- ① SPLIT SYSTEM WITH RETURN AND SUPPLY PLENUMS ON DRAIN FAN. TRANSITION DUCTWORK AS SHOWN. ROUTE 10" OUTSIDE AIR DUCT TO FRESH-AIR LOUVER PLENUM, PROVIDE MANUAL VOLUME DAMPER AND BALANCE FOR CFM AS SCHEDULED. ROUTE 1" CONDENSATE TO FLOOR DRAIN.
- ② CEILING EXHAUST FAN WITH 6" DUCT THROUGH WALL TO APPROVED WALL CAP. FAN TO RUN CONTINUOUS.
- ③ CEILING EXHAUST FAN WITH 8" DUCT THROUGH WALL TO APPROVED WALL CAP. FAN SHALL BE INTERLOCKED WITH LIGHT-SWITCH.
- ④ RESIDENTIAL RANGE HOOD. ROUTE EXHAUST DUCT THROUGH WALL TO APPROVED CAP. INSTALL PER MANUFACTURERS RECOMMENDATIONS.
- ⑤ CONDENSING UNITS ON 4" THICK CONCRETE PAD. MAINTAIN ALL SERVICE AND MANUFACTURERS CLEARANCES. ROUTE REFRIGERANT PIPING THROUGH WALL, PROVIDE SHEET-METAL COVER AT WALL OPENING.
- ⑥ MOUNT THERMOSTATS 48" AFF. PROVIDE WITH LOCKABLE COVERS.
- ⑦ 24/24 FRESH-AIR INTAKE LOUVER WITH INSECT SCREEN. PROVIDE 24/24 INSULATED PLENUM. ROUTE 10" DUCT FROM PLENUM TO EACH RETURN AIR PLENUM WITH MANUAL VOLUME DAMPER, SET FOR CFM AS SCHEDULED.

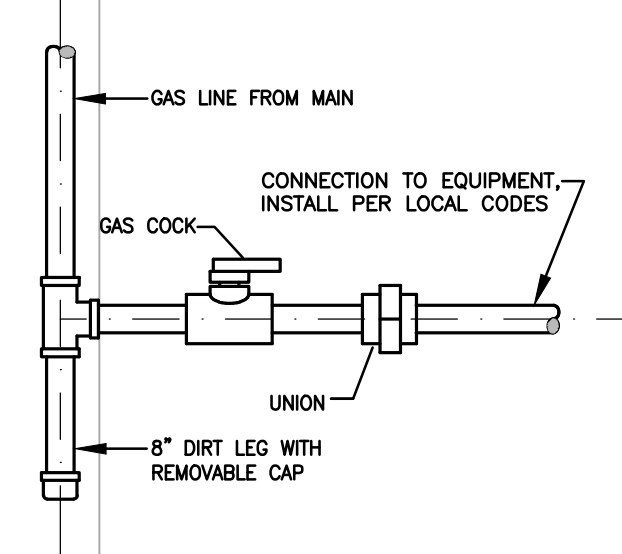
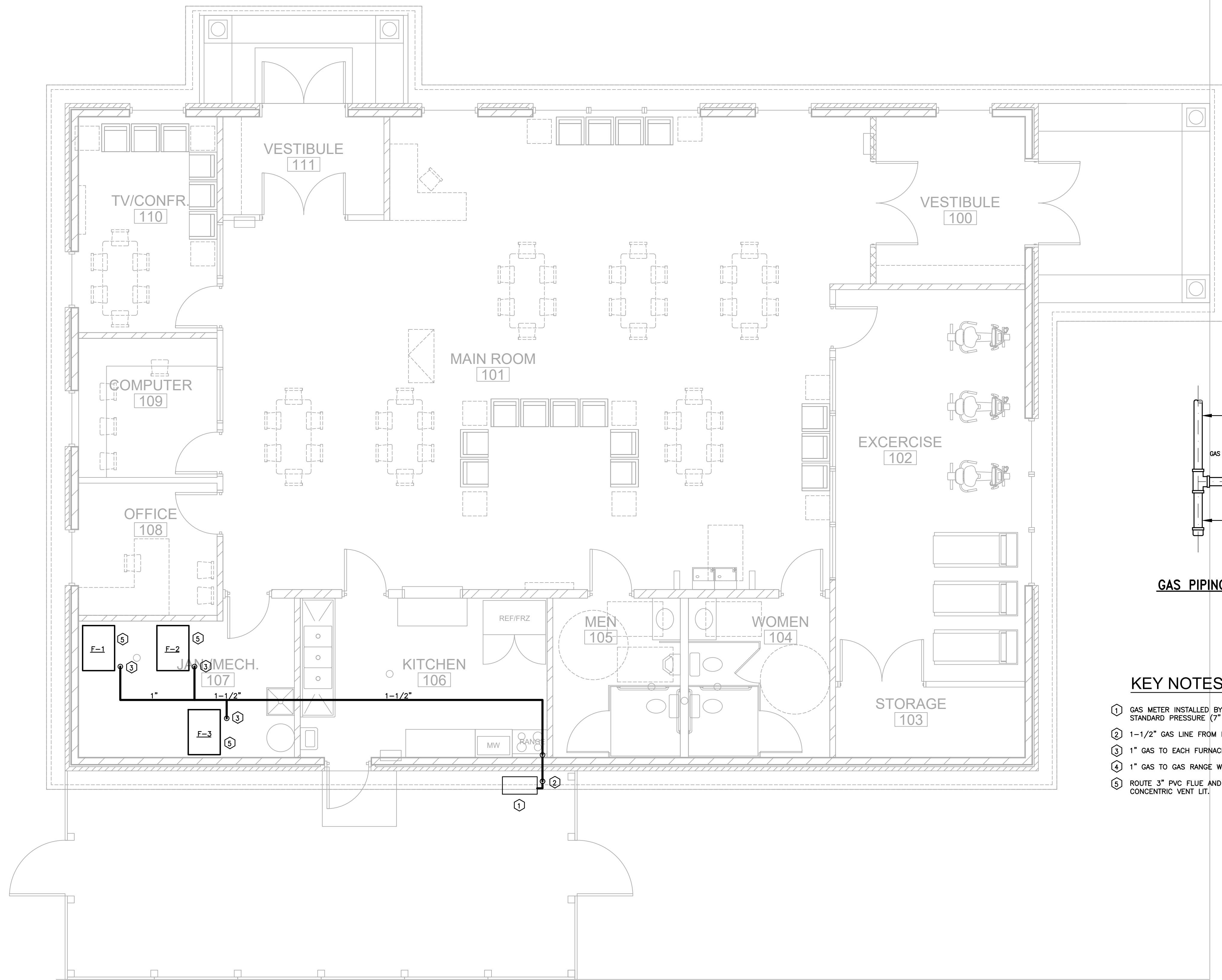
GENERAL NOTES:

1. CONTRACT DOCUMENT DRAWINGS FOR MECHANICAL WORK ARE DIAGRAMMATIC AND ARE INTENDED TO CONVEY SCOPE AND GENERAL ARRANGEMENT ONLY.
2. COORDINATE CONSTRUCTION OF ALL MECHANICAL WORK WITH ARCHITECTURAL, STRUCTURAL, CIVIL, AND OTHER DISCIPLINES PRIOR TO CONSTRUCTION.
3. PROVIDE ALL MATERIALS AND EQUIPMENT AND PERFORM ALL LABOR REQUIRED TO INSTALL COMPLETE AND OPERABLE MECHANICAL SYSTEM AS INDICATED ON THE DRAWINGS, AS SPECIFIED AND AS REQUIRED BY CODE.
4. INSTALL ALL MECHANICAL EQUIPMENT AND APPURTENANCES IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS, CONTRACT DOCUMENTS, AND APPLICABLE CODES AND REGULATIONS.
5. PROVIDE VIBRATION ISOLATION FOR ALL MECHANICAL EQUIPMENT TO PREVENT TRANSMISSION OF VIBRATION TO BUILDING STRUCTURE.
6. THE LOCATIONS OF ALL ITEMS SHOWN ON THE DRAWINGS OR CALLED FOR IN THE SPECIFICATIONS THAT ARE NOT DEFINITELY FIXED BY DIMENSIONS ARE APPROXIMATE ONLY. THE EXACT LOCATIONS NECESSARY TO SECURE THE BEST CONDITIONS AND RESULTS MUST BE DETERMINED BY THE PROJECT SITE CONDITIONS AND SHALL HAVE THE APPROVAL OF THE ENGINEER BEFORE BEING INSTALLED. DO NOT SCALE DRAWINGS.
7. ALL DUCTWORK SHALL BE RIGID TYPE UNLESS OTHERWISE NOTED ON PLANS.
8. COORDINATE ROUTING OF DUCTWORK WITH STRUCTURAL MEMBERS AND CEILING HEIGHTS.
9. REFER TO AIR DEVICE SCHEDULE FOR INDIVIDUAL RUNOUT SIZES.

1 FLOOR PLAN - HVAC
M-1 SCALE: 1/4" = 1'-0"

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336 Collett Bridge Road
Alvaton, KY 42122
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GAS LOAD AND FLUE SCHEDULE						
ITEM	NUMBER OF ITEMS	TOTAL LOAD FOR ITEMS (CFH)	GAS PRESSURE	LOCATION	FLUE SIZE AND TYPE (EACH ITEM)	REMARKS
F-1	1	135	7" WC	MECH ROOM	3" PVC	PROVIDE GAS COCK & DIRT LEG
F-2	1	135	7" WC	MECH ROOM	3" PVC	PROVIDE GAS COCK & DIRT LEG
F-3	1	135	7" WC	MECH ROOM	3" PVC	PROVIDE GAS COCK & DIRT LEG
	3	405				

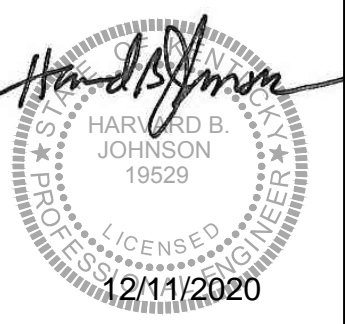


GAS PIPING CONNECTION DETAIL

KEY NOTES:

- ① GAS METER INSTALLED BY LOCAL UTILITY COMPANY. SIZE METER FOR 525 CFH AT STANDARD PRESSURE (7" WC).
- ② 1-1/2" GAS LINE FROM METER INTO MECHANICAL ROOM.
- ③ 1" GAS TO EACH FURNACE WITH GAS COCK AND DRIP LEG.
- ④ 1" GAS TO GAS RANGE WITH GAS COCK AND DRIP LEG. QUICK DISCONNECT BY OTHERS.
- ⑤ ROUTE 3" PVC FLUE AND 3" PVC COMBUSTION AIR FROM EACH UNIT THROUGH ROOF TO CONCENTRIC VENT LIT.

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED ARCHITECT IN THE STATE OF KENTUCKY



DATE: 12/11/2020
DRAWN BY:
CHECKED BY:
REVISIONS:

PROJECT NUMBER:

NEW FACILITY FOR:
CITY OF LEBANON SENIOR CENTER
Mulberry Street and South Spalding Avenue, Lebanon, Kentucky

FLOOR PLAN - GAS

SHEET
M-2
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LEGEND	
SYMBOL	DESCRIPTION
AFF	ABOVE FINISHED FLOOR
BFC	BELOW FINISHED CEILING
CO	CLEAN OUT
CU	CONDENSING UNIT
EF	EXHAUST FAN
F	FAN COIL UNIT
OA	OUTSIDE AIR
RA	RETURN AIR
SA	SUPPLY AIR
SF	SUPPLY FAN
UH	UNIT HEATER
	SUPPLY DUCTWORK
	RETURN DUCTWORK
	EXHAUST DUCTWORK
	SUPPLY AIR (DENOTES FOUR WAY DIFFUSER)
	RETURN AIR
	EXHAUST AIR
	DENOTES 2-WAY DIFFUSER (AIR ARROWS SHOW THROW DIRECTIONS)
	SUPPLY DUCT UP
	RETURN / EXHAUST DUCT UP
	WALL THERMOSTAT
	INDICATES KEY NOTES
	AIR DEVICE #1 CFM AIR QUANTITY } SEE AIR DISTRIBUTION SCHEDULE
	MANUAL VOLUME BALANCING DAMPER

SUPPLY AIR DEVICES							
MARK	NECK SIZE	CFM RANGE	MAX TOTAL ΔP	MAX NC	TITUS MODEL NO.		REMARKS
					SERIES	ACCESSORIES	
S1	4" NECK	UP TO 85	0.08"	30	TMSI	Ⓢ	12x12 SQUARE CEILING DIFFUSER WITH OPPOSED BLADE DAMPER AND INSULATION BLANKET
	5" NECK	86-125	0.08"	30	TMSI		
	6" NECK	126-160	0.08"	30	TMSI		
S1	6" NECK	161-180	0.08"	30	TMSI	Ⓢ	24x24 SQUARE CEILING DIFFUSER WITH OPPOSED BLADE DAMPER AND INSULATION BLANKET
	8" NECK	181-310	0.08"	30	TMSI		
	10" NECK	311-440	0.08"	30	TMSI		
	12" NECK	441-590	0.08"	30	TMSI		

RETURN DEVICES							
MARK	NECK SIZE	UP TO	CFM RANGE	MAX ΔP	NC	SERIES	REMARKS
	8" NECK	116-200	0.08"	30	8R		
	10" NECK	201-310	0.08"	30	8R		
	12" NECK	311-450	0.08"	30	8R		
	14" NECK	451-600	0.08"	30	8R		
	15x15 NECK	601-930	0.08"	30	8R		

SERVICE AND MARK NUMBER } S = SUPPLY
 CFM (ON PLANS) } R = RETURN

ACCESSORIES:
 Ⓢ OBD
 Ⓢ SOUND ATTENUATOR

NOTES:
 1. CEILING DEVICES FURNISHED SHALL BE COMPATIBLE WITH CEILINGS SPECIFIED BY ARCHITECT.
 2. UNLESS OTHERWISE NOTED, PROVIDE SOUND ATTENUATING FLEX DUCT AT CONNECTION.
 3. PROVIDE SUPPLY AIR CEILING DEVICES WITH 4-WAY THROW PATTERN, UNLESS OTHERWISE INDICATED.

SUPPLY RUNOUT SIZES (U.N.O.)		RETURN RUNOUT SIZES (U.N.O.)	
CFM RANGES	DUCT SIZE	CFM RANGES	DUCT SIZE
0-100	6"	0-75	6" or 6/6
101-130	7"	76-140	7" or 8/6
131-200	8"	141-190	8" or 8/8
201-260	9"	191-250	9" or 10/8
261-400	10"	251-320	10" or 10/10
401-500	11"	321-420	11" or 12/10
501-620	12"	421-520	12" or 12/12
621-790	14"	521-800	14" or 14/12

* RUNOUT SIZES TO BE USED ONLY IF NOT NOTED ON PLANS.

SPLIT SYSTEM GAS FIRED HVAC UNIT																				
INDOOR UNIT													OUTDOOR UNIT				ACCESSORIES	NOTES		
MARK	CFM	O.A CFM	FAN HP	COOLING DATA				HEATING IN (MBH)	FLUE TYPE	FLUE SIZE	VOLTAGE	MCA/MOCP	CONDENSATE DRAIN	MARK	DESIGN TEMP.				VOLTAGE	MCA/MOCP
				EATdb	EATwb	SENS. MBH	TOTAL MBH								db	wb				
F-1	2000	330	1	80	67	48	60	135	PVC	3"	120/1/60	12.3 / 20	1-1/4"	CU-1	95°	75°	240/1/60	38.4 / 50	1-10	1-5
F-2	2000	330	1	80	67	48	60	135	PVC	3"	120/1/60	12.3 / 20	1-1/4"	CU-2	95°	75°	240/1/60	38.4 / 50	1-10	1-5
F-3	2000	330	1	80	67	48	60	135	PVC	3"	120/1/60	12.3 / 20	1-1/4"	CU-3	95°	75°	240/1/60	38.4 / 50	1-10	1-5

- ACCESSORIES:
- PROVIDE 5 YEAR COMPRESSOR WARRANTY.
 - PROVIDE ANTI-SHORT CYCLING PROTECTION.
 - PROVIDE LOW AMBIENT CONTROLS (0°)
 - PROVIDE CRANKCASE HEATER.
 - PROVIDE HIGH / LOW PRESSURE CUTOUTS.
 - PROVIDE FACTORY MOUNTED SAFETY DISCONNECTS FOR INDOOR AND OUTDOOR UNITS.
 - PROVIDE PVC FLUE AND COMBUSTION AIR PIPES WITH CONCENTRIC VENT.
 - INDOOR UNIT SHALL BE LENNOX MODEL ML193UH, OR EQUAL.
 - OUTDOOR UNIT SHALL BE LENNOX MODEL 14ACX WITH MATCHING COIL, OR EQUAL.
 - 7-DAY PROGRAMMABLE THERMOSTAT WITH AUTO CHANGE-OVER.

- NOTES:
- PROVIDE AUXILIARY DRAIN PAN WITH FLOAT SWITCH FOR AUTOMATIC SHUT-DOWN OF UNIT.
 - PROVIDE FLEXIBLE CONNECTORS BETWEEN AIR HANDLING UNIT AND DUCTWORK.
 - ROUTE 1-1/4" CONDENSATE TO FLOOR DRAINS PROVIDED.
 - PROVIDE 4" THICK STEEL REINFORCED CONCRETE PAD FOR OUTDOOR UNIT.
 - ROUTE REFRIGERANT PIPING FROM OUTDOOR UNIT TO INDOOR UNIT IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.

AIR BALANCE						
MARK	SUPPLY CFM	RETURN CFM	OUTSIDE AIR CFM	EXHAUST CFM	RELATIVE PRESSURE (CFM)	REMARKS
F-2	2,000	1,670	330	-	-	AC
F-3	2,000	1,670	330	-	-	AC
EF-1				200	-	TOILET EXHAUST
EF-2				200	-	TOILET EXHAUST
EF-3				75	-	TOILET EXHAUST
RH-1	-	-	-	500	-	RH-1 EXHAUST
TOTALS	6,000	5,010	990	975	+15	

FAN SCHEDULE													
MARK	CFM	SPWG. INCHES	RPM	SONES	ELECTRICAL			SERVICE	ACCESSORIES	MANUFACTURER	MODEL NO.	INTERLOCK	REMARKS
					HP (WATTS)	VOLTAGE	STARTER/DISCONNECT						
EF-1	200	0.25"	900	2.0	1/6	120/1/60	MAN	EF	3,4,5	GREENHECK	SP-A300	SWITCH	FAN TO RUN CONTINUOUSLY
EF-2	200	0.25"	900	2.0	1/6	120/1/60	MAN	EF	3,4,5	GREENHECK	SP-A300	SWITCH	FAN TO RUN CONTINUOUSLY
EF-3	75	0.25"	900	0.4	1/6	120/1/60	MAN	EF	3,4,5	GREENHECK	SP-A90	NONE	FAN TO RUN CONTINUOUSLY

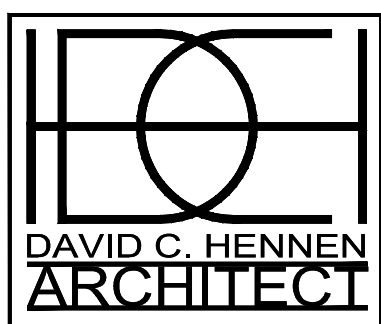
- SERVICE:
- EF - EXHAUST FAN
- STARTER/DISCONNECT:
- MAN - MANUAL STARTER WITH PILOT LIGHT FOR "RUN" AND HANDLE LOCK-OFF FOR DISCONNECTING MEANS
- NOTES:
- PROVIDE CURB TO ACCOMMODATE ROOF SLOPE, WHERE APPLICABLE.
 - MAKE ALL ROOF PENETRATIONS WEATHERTIGHT.

- ACCESSORIES:
- GRAVITY BACK-DRAFT DAMPER
 - WALL CAP
 - BIRDSCREEN

RANGE HOOD SCHEDULE								
MARK	SIZE LENGTH	EXHAUST		ACUREX MODEL NUMBER	MATERIAL	EXHAUST FAN	VOLTAGE AMPS	ACCESSORIES
		CFM	COLLAR SPWG					
RH-1	36"	500	.125"	XRRS-36-R	STAINLESS STEEL	INTEGRAL	120V 15A	1,2,3

- ACCESSORIES/NOTES:
- HOOD SHALL BE EXHAUSTED TO EXTERIOR WALL WITH APPROVED CAP.
 - MOUNTING BELOW CABINETS.
 - MEET NFPA AND LOCAL CODE.

OUTSIDE AIR REQUIREMENTS (ASHRAE 62.1-2019)										
AREA SERVED	AREA CLASSIFICATION	UNIT SERVED	FLOOR AREA (SF)	OA RATE CFM/SF	OCCUPANCY PEOPLE / 1000 SF	TOTAL PEOPLE	CFM / PERSON	CFM	EXHAUST	TOTAL OA CFM
MAIN ROOM	MULTI-USE	F-1	500	0.06	30	60	30	5	150	180
CONFERENCE	CONFERENCE	F-1	155	0.06	9	50	8	5	39	48
COMPUTER	OFFICE	F-1	100	0.06	6	5	1	5	3	9
OFFICE	OFFICE	F-1	95	0.06	6	5	0	5	2	8
VESTIBULE	MAIN ENTRY	F-1	85	0.06	5	5	0	5	2	7
										252
MAIN ROOM	MULTI-USE	F-2	900	0.06	54	60	54	5	270	324
VESTIBULE	MAIN ENTRY	F-3	130	0.06	8	5	1	5	3	11
EXERCISE	AEROBICS ROOM	F-3	360	0.06	22	30	11	20	216	238
STORAGE	STORAGE	F-3	70	0.06	4	5	0	5	2	6
WOMEN	TOILET	F-3	120	0	0	0	0	0	0	0
MEN	TOILET	F-3	120	0	0	0	0	0	0	0
KITCHEN	KITCHEN	F-3	200	0.7	140	0	0	0	0	140
										395



I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED ARCHITECT IN THE STATE OF KENTUCKY.



DATE: 12/11/2020
 DRAWN BY:
 CHECKED BY:
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PROJECT NUMBER:

NEW FACILITY FOR:
CITY OF LEBANON SENIOR CENTER
 Mulberry Street and South Spalding Avenue, Lebanon, Kentucky

HVAC SCHEDULES

HARVARD B. JOHNSON, PE
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 Alvaton, KY 42122
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M-3
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HVAC SPECIFICATIONS

PART 1

GENERAL

- FURNISH ALL MATERIALS, LABOR, TOOLS, TRANSPORTATION AND INCIDENTALS TO COMPLETE THE PROJECT IN EVERY DETAIL, AND LEAVE IN WORKING ORDER ALL ITEMS CALLED FOR HEREIN OR SHOWN ON THE ACCOMPANYING DRAWINGS.
- IT IS THE RESPONSIBILITY OF CONTRACTOR TO READ ALL SPECIFICATIONS AND CONSULT ALL DRAWINGS WHICH MAY AFFECT THE INSTALLATION AND COORDINATION OF HIS WORK WITH OTHER TRADES. CONTRACTOR SHALL COORDINATE AND MAKE MINOR ADJUSTMENTS IN LOCATION OF EQUIPMENT AND MATERIALS AS NECESSARY TO SECURE COORDINATION.
- LAYOUT SHOWN IN DRAWINGS IS BASED ON A PARTICULAR MAKE OF EQUIPMENT. CONTRACTOR SHALL PROVIDE SIX SUBMITTAL SETS OF SHOP DRAWINGS TO ENGINEER FOR APPROVAL PRIOR TO STARTING WORK. IF ANOTHER MAKE OF EQUIPMENT IS DESIRED, THESE SUBMITTALS SHALL ALSO SHOW ALL REQUIRED MODIFICATIONS AND CHANGES, INCLUDING THOSE INVOLVING OTHER TRADES, AND COST THEREOF SHALL BE INCLUDED IN HIS BID. CONTRACTOR MUST RECEIVE APPROVED SUBMITTAL COPY, SIGNED BY ENGINEER BEFORE PROCEEDING WITH ANY MODIFICATIONS. WORK INSTALLED USING UNAPPROVED SUBSTITUTIONS SHALL BE REPLACED AT NO ADDITIONAL COST TO THE OWNER.
- CONTRACTOR SHALL VISIT THE SITE AND FULLY INFORM HIMSELF CONCERNING ALL CONDITIONS AFFECTING SCOPE OF WORK. FAILURE TO DO SO SHALL NOT RELIEVE CONTRACTOR OF ANY RESPONSIBILITY IN THE PERFORMANCE OF HIS WORK. ALL WORKMANSHIP SHALL BE OF THE HIGHEST QUALITY IN ACCORDANCE WITH THE BEST PRACTICES OF THE TRADE BY CRAFTSMEN SKILLED IN THIS PARTICULAR WORK. CONTRACTOR SHALL FILE ALL DRAWINGS, PAY ALL FEES AND OBTAIN ALL PERMITS AND CERTIFICATES OF INSPECTION RELATIVE TO THIS WORK.
- COMPLETED INSTALLATION SHALL CONFORM TO ALL APPLICABLE FEDERAL, STATE AND LOCAL CODES AND ORDINANCES, INCLUDING BUT NOT LIMITED TO THE LATEST APPROVED EDITIONS OF THE FOLLOWING: STATE BUILDING CODE, INTERNATIONAL BUILDING CODE, NFPA-90A, NFPA-101, NFPA-96, AND NFPA-54. ALL EQUIPMENT SHALL BE ARI CERTIFIED AND U.L. LISTED.
- SYSTEM LAYOUT IS SCHEMATIC AND EXACT LOCATIONS SHALL BE DETERMINED BY STRUCTURAL CONDITIONS, COORDINATION WITH OTHER TRADES, COORDINATION WITH FINISHES AND OTHER CONDITIONS. STRUCTURAL SUPPORTS SHALL NOT BE CUT OR ALTERED TO ASSURE FIT OF HVAC SYSTEM.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DEFECTS, REPAIRS AND REPLACEMENTS IN MATERIALS AND WORKMANSHIP FOR A PERIOD OF ONE (1) YEAR AFTER FINAL PAYMENT IS APPROVED. CONTRACTOR SHALL HONOR FACTORY WARRANTIES ON ALL EQUIPMENT PROVIDED AS PART OF THIS SYSTEM. COMPRESSORS SHALL BE PROVIDED WITH A MINIMUM OF FIVE (5) YEAR WARRANTY INCLUDING LABOR.
- UPON COMPLETION OF PROJECT, ALL SYSTEM EQUIPMENT AND MATERIALS SHALL BE IN NEW, CLEAN CONDITION WITH ALL DAMAGE RESTORED TO ACCEPTABLE CONDITION. ALL EQUIPMENT, COMPONENTS AND DUCTWORK SHALL BE INSPECTED AND THOROUGHLY CLEANED, READY FOR USE. AT COMPLETION OF JOB, ALL MISCELLANEOUS TOOLS, SCAFFOLDING, SURPLUS MATERIALS, RUBBISH AND DEBRIS SHALL BE REMOVED BY CONTRACTOR.
- IF HVAC EQUIPMENT IS USED FOR TEMPORARY HEATING, THE CONTRACTOR SHALL ASSUME THE RESPONSIBILITY FOR CLEANING FILTERS, COILS, AND OTHER EQUIPMENT. FINAL PERMANENT CONNECTIONS OF SERVICES TO UNITS SHALL BE COMPLETE PRIOR TO ANY START-UP OF EQUIPMENT.

PART 2

PRODUCTS

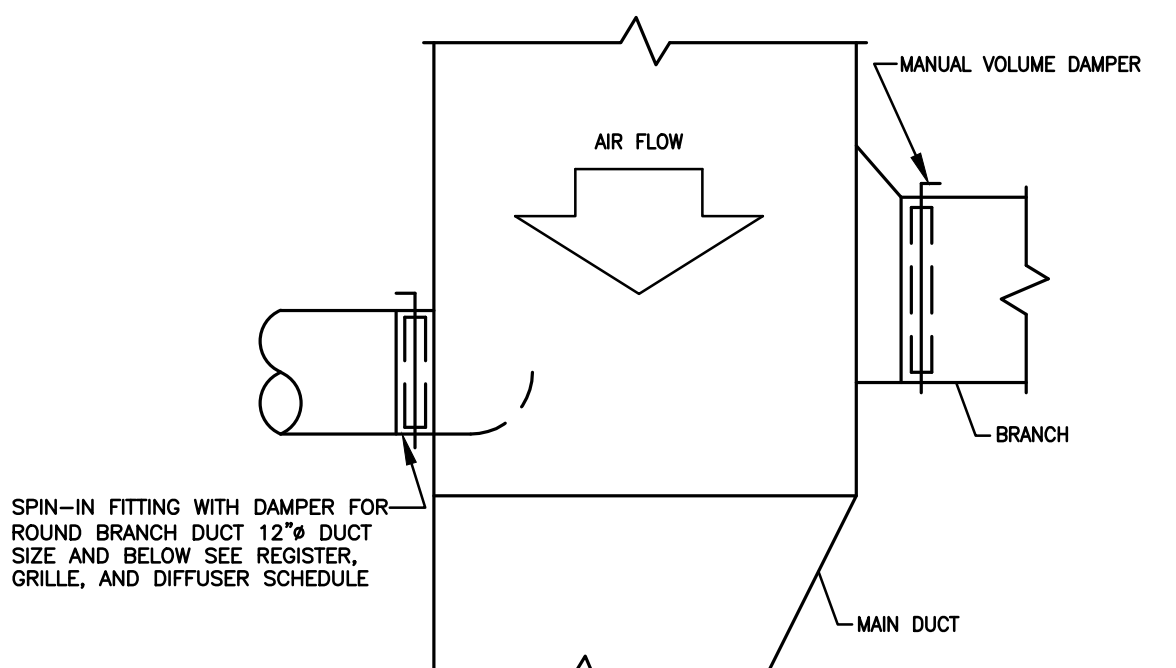
- HEATING AND COOLING EQUIPMENT
 - FURNISH AND SPLIT SYSTEM COMBINATION ELECTRIC COOLING AND NATURAL GAS FIRED HEATING UNITS BY CARRIER, TRANE, OR LENNOX AS SHOWN ON DRAWINGS. UNITS SHALL BE MOUNTED ON A CONCRETE PAD. REFER TO SCHEDULE FOR ALL ACCESSORIES.
 - UNIT SHALL BE FACTORY ASSEMBLED, TESTED AND HAVE COMPLETE REFRIGERANT CHARGE, READY TO OPERATE. ALL TUBING JOINTS SHALL BE BRAZED. COIL SHALL BE MINIMUM OF 3-ROWS DEEP. COIL SHALL BE COPPER TUBING W/ ALUMINUM PLATE FINS. SPINE FINS ARE NOT ACCEPTABLE.
 - FAN SHALL BE STATICALLY AND DYNAMICALLY BALANCED, DOUBLE INLET, FORWARD CURVED BLOWER CAPABLE OF DELIVERING DESIGN CFM. FAN SHALL BE QUIET IN OPERATION AS DETERMINED BY THE ENGINEER, AND INTERNALLY VIBRATION ISOLATED.
 - EQUIPMENT SHALL BE COMPLETELY FACTORY WIRED WITH ALL CONTROL AND PROTECTIVE DEVICES. ALL EQUIPMENT SHALL HAVE A SMOKE DETECTOR IN RETURN DUCT AND CONTROLS FOR SMOKE DETECTORS SHUTDOWN. FIRE-STATS SHALL BE INCLUDED ON ALL OTHER UNITS AS REQUIRED BY CODE. ALL FIRE-STATS SHALL HAVE 136" SETPOINT.
 - FILTERS SHALL BE MERV-8 2" THROW AWAY TYPE, OR AS SCHEDULED. A CLEAN SET OF REPLACEMENT FILTERS SHALL BE PROVIDED BY CONTRACTOR UPON START-UP OF EQUIPMENT.
 - SYSTEMS SHALL BE COMPLETE WITH THERMOSTAT AND SUBBASE SPECIFICALLY DESIGNED FOR SYSTEM AND AS SHOWN ON DRAWINGS.
 - ACCESSORIES SHALL INCLUDE TIME DELAY RELAYS TO PREVENT COMPRESSOR SHORT CYCLING, MALFUNCTION SWITCH, FIRE-STAT CUT-OUTS, LOW PRESSURE SWITCH, HIGH-PRESSURE CUT-OUT, LOW AMBIENT OPERATING KIT, CRANK CASE HEATER & COIL GUARD.
 - UNITS SHALL HAVE MANUAL OUTSIDE AIR DAMPERS EXCEPT AS SHOWN ON DRAWINGS.
- REFRIGERANT PIPING TO BE ACR COPPER, TYPE L, HARD DRAWN WITH SILVER BRAZED JOINTS. ALL JOINT CONNECTIONS TO BE WITH SILFOS OR STAY-BRITE #8. USE MANUFACTURER'S RECOMMENDED FLUX ON ALL BRAZED JOINTS. PROVIDE ISOLATION / CHARGING VALVES, FILTER DRIER, AND MOISTURE INDICATING SIGHT GLASS. REFRIGERANT SUCTION PIPING TO BE INSULATED WITH 3/4" THICK AP ARMAFLEX. EXTERIOR INSULATED PIPING SHALL HAVE ALUMINUM JACKET COVER WITH ALL SEAMS CAULKED WITH RTV CLEAR SILICONE CAULKING.
- GAS FIRED EQUIPMENT
 - ALL GAS FIRED EQUIPMENT SHALL BE AGA CERTIFIED.
 - BURNERS SHALL BE EQUIPPED WITH CONTROLS AND SAFETIES REQUIRED FOR COMPLETE AND FULLY OPERATIONAL SYSTEM. PILOT SHALL BE INTERMITTENT ELECTRIC IGNITION TYPE.
 - HEAT EXCHANGER SHALL BE PROVIDED WITH A MINIMUM FIVE (5) YEAR FULL WARRANTY.
- FANS
 - FANS SHALL BE EQUAL TO THE MAKE AND MODEL(S) INDICATED AND SHALL BE LOCATED AS SHOWN ON DRAWINGS. FANS SHALL BE PENN, ACME, LOREN, COOK OR GREENHECK. CURB MOUNTED FANS SHALL BE MOUNTED ON INSULATED CURBS, MINIMUM 1'-0" HIGH.
 - FANS SHALL OPERATE CONTINUOUSLY UNLESS OTHERWISE NOTED ON EQUIPMENT SCHEDULE TO BE SWITCHED. SWITCH SHALL BE INSTALLED BY DIVISION 13.
- DUCTWORK AND INSULATION
 - ALL LOW PRESSURE DUCTWORK SHALL BE SHEETMETAL 1" SPWG CONSTRUCTION EXCEPT AS NOTED. CONSTRUCTION STANDARDS AND RECOMMENDATIONS OF SMACNA, LATEST EDITION, SHALL BE FOLLOWED WITH RESPECT TO CONSTRUCTION, INSTALLATION AND SUPPORTING OF ALL DUCTWORK, EXCEPT MINIMUM GAUGE SHALL BE 24 GAUGE. ALL JOINTS SHALL BE SEALED WITH APPROVED SEALANT.
 - DIMENSIONS FOR SHEETMETAL WORK ON DRAWINGS ARE INSIDE CLEAR UNLESS OTHERWISE NOTED. CONTRACTOR SHALL ADJUST SHEETMETAL SIZES TO ALLOW FOR INTERNAL LINER WHERE SPECIFIED.
 - ALL RECTANGULAR RETURN DUCTS SHALL HAVE INTERNAL INSULATION. INSULATION SHALL BE 1" THICK AT 1.5 LB DENSITY, GLUED AND PINNED. WHERE INTERNAL LINER AND EXTERNAL WRAP MEET, THEY SHALL OVERLAP BY MINIMUM OF 6". INSULATION SHALL BE BY MANVILLE CORPORATION, CERTAINTED OR KNAUF. ROUND RETURN DUCTS IN UNCONDITIONED SPACES SHALL HAVE 2" EXTERNAL INSULATION SAME AS SUPPLY DUCTS.
 - ALL SUPPLY DUCTS SHALL BE EXTERNALLY INSULATED WITH MINIMUM 2" THICK FIBERGLASS FLEXIBLE DUCT INSULATION WITH VAPOR BARRIER, MANVILLE CORPORATION, CERTAINTED OR KNAUF. IN ADDITION, INSULATE INTERNALLY WHEN INDICATED. SPIRAL DUCTWORK IS THE ONLY EXCEPTION.
 - TRUNK DUCTS SHALL BE ISOLATED FROM UNIT VIBRATION WITH THE USE OF NFPA AND U.L. APPROVED FLEXIBLE CONNECTORS IN BOTH SUPPLY AND RETURN.
 - INSULATED FLEXIBLE DUCT MAY BE UTILIZED FOR CONNECTION TO GRILLES AND REGISTERS IN MAXIMUM LENGTHS OF 4'-0" PER BRANCH RUN. FLEXIBLE DUCT SHALL BE CERTAINTED, WIREMOLD OR MANVILLE CORPORATION, FLEX METAL INSULATED WITH ACOUSTICAL VINYL VAPOR BARRIER, U.L. APPROVED WITH CONDUCTANCE 0.22 AT 75° F.

- ROUND DUCT TAKE-OFFS SHALL BE SPIN-IN OR CONICAL TEE TYPE WITH DAMPERS, NO AIR SCOOPS. ALL ROUND PIPE TO BE CONNECTED WITH SHEET METAL SCREWS AND SUPPORTED WITH 1" METAL STRAP. RECTANGULAR TAKE-OFFS AND BRANCHES SHALL BE 45° ANGLE BOOT OR TEE.
- SINGLE THICKNESS TURNING VANES SHALL BE INSTALLED AT 90° TURNS IN LOW PRESSURE MAIN SUPPLY DUCTS.
- INTERNALLY INSULATE AND WEATHERPROOF DUCTWORK EXPOSED TO WEATHER WITH MINIMUM THREE COATS OF FIBERGLASS CLOTH AND EC-800. FINISH WITH COMPATIBLE EXTERIOR PAINT, COLOR AS SELECTED BY ARCHITECT.
- SMOKE/FIRE DAMPERS
 - CONTRACTOR SHALL COORDINATE ALL RATED ASSEMBLY'S WITH LATEST EDITION OF ARCHITECTURAL DRAWINGS. CONTRACTOR SHALL ASSUME ALL RESPONSIBILITY TO INSTALL FIRE, COMBINATION FIRE & SMOKE, AND RADIATION DAMPERS IN RATED ASSEMBLY'S.
 - FIRE AND SMOKE DAMPERS SHALL BE U.L. LISTED BY RUSKIN OR EQUAL RATED IN ACCORDANCE WITH THE ASSEMBLY IN WHICH DAMPER IS INSTALLED. INSTALL IN ACCORDANCE WITH APPLICABLE CODES AND DAMPER LISTING. DAMPERS SHALL BE DYNAMIC TYPE.
 - FIRE DAMPERS AND CEILING DAMPERS MAY BE FUSIBLE LINK TYPE.
 - SMOKE DAMPERS AND COMBINATION FIRE/SMOKE DAMPERS SHALL BE ELECTRIC MOTOR OPERATED, REMOTE RESETTABLE TYPE. COORDINATE DAMPER MOTOR VOLTAGE WITH SMOKE DETECTOR BY DIVISION 16, PROVIDE CONTROL VOLTAGE TRANSFORMER IF REQUIRED.
 - CONTRACTOR SHALL INSTALL REQUIRED ACCESS DOORS TO EACH FIRE DAMPER AND LABEL ACCORDINGLY.
- AIR DEVICES
 - AIR DEVICES SHALL BE TITUS OR METALRE COMMERCIAL TYPE WITH FRAME TYPE SUITABLE FOR CEILING FINISH. ALL CEILING DIFFUSERS WITHIN A SPACE SHALL HAVE UNIFORM FACE DIMENSIONS UNLESS OTHERWISE NOTED. SEE DRAWINGS FOR OTHER REQUIREMENTS.
 - CEILING DIFFUSERS SHALL BE SQUARE LOUVER TYPE WITH OPPOSED BLADE DAMPERS, ALUMINUM CONSTRUCTION, OFF WHITE FINISH, SIZES AS SHOWN ON DRAWINGS.
 - SUPPLY AIR REGISTERS SHALL BE HORIZONTAL FACE TYPE WITH OPPOSED BLADE DAMPERS, OFF WHITE FINISH, ALUMINUM, SIZES AS SHOWN ON DRAWINGS.
 - CEILING RETURN AIR AND EXHAUST GRILLES SHALL BE 3/2" X 3/2" EGCGRATE TYPE WITH OFF-WHITE FINISH, ALUMINUM, SIZES AS SHOWN ON DRAWINGS.
 - SIDEWALL RETURN AIR GRILLES SHALL BE HORIZONTAL FACE TYPE ALUMINUM (STEEL CONSTRUCTION FOR GRILLES NEAR FLOOR), OFF-WHITE FINISH OR AS SPECIFIED BY OWNER, SIZE AS SHOWN ON DRAWINGS.
 - AIR DEVICES IN CEILINGS NOT EASILY ACCESSIBLE SHALL HAVE CABLE-OPERATED ACTUATED DAMPERS OR BALANCING DAMPERS AT THE AIR DEVICE.
- LOUVERS AND DAMPERS
 - INTAKE AND RELIEF AIR LOUVERS SHALL BE AMERICAN WARMING, RUSKIN, LOUVERS AND DAMPERS OR VENT PRODUCTS, 6" DEEP "STORMPROOF", DRAINABLE DESIGN FABRICATED OF EXTRUDED ALUMINUM. LOUVER SHALL BE SUPPLIED WITH ALUMINUM BIRD SCREEN IN A REMOVABLE FRAME AND WITH PRIMER FINISH FOR PAINTING TO ARCHITECT'S SPECIFICATIONS. SEE DRAWINGS FOR SIZES. LOUVERS SHALL BE AMGA RATED. WATER PENETRATION SHALL NOT EXCEED 0.01 OZ./S.F. PER MINUTES AT 1,000 FPM WITH WATER FLOW AT 0.25 GPM.
 - DAMPERS SHALL BE AMERICAN WARMING, RUSKIN, LOUVERS AND DAMPERS OR VENT PRODUCTS, ELECTRIC MOTORIZED DAMPER OF EXTRUDED ALUMINUM. DAMPER SHALL BE LOW LEAKAGE TYPE, RUSKIN CD-50 OR EQUAL.
 - MANUAL VOLUME DAMPERS SHALL BE INSTALLED IN AREAS ACCESSIBLE FOR BALANCING. IF ACCESS IS NOT AVAILABLE VIA ACCESS DOORS OR REMOVABLE CEILING TILE, PROVIDE CABLE OPERATED DAMPER WITH CABLE INSIDE AIRSTREAM OR OUTSIDE AIRSTREAM.
- FLUES AND VENTS
 - CONTRACTOR SHALL FURNISH AND INSTALL ALL FLUES AND VENTS. FLUES AND VENTS SHALL BE U.L. LISTED DOUBLE WALL TYPE "B" OR PVC FOR CONDENSING FURNACES PER MANUFACTURER WITH SIZES AS INDICATED ON DRAWINGS.
 - CONSTRUCTION AND HEIGHT OF FLUE ABOVE ROOF SHALL CONFORM TO REQUIREMENTS OF NFPA 54 AND LOCAL CODES.
- PAINTING
 - ALL EQUIPMENT LOCATED OUTDOORS SHALL BE FURNISHED WITH FACTORY FINISH. CONTRACTOR SHALL TOUCH UP ANY SCRATCHES OR CHIPS IN ORIGINAL FINISH WITH FACTORY TOUCH-UP PAINT.
 - PAINT INSIDE OF DUCTS VISIBLE TO VIEW WITH FLAT BLACK PAINT.
 - EQUIPMENT OR DEVICES INSTALLED AND SCRATCHED SHALL BE PAINTED USING MANUFACTURERS TOUCH-UP PAINT OR REPLACED WITH NEW.
- SLEEVES
 - PROVIDE 18 GAGE SLEEVING AT MASONRY WALLS, ETC.
 - SEAL ALL PENETRATIONS OF RATED PARTITIONS WITH U.L. LISTED FIRE BARRIER MATERIAL.
- CONTROLS
 - HVAC CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLATION OF ALL LOW VOLTAGE CONTROL WIRING AND CONDUIT REQUIRED TO OPERATE THE HVAC EQUIPMENT AS SPECIFIED HEREIN OR AS SHOWN ON DRAWINGS. WIRING SHALL BE INSTALLED IN ACCORDANCE WITH LATEST EDITION OF NEC. REFER TO DRAWINGS OR SCHEDULE FOR COORDINATION OF EQUIPMENT STARTERS AND SAFETY DISCONNECTS
 - DUCT MOUNTED SMOKE DETECTORS FURNISHED AND INSTALLED ON SUPPLY AND RETURN DUCT FOR ALL UNITS. COORDINATE POWER CONNECTIONS WITH DIVISION 16 IF BUILDING HAS FIRE ALARM SYSTEM; OTHERWISE WIRE TO SHUT-DOWN UNIT IN PRESENCE OF SMOKE.
 - MANUFACTURERS CONTROLS SHALL BE COMPATIBLE WITH UNITS AND UNIT CAPABILITIES. VERIFY ALL COOLING AND HEATING STAGES WORK AS INTENDED.
- NATURAL GAS PIPING
 - PIPE SHALL BE SCHEDULE 40 BLACK STEEL CONFORMING TO ASTM A53, ASSEMBLED WITH MALLEABLE IRON (ANSI/ASME B16.3) OR FORMED STEEL WELDING FITTINGS. USE WELDING FITTINGS ON 2" AND ABOVE, ON ALL BURIED PIPING, AND ON ALL PIPING FROM GAS METER TO GAS PRESSURE REGULATORS (ON PIPING SYSTEMS ABOVE STANDARD PRESSURE). WELDING SHALL CONFORM TO ANSI/AWS D1.1.
 - PIPE BELOW GRADE SHALL BE COATED AND WRAPPED. STRAIGHT LENGTHS SHALL BE FURNISHED WITH FACTORY-APPLIED ELECTRICALLY INSULATING COATING, FITTINGS AND DAMAGED COATING SHALL BE WRAPPED WITH TAPECOAT CT APPLIED IN ACCORDANCE WITH MANUFACTURER'S LATEST PRINTED INSTRUCTIONS. PROVIDE INSULATING FILLINGS (ABOVE GRADE) AT EACH END OF PIPE RUN.
 - IF APPROVED BY THE LOCAL GAS UTILITY, PIPE BELOW GRADE SHALL BE DRISCOPEIE 6500 OR AS APPROVED POLYETHYLENE TYPE, INSTALLED TO CONFORM TO MANUFACTURER'S RECOMMENDATIONS AND LOCAL UTILITY REQUIREMENTS.
 - GAS PRESSURE REGULATORS, WHERE INDICATED, SHALL BE INTERNALLY VENTED TYPE. VENT TO OUTSIDE WHEN APPLICABLE. DO NOT INSTALL ABOVE CEILINGS.
 - PROVIDE GAS COCK AND DIRT LEG AT EACH APPLIANCE AND WHERE INDICATED ON DRAWINGS. PROVIDE DIELECTRIC FLANGES AT DISSIMILAR METAL CONNECTIONS AND WHERE INDICATED ON DRAWINGS.
 - AFTER COMPLETION OF WORK, AND BEFORE BACKFILLING, IF REQUIRED, THE ENTIRE SYSTEM SHALL BE TESTED TO AN AIR PRESSURE OF 125 PSI FOR A PERIOD OF TWO HOURS AND PROVED TIGHT BY INSPECTION. FURNISH RESULTS OF THE TESTS, SIGNED BY THE CONTRACTOR, TO THE ARCHITECT-ENGINEER.

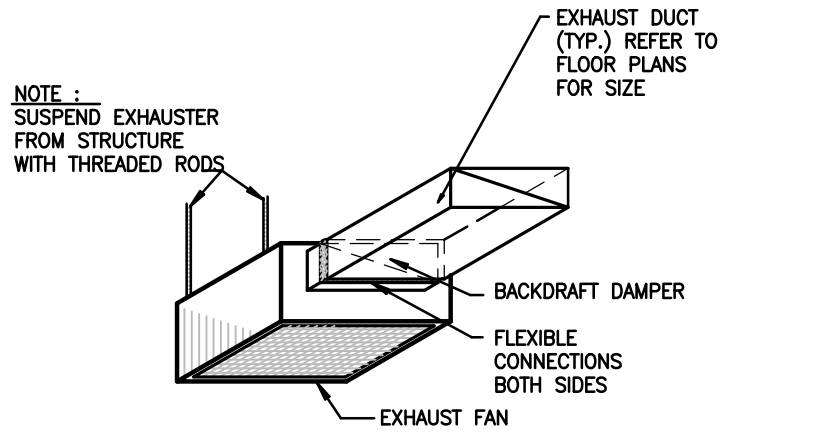
PART 3

EXECUTION

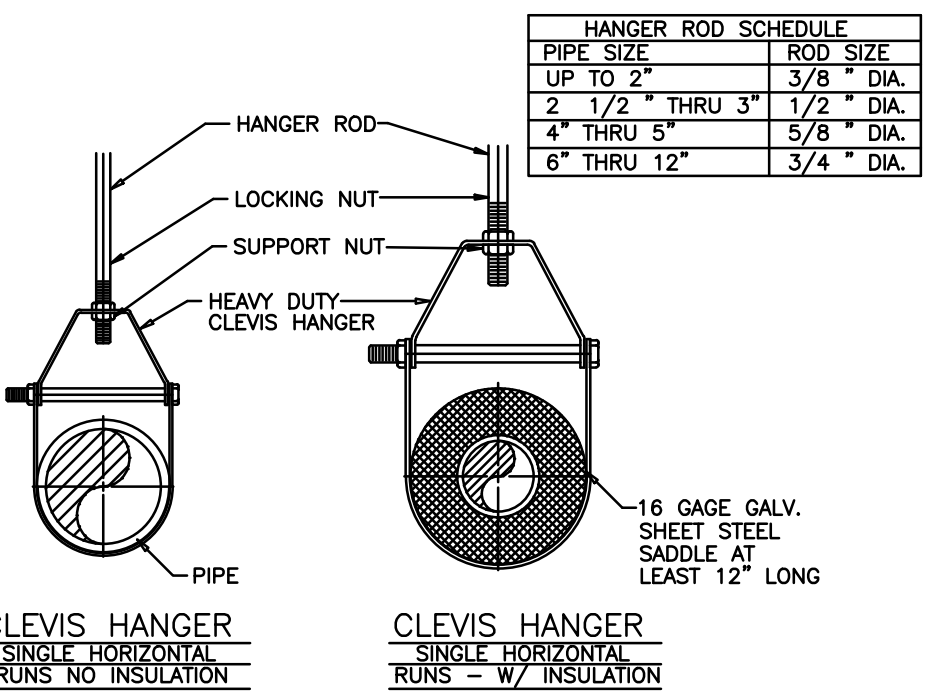
- FURNISH AND INSTALL SYSTEM IN ACCORDANCE WITH REFERENCED STANDARDS, APPLICABLE CODES, MANUFACTURERS RECOMMENDATIONS AND AS INDICATED ON DRAWINGS.
- HVAC CONTRACTOR SHALL PROVIDE THE SERVICES OF AN INDEPENDENT AABC OR NEBB CERTIFIED TEST AND BALANCE COMPANY TO ASSURE CONFORMANCE WITH DESIGN. CONTRACTOR SHALL SUBMIT WRITTEN TEST AND BALANCE REPORT TO ENGINEER FOR REVIEW. TEST AND BALANCE COMPANY SHALL MAKE NECESSARY ATTEMPTS TO BALANCE SYSTEM WITHIN 10% OF DESIGN.
- CONTRACTOR SHALL INSTRUCT THE OWNER'S REPRESENTATIVE IN ALL MATTERS PERTAINING TO THE PROPER MAINTENANCE OF EQUIPMENT FURNISHED UNDER THIS CONTRACT. PROVIDE IOM DOCUMENTS FOR ALL EQUIPMENT.
- CONTRACTOR SHALL PROVIDE OWNER WITH AS-BUILT DRAWINGS REFLECTING ACTUAL INSTALL.
- PROVIDE 4" THICK STEEL REINFORCED CONCRETE PAD FOR EXTERIOR EQUIPMENT OF LESS THAN 1,000 LBS. LOCATED ON THE GROUND, AND 6" THICK FOR MORE THAN 1,000 LBS. BOLT AIR CONDITIONING UNIT COMPONENTS TO THE PADS AT MINIMUM 2 CORNERS.



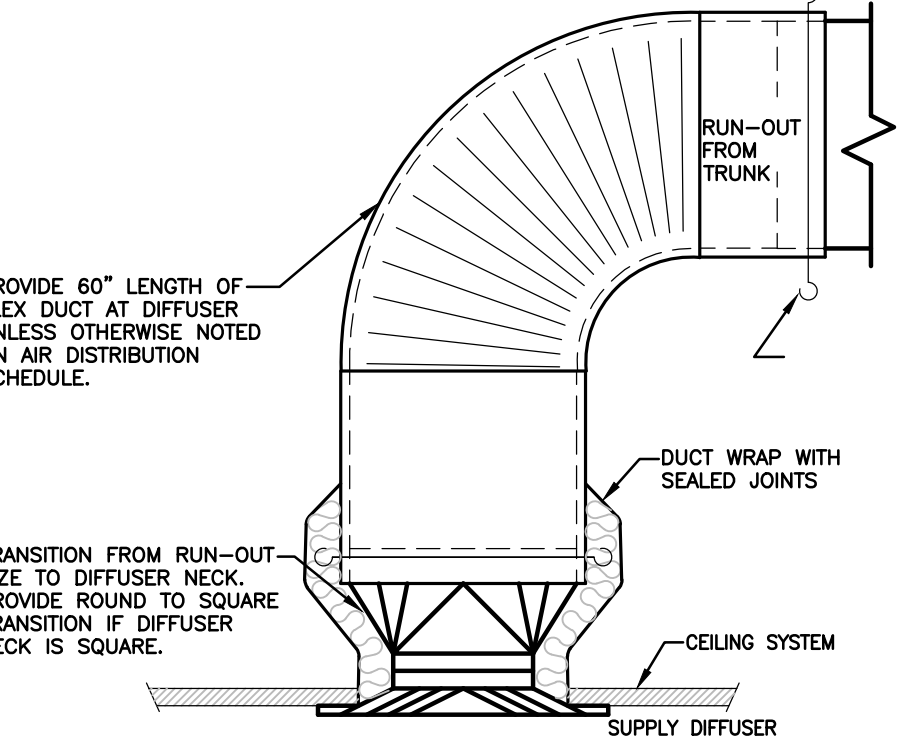
SUPPLY DUCT DETAIL



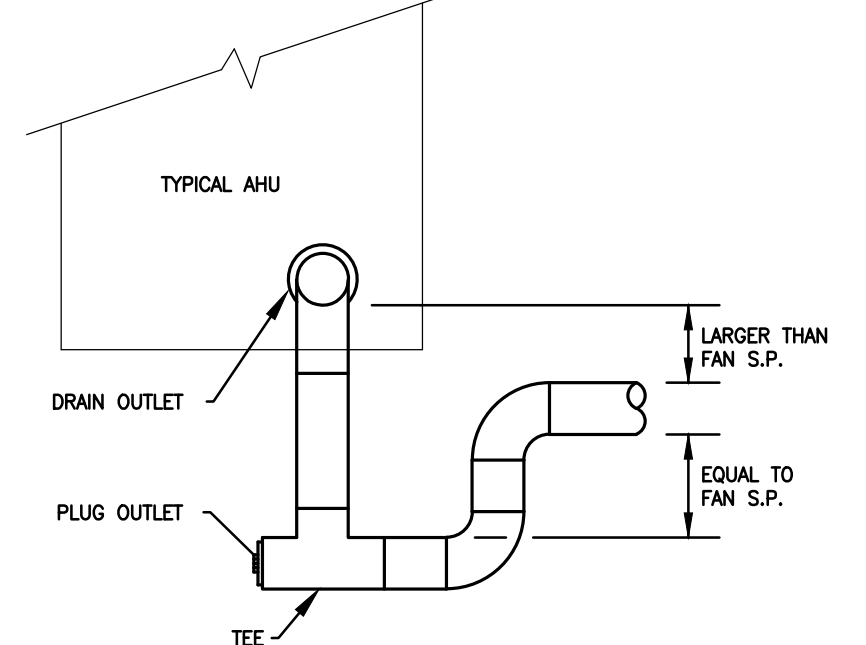
CEILING EXHAUSTER DETAIL



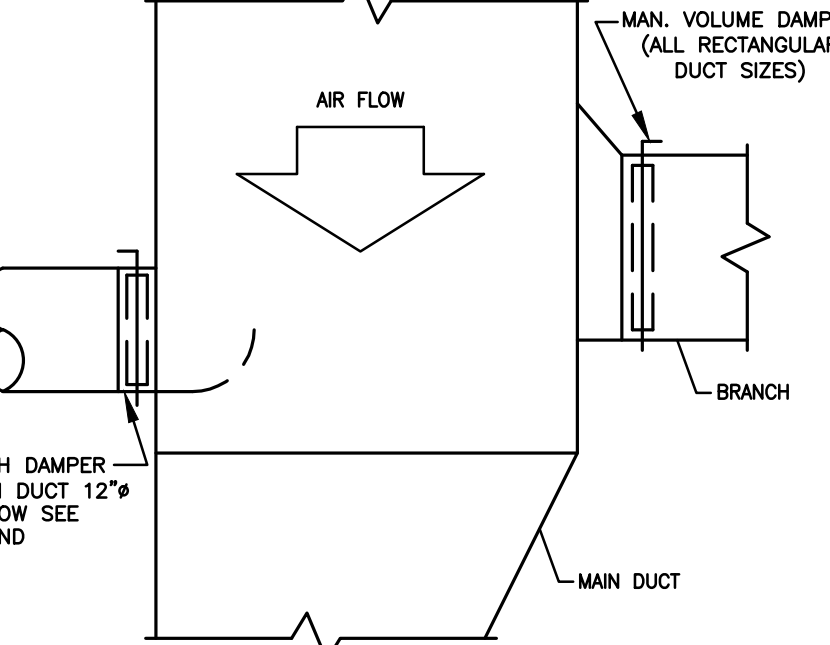
PIPE SUPPORT DETAIL



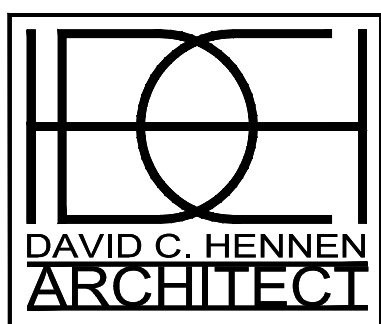
CEILING DIFFUSER DETAIL



A/C UNIT CONDENSATE DETAIL



DUCTWORK TAKE-OFF DAMPER DETAIL



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DATE: 12/11/2020
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 CHECKED BY:
 REVISIONS:
 PROJECT NUMBER:

NEW FACILITY FOR:
CITY OF LEBANON SENIOR CENTER
 Mulberry Street and South Spaulding Avenue, Lebanon, Kentucky

HVAC DETAILS

HARVARD B. JOHNSON, PE
 336 Collett Bridge Road
 Alvaton, KY 42122
 (270) 783-2480

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DATE: NO. 6605



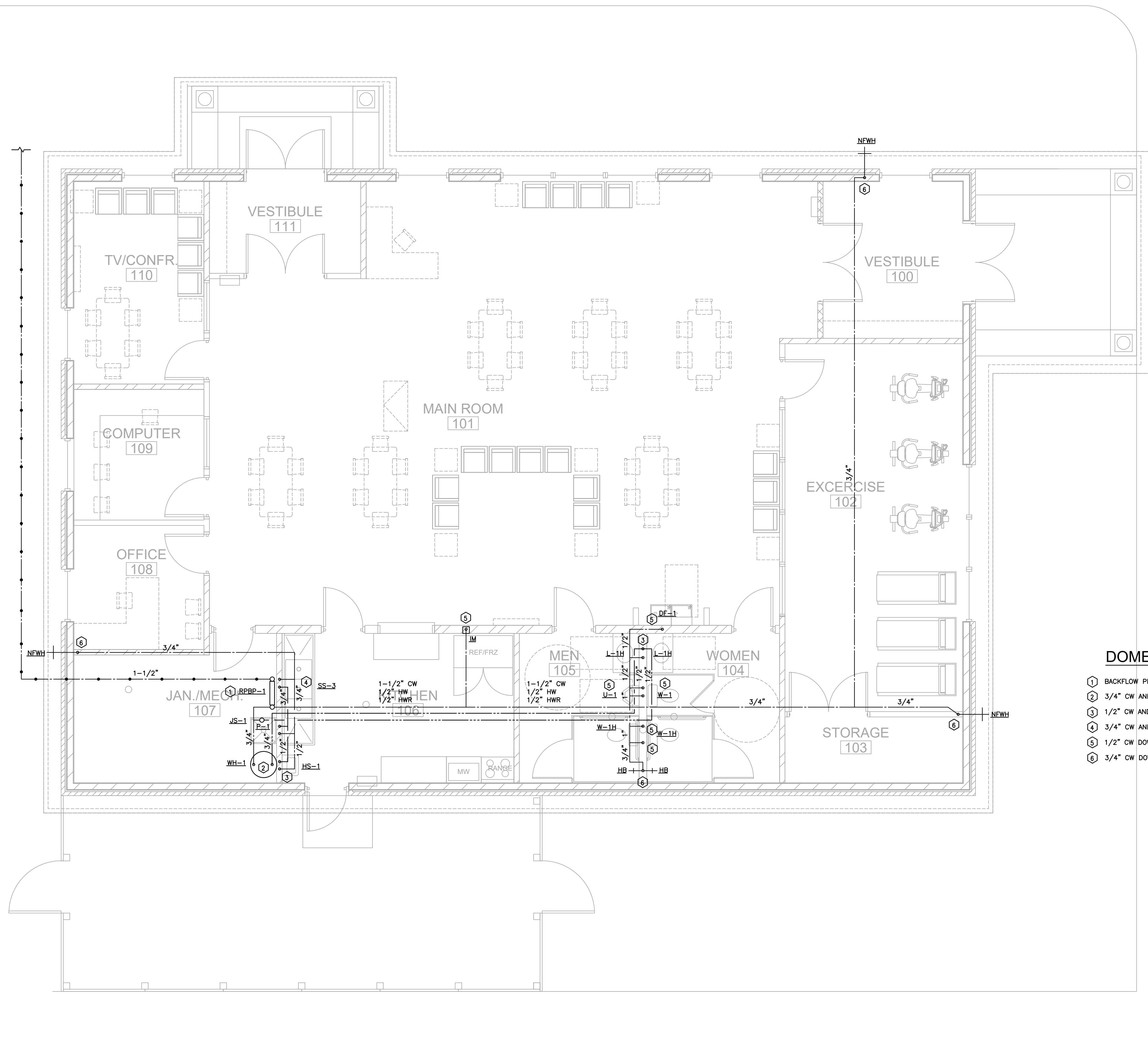
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Mulberry Street and South Spalding Avenue, Lebanon, Kentucky

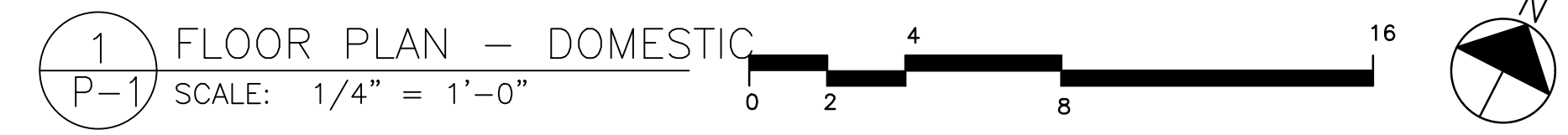
FLOOR PLAN - DOMESTIC

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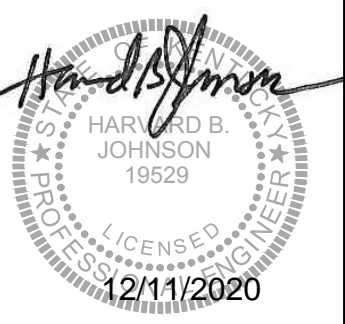
DOMESTIC NOTES:

- ① BACKFLOW PREVENTOR RACKED ON WALL. PIPE RELIEFS TO EXTERIOR.
- ② 3/4" CW AND HOT WATER AT WATER HEATER.
- ③ 1/2" CW AND HW DOWN TO FIXTURE WITH SHUT-OFF VALVES.
- ④ 3/4" CW AND HW DOWN TO FIXTURE WITH SHUT-OFF VALVES.
- ⑤ 1/2" CW DOWN TO FIXTURE WITH SHUT-OFF VALVES.
- ⑥ 3/4" CW DOWN TO FIXTURE WITH SHUT-OFF VALVE.



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DATE: NO. 6605



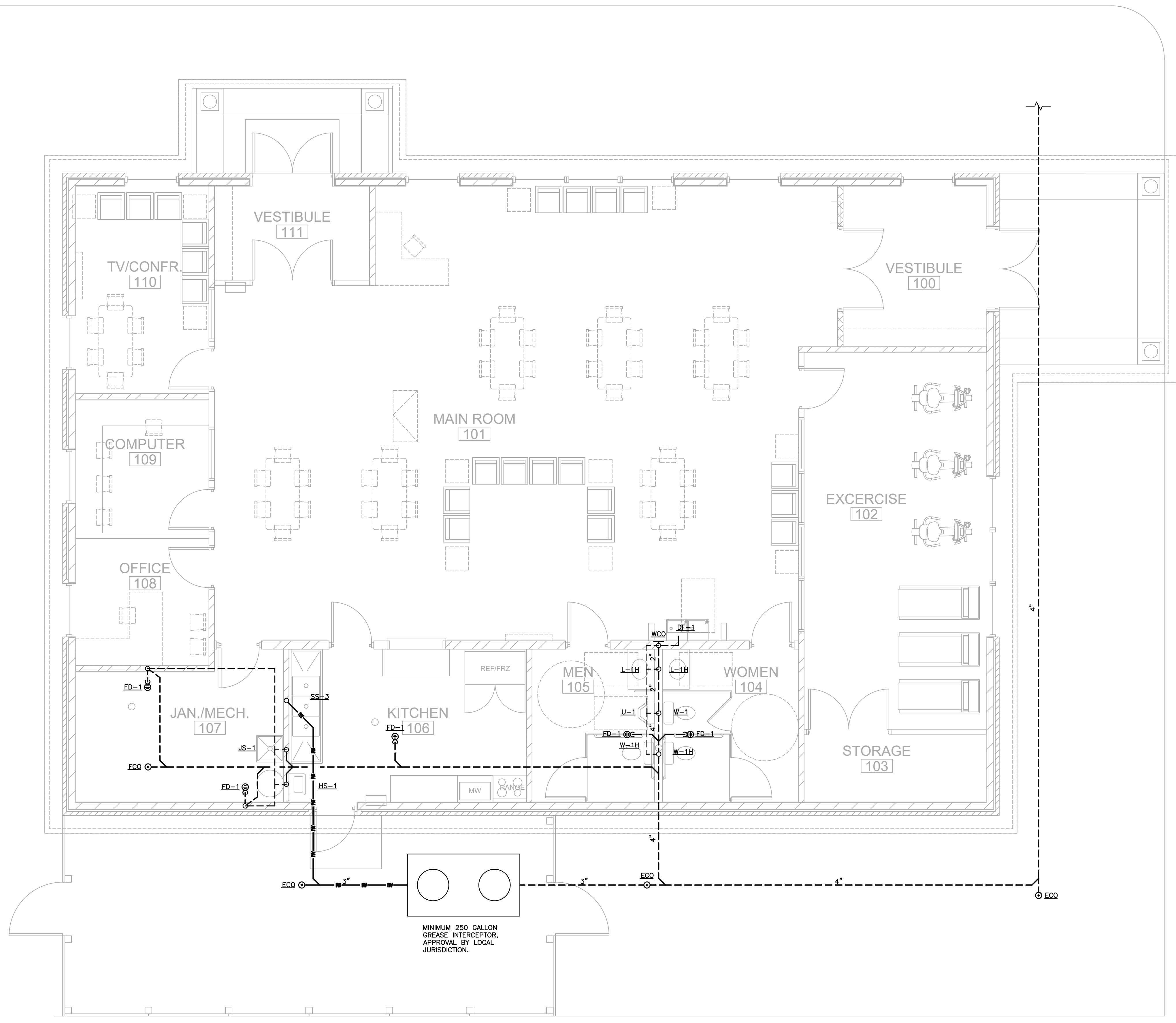
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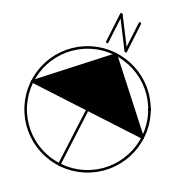
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FLOOR PLAN - SANITARY

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1 FLOOR PLAN - SANITARY
P-2 SCALE: 1/4" = 1'-0"
0 2 4 8 16



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GREASE INTERCEPTOR SIZING

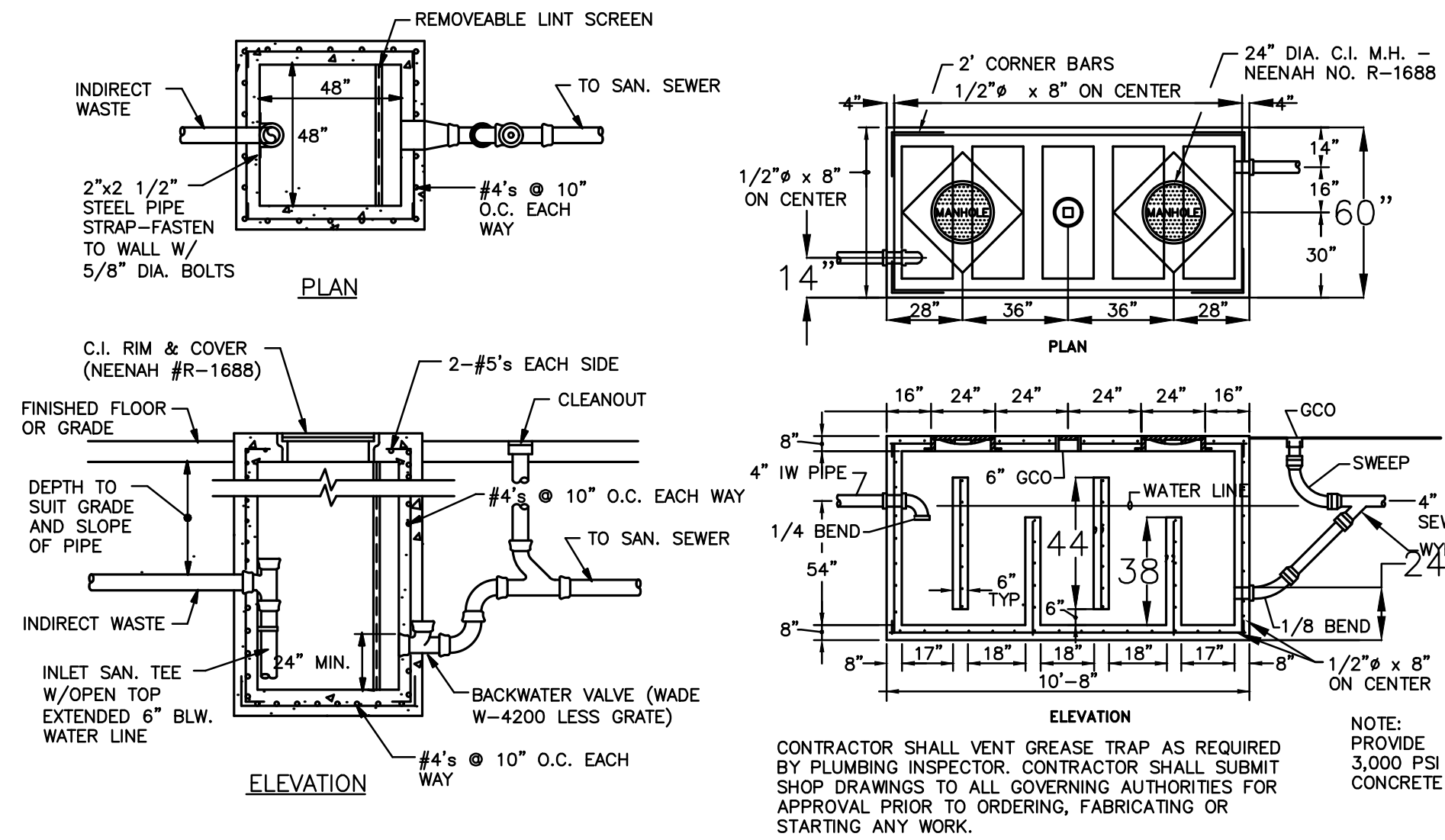
$$GI = SC * FF * RT * SF$$

GI = GREASE INTERCEPTOR VOLUME, GALLONS
 SC = SEATING CAPACITY (# OF SEATS)
 RT = RETENTION TIME, HOURS = 2.5
 SF = STORAGE FACTOR, DIMENSIONLESS = 1.5
 FF = FLOW FACTOR CRITERIA IN GALLONS/MEAL-HOUR DETERMINED USING FOLLOWING CRITERIA:

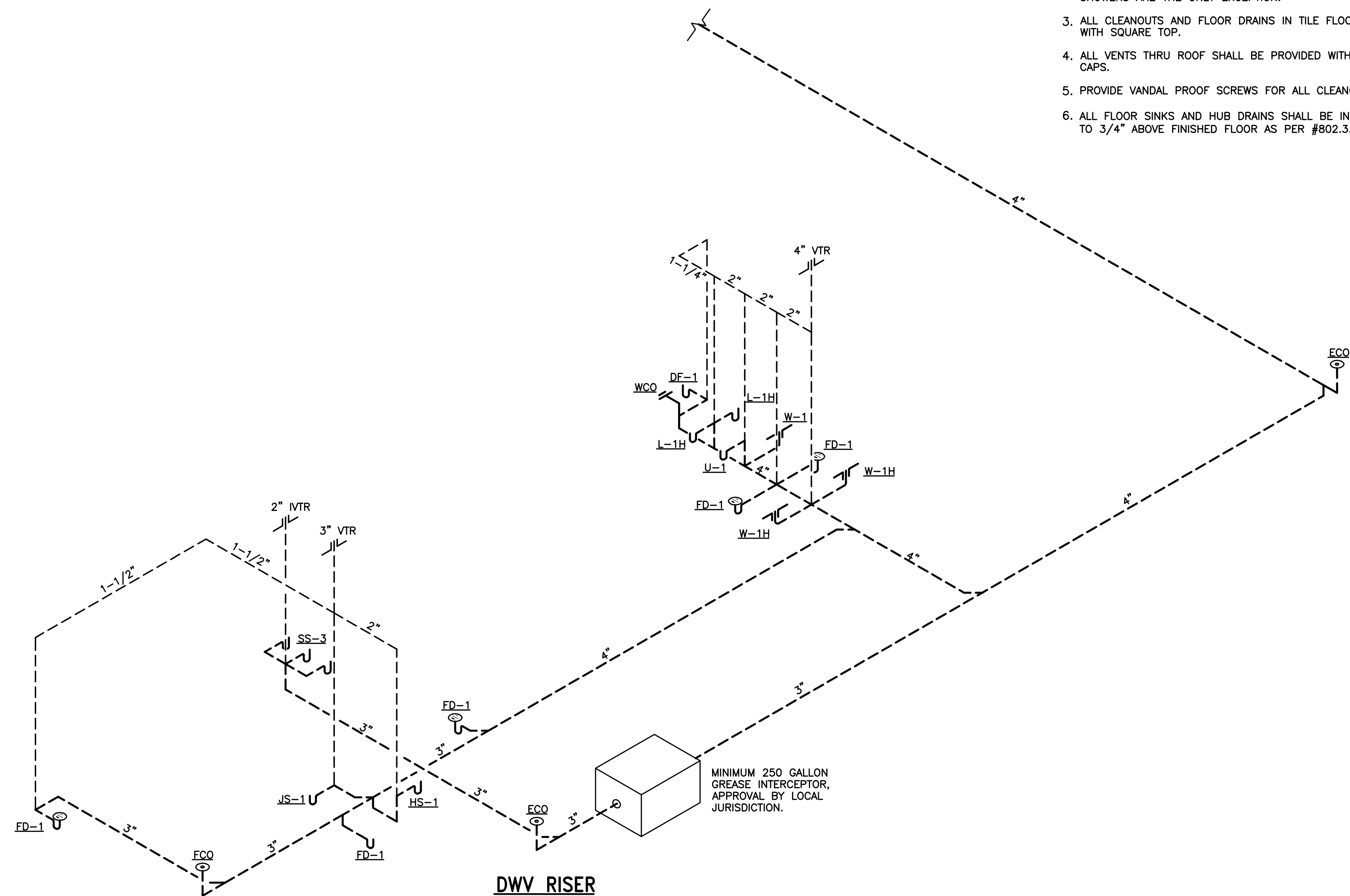
- DEEP FRYING AND DISHWASHER FF = 3.0
- NO DEEP FRYING, DISHWASHER FF = 2.5
- DEEP FRYING, DISPOSABLE SERVINGWARE FF = 2.5
- NO DEEP FRYING, REUSABLE SERVINGWARE, NO DISHWASHER FF = 2.0
- NO DEEP FRYING, DISPOSABLE SERVINGWARE FF = 1.5
- NO COOKING OF ANY TYPE, DISPOSABLE SERVINGWARE FF = 0.5

$$GI = 60 * 3.0 * 2.0 * 2.0 = 720 \text{ GALLONS}$$

AUTHORITY HAVING JURISDICTION SHALL DICTATE SIZE TO BE INSTALLED.



GREASE INTERCEPTOR DETAIL



DWV RISER

WATER HEATER SCHEDULE

SYMBOL	FIXTURE	DESCRIPTION
WH-1	HOT WATER HEATER 140"	30 GALLON ELECTRIC, 208/1/60, 6KW, STATE MODEL ENG-55-DORT, PROVIDE WITH AMTROL THERM-X-TROL EXPANSION TANK MODEL ST. PROVIDE DRAIN PAN AND INSTALL HEATER PER DETAIL.

NOTES:

- PROVIDE ALL WATER HEATERS WITH MANUFACTURERS DRAIN PAN. PIPE DRAIN PAN TO NEAREST FLOOR DRAIN.
- PROVIDE ALL WATER HEATERS WITH ASME T & P RELIEF VALVE. PIPE RELIEF FULL SIZE TO FLOOR DRAIN.
- SEE HEATER DETAIL.
- PROVIDE GRUNDFOS MODEL UP15-10B5 RECIRCULATING PUMP OR APPROVED EQUAL (E-1), 115 VOLT, 55 WATTS, 1/25 HP, AND (1) SPEED BRONZE 1/2" SWEAT HOUSING.

DRAIN, CLEANOUT AND HYDRANT SCHEDULE

SYMBOL	FIXTURE	MANUF.	DESCRIPTION
NEWH	WALL HYDRANT	WOODFORD	MODEL 65 SERIES NON-FREEZE ANTI-SIPHON WALL HYDRANT WITH BRONZE CASING AND INTEGRAL BACKFLOW PREVENTER
HF	HOSE FAUCET	CHICAGO	MODEL 952-CP CHROME PLATED SILL FAUCET WITH VACUUM BREAKER, SPOUT AND 293-6 LOOSE KEY HANDLE
WC	WATER CONNECTION	WOODFORD	THERMALINE SANITARY FREEZELESS WATER CONNECTION (120-1-60)
ECQ	FLOOR CLEANOUT	WADE	W-6030 CAST IRON CLEANOUT WITH SECURED DUCTILE IRON SCORRIATED COVER
WCO	WALL CLEANOUT	WADE	W-8450-R FOR DRY OR BLOCK WALL CONSTRUCTION OR W-8450-130-C FOR PLASTER OR TILE WALL CONSTRUCTION
GCQ	GRADE CLEANOUT	WADE	W-6030-2 CAST IRON C.O. WITH LOOSE SET TRACTOR TOP SET IN 18"x18"x6" CONCRETE PAD
FD-1	FLOOR DRAIN	WADE	W-1100 CAST IRON FLOOR DRAIN WITH 6" SATIN NICKEL BRONZE STRAINER AND #27 SEDIMENT BUCKET
RPBP	1-1/2" BACKFLOW PREVENTER	WILKINS	WILKINS MODEL 350A REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTER W/ STRAINER, OS&Y VALVE SHUT-OFFS & AIR GAP FITTING W/ ELBOW
TP	TRAP PRIMER	PPP	PO-500 OREGON #1 TRAP PRIMER VALVE W/ APPROPRIATE DISTRIBUTION UNIT
IM	ICE MAKER BOX	PLASTIC ODDITIES	PLASTIC ICE MAKER BOX WITH VALVE

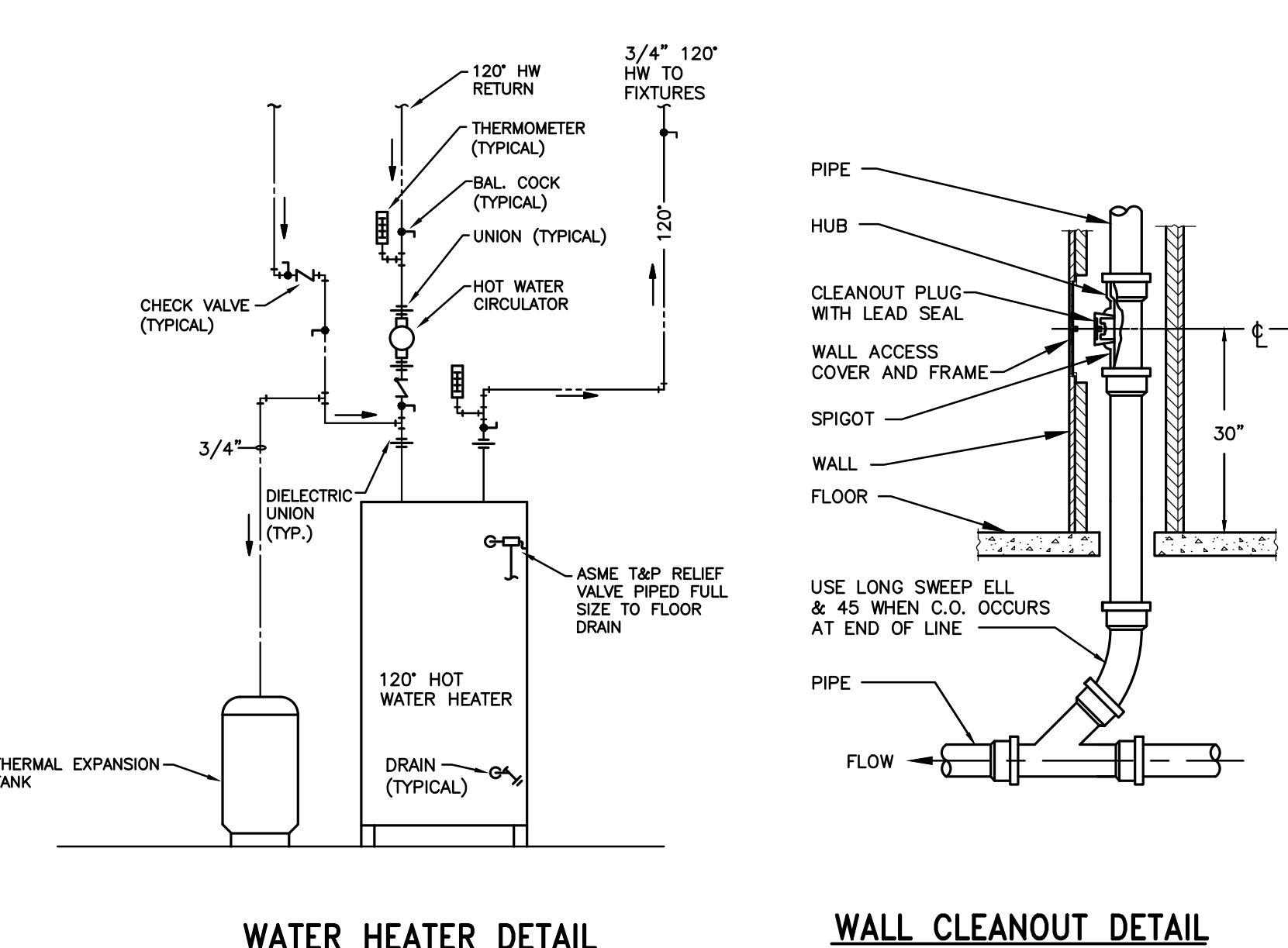
NOTES:

- PROVIDE CARPET MARKERS FOR ALL FLOOR CLEANOUTS IN CARPETED AREAS.
- ALL FLOOR DRAINS SHALL BE PROVIDED WITH TRAP PRIMERS. TRAP PRIMERS SHALL BE LOCATED AT NEAREST LAVATORY OR SINK AND RUN 1/2" TYPE 1/2" COPPER BELOW SLAB TO FLOOR DRAINS. KITCHEN DRAINS AND SHOWERS ARE THE ONLY EXCEPTION.
- ALL CLEANOUTS AND FLOOR DRAINS IN TILE FLOOR SHALL BE PROVIDED WITH SQUARE TOP.
- ALL VENTS THRU ROOF SHALL BE PROVIDED WITH VANDAL PROOF VENT CAPS.
- PROVIDE VANDAL PROOF SCREWS FOR ALL CLEANOUTS, FLOOR DRAINS.
- ALL FLOOR SINKS AND HUB DRAINS SHALL BE INSTALLED WITH RIMS 1/2" TO 3/4" ABOVE FINISHED FLOOR AS PER #802.3.2 IPC.

PLUMBING FIXTURE SCHEDULE

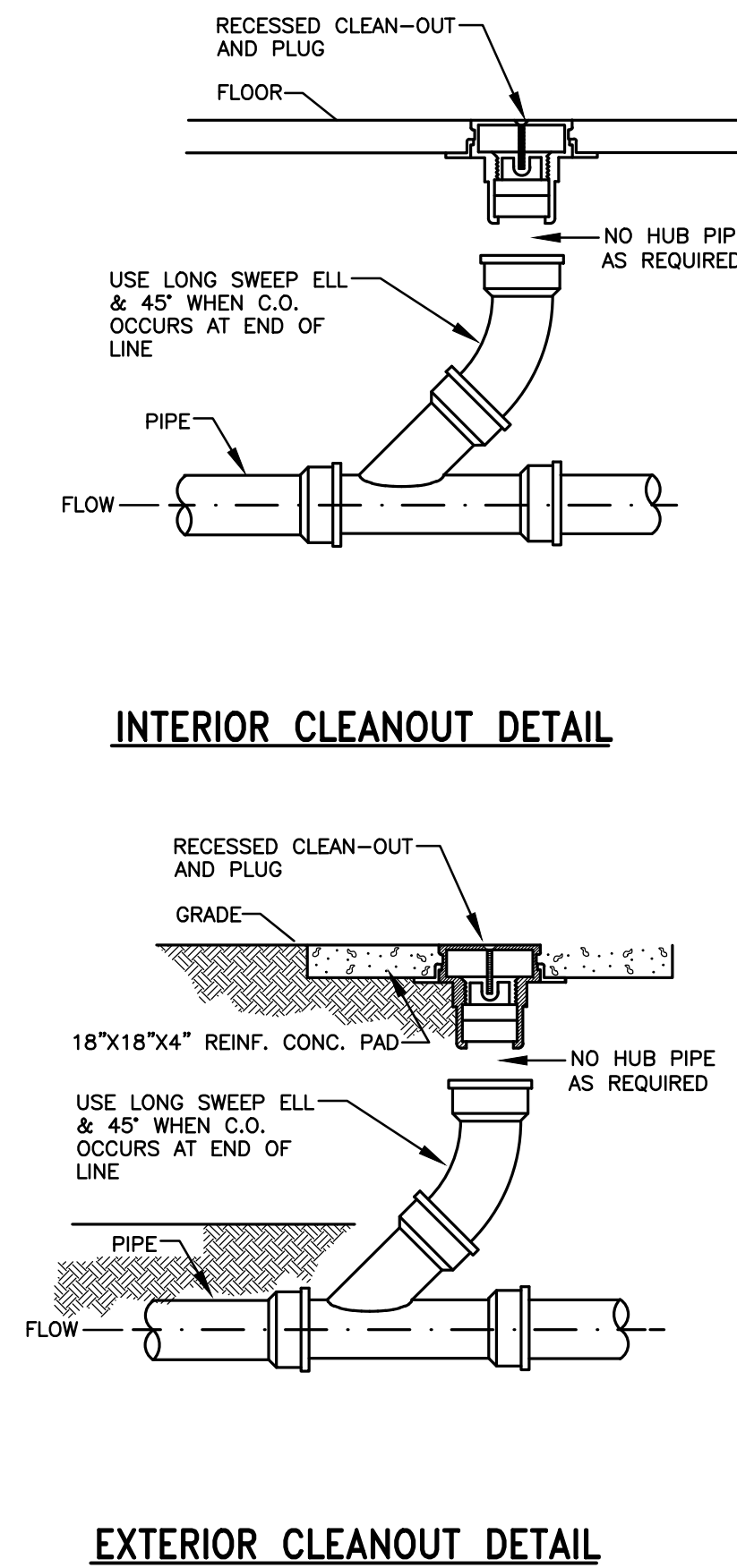
SYMBOL	FIXTURE	DESCRIPTION	SOIL	WASTE	VENT	HW	CW
W-1	WATER CLOSET	CRANE MODEL 31362 ELONGATED, FLOOR MOUNTED TANK TYPE (1.28 GAL. FLUSH) WITH CENTOCO 1500STSC OPEN FRONT WHITE SEAT WITH COVER, AND WATTS MODEL 890-003LK ANGLE SUPPLY STOP.	4"	-	2"	-	1/2"
W-1H	WATER CLOSET	CRANE MODEL 31372 ELONGATED FLOOR MOUNTED TANK TYPE (16-1/2" HIGH BOWL, 1.28 GAL. FLUSH) WITH CENTOCO 1500STSC OPEN FRONT WHITE SEAT, WITH COVER AND WATTS MODEL 890-003LK ANGLE SUPPLY STOP.	4"	-	2"	-	1/2"
U-1	URINAL	KOHLER K-5016-ET SIPHON JET URINAL WITH 3/4" TOP SPUD, SLOAN "ROYAL" 186 FLUSH VALVE. (PROVIDE CARRIER EQUAL TO WADE).	2"	-	2"	-	3/4"
L-1H	LAVATORY	KOHLER K-2196-4 COUNTER TOP OVAL BOWL WITH 4" FAUCET CENTERS, DELTA MODEL 501WFDF SINGLE HANDLE FAUCET WITH MCGUIRE 155A GRID STRAINER W/ TAILPIECE, KOHLER K-8998 1 1/4" P-TRAP AND K-7605 3/8" SUPPLIES.	-	1-1/4"	1-1/2"	1/2"	1/2"
MS-1	MOP SINK	FIAT MODEL MSB-2424 (24"x24"x10") MOLDED STONE BASIN WITH MODEL 1453-BB STRAINER, MODEL 830-AA FAUCET WITH VACUUM BREAKER, MODEL 832-AA HOSE AND BRACKET AND MODEL 889-CO MOP HANGER. MODEL MSB 2424 WALL GUARD AND E-77-AA VINYL BUMPER GUARD.	-	3"	2"	1/2"	1/2"
SS-3	3-COMPARTMENT SINK	OWNER FURNISHED EQUIPMENT. PROVIDE COMPLETE INSTALL PER MANUFACTURERS RECOMMENDATIONS.	-	1-1/2"	1-1/2"	3/4"	3/4"
HS-1	HAND SINK	ELKAY MODEL CHS1716 WALL MOUNTED STAINLESS STEEL HAND WASH-UP SINK W/ LK499A CHROME PLATED GOOSENECK SPOUT FAUCET W/ AE13A AERATOR, LKB GRID STRAINER AND LK500 CHROME 1-1/2" P-TRAP. PROVIDE AND INSTALL CARRIER EQUAL TO WADE. MOUNT TO ADA. PROVIDE TRUE-BRO LAV GUARDS.	-	1-1/4"	1-1/4"	1/2"	1/2"

- WATER CLOSETS SHALL BE PROVIDED WITH A MAXIMUM FLUSHING RATE PER CODE IF MORE RESTRICTED THAN FIXTURE SPECIFIED.
- PROVIDE SET SCREWS ON ALL ESCUTCHEONS.
- PROVIDE 3 GPM MAX. FLOW CONTROLS ON ALL SINK FAUCETS AND .5 GPM MAX. FLOW CONTROLS ON ALL LAVATORY FAUCETS.
- INSULATE ALL TRAPS, CW AND HW SUPPLIES ON HANDICAPPED LAVATORIES AND SINKS WITH TRUEBRO, INC., MODEL #102W & #105W. (UNLESS NOTED OTHERWISE.)
- MOUNT ALL HANDICAPPED FIXTURES AT HEIGHT AS PER ADA REQUIREMENTS.
- ALL FIXTURES ARE WHITE OR STAINLESS STEEL UNLESS NOTED OTHERWISE.
- MOUNT ALL PUBLIC FLUSH VALVES AT A HEIGHT OF 42 INCHES, UNLESS OTHERWISE NOTED.
- REFER TO ARCH. PLAN FOR EXACT LOCATION AND MOUNTING HEIGHT OF ALL FIXTURES.
- PROPERLY ADJUST ALL AUTOMATIC FAUCETS TO PROVIDE WARM WATER.



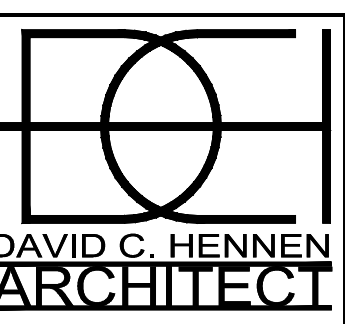
WATER HEATER DETAIL

WALL CLEANOUT DETAIL



INTERIOR CLEANOUT DETAIL

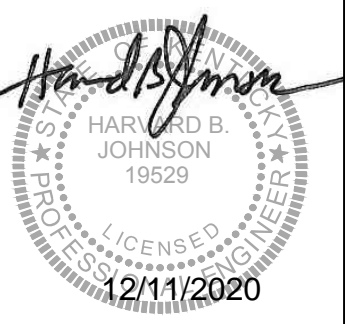
EXTERIOR CLEANOUT DETAIL



DAVID C. HENNING ARCHITECT

343 East Main Street, Lebanon KY 40033
 270.634.8153 dchenning@yahoo.com

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DATE: 12/11/2020

BROWN BY:

CHECKED BY:

REVISIONS:

PROJECT NUMBER:

NEW FACILITY FOR:
CITY OF LEBANON SENIOR CENTER
 Mulberry Street and South Spalding Avenue, Lebanon, Kentucky

PLUMBING SCHEDULES

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 Alvaton, KY 42122
 (270) 783-2480

PLUMBING LEGEND	
SYMBOL	DESCRIPTION
-----	SANITARY WASTE
-----	SANITARY VENT
-----IW-----	INDIRECT WASTE (IW)
-----IV-----	INDIRECT VENT (IV)
-----	GAS
-----	COLD WATER (CW)
-----●-----	COLD WATER (CW) BELOW GRADE
-----	115° HOT WATER (HW)
-----●-----	115° HOT WATER (HW) BELOW GRADE
-----	115° HOT WATER RETURN (HWR)
-----●-----	115° HOT WATER RETURN (HWR) BELOW GRADE
-----140°-----	140° HOT WATER (140° HW)
-----140°R-----	140° HOT WATER RETURN (140° HWR)
-----	GATE VALVE
-----	BALL VALVE
----- -----	UNION
-----N-----	CHECK VALVE
-----PRV-----	PRV: PRESSURE REDUCING VALVE
-----X-----	PIPE ANCHOR
-----	EXPANSION JOINT
-----	FLOW SWITCH
-----T-----	PLUGGED TEE
-----	WATER HAMMER ARRESTOR
-----	PRESSURE GAUGE
-----F.D.-----	FLOOR DRAIN
-----F.S.-----	FLOOR SINK
-----C.O.-----	CLEAN OUT
-----F.C.O.-----	FLOOR CLEANOUT
-----G.C.O.-----	GRADE CLEANOUT
-----W.C.O.-----	WALL CLEANOUT
-----V.T.R.-----	VENT THRU ROOF
-----IVTR-----	INDIRECT VENT THRU ROOF
-----WH-----	WALL HYDRANT
-----NFWH-----	NON-FREEZE WALL HYDRANT
-----DF-1-----	PLUMBING FIXTURE
-----R.P.B.P.-----	REDUCED PRESSURE BACKFLOW PREVENTER
-----OSCI-----	OWNER SUPPLIED, CONTRACTOR INSTALLED

GENERAL PLUMBING NOTES

- ANY CONTRACTOR WHO DESIRES TO INSTALL, ENLARGE, ALTER, REPAIR, MOVE OR REPLACE A PLUMBING SYSTEM, THE INSTALLATION OF WHICH IS REGULATED BY THIS CODE, SHALL FIRST MAKE APPLICATION AND OBTAIN THE REQUIRED PERMIT FOR THE WORK AS PER SECTION #106.0 IPC.
- ALL FLOOR SINKS AND HUB DRAINS SHALL BE INSTALLED WITH RIMS 1/2" TO 3/4" ABOVE FINISHED FLOOR AS PER #802.3.2 IPC.
- CONTRACTOR SHALL CONNECT NEW FLOOR DRAINS AND FLOOR SINKS DIRECTLY TO EXISTING SANITARY SYSTEM WITHOUT NEED OF VENTING PER #912 IPC.
- THESE DRAWINGS ARE DIAGRAMMATIC AND SHOW GENERAL PLUMBING LAYOUTS AND PIPE ROUTING FOR BIDDING PURPOSES ONLY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PREPARE DETAILED SHOP DRAWINGS AND TO CONFIRM SPACE ALLOCATIONS.
- SEE ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR ALL BUILDING DIMENSIONS, DETAILS, ELEVATIONS AND EXACT LOCATIONS OF FIXTURES.
- CONTRACTOR SHALL VERIFY ALL FLOW LINES PRIOR TO ROUGHING IN.
- ALL WORK SHALL CONFORM TO APPLICABLE PLUMBING CODE, LOCAL BUILDING CODES AND STATE HEALTH REGULATIONS HAVING JURISDICTION.
- PLUMBING CONTRACTOR SHALL REVIEW ARCHITECTURAL, STRUCTURAL, ELECTRICAL, SPRINKLER AND MECHANICAL DRAWINGS AND COORDINATE HIS WORK WITH ALL OTHER TRADES FOR PIPE ROUTING AND EQUIPMENT PLACEMENT. AVOID INTERFERENCE WITH ARCHITECTURAL FEATURES, BEAMS, FOOTINGS, WINDOWS, ETC. NOTIFY ARCHITECT OF ANY CONFLICTS.
- CONTRACTOR MAY RE-LAYOUT TO HIS ADVANTAGE CODE EQUIVALENT PLUMBING SO AS TO REDUCE INSTALLATION COSTS, OR TO RE-ROUTE TO AVOID CONFLICTS WITH OTHER TRADES AFTER FIRST HAVING RECEIVED THE APPROVAL OF THE ARCHITECT / ENGINEER.
- PLUMBING CONTRACTOR SHALL COORDINATE WITH ELECTRICAL CONTRACTOR ALL VOLTAGES, ELECTRICAL LOADS, ETC. OF ELECTRICALLY OPERATED EQUIPMENT PRIOR TO ORDERING. ALL EQUIPMENT SHALL BE U.L. AND N.E.M.A. LISTED.
- PLUMBING CONTRACTOR SHALL FURNISH ACCESS PANELS TO BE INSTALLED BY GENERAL CONTRACTOR AS REQUIRED FOR PLUMBING INSTALLATIONS.
- ALL VALVES AND SHOCKSTOPS SHALL BE ACCESSIBLE.
- SLEEVES SHALL BE INSTALLED WHERE PIPING PASSES THROUGH STRUCTURE.
- ALL OPENINGS THROUGH RATED WALLS SHALL BE SEALED WITH AN APPROVED FIREPROOFING TO MAINTAIN THE INTEGRITY OF THE WALL.
- PROVIDE MANUFACTURED COMPATIBLE PIPE HANGERS, RODS AND INSERTS, OR CLAMPS FOR THE PROPER SUPPORT OF ALL PIPING. NO BAND IRON, TIE WIRE, METAL STRAPPING OR WIRE STRAPPING WILL BE PERMITTED.
- PROVIDE SUITABLE BACKING AND SUPPORT FOR ALL PLUMBING FIXTURES.
- OFFSET ALL V.T.R.'S AS REQUIRED WHETHER OR NOT SHOWN ON DRAWINGS.
- ALL V.T.R.'S SHALL BE A MINIMUM OF 10 FT. AND/OR AS REQUIRED BY CODE AWAY FROM A/C INTAKES WHETHER OR NOT SHOWN ON PLANS.
- ALL PIPING SHALL BE LABELED.
- UPON COMPLETION OF THE WORK COVERED BY THIS CONTRACT, FURNISH THE OWNER WITH ONE (1) SET OF REPRODUCIBLE RECORD DOCUMENTS WHICH SHOW ALL PLUMBING INSTALLED UNDER THIS CONTRACT.
- ALL PIPING SUBJECT TO FREEZING SHALL BE WRAPPED WITH HEAT TAPE EQUAL TO RAYCHEM "XL TRACE" AND SHALL BE INSULATED.
- ALL WATER PIPING SHALL BE SLOPED TO LOW POINTS AND PROVIDED WITH DRAINS SO THAT ENTIRE SYSTEM MAY BE DRAINED. ALL DRAINS SHALL BE ACCESSIBLE.
- PROVIDE ALL V.T.R.'S WITH 4 LB. HIGH BOOT LEAD FLASHING.
- ALL WATER PIPING INSTALLED BELOW SLAB SHALL BE TYPE "K" COPPER. 2" OR SMALLER SHALL BE LOOPED (NO JOINTS). LARGER THAN 2" SHALL HAVE SILFOS BRAZED JOINTS.
- DO NOT RUN ANY WATER PIPING ABOVE ELECTRICAL PANELS (COORDINATE WITH ELECTRICAL CONTRACTOR).
- CONTRACTOR SHALL NOT INSTALL ANY DEAD ENDS IN WATER PIPING. WATER HAMMER ARRESTORS AND VALVED WATER CONNECTIONS FOR FUTURE SHALL BE INSTALLED AS CLOSE AS POSSIBLE TO TEE CONNECTION. WATER HAMMER ARRESTORS SHALL BE INSTALLED ABOVE CEILING FOR ACCESS PURPOSES.

PLUMBING SPECIFICATIONS:

PART 1:

GENERAL

- MATERIALS AND INSTALLATION SHALL COMPLY WITH ALL APPLICABLE STATE AND LOCAL CODES AND REQUIREMENTS.
- OBTAIN AND PAY FOR ALL REQUIRED PERMITS, INSPECTION FEES, TAPPING FEES, CONNECTION CHARGES, AND UTILITY COMPANY SERVICE CHARGES.
- INSTALLATION SHALL BE DONE IN A NEAT AND PROFESSIONAL MANNER. PART

PART 2:

PRODUCTS

- ALL PIPING AND FITTINGS FOR THE DOMESTIC WATER SYSTEM SHALL BE CERTIFIED BY THE UNDERWRITERS LABORATORY TO MEET THE ANSI NSF 61 SECTION 9 STANDARD.
- ALL DOMESTIC WATER PIPING INSIDE THE BUILDING ABOVE SLAB SHALL BE TYPE "L" HARD COPPER.
- DOMESTIC WATER PIPING BELOW SLAB AND OUTSIDE SHALL BE TYPE "K" SOFT SEAMLESS. NO JOINTS SHALL BE ALLOWED BELOW SLAB.
- COPPER PIPE FITTINGS SHALL BE SWEATED JOINT, WROUGHT COPPER, SWEEP PATTERN FITTINGS, SOLDERED USING 95-5 LEAD-FREE SOLDER.
- ALL SANITARY WASTE AND VENT PIPING INSIDE AND UNDERSLAB TO 5'-0" OUTSIDE THE BUILDING SHALL BE SCHEDULE 40 PVC, DWV OR SERVICE WEIGHT CAST IRON WITH DRAINAGE FITTINGS. OUTSIDE PVC PIPING 5'-0" FROM BUILDING SHALL BE SDR-35 OR D-3034.
- JOINT FOR PVC PIPING SHALL BE SOLVENT WELD TYPE INSIDE AND UNDERSLAB TO 5'-0" OUTSIDE THE BUILDING AND NEOPRENE PUSH-ON TYPE JOINTS OUTSIDE 5'-0" FROM THE BUILDING. JOINTS FOR CAST IRON PIPE SHALL BE NO-HUB TYPE ABOVE, SLAB ON GRADE AS MANUFACTURED BY CLAMP-ALL OR ANACO HUSKY. CAST IRON SOIL PIPING INSTITUTE NO-HUB, DOUBLE BAND CONNECTORS SHALL NOT BE ALLOWED. JOINTS FOR CAST IRON PIPE BELOW SLAB OR GRADE SHALL BE NEOPRENE PUSH-ON TYPE.
- HANGERS: PIPE SIZES 1/2" TO 1-1/2": ADJUSTABLE WROUGHT STEEL LOOP (COPPER, ELECTROPLATE IF APPLICABLE).
- HANGERS: PIPE SIZES 2" AND UP: ADJUSTABLE WROUGHT STEEL CLEVIS (COPPER, ELECTROPLATE IF APPLICABLE).
- MULTIPLE OR TRAPEZE HANGERS: STEEL CHANNELS WITH WELDED SPACERS AND HANGER RODS.
- PROVIDE STEEL HANGER RODS, THREADED BOTH ENDS, THREADED ONE END, OR CONTINUOUS THREADED AS REQUIRED.
- INSULATE DOMESTIC COLD WATER, HOT WATER WITH 1" THICK FIBERGLASS INSULATION WITH MOLDED FIBERGLASS PIPE COVERING AND CONTINUOUS VAPOR AS MANUFACTURED BY MANVILLE CORPORATION, OWENS-CORNING, KNAUF, OR CERTAINTEEED. INSULATE DOMESTIC HOT AND COLD WATER PIPING IN WALLS AND CHASES BEHIND FIXTURES WITH 1/2" THICK FIBERGLASS INSULATION.
- INSULATE ALL DOMESTIC WATER PIPING BELOW SLAB AND TO 5'-0" OUTSIDE THE BUILDING WITH 1/2" ARMAFLEX.
- PIPE INSULATION AND COVERINGS SHALL HAVE A RATING OF NO GREATER THAN 25 FLAME SPREAD, NO HIGHER THAN 50 SMOKE DEVELOPED, AND NO MORE THAN 50 FUEL CONTRIBUTED.
- CONCRETE ANCHORS (WEDGE ANCHORS) SHALL BE ZINC-PLATED CARBON STEEL WEDGE ANCHORS AVAILABLE IN ANCHOR/DRILL SIZES 1/4" TO 3/4" AND LENGTHS OF 1-3/4" THROUGH 12", MEETING U.S. GOVERNMENT G.S.A. SPECIFICATIONS FF-5-325, GROUP II, TYPE 4, CLASS 1, FOR FASTENING PLUMBING SYSTEMS TO CONCRETE AND PIPE HANGING. ITW RAMSET/RED HEAD BRAND OR APPROVED EQUAL.
- ACCEPTABLE FIXTURE MANUFACTURERS

- NO OTHER MANUFACTURER SUBSTITUTIONS SHALL BE ALLOWED WITHOUT PRIOR WRITTEN APPROVAL FROM THE ENGINEER FIVE (5) DAYS BEFORE BIDDING.
- CONTRACTOR SHALL PROVIDE FAUCETS AND FITTINGS THAT ARE CERTIFIED BY UNDERWRITERS LABORATORY TO MEET THE ANSI NSF 61, SECTION 9 STANDARD.
- FIXTURES SHALL BE MOUNTED RIGID TO WALLS AND FLOOR.
- FIXTURES: ELJER, AMERICAN STANDARD OR KOHLER.
- FITTINGS: SYMMONS, CHICAGO FAUCET CO.
- FLUSH VALVES: SLOAN VALVE COMPANY, ZURN, OR DELANEY (IF MODIFIED TO BE NON-HOLD OPEN)
- STAINLESS STEEL SINKS: JUST OR ELKAY.
- SERVICE BASINS: STERN WILLIAMS, FIAT, OR CREATIVE INDUSTRIES.
- WATER HEATERS: LOCHINVAR, STATE, RUUD, OR A. O. SMITH.
- TOILET SEATS: CHURCH, OLSONITE, BENEKE OR BEMIS.
- DRAIN, HYDRANTS, CARRIERS AND SHOCK ABSORBERS: J. R. SMITH, ZURN, WADE, OR JOSAM.
- WATER HEATER PANS: SHAMROCK OR TREND MFG. OF AMERICA.
- REDUCED PRESSURE BACKFLOW PREVENTION: FEBCO, HERSEY, WATTS, OR WILKINS.

PART 3:

EXECUTION

- EXCAVATION, BACKFILLING AND TRENCH WORK SHALL BE DONE IN ACCORDANCE WITH O.S.H.A. AND EXISTING SAFETY STANDARDS.
 - PROVIDE SHORING AND CLEANING NECESSARY TO KEEP TRENCHES IN WORKING CONDITIONS, INCLUDING PUMPING OUT WATER.
 - IN MOSTLY ROCK MATERIAL, TRENCHES SHALL BE EXCAVATED TO AT LEAST 6" BELOW THE ELEVATION OF THE BOTTOM OF THE PIPES. AFTER EXCAVATION, TRENCH SHALL THEN BE FILLED TO THE PROPER ELEVATION WITH CRUSHED LIMESTONE. GRAVEL SHALL BE SCOOPED OUT UNDER PIPE BELLS SO THE PIPE RESTS FIRMLY ON THE TRENCH BOTTOM.
 - IN MOSTLY EARTH OR SAND MATERIAL, THE LAST 6" OF EXCAVATION SHALL BE DONE BY HAND. TRENCH BOTTOM SHALL BE SCOOPED OUT AT PIPE BELLS SO THE PIPE RESTS FIRMLY ON THE TRENCH BOTTOM.
 - BACKFILLING AND TAMPING SHALL BE CAREFULLY DONE SIMULTANEOUSLY ALONG BOTH SIDES OF THE PIPE USING ROCK FREE EARTH, CRUSHED STONE OR SAND UNTIL THE PIPE IS COVERED TO A DEPTH OF AT LEAST 12". THE REST OF THE FILL UP TO THE TOPSOIL LAYER MAY BE GRAVEL OR ROCK FREE EARTH. ACCEPTABLE SOIL MATERIALS FOR BACKFILL AND FILL SHALL BE FREE OF CLAY, ROCK OR GRAVEL LARGER THAN 2" IN ANY DIMENSION, DEBRIS, WASTE, FROZEN MATERIALS AND OTHER DELETERIOUS MATTER HAVING A ELASTICITY INDEX LESS THAN 30. BACKFILL SHALL BE DONE IN LAYERS OF NOT MORE THAN 8" AND EACH LAYER SHALL BE COMPACTED. THE LAST 12" OF BACKFILL SHALL BE ROCK FREE TOPSOIL.
- SURFACE SHALL BE RESTORED TO ITS ORIGINAL CONDITION.
- EXPOSED HOT AND COLD WATER TRIM IN FINISHED AREAS SHALL BE CHROME FINISHED.
- ALL HORIZONTAL AND VERTICAL PIPING SHALL BE SUPPORTED IN ACCORDANCE WITH APPLICABLE STATE AND LOCAL CODE RECOMMENDATIONS. SUPPORTS SHALL SECURELY HOLD PIPING, PREVENT VIBRATION, COMPENSATE FOR ALL STATIC AND OPERATIONAL CONDITIONS OF THE VARIOUS SYSTEMS AND SHALL NOT BE SUBJECT TO ELECTROLYTIC ACTION. THIS SHALL BE ACCOMPLISHED BY USING THE SUMMER SYSTEM, THE POSIFIX, STAKFIX, PIPEFIX OR CHANNEL.
- SHOCK ABSORBERS SHALL BE INSTALLED ON ALL HOT AND COLD WATER BRANCH LINES CONTAINING SINGLE LEVER FAUCETS, FLUSH VALVES OR QUICK CLOSING VALVES SUCH AS DISHWASHERS, CLOTHES WASHERS, AND THEIR EQUIPMENT. BETWEEN THE LAST TWO FIXTURES. THIS SHALL BE ACCOMPLISHED BY USING THE SUMMER SYSTEM, THE POSIFIX, STAKFIX, PIPEFIX OR CHANNEL.

5. SANITARY WASTE AND VENT, RAINWATER LEADERS, AND STORMWATER PIPING SHALL BE UNIFORMLY GRADED TO ELEVATIONS SHOWN. IF NO ELEVATIONS ARE GIVEN, SEWERS SHALL BE PITCHED NOT LESS THAN 1/4" PER FOOT FOR ALL PIPING 3" IN DIAMETER AND SMALLER AND 1/8" PER FOOT FOR PIPE LARGER THAN 3" IN DIAMETER.

6. SUPPORT HORIZONTAL PIPING AS FOLLOWS:

NOMINAL PIPE SIZE (IN.)	MAXIMUM DISTANCE BETWEEN SUPPORT (FT.)	MINIMUM HANGER ROD DIAMETER (IN.)
1/2	6	3/8
3/4 TO 1-1/2	6	3/8
2 TO 2-1/2	10	3/8
3 TO 4	12	1/2 TO 5/8
6	14	3/4

7. HANGERS FOR PIPING GREATER THAN 1" SHALL PASS OVER THE INSULATION. PROVIDE SADDLES FOR INSULATED PIPING.

8. HANGERS SHALL BE ATTACHED TO STRUCTURAL STEEL WORK BY CLAMPING OR OTHER APPROVED METHODS, EXCEPT THAT STRUCTURAL WORK SHALL NOT BE DRILLED AND PUNCHED.

9. INSULATION SHALL BE APPLIED WITH JOINTS TIGHTLY BUTTED. OPEN CRACKS, VOIDS AND DEPRESSIONS SHALL BE FILLED WITH HYDRAULIC SETTING CEMENT AND LAPPING MATCHING THE FINISH SHALL BE PASTED NEATLY OVER JOINTS.

10. FITTINGS AND VALVES SHALL BE INSULATED WITH THE SAME TYPE INSULATION AS THE PIPING OR WITH HYDRAULIC SETTING CEMENT, BUILT UP TO THE SAME THICKNESS AS LINES. COVER SHALL BE SAME AS ADJACENT PIPING OR PVC PREFORMED JACKET.

11. SEAL ALL PENETRATIONS OF RATED PARTITIONS WITH U.L. RATED FIRE BARRIER MATERIAL.

12. AIR ADMITTANCE VALVES SHALL NOT BE ALLOWED ON SANITARY WASTE AND VENT SYSTEMS.

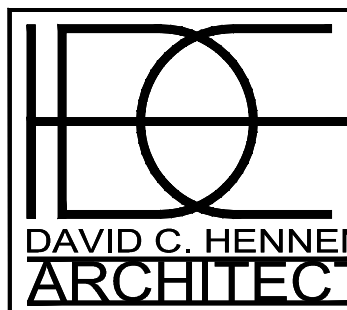
13. THE SYSTEM TESTS DESCRIBED HEREIN ARE MINIMUM REQUIREMENTS. HOWEVER, ADDITIONAL TESTS AS REQUIRED BY THE AUTHORITY HAVING JURISDICTION SHALL ALSO BE PERFORMED.

14. DOMESTIC WATER PIPING SHALL BE TESTED AT 125 PSI. IN ADDITION, PIPING SHALL BE TESTED IN ACCORDANCE WITH APPLICABLE CODE REQUIREMENTS.

15. THE DOMESTIC WATER SYSTEM SHALL BE FLUSHED OUT PROGRESSIVELY BY OPENING OUTLETS AND FLOWING WATER UNTIL RUNS CLEAR. AFTER PIPE CLEANING IS COMPLETED, THE STRAINERS SHALL BE REMOVED, CLEANED, AND REPLACED. THEN THE ENTIRE DOMESTIC WATER SYSTEM SHALL BE DISINFECTED IN ACCORDANCE WITH THE AUTHORITY HAVING JURISDICTION.

16. THE SANITARY WASTE SYSTEMS SHALL BE FLUSHED OUT PROGRESSIVELY WITH FLOWING WATER UNTIL IT RUNS CLEAR.

17. THE ENTIRE SANITARY WASTE SYSTEMS SHALL BE TESTED AGAINST A HEAD PRESSURE OF 10' TSH, FOR A MINIMUM OF 8 HOURS WITHOUT LEAKAGE.



DAVID C. HENNING
ARCHITECT

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I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED ARCHITECT IN THE STATE OF KENTUCKY.



DATE: 12/11/2020

DRAWN BY:

CHECKED BY:

REVISIONS:

PROJECT NUMBER:

NEW FACILITY FOR:
**CITY OF LEBANON
SENIOR CENTER**
Mulberry Street and South Spalding Avenue, Lebanon, Kentucky

PLUMBING
SPECIFICATIONS

SHEET

P-4

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Alvaton, KY 42122
(270) 783-2480

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED ARCHITECT IN THE STATE OF KENTUCKY
DATE: NO. 6905

Harold B. Johnson
HAROLD B. JOHNSON
19529
LICENSED
12/11/2020

DATE: 12/11/2020
DRAWN BY:
CHECKED BY:
REVISIONS:

PROJECT NUMBER:

NEW FACILITY FOR:
CITY OF LEBANON SENIOR CENTER
Mulberry Street and South Spalding Avenue, Lebanon, Kentucky

SITE PLAN - ELECTRICAL

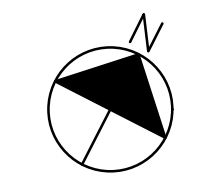
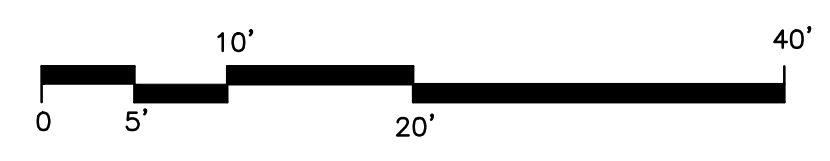
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ES-1
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CONSTRUCTION NOTES

- ① PROVIDE CONNECTION FOR ILLUMINATED MONUMENT SIGNAGE, COORDINATE WITH OWNER/VENDOR.
- ② CONTROL VIA CONTACTOR LC-1 AND SINGLE PE CELL.

1 SITE PLAN - ELECTRICAL
E-0 SCALE: 1" = 10'



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I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED ARCHITECT IN THE STATE OF KENTUCKY.
 DATE: NO. 6605

Harold B. Johnson
 HAROLD B. JOHNSON
 LICENSED ARCHITECT
 19529
 12/11/2020

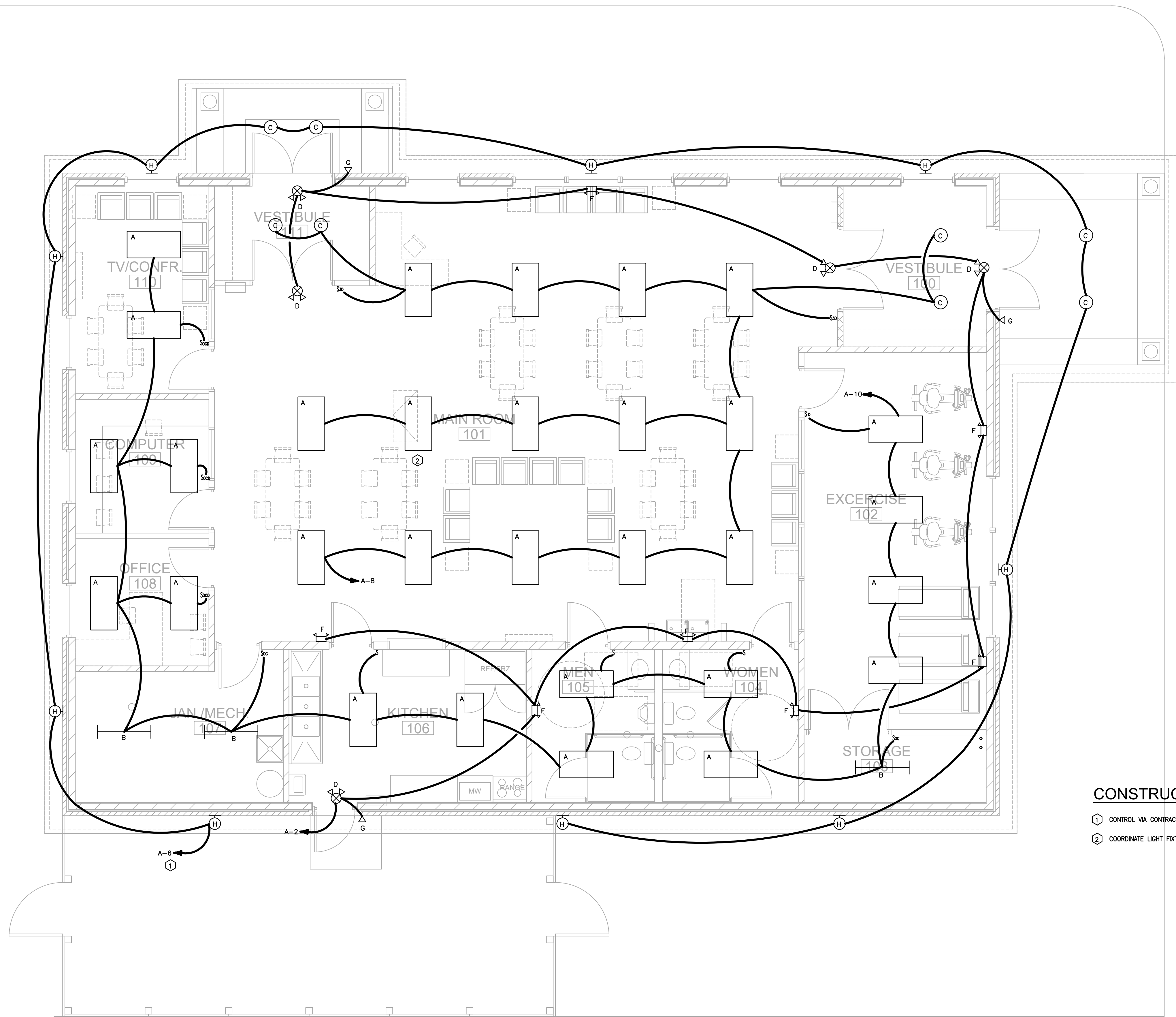
DATE: 12/11/2020
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 CHECKED BY:
 REVISIONS:

PROJECT NUMBER:

NEW FACILITY FOR:
CITY OF LEBANON SENIOR CENTER
 Mulberry Street and South Spalding Avenue, Lebanon, Kentucky

FLOOR PLAN - LIGHTING

SHEET
E-1
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CONSTRUCTION NOTES

- ① CONTROL VIA CONTRACTOR LC-1 AND SINGLE PE CELL.
- ② COORDINATE LIGHT FIXTURE WITH ATTIC ACCESS DOOR.

1 FLOOR PLAN - LIGHTING
 E-1 SCALE: 1/4" = 1'-0"
 0 2 4 8 16

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I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED ARCHITECT IN THE STATE OF KENTUCKY.
DATE: NO. 6605

Harold B. Johnson
HAROLD B. JOHNSON
19529
LICENSED
12/11/2020

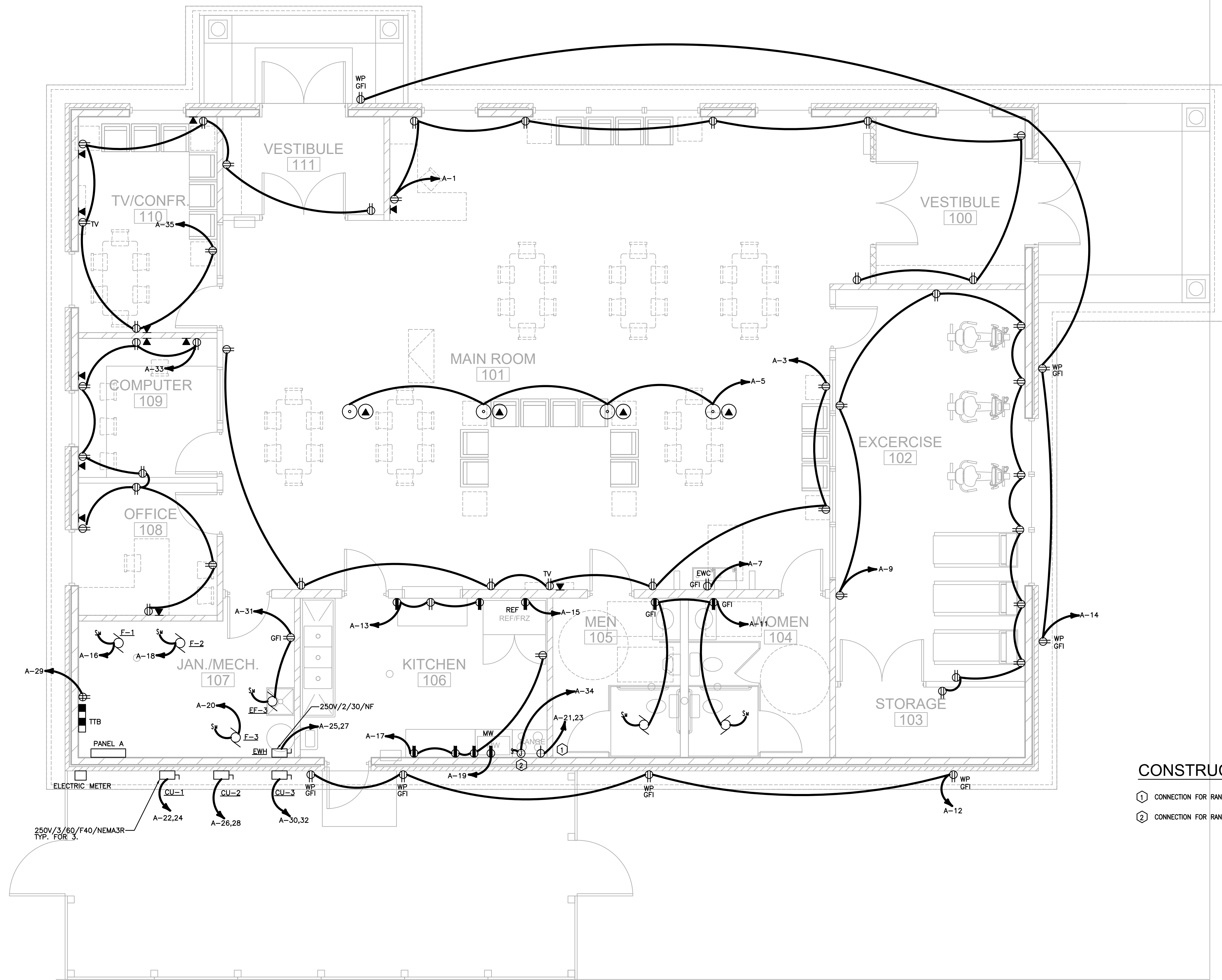
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CITY OF LEBANON SENIOR CENTER
Mulberry Street and South Spalding Avenue, Lebanon, Kentucky

**FLOOR PLAN
POWER & SYSTEMS**

SHEET
E-2
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CONSTRUCTION NOTES

- ① CONNECTION FOR RANGE 250/1/50A
- ② CONNECTION FOR RANGE HOOD.

1 FLOOR PLAN - POWER & SYSTEMS
E-2 SCALE: 1/4" = 1'-0"



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LIGHT FIXTURE SCHEDULE								
TYPE	MANUFACTURER	CATALOG NO.	DESCRIPTION	MOUNTING	VOLTAGE	# LAMPS	LAMP TYPE	WATTS
A	LITHONIA	EPANL-2X4-600LM-8CRI-40K-MIN10	-	LAY-IN	120	1	LED	40
B	LITHONIA	ZL1N-L48-5MR-5000LM-FST-40K	STRIP	SURFACE SUSPENDED	120	1	LED	32
C	LITHONIA	REAL 6C-D6MW-DESL-1500L-40K-955C-120-64L-PFMW	CAN	RECESSED	120	1	LED	18
D	LITHONIA	LHQM-S-W-R-HO	EXIT, DUAL HEAD EM, BATT	UNIVERSAL	120	INCL	LED	-
F	LITHONIA	ELMZ-LED	DUAL HEAD EM	WALL	120	INCL	LED	-
G	LITHONIA	ELA-T-QWP-L0309	DUAL HEAD EM REMOTE	WALL	120	INCL	LED	-
H	LITHONIA	7WP-LED-ALO-50K	WALL PACK	WALL	120	1	LED	43
K	LITHONIA	RSX1-LED-P3-40K-R2-MVOLT-SPA-DBXKD	25' POLE, 4" SQUARE, DBXKD	POLE	120	1	LED	109

PANELBOARD SCHEDULE												A
VOLTAGE	120/240	AMPS	400	MOUNTING	SURFACE	NOTES:						
PHASE	1	MAIN	MBR	ENCLOSURE	NEMA 1	*BRANCH CIRCUITS ARE (2)#12, (1)#12 GND IN 1/2" COND, UON. SEE CIRCUIT SCHEDULE.						
WIRE	3	MIN AIC	22,000									
CONNECTED LOADS												
CIR#	TYPE	DESCRIPTION	BKR	CKT*	KVA	PHASE	KVA	CKT*	BKR	DESCRIPTION	TYPE	CIR#
1	R	REC 100, 101	20/1		1.6	A	0.5		20/1	EM LTS	L	2
3	R	REC 101	20/1		1.4	C	0.5		20/1	POLE LTS	L	4
5	R	FLOOR BOX 101	20/1		0.8	A	0.6		20/1	WALL PACKS	L	6
7	R	EWC	20/1		1.0	C	0.7		20/1	LTS 101	L	8
9	R	REC 102	20/1		1.8	A	1.0		20/1	LTS 102-110	L	10
11	N	EF-1, EF-2	20/1		1.0	C	0.8		20/1	EXT REC	R	12
13	R	KIT REC	20/1		0.6	A	0.6		20/1	EXT REC	R	14
15	R	REF	20/1		1.0	C	1.2		20/1	F-1	N	16
17	R	KIT REC	20/1		0.7	A	1.2		20/1	F-2	N	18
19	R	MW	20/1		1.0	C	1.2		20/1	F-3	N	20
21	A	RANGE	50/2		4.5	A	3.6		50/2	CU-1	N	22
23	A	I	I		4.5	C	3.6		I	I	N	24
25	A	EVH	30/2		3.0	A	3.6		50/2	OU-2	N	26
27	A	I	I		3.0	C	3.6		I	I	N	28
29	R	TTB	20/1		0.4	A	3.6		50/2	CU-3	N	30
31	R	EF-3	20/1		0.2	C	3.6		I	I	N	32
33	R	REC 108, 109	20/1		1.8	A	1.0		20/1	RANGE HOOD	R	34
35	R	REC 110, 111	20/1		1.4	C						36
37						A						38
39						C						40
41						A						42
NOTES: (1) PROVIDE (3) 1/2" EMPTY CONDUIT STUB ABOVE CEILING FOR FUTURE.												
LOAD SUMMARY												
LOAD TYPE	CNNT KVA	ADJ FACTOR	DMD KVA	CONNECTED KVA								
APPLIANCE (A)	15.0	100%	15.0		60.6							
ELECTRIC HEAT (H)	0.0	100%	0.0	DEMAND KVA	65.5							
LIGHTING (L)	3.3	125%	4.1	DEMAND AMPS	272.7							
NON-CONT MOTORS (M)	0.0	100%	0.0									
RECEPTACE (R)	16.1	125%	20.1	PHASE A CONNECTED AMPS	257.5							
OTHER CONT (C)	0.0	125%	0.0									
OTHER NON-CONT (N)	26.2	100%	26.2	PHASE C CONNECTED AMPS	247.5							
KITCHEN EQUIPMENT*	0.0	60%	0.0	MAX IN-BALANCE	4%							

ELECTRICAL LEGEND (ALL SYMBOLS MAY NOT BE APPLICABLE TO THIS PROJECT)			ELECTRICAL LEGEND (ALL SYMBOLS MAY NOT BE APPLICABLE TO THIS PROJECT)		
SYMBOL	DESCRIPTION	MTG. HT. TO CENTERLINE	SYMBOL	DESCRIPTION	MTG. HT. TO CENTERLINE
LIGHTING FIXTURES & DEVICES			CONDUIT		
"A"	LIGHT FIXTURE TYPE DESIGNATION— SEE LIGHTING SCHEDULE FOR MOUNTING AND LAMP TYPE.		()	CONDUIT CONCEALED ABOVE CLG. OR IN WALL	
(A)	INCANDESCENT, FLUORESCENT OR H.I.D. FIXTURE ON NORMAL BRANCH CIRCUIT.		()	CONDUIT CONCEALED IN OR BELOW FLOOR SLAB (WHERE USED OUTSIDE=UNDERGROUND)	
○	WALL MOUNTED (INCANDESCENT, FLUORESCENT, OR H.I.D.) FIXTURE ON NORMAL BRANCH CIRCUIT.	AS NOTED	()	HOMERUN TO PANELBOARD INDICATES (MIN.2 #12, 12G IN 3/4" C. ADD NO. OF PHASE CONDUCTORS TO MATCH NO. OF ARROWHEADS.	
↑	EXIT SIGN WITH BATTERY PACK DUAL EM HEAD. PROVIDE ARROWS AS INDICATED.	WALL MOUNT 7'-6" A.F.F.	()	NOTE: FOR ALL CONDUITS, REFER TO PLANS. REFER TO VENDOR DRAWINGS FOR CONDUIT AND WIRING REQUIREMENTS FOR LOW VOLTAGE SYSTEMS AND CONTROL WIRING.	
↔	DOUBLE HEAD EMERGENCY EGRESS FIXTURE WITH BUILT IN BATTERY PACK.	WALL MOUNT 7'-6" A.F.F.	DISTRIBUTION EQUIPMENT		
△	DUAL REMOTE EMERGENCY HEAD	WALL MOUNT 7'-6" A.F.F.	⊗	NON-FUSIBLE SAFETY SWITCH SIZE & TYPE AS NOTED (VOLTS/POLES/AMPS/ENCLOSURE). NEMA 1. IF NOT NOTED RT=NEMA 3R	AS NOTED
S	SINGLE-POLE SWITCH (K=KEY OPERATED, P= WITH PILOT LIGHT, WP=NEMA 3R WEATHER-PROOF DEVICE, & D=DIMMER)	48" A.F.F.	⊖	FUSIBLE SAFETY SWITCH SIZE & TYPE AS NOTED (VOLTS/POLES/AMPS/FUSE/ENCLOSURE). NEMA 1 IF NOT NOTED RT=NEMA 3R	AS NOTED
Soc	OCCUPANCY SENSOR	48" A.F.F.	□	LIGHTING PANELBOARD—SURFACE MOUNTED	AS NOTED
SocD	OCCUPANCY SENSOR WITH DIMMER	48" A.F.F.	LC	LIGHTING CONTACTOR	
S3	THREE-WAY SWITCH (SEE TYPE ABBREVIATIONS)	48" A.F.F.	ABBREVIATIONS		
S4	FOUR-WAY SWITCH (SEE TYPE ABBREVIATIONS)	48" A.F.F.	ABC	ABOVE COUNTER	
PE	PHOTO ELECTRIC CELL		A/C	AIR CONDITIONER	
TELEPHONE/DATA SYSTEM			ADA	AMERICANS WITH DISABILITIES ACT	
▶	TELEPHONE/DATA OUTLET (W= WALL MOUNTED AT +46", WITH MIN. 3/4" EMPTY CONDUIT, WITH PULL WIRE, EXTENDING TO ACCESSIBLE SPACE FROM OUTLET BOX.	18" A.F.F.	AFF	ABOVE FINISHED FLOOR	
▶	TELEPHONE/DATA OUTLET AT SPECIAL MTG. HEIGHT (HT= TELEPHONE FOR HANDICAPPED USE, MOUNT 46" AFF) WITH MIN. 3/4" EMPTY CONDUIT, WITH PULL WIRE, EXTENDING TO ACCESSIBLE CEILING SPACE FROM OUTLET BOX.	54" A.F.F. (U.O.N.)	AFG	ABOVE FINISHED GRADE	
⊙	FLOOR MOUNTED TELEPHONE/DATA OUTLET		AHU	AIR HANDLING UNIT	
■	TELEPHONE TERMINAL BOARD		B	BLANK OFF DEVICE. PROVIDE 3/4" CONDUIT MINIMUM TO ABOVE ACCESSIBLE CEILING AND BUSH. PROVIDE NYLON PULL STRING.	
MECHANICAL EQUIPMENT			C	CONDUIT	
⊙	MOTOR (HORSEPOWER AS NOTED)		CL	CENTERLINE	
⊙	FRACTIONAL HORSEPOWER		CU	CONDENSING UNIT	
⊙	EXHAUST FAN		DW	DISHWASHER	
WIRING DEVICES			EF	EXHAUST FAN	
⊖	120 VOLT DUPLEX RECEPTACLE. 20 AMPS U.O.N. (WP = NEMA 3R, ST = SAFETY TYPE) (GFI = GROUND FAULT INTERRUPTER)	18" A.F.F.	EWH	ELECTRIC WATER HEATER	
⊖	120 VOLT DUPLEX RECEPTACLE AT SPECIAL MTG. HEIGHT (SEE TYPE ABBREVIATIONS ABOVE.)	54" A.F.F. (U.O.N.)	F	FURNACE	
⊖	120 VOLT QUADRAPLEX RECEPTACLE (SEE TYPE ABBREVIATIONS ABOVE.)	18" A.F.F.	GFI	GROUND FAULT INTERRUPTER	
⊖	120 VOLT QUADRAPLEX RECEPTACLE AT SPECIAL MTG. HEIGHT. (SEE ABBREVIATIONS ABOVE.)	44" A.F.F. (U.O.N.)	GND	GROUND	
⊖	SINGLE RECEPTACLE, VOLTS, PHASE AND AMPS AS NOTED, NEMA CONFIGURATION AS REQUIRED BY EQUIPMENT.	18" A.F.F. (U.O.N.)	MTD	MOUNTED	
⊙	JUNCTION BOX	AS NOTED	MW	MICROWAVE	
SM	MANUAL MOTOR STARTING SWITCH (WP=NEMA 3R WEATHERPROOF, T=THERMAL TYPE)	46" A.F.F. (U.O.N.)	OC	ON CENTER	
⊙	FLOOR MOUNTED 120V DUPLEX RECEPTACLE		OCFI	OTHERS FURNISHED CONTRACTOR INSTALLED	
			⊖	TELEPHONE TERMINAL BOARD UNLESS OTHERWISE NOTED WEATHERPROOF (NEMA 3R)	
			MARK STANDARDS		
			⊖	SECTION MARK	
			⊖	DETAIL MARK	
			⊖	CONSTRUCTION NOTE	

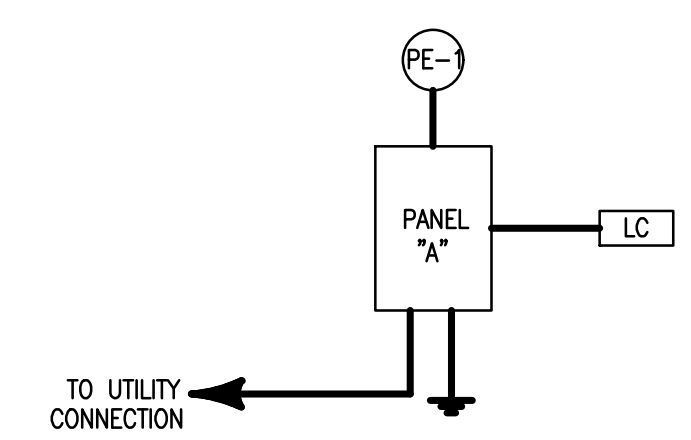
FEEDER SCHEDULE - COPPER					
FEEDER #	PHASE & NEUTRAL CONDUCTORS	GND CONDUCTOR (PER CONDUIT)	2-WIRE CONDUIT SIZE	3-WIRE CONDUIT SIZE	4-WIRE CONDUIT SIZE
25	12	12	1/2"	1/2"	1/2"
28	10	10	1/2"	3/4"	3/4"
30	10	10	1/2"	3/4"	3/4"
35	8	10	3/4"	3/4"	1"
40	8	10	3/4"	3/4"	1"
45	8	10	3/4"	3/4"	1"
50	8	10	3/4"	3/4"	1"
60	6	10	3/4"	1"	1-1/4"
70	4	8	1"	1-1/4"	1-1/4"
80	4	8	1"	1-1/4"	1-1/4"
90	4	8	1"	1-1/4"	1-1/4"
100	3	8	1"	1-1/4"	1-1/4"
110	2	6	1"	1-1/4"	1-1/2"
120	1	6	1-1/4"	1-1/2"	2"
150	1/0	6	1-1/4"	1-1/2"	2"
170	2/0	6	1-1/4"	2"	2"
200	3/0	6	1-1/2"	2"	2-1/2"
220	4/0	4	1-1/2"	2"	2-1/2"
250	250	4	2"	2-1/2"	3"
300	350	4	2"	3"	3"
350	500	3	—	3"	3-1/2"
400	500	3	—	3"	3-1/2"
450	(2) 4/0	2	—	(2) 2"	(2) 2-1/2"
500	2-250	2	—	(2) 2-1/2"	(2) 3"
600	2-350	1	—	(2) 3"	(2) 3"
700	2-500	1/0	—	(2) 3-1/2"	(2) 3-1/2"
800	2-500	1/0	—	(2) 3-1/2"	(2) 3-1/2"

1. 3 PHASE, 3 WIRE FEEDERS (WITHOUT A NEUTRAL) ARE DESIGNATED THUS: ⊗

2. 3 PHASE, 4 WIRE FEEDERS (WITH A NEUTRAL) ARE DESIGNATED THUS: ⊗N

3. SINGLE PHASE, 2 WIRE FEEDERS (WITHOUT A NEUTRAL) ARE DESIGNATED THUS: ⊗SP

4. SINGLE PHASE, 3 WIRE FEEDERS (WITH A NEUTRAL) ARE DESIGNATED THUS: ⊗SPN



SINGLE-LINE DIAGRAM

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I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED ARCHITECT BY THE STATE OF KENTUCKY.

HARVARD B. JOHNSON
REGISTERED ARCHITECT
19529
12/11/2020

DATE: 12/11/2020

BROWN BY:

CHECKED BY:

REVISIONS:

PROJECT NUMBER:

NEW FACILITY FOR:

CITY OF LEBANON SENIOR CENTER

Mulberry Street and South Spalding Avenue, Lebanon, Kentucky

ELECTRICAL SCHEDULES

SHEET

E-3

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ELECTRICAL SPECIFICATIONS

PART 1 GENERAL

- FURNISH ALL MATERIALS, LABOR, TOOLS, TRANSPORTATION AND INCIDENTALS TO COMPLETE IN EVERY DETAIL, AND LEAVE IN WORKING ORDER ITEMS SHOWN ON THE CONTRACT DOCUMENTS.
- INSTALLATION AND COORDINATION OF HIS WORK WITH OTHER TRADES. CONTRACTOR SHALL COORDINATE AND MAKE MINOR ADJUSTMENTS IN COORDINATION.
- LAYOUT SHOWN IN DRAWINGS IS BASED ON A PARTICULAR MAKE OF EQUIPMENT. CONTRACTOR SHALL PROVIDE SIX SUBMITTAL SETS OF INDICATED PRODUCTS SHOP DRAWINGS TO THE ENGINEER FOR APPROVAL PRIOR TO STARTING WORK. PANEL SCHEDULES SHALL BE REJECTED WITHOUT DIMENSIONED LAYOUT OF ELECTRICAL ROOM(S). IF ANOTHER MAKE OF EQUIPMENT IS DESIRED, THESE SUBMITTALS SHALL ALSO SHOW ALL REQUIRED MODIFICATIONS AND CHANGES, INCLUDING THOSE INVOLVING CONTRACTOR MUST RECEIVE APPROVED SUBMITTAL COPY, SIGNED BY ENGINEER BEFORE PROCEEDING WITH ANY MODIFICATIONS. WORK INSTALLED USING UNAPPROVED SUBSTITUTIONS SHALL BE REPLACED AT NO ADDITIONAL COST TO THE OWNER.
- CONTRACTOR SHALL VISIT THE SITE AND FULLY INFORM HIMSELF CONCERNING ALL CONDITIONS AFFECTING SCOPE OF WORK. FAILURE TO DO SO SHALL NOT RELIEVE CONTRACTOR OF ANY RESPONSIBILITY IN THE PERFORMANCE OF HIS WORK. ALL WORKMANSHIP SHALL BE OF THE HIGHEST QUALITY IN ACCORDANCE WITH THE BEST PRACTICES OF THE TRADE BY CRAFTSMEN SKILLED IN THIS PARTICULAR WORK.
- COMPLETED INSTALLATION SHALL CONFORM TO ALL APPLICABLE FEDERAL, STATE AND LOCAL CODES AND ORDINANCE, INCLUDING BUT NOT LIMITED TO THE LATEST APPROVED EDITIONS OF THE FOLLOWING:
 - KENTUCKY BUILDING CODE
 - NFPA-70- NATIONAL ELECTRICAL CODE
 - NFPA-72- PROTECTIVE SIGNALING SYSTEMS
 - NFPA-101- LIFE SAFETY CODE
 - INTERNATIONAL BUILDING CODE
- CONTRACTOR SHALL MAINTAIN LIGHTING AND POWER AND SHALL PROVIDE MATERIALS NECESSARY FOR TEMPORARY LIGHTS AND POWER. POWER CONSUMPTION WILL BE PAID FOR BY THE CONTRACTOR.
- OBTAIN PERMITS AND CERTIFICATES OF APPROVAL FROM ALL AUTHORITIES HAVING JURISDICTION OVER THE INSTALLATION AND PAY ALL FEES REQUIRED.

PART 2 PRODUCTS

- CONDUIT
 - PROVIDE A COMPLETE CONDUIT SYSTEM WITH ASSOCIATED COUPLINGS, CONNECTORS, AND FITTINGS.
 - CONDUIT SHALL BE AS MANUFACTURED BY ALLIED, WHEATLAND OR REPUBLIC FOR GALVANIZED RIGID/EMT AND ANACONDA, ALFLEX OR INTERNATIONAL FOR FLEXIBLE STEEL CONDUIT.
 - FOR EMT PROVIDE STEEL SET SCREW TYPE COUPLINGS, CONNECTORS, AND FITTINGS WITH NYLON INSULATED THROATS AND CASE HARDENED LOCKNUTS.
 - RIGID NONMETALLIC (PVC) CONDUIT: CARLON SCHEDULE 40, HEAVY WALL OR APPROVED EQUAL.
 - RUN CONCEALED CONDUITS IN AS DIRECT LINE AS POSSIBLE BETWEEN OUTLETS. RUN EXPOSED CONDUITS AT RIGHT ANGLES WITH BUILDING STRUCTURE.
 - MAINTAIN INTEGRITY OF FIRE PARTITIONS AND FLOOR SLABS WHERE CONDUITS PASS THROUGH SLEEVES FROM ONE AREA TO ANOTHER WITH U.L. LISTED FIRE AND SMOKE STOP FITTINGS.
 - COMPLETE ALL CONDUIT SYSTEMS BEFORE INSTALLING CONDUCTORS.
 - INSTALL COPPER, GROUND WIRE IN ALL FLEXIBLE CONDUIT.
 - ALLOW SUFFICIENT SLACK IN FLEXIBLE CONDUIT TO REDUCE VIBRATION EFFECT. USE LIQUIT-TIGHT FLEXIBLE CONDUIT FOR FINAL CONNECTION TO MOTORS AND WHERE SUBJECTED TO DAMP AND WET LOCATION.
 - SUPPORT CONDUIT WITH APPROVED STRAPS AND HANGERS AT INTERVALS REQUIRED BY N.E.C.
 - USE ELECTRICAL METALLIC TUBING WHERE DRAWINGS CALL FOR CONDUIT TO BE CONCEALED IN WALLS OR ABOVE CEILINGS.
 - USE GALVANIZED RIGID WHERE CONDUITS ARE RUN EXPOSED ABOVE FINISHED FLOOR OR GRADE.
 - USE PVC SCHEDULE 40 WHERE RUN IN SLAB (ON FIRST FLOOR ONLY) AND BELOW GRADE WITH TRANSITION BEING MADE TO GALVANIZED RIGID BEFORE TURNING UP OUT OF SLAB OR GRADE.
 - MINIMUM CONDUIT SIZE SHALL BE 1/2".
- WIRE AND CABLE
 - PROVIDE A COMPLETE SYSTEM OF CONDUCTORS FOR LIGHTING AND POWER SYSTEMS THROUGHOUT THE PROJECT.
 - ALL CONDUCTORS SHALL BE 98 PERCENT CONDUCTIVITY COPPER WITH 600 VOLT MINIMUM INSULATION. 75 DEGREE C INSULATION MINIMUM.
 - ALL CONDUCTORS NO. 8 AND SMALLER SHALL HAVE TYPE THHN OR THWN INSULATION AND SHALL BE SOLID UNLESS NOTED OTHERWISE ON PLANS.
 - ALL CONDUCTORS NO. 6 AND LARGER SHALL HAVE TYPE THHN OR THWN INSULATION AND SHALL BE STRANDED UNLESS NOTED OTHERWISE ON PLANS.
 - CONDUCTORS SHALL BE AS MANUFACTURED BY ANACONDA, GENERAL CABLE, HABISHAW, OKONITE, ROME, TRIANGLE OR SOUTHWIRE UNLESS NOTED OTHERWISE.
 - MAKE ALL SPLICES OR CONNECTIONS ONLY AT OUTLET OR JUNCTION BOXES.
 - USE ONLY APPROVED (SOAPSTONE) OR OTHER LUBRICANT WHERE REQUIRED.
 - USE APPROVED SCOTCHLOCK OR T&B CONNECTORS FOR INTENDED APPLICATION WHERE CONNECTORS ARE REQUIRED.
- CONDUCTORS ARE TO BE COLOR CODED WITH A DIFFERENT COLOR FOR EACH PHASE. NEUTRAL AND GROUND AS FOLLOWS:
120/240V CIRCUITS; PHASE A AND B BLACK AND RED RESPECTIVELY. NEUTRAL, WHITE. GROUND, GREEN.

3. OUTLET AND JUNCTION BOXES

- PROVIDE EACH FIXTURE, SWITCH, RECEPTACLE, AND OTHER DEVICE WITH A GALVANIZED STEEL OUTLET BOX OF APPROPRIATE SIZE AND DEPTH FOR ITS PARTICULAR LOCATION AND PROVIDE PULL AND JUNCTION BOXES WHERE REQUIRED.
- CEILING OUTLET BOXES SHALL BE 4" OCTAGON AND WALL BOXES TO BE 4" SQUARE WITH RAISED PLASTER RINGS OR DEVICE RINGS. PROVIDE FIXTURE STUDS IN CENTER OF BOXES USED FOR SUPPORT OF FIXTURES.
- OUTLET AND JUNCTION BOXES SHALL BE AS MANUFACTURED BY NATIONAL, APPLETON, GENERAL ELECTRIC, RACO, OR STEEL CITY.
- INSTALL PULL BOXES IN ALL CIRCUITS OR FEEDERS OVER 100 FEET LONG.
- OUTLET BOXES SHALL BE SECURELY ANCHORED, SET TRUE AND PLUMB AND NO PART OF BOX OR COVER SHALL EXTEND BEYOND FINISHED WALL OR CEILING. FLUSH MOUNTED BOXES SHALL BE SET TO WITHIN 1/8" OF FINISHED WALL AND A PLASTER RING USED TO MAKE COVER FLUSH WITH WALL. PLASTER RING NOT REQUIRED FOR EXPOSED LOCATIONS.
- OUTLET BOXES SHALL NOT BE LOCATED ON OPPOSITE SIDES OF THE SAME FIRE OR SMOKE RATED WALL WITHIN THE SAME STUD COMPARTMENT. BOXES SHALL BE OFFSET AS REQUIRED TO PREVENT THIS AND TO MAINTAIN WALL RATINGS.
- WIRING DEVICES AND PLATES
 - PROVIDE SUBMITTALS.
 - PROVIDE SWITCHES, RECEPTACLES, AND OTHER WIRING DEVICES AS INDICATED ON DRAWINGS.
 - PROVIDE IVORY DEVICE PLATES ON ALL WIRING DEVICES, UNLESS DIRECTED OTHERWISE BY OWNER. FIELD COORDINATE DEVICE AND DEVICE PLATE COLOR TO MATCH WALL COVERINGS AS DIRECTED BY OWNER.
- SWITCHES (LEVITON NO. USED; P&S, LUTRON OR HUBBLE ACCEPTABLE).
 - 20AMP, 120/277V, AC:
 - CSB1-201 SINGLE POLE
 - CSB4-201 THREE WAY
 - RECEPTACLES:
 - 20-AMP, 125 V, AC:
 - BR20-1 DUPLEX TYPE
 - 6899I GF1
 - MISCELLANEOUS DEVICES:
 - MANUAL MOTOR STARTER: BRYANT NO. 10004 OR SQUARE D, CLASS 2150.
 - MOUNT ALL SWITCHES 48" ABOVE FINISHED FLOOR UNLESS NOTED OTHERWISE.
 - MOUNT ALL RECEPTACLES 18" ABOVE FINISHED FLOOR UNLESS NOTED OTHERWISE OR OTHERWISE REQUIRED TO MATCH EXISTING DEVICES IN SAME ROOM.
 - CHECK ARCHITECTURAL DRAWINGS FOR SPECIAL MOUNTING CONDITIONS FOR CASEWORK AND IN SPECIAL AREAS
 - INSTALL DEVICE PLATES IN FULL CONTACT WITH WALL.
- PANELBOARDS
 - PROVIDE SUBMITTALS SHOWING CIRCUIT BREAKER SIZES, AIC RATINGS, BUS AND NEUTRAL SIZES. PROVIDE ROOM DIMENSIONS IF APPLICABLE.
 - PANELBOARDS SHALL BE OF THE CIRCUIT BREAKER TYPE AS MANUFACTURED BY SQUARE "D", SIEMENS, GENERAL ELECTRIC, CUTLER-HAMMER OR APPROVED EQUAL.
 - PANELBOARDS SHALL BE RATED FOR 120/240 VOLT 1 PHASE, 3 WIRE AS INDICATED ON SCHEDULE.
 - ALL PANELBOARDS SHALL HAVE ISOLATED NEUTRAL BUS.
 - ALL PANELS SHALL HAVE SEPARATE GROUND BUS CONNECTED WITH A GREEN GROUNDING CONDUCTOR BACK TO THE SOURCE OF ITS PARTICULAR FEED.
 - ALL PANELBOARDS SHALL HAVE TYPED DIRECTORY CARDS EXCEPT THAT POWER PANELS WILL BE ENGRAVED PHENOLIC NAMEPLATES ATTACHED TO THE INDIVIDUAL BREAKERS INDICATING THE PANELBOARD OR DEVICE BEING SERVED.
 - INSTALL FLUSH MOUNTED PANELBOARDS WHERE INDICATED SO THAT THE PANEL BOX WILL BE FLUSH WITH THE WALL SURFACE AND THE PANELBOARD FRONT WILL BE IN FULL CONTACT WITH THE WALL, STUB OUT INTO CEILING SPACE A MINIMUM OF ONE 3/4" EMPTY CONDUIT PER EACH 3 POLES OF SPARES OR SPACES.
 - SURFACE MOUNTED PANELBOARDS SHALL BE FIRMLY ATTACHED TO THE WALL ON WHICH IT IS BEING MOUNTED.
 - ALL PANELBOARDS SHALL HAVE A COPPER BUS.
- SAFETY SWITCHES
 - PROVIDE SUBMITTALS
 - SAFETY SWITCHES SHALL BE AS MANUFACTURED BY SQUARE D, SIEMENS, GENERAL ELECTRIC, CUTLER-HAMMER OR APPROVED EQUAL.
 - SAFETY SWITCHES SHALL BE OF THE HEAVY DUTY TYPE WITH ARC SHIELDS AND GROUND LUG AND SHALL BE RATED FOR THE VOLTAGE OF THE SYSTEM TO WHICH IT IS BEING USED.
 - PROVIDE NEMA 1 ENCLOSURES FOR INTERIOR APPLICATIONS AND NEMA 3R FOR EXTERIOR APPLICATIONS OR IN WET LOCATIONS.
 - FUSES FOR SAFETY SWITCHES SHALL BE AS MANUFACTURED BY BUSSMAN OR LITLIFEUSE AND SHALL BE DUAL ELEMENT FUSETRONS FOR MOTORS AND "LOW PEAK" FOR OTHER LOADS.

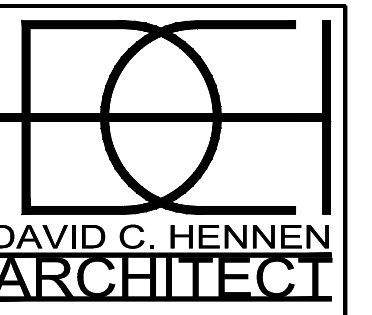
7. SERVICE ENTRANCE AND GROUNDING

- ALL CURRENT CONSUMING DEVICES SHALL HAVE A GROUND WIRE INSTALLED IN THE SAME CONDUIT AS THE PHASE CONDUCTORS FROM THE PANEL TO THE DEVICE. THIS APPLIES TO RECEPTACLES, MOTORS, ETC.
- SERVICE ENTRANCE RACEWAYS, CONDUCTORS, TRENCHING, BACKFILL, ETC. SHALL BE INSTALLED AS INDICATED ON DRAWINGS AND PER NEC AND LOCAL CODE REQUIREMENTS INCLUDING LOCAL UTILITY COMPANY INSTALLATION SPECIFICATIONS.
- ALL GROUND WIRE SHALL BE COPPER WITH A GREEN INSULATION OR IF A GREEN INSULATION IS NOT AVAILABLE, THEN GREEN IDENTIFYING TAPE WILL BE INSTALLED AT BOTH TERMINATION POINTS.
- ALL MATERIALS SHALL BE AS SPECIFIED ON DRAWINGS OR AS SPECIFIED BY LOCAL UTILITY COMPANY FOR SERVICE EQUIPMENT INSTALLATIONS.
- PROVIDE GROUND WIRES THROUGHOUT DISTRIBUTION SYSTEM AND TO ALL UTILIZATION EQUIPMENT, SUCH AS RECEPTACLES, MOTORS, AND OTHER REQUIREMENT LOCATIONS PER NATIONAL ELECTRICAL CODE ARTICLE 250.
- PROVIDE SERVICE INSTALLATION PER DRAWINGS. CONTRACTOR SHALL FIELD COORDINATE EXACT LOCATION AND POINT OF SERVICE INSTALLATION WITH UTILITY COMPANY INCLUDING PROVIDING FINAL BROKEN DOWN LISTING OF LOADS FOR UTILITY COMPANY USE IN DETERMINING SERVICE EQUIPMENT SIZES AND TYPES.
- LIGHTING FIXTURES
 - PROVIDE SUBMITTALS
 - PROVIDE LIGHTING FIXTURES AS INDICATED ON LIGHTING FIXTURE SCHEDULE ON DRAWINGS. EQUAL TO BE BY LITHONIA, BENJAMIN-DAYBRITE, HUBBELL, METALUX OR LIGHTOLIER.
 - FLUORESCENT BALLASTS SHALL BE ELECTRONIC AS MANUFACTURED BY ADVANCE, MOTOROLA OR MAGNETEC.
 - FLUORESCENT LAMPS SHALL BE RAPID START COOL WHITE UNLESS NOTED OTHERWISE.
 - LED FIXTURES SHALL BE 4000K MINIMUM.
 - HID LAMPS SHALL BE RATED AT VOLTAGE INDICATED ON DRAWINGS. HID FIXTURES SHALL BE FURNISHED WITH REGULATING, HPF BALLASTS AND WHERE RECESSED, SHALL HAVE INTEGRAL THERMAL PROTECTION.
 - LAMPS SHALL BE AS MANUFACTURED BY GENERAL ELECTRIC, SYLVANIA, OR PHILIPS.
 - TIME SWITCHES OR PHOTOCELLS SHALL BE TORK, INTERMATIC OR PARAGON OF TYPES SHOWN ON DRAWINGS.
 - JOINTS AND FIXTURE WIRING SHALL BE MADE USING WIRE NUTS, PREINSULATED SCOTCH LOCKS OR OTHER APPROVED MECHANICAL MEANS OF CONNECTION.
 - COORDINATE FIXTURE LOCATIONS TO CLEAR DIFFUSERS, DUCTWORK, PIPING, ETC.
 - COORDINATE FIXTURE TYPES WITH CEILING TYPES BEING INSTALLED.
 - ADJUST FIXTURES TO LIGHT INTENDED AREA WHERE ADJUSTABLE.
- TELEPHONE/DATA RACEWAY SYSTEM
 - PROVIDE CONDUIT STUB UP AS INDICATED ON THE DRAWINGS AT EACH DEVICE.
 - TERMINATE CONDUITS ABOVE DROPPED CEILING USING NYLON INSULATED BUSHINGS.
 - OUTLET BOXES SHALL BE 4 1/16" SQUARE BOXES WITH PLASTER RING AND COVER AS REQUIRED BY TELEPHONE VENDOR.
 - PROVIDE SERVICE CONDUITS, OUTLET CONDUITS, BACK BOXES, COVER PLATES, JUNCTION BOXES, AND TERMINAL BOARDS OR CABINETS AS REQUIRED BY DRAWINGS AND TELEPHONE/ DATA VENDOR.
 - LEAVE NYLON PULLSTRING IN ALL EMPTY CONDUITS.
 - PROVIDE METALLIC CONDUIT SLEEVES WHEREVER CABLES PASS THROUGH FIRE OR SMOKE RATED WALL ASSEMBLIES.
 - OWNER VENDOR TO PROVIDE CABLE, PULL CABLE AND MAKE TERMINATIONS.
 - SERVICE ENTRANCE CONDUITS AND FIREPROOF 4 x 4' x 3/4" TERMINAL BOARDS SHALL BE FURNISHED AS SHOWN ON DRAWINGS. CONTRACTOR SHALL FIELD COORDINATE ACTUAL LOCATION OF TERMINATION WITH LOCAL UTILITY PRIOR TO ROUGH-IN. GROUND WITH BARE #6 AWG THROUGH GROUND BUSHINGS.

PART 3 EXECUTION

- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DEFECTS, REPAIRS, MATERIALS AND WORKMANSHIP FOR A PERIOD OF ONE (1) YEAR AFTER FINAL PAYMENT IS APPROVED. CONTRACTOR SHALL HONOR FACTORY WARRANTIES ON ALL EQUIPMENT PROVIDED.
- UPON COMPLETION OF PROJECT, ALL EQUIPMENT AND MATERIALS SHALL BE IN NEW, CLEAN CONDITIONS WITH ALL DAMAGE RESTORED TO ACCEPTABLE CONDITION. ALL EQUIPMENT SHALL BE INSPECTED AND THOROUGHLY CLEANED, READY FOR USE. AT COMPLETION OF JOB, ALL MISCELLANEOUS TOOLS, SCAFFOLDING, SURPLUS MATERIALS, RUBBISH AND DEBRIS SHALL BE REMOVED BY CONTRACTOR
- WHERE CONDUITS ARE TO PASS THROUGH WALLS, FLOORS, ETC. SLEEVES SHALL BE PROVIDED PRIOR TO WALL CONSTRUCTION. SLEEVES SHALL BE OF RIGID METAL. WHERE SLEEVES PENETRATE EXTERIOR SURFACES, VOIDS SHALL BE SEALED WATER TIGHT, WHERE SLEEVES PASS THROUGH RATED PARTITIONS, SLEEVE PACKING SHALL BE OF U.L. LISTED FIRE SAFE TYPE.
- CONTRACTOR SHALL SUBMIT THREE SETS (3) OF INSTRUCTION BOOKS, INCLUDING INSTALLATION, OPERATION AND MAINTENANCE INSTRUCTIONS, PAMPHLETS OR PROCEDURES AND ALL EQUIPMENT WARRANTIES OBTAINED FROM EACH MANUFACTURER OF EQUIPMENT.

- CONTRACTOR SHALL MAINTAIN ONE SET OF BLUE LINES AT THE CONSTRUCTION SITE. THESE BLUE LINES SHALL BE MARKED FOR CHANGES AND SHALL BE USED FOR AS-BUILT DRAWINGS. TURN DRAWINGS OVER TO THE OWNER AT THE COMPLETION OF THE PROJECT.
- ELECTRICAL DRAWINGS ARE DIAGRAMMATIC AND SHALL NOT BE SCALED FOR EXACT SIZES OR LOCATIONS.



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I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED ARCHITECT IN THE STATE OF KENTUCKY.
DATE: 12/11/2020
NO. 6605



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NEW FACILITY FOR:
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SENIOR CENTER**
Mulberry Street and South Spalding Avenue, Lebanon, Kentucky

**ELECTRICAL
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