SPECIFICATIONS

BID PACKAGE FOR

VALLEY VIEW LOCAL SCHOOL DISTRICT

BOARD OF EDUCATION OFFICE RENOVATION PROJECT

Located at:
Old High School Building
6027 Farmersville Pike
Germantown, Ohio 45327

FOR THE

Valley View Local School District
59 Peffley Street
Germantown, OH 45327

Prepared by:
The Oregon Group Architects, Inc.
300 S. Patterson Blvd.
Dayton, Ohio 45402

p: 937.228.1511
w: www.oregongroup.com

Bid Specifications
January 23, 2026

Kyle Zepernick, Licence #10884
Expiration Date 12-31-27

BIDDING DOCUMENTS

VALLEY VIEW LOCAL SCHOOLS
Advance As One

OWNER

Valley View Local School District Board of Education

PROJECT

Board Office Renovation Project

6027 Farmersville Pike

Germantown, Ohio 45327

DESIGN PROFESSIONAL

Oregon Group Architects, Inc.

300 S. Patterson Blvd.

Dayton, Ohio 45402

Public Notice

Sealed bids will be received by the Board of Education of the Valley View Local School District as provided in this notice for the Board Office Renovation Project. Questions may be directed to Kyle Zepernick, Oregon Group Architects, Inc. at kzepernick@oregongroup.com.

Bid documents will be made available for a non-refundable purchase from Arc Reprographics Dayton, by phone (937-277-7930) or at their website (www.e-arc.com).

Bids shall be enclosed in a sealed envelope addressed to Board of Education of the Valley View Local School District, ATTN: Valorie Hill, Treasurer, 59 Peffley Street, Germantown, Ohio 45327, and plainly marked on the outside "Valley View LSD – Board Office Renovation Project Bid." Bids will be received until 2:00 p.m., local time February 18, 2026 and immediately after the deadline the bids will be opened and publicly read.

A pre-bid conference will be held on February 4, 2026 at 1:30 p.m. at the old high school campus located at 6027 Farmersville Pike, Germantown, Ohio 45327.

All bids must include a Bid Guaranty, as described in the Instructions to Bidders. No bidder may withdraw its bid within 60 days after the opening; the Board reserves the right to waive irregularities, reject any or all bids, and conduct necessary investigations to determine bidder responsibility.

INSTRUCTIONS TO BIDDERS

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A. BIDDER'S PLEDGE AND AGREEMENT

1. **Each Bidder acknowledges that this is a public project involving public funds and that the Owner expects and requires that each successful Bidder adhere to the highest ethical and performance standards. Each Bidder by submitting a bid pledges and agrees that (a) it will act at all times with absolute integrity and truthfulness in its dealings with the Owner and the Design Professional, (b) it will use its best efforts to cooperate with the Owner and the Design Professional and all other Contractors on the Project and at all times will act with professionalism and dignity in its dealings with the Owner, Design Professional, and other Contractors, (c) it will assign only competent supervisors and workers to the Project, each of whom is fully qualified to perform the tasks that are assigned to him/her, and (d) it has read, understands and will comply with the terms of the Contract Documents.**

B. EXAMINATION OF CONTRACT DOCUMENTS AND SITE CONDITIONS AND RELIANCE UPON TECHNICAL DATA

1. Each Bidder shall have a competent person carefully and diligently review each part of the Contract Documents, including the Divisions of the Specifications and parts of the Drawings that are not directly applicable to the Work on which the Bidder is submitting its bid. By submitting its bid, each Bidder represents and agrees, based upon its careful and diligent review of the Contract Documents, that it is not aware of any conflicts, inconsistencies, errors, or omissions in the Contract Documents for which it has not notified the Design Professional in writing at least ten (10) days prior to the bid opening. If there are any such conflicts, inconsistencies, errors, or omissions in the Contract Documents, the Bidder (i) will provide the labor, equipment, or materials of the better quality or greater quantity of Work and/or (ii) will comply with the more stringent requirements. The Bidder will not be entitled to any Change Order, additional compensation, or additional time on account of such conditions for any conflicts, inconsistencies, errors, or omissions that would have been discovered by such careful and diligent review, unless it has given prior written notice to the Design Professional.

2. Each Bidder shall have a competent person carefully and diligently inspect and examine the entire site and the surrounding area, including all parts of the site applicable to the Work for which it is submitting its bid, including location, condition, and layout of the site and the location of utilities, and carefully correlate the results of the inspection with the requirements of the Contract Documents. The Bidder's bid shall include all costs attributable to site and surrounding area conditions that would have been discovered by such careful and diligent inspection and examination of the site and the surrounding area, and the Bidder shall not be entitled to any Change Order, additional compensation, or additional time on account of such conditions.

3. The Bidder may rely upon the general accuracy of any technical data identified in the Owner-Contractor Agreement (e.g., any soils exploration reports, soil boring logs, site survey, or abatement reports) in preparing its bid, but such technical data are not part of the Contract Documents. Except for the limited reliance described in the preceding sentence, Bidder may not, if awarded a contract for the Work, rely upon or make any Claim against the Owner or Design Professional, or any of their agents or employees, with respect to any of the following:

    (a) the completeness of such reports and drawings for Bidder's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by the successful Bidder and safety precautions and programs incident thereto; or

(b) any interpretation by the successful Bidder of or conclusion drawn from any technical data or any such other data, interpretations, opinions, or information. For example, all interpolations and extrapolations of data performed by the Bidder to estimate locations or quantities of subsurface strata are independent factual assumptions, which Owner does not warrant.

4. Each Bidder will be deemed to have actual knowledge of all information provided or discussed at the pre-bid meeting.

C. PROJECT

1. The Project is the Board Office Renovation Project ("the Project"). The Project and Work for the Project consists of renovating approximately 2,595 SF of existing old high school office spance into new Board of Education office space. The Renovations are anticipated to include new partitions, doors, finishes, and mechanical, electrical and plumbing systems, in accordance with the Drawings and Specifications prepared by the Design Professional.

2. The Design Professional for the Project is:

Orgeon Group Architects, Inc.
300 S. Patterson Boulevard
Dayton, Ohio 45402
Design Professional Representative: Kyle D. Zepernick, R.A., President
Email: kzepernick@oregongroup.com

3. Procurement Schedule:

Description	Date	Time
First Advertisement of Public Notice	January 27, 2026	N/A
Second Advertisement of Public Notice	February 3, 2026	N/A
Pre-Bid Meeting per Section F.5	February 4, 2026	1:30 p.m.
Deadline to Submit Questions per Section M.3	February 5, 2026	5:00 p.m.
Deadline for Submission of Bids per Section G.5	February 18, 2026	2:00 p.m.

D. WORK

1. Only one contract will be issued by the Owner for constructing the Project, the General Contract, which will cover all scopes of work necessary to construct the Project.

2. The Contractor awarded the General Contract (General Contractor) will be responsible for the performance and coordination of any and all subcontractors and suppliers either directly or indirectly contracted with the General Contractor.

3. Owner may provide Bidders access to the Project site to conduct such examinations, investigations, explorations, tests, and studies as Bidder deems necessary for submission of a Bid. Bidder shall fill all holes and clean up and restore the Site to its former condition upon completion of such explorations, investigations, tests, and studies. Bidder shall comply with all applicable Laws and Regulations and Owner's policies relative to excavation and utility locates. Bidders must follow COVID-19 safety protocols required by law or requested by the Owner. Bidders may visit the site by contacting Erick Depew, Director of Operations, at erick.depew@valleyview.k12.oh.us to set an appointment.

E. ESTIMATE OF COST

The total estimated construction cost for the base bid is **$550,000**.

F. CONTRACT DOCUMENTS AND PRE-BID MEETING

1. The Contract Documents consist of the Contract Documents listed in Section 1 of the Owner-Contractor Agreement.

2. Drawings and specifications will be available at Arc Reprographics Dayton, 937-277-7930, www.e-arc.com.

3. Bidders shall use complete sets of Contract Documents in preparing bids. Neither the Owner nor the Design Professional assumes any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Contract Documents.

4. The Owner or the Design Professional, in making the Contract Documents available on the above terms, does so only for the purpose of obtaining bids on the Work and does not confer a license or grant for any other use.

5. A pre-bid conference will be held at the date and time indicated in Section C.3. at the old high school campus located at 6027 Farmersville, Pike, Germantown, Ohio 45327.

   Attendance is highly recommended. The Owner shall not be held liable if a bidder is unable to attend due to technical or other issues or obstructions.

G. PREPARATION OF BIDS

1. All bids must be submitted on the "Bid Form" furnished with the Contract Documents.

2. All blank spaces shall be filled in, in ink or typewritten, in words and figures, and in figures only where no space is provided for words, and signed by the Bidder. The wording on the Bid Form shall be used without change, alteration, or addition. Any change in the wording or omission of specified accompanying documents may cause the bid to be rejected. If there is an inconsistency or conflict in the bid amount, the lowest amount shall control, whether expressed in numbers or words.

3. Bidders shall note receipt of Addenda on the Bid Form. If the Bidder fails to acknowledge receipt of each Addendum, the Bid shall be deemed non-responsive, unless the Bid amount clearly and unambiguously reflects receipt of the Addendum or the Addendum involves only a matter of form and does not materially affect the price, quantity or quality of the Work to be performed.

4. Each Bidder shall submit **1 original and 1 copy** of its bid to the Owner. The Bid Form shall be signed with the name typed or printed below the signature. A Bid shall not be submitted by facsimile transmission or any other electronic means. A Bidder that is a corporation shall sign its bid with the legal name of the corporation followed by the name of the state of incorporation and the legal signature of an officer authorized to bind the corporation to a contract.

5. Bids shall be enclosed in a sealed opaque envelope with the Bidder's name, plainly marked on the outside "Valley View LSD – Board Office Renovation Project Bid," and addressed as follows:

Valley View Local School District Board of Education
ATTN: Valorie Hill, Treasurer
59 Peffley Street
Germantown, Ohio 45327

Bids must be received at the location designated above in accordance with the Procurement Schedule in Section C.3 above.

Hand deliveries may be made during the Owner's standard operating hours and must be made before the deadline. However, Respondents are responsible for confirming current operating hours.

A public bid opening will take place immediately after the time for submitting bids is expired.

The Owner shall not be held liable if a bidder is unable to attend due to technical or other issues or obstructions.

6. **The completed Bid Form shall be accompanied by the following completed documents:**

   Bid Guaranty and if applicable, Contract Bond (See Paragraph G.8 below.)

   Contractor's Qualification Statement (See Paragraph H.4 below.)

7. The Bidder shall take the following precautions in preparing its bid:

   a. Sign the bid and check to ensure all blank spaces have been filled in with requested information and that the specified accompanying documents (listed in Paragraph G.6 above) have been included in a sealed opaque envelope addressed as described in item Paragraph G.5 above.

   b. When the Bid Form provides for quoting either an addition or deduction for an Alternate item, indicate whether the sum named is an addition or deduction. If it is not indicated, it will be conclusively presumed that the amount is a deduction.

   c. When the Bid Form provides for quoting a unit price, the Bidder should quote the unit price as set forth in the Contract Documents and as described in Paragraph L.1 below.

   d. When applicable, make sure that the Bid Guaranty is properly executed and signed by:

      1) The Bidder
      2) The Surety or Sureties

   e. Make sure that the amount of the Bid Guaranty (if the Bid Guaranty is in the form of a certified check, letter of credit, or cashier's check) is for a specific sum in an amount as instructed in Paragraph G.8.a below. If the Bid Guaranty is in the form of the Bid Guaranty and Contract Bond, the amount may be left blank; if an amount is inserted, it must equal the total of the base bid plus the amount of all add alternates included in the bid. If inserted, then the failure to state an amount equal to the total of the base bid and all add alternates shall make the bid non-responsive if the Owner selects alternates not included in the amount.

   f. Make sure that the appropriate bid package and scope of work is inserted in the correct space on the Bid Guaranty and Contract Bond Form. Failure to include work covered by the bid submitted may make the bid non-responsive.

8. Bonds and Guarantees

   a. Bid Guaranty: Bidder shall furnish a Bid Guaranty, in the form prescribed in Sections 153.54, 153.57, and 153.571 of the Ohio Revised Code, in the form of either: (1) a bond for the full amount of the Base Bid plus the amount of all Add Alternates included in the Bidder's bid, in the form of the Bid Guaranty and Contract Bond included in the Contract Documents; or (2) a certified check, cashier's check, or irrevocable letter of credit in a form satisfactory to the Owner in an amount equal to 10% of the bid. Bid amount shall be the

total of all sums bid, including all add alternatives, but excluding all deduct alternatives. NOTE: AIA or EJCDC Bid Bond forms are not acceptable.

b. Contract Bond: The successful Bidder, who, as a Bid Guaranty, submits a certified check, cashier's check, or irrevocable letter of credit in an amount equal to 10% of the bid, shall furnish a Contract Bond in the form Contract Bond included in the Contract Documents in an amount equal to 100% of the Contract Sum. NOTE: AIA or EJCDC Bond forms are not acceptable.

c. The bond must be issued by a surety company authorized by the Ohio Department of Insurance to transact business in the State of Ohio and acceptable to the Owner. The bond must be issued by a surety capable of demonstrating a record of competent underwriting, efficient management, adequate reserves, and sound investments. These criteria will be deemed to be met if the surety currently has an A.M. Best Company Policyholders Rating of "A-" or better and has or exceeds the Best Financial Size Category of Class VI. Other sureties may be acceptable to the Owner, in its sole discretion

d. All bonds shall be signed by an authorized agent of an acceptable surety and by the Bidder.

e. Surety bonds shall be supported by credentials showing the Power of Attorney of the agent, a certificate showing the legal right of the Surety Company to do business in the State of Ohio, and a financial statement of the Surety.

f. The Bid Guaranty, as applicable, shall be in the name of or payable to the order of the Owner.

g. The name and address of the Surety and the name and address of the Surety's Agent should be typed or printed on each bond.

H. METHOD OF AWARD

1. **All bids shall remain open for acceptance for sixty (60) days** following the day of the bid opening, but the Owner may, in its sole discretion, release any bid and return the Bid Guaranty prior to that date. The Bid Guaranty shall be subject to forfeiture, as provided in the Ohio Revised Code, if a bid is withdrawn during the period when bids are being held.

2. The Owner reserves the right to reject any, part of any, or all bids and to waive any informalities and irregularities. The Bidder expressly acknowledges this right of the Owner to reject any or all bids or to reject any incomplete or irregular bid. Bidders must furnish all information requested on or accompanying the Bid Form. Any false representations or failure to provide information may result in disqualification of the bid.

3. Determination of the Lowest Responsible Bid. Subject to the right of the Owner to reject any or all bids, the Owner will award the Contract for the Work to the bidder submitting the lowest responsible bid that is responsive to the bidding requirements, taking into consideration accepted alternates. In evaluating bids, the Owner may consider the qualifications of the Bidders, whether or not the bids comply with the prescribed requirements, and alternates and unit prices, if requested, on the Bid Form. The Owner may also consider the qualifications and experience of subcontractors and suppliers. The Owner may conduct such investigations as are deemed necessary to establish the qualifications and financial ability of the Bidder and its subcontractors and suppliers. The factors the Owner may consider in determining which bid is the lowest responsible include the factors set forth below. The Owner, in its discretion, may consider and give such weight to these criteria as it deems appropriate.

   a. The Bidder's work history. The Bidder should have a record of consistent customer satisfaction and of consistent completion of projects, including projects that are comparable to or larger and more complex than the Owner's Project, on time and in accordance with the applicable Contract Documents, and based upon the Bidder's claims history. If the

Bidder's management operates or has operated another construction company, the Owner may consider the work history of that company in determining whether the Bidder submitted the lowest responsible bid.

The Owner will consider the Bidder's prior experience on other projects of similar scope and/or complexity including prior projects with the Owner and/or Design Professional, including the Bidder's demonstrated ability to complete its work on these projects in accordance with the Contract Documents and on time, and will also consider its ability to work with the Owner and Design Professional as a willing, cooperative, and successful team member. Bringing overstated claims, an excessive number of claims, acting uncooperatively, and filing lawsuits against project owners and/or their design professionals on prior projects of similar scope and/or complexity will be deemed evidence of a Bidder's inability to work with the Owner and Design Professional as a willing, cooperative, and successful team member.

The Bidder authorizes the Owner and its representatives to contact the owners and design professionals (and construction managers, if applicable) on projects on which the Bidder has worked and authorizes and requests such owners and design professionals (and construction managers) to provide the Owner with a candid evaluation of the Bidder's performance. By submitting its bid, the Bidder agrees that if it or any person, directly or indirectly, on its behalf or for its benefit brings an action against any of such owners or design professionals (or construction managers) or the employees of any of them as a result of or related to such candid evaluation, the Bidder will indemnify and hold harmless such owners, design professionals (and construction managers) and the employees of any of them from any claims, whether or not proven, that are part of or are related to such action and from all legal fees and expenses incurred by any of them arising out of or related to such legal action. This obligation is expressly intended for the benefit of such owners, design professionals (and construction managers), and the employees of each of them.

b. The Bidder's financial ability to complete the Contract successfully and on time without resort to its Surety.

c. The Bidder's prior experience with similar work on comparable or more complex projects.

d. The Bidder's prior history for the successful and timely completion of projects, including the Bidder's history of filing claims and having claims filed against it.

e. The Bidder's equipment and facilities.

f. The adequacy, in numbers and experience, of the Bidder's work force to complete the Contract successfully and on time.

g. The Bidder's compliance with federal, state, and local laws, rules, and regulations, including but not limited to the Occupational Safety and Health Act, the Ohio Prevailing Wage laws, and Ohio ethics laws.

h. The Bidder's participation in a drug-free workplace program acceptable to the Owner, and the Bidder's record for both resolved and unresolved findings of the Auditor of State for recovery as defined in Section 9.24 of the Ohio Revised Code.

i. The Owner's prior experience with the Bidder's surety.

j. The Bidder's interest in the Project as evidenced by its attendance at any pre-bid meetings or conferences for bidders.

k. Depending upon the type of the work, other essential factors, as the Owner may determine and as are included in the Specifications.

l. The number of years the Bidder has been actively engaged as a contractor in the construction industry.

m. Financial responsibility demonstrated by the Bidder and whether Bidder possesses adequate resources and availability of credit, the means and ability to procure insurance

and acceptable performance bonds required for the Project and whether any claims have been made against performance bonds secured by the bidder on other construction projects.

n. The foregoing information with respect to each of the Subcontractors and Suppliers that the Bidder intends to use on the Project.

4. **Qualifications Statement. Each Bidder will submit with its bid a completed Contractor Qualifications Statement, which is included with the Contract Documents, and thereafter provide the Design Professional promptly with such additional information as the Design Professional may request regarding the Bidder's qualifications. A Bidder shall submit any requested additional information within 24 hours of the date on the request.**

5. The failure to submit requested information on a timely basis may result in the determination that the Bidder has not submitted the lowest responsible bid.

6. By submitting its bid, the Bidder agrees that the Owner's determination of which bidder is the lowest responsible bidder shall be final and conclusive, and that if the Bidder or any person on its behalf challenges such determination in any legal proceeding, whether or not proven, the Bidder will indemnify and hold the Owner and its employees and agents harmless from any claims included or related to such legal proceeding, whether or not proven, and from legal fees and expenses incurred by the Owner, its employees, or agents that arise out of or are related to such challenge.

7. **After bid opening, within 24 hours of a request made by the Owner or Design Professional, the apparent low Bidder and any other Bidder so requested must submit the following:**

   a. **SUBCONTRACTORS:** For all subcontracts with an estimated value of at least $20,000, a list of all Subcontractors that the Bidder will use to construct the Project, as well as an indication of whether or not the Bidder has ever worked with a proposed Subcontractor before, including the following information for the three most recent projects on which the Bidder and each Subcontractor have worked together:

      - Project Owner
      - Project Name
      - Subcontract Scope
      - Subcontract Value
      - Owner's contact name and phone number.

      If Bidder and a proposed Subcontractor have not worked together on at least three projects in the five years, Bidder must submit the information set forth above for the three most recent similar projects to the Project that a proposed Subcontractor has worked on.

      The above Subcontractor information, as well as the information pertaining to each proposed Subcontractor, shall be used in the Owner's determination of the lowest responsible bid.

      Once a Bidder identifies its proposed Subcontractors as set forth herein, and Owner makes no objections, the list shall not be changed unless written approval of the change is authorized by the Owner and Design Professional.

   b. **FINANCING: The following additional financial information is not a public record under Ohio Revised Code Section 149.43 and will be kept confidential,**

except under proper order of a court, per Ohio Revised Code Section 9.312(A).

i. Provide a financial statement, preferably audited, including your organization's latest balance sheet and income statement showing the following items:

- Current Assets (e.g., cash, joint venture accounts, accounts receivable, notes receivable, accrued income, deposits, materials inventory and prepaid expenses);
- Net Fixed Assets;
- Other Assets;
- Current Liabilities (e.g., accounts payable, notes payable, accrued expenses, provision for income taxes, advances, accrued salaries and accrued payroll taxes); and
- Other Liabilities (e.g., capital, capital stock, authorized and outstanding shares par values, earned surplus and retained earnings).

ii. Provide the name and address of firm preparing attached financial statement, and date thereof.

iii. If the attached financial statement is not for the identical organization named in the completed Contractor's Qualification Statement submitted with the bid, explain the relationship and financial responsibility of the organization whose financial statement is provided (e.g., parent-subsidiary).

8. Affidavit as to Personal Property Taxes. Each successful Bidder shall submit, prior to the time of the entry into the Contract, an affidavit in the form required by Section 5719.042, Ohio Revised Code, regarding the status of the Bidder's personal property taxes. A copy of the affidavit form is included with the Contract Documents.
9. No Bidder may withdraw its bid within **sixty (60)** days after the date bids are opened. The Owner reserves the right to waive any formalities or irregularities or to reject any or all bids.
10. The Owner reserves the right to disqualify bids, before or after opening, upon evidence of collusion with intent to defraud or other illegal practices on the part of the Bidder.
11. Award of Contract. The award of the Contract, when required, will only be made pursuant to a duly adopted resolution of the Owner.

I. EXECUTION OF CONTRACT

1. Within the time designated by the Owner or Design Professional after award of the Contract, the successful Bidder shall execute and deliver to the Owner or Design Professional the required number of copies of the Owner-Contractor Agreement, in the form included in the Contract Documents, and all accompanying documents requested, including, but not limited to, a Contract Bond (if applicable), insurance certificates, and a valid Workers' Compensation Certificate. The successful Bidder shall have no property interest or rights under the Owner-Contractor Agreement until the Agreement is executed by the Owner.

J. SUBSTITUTIONS/NON-SPECIFIED PRODUCTS

1. Certain brands of material or apparatus are specified. Each bid will be based on these brands, which may be referred to in the Contract Documents as Standards. The use of another brand (referred to as a substitution or proposed equal in the Contract Documents, when a bidder or the contractor seeks to have a different brand of material or apparatus than that specified approved by the Owner for use in the Project) may be requested as provided herein.

2. The products specified in the Contract Documents establish a standard of required function, dimension, appearance, and quality.

3. Bidders wishing to obtain approval to bid non-specified products shall submit written requests to the Design Professional a minimum of ten (10) calendar days before the bid date and hour. To facilitate the submission of requests, a Pre-Bid Substitution Form is included in the Contract Documents. The Bidder shall include the name of the material or equipment for which it is to be substituted and a complete description of the proposed substitution, including the name of the proposed manufacturer and/or product and a complete description of the proposed product including the manufacturer's name and model number or system proposed, drawings, product literature, performance and test data, color selections or limitations, and any other information necessary for evaluation. Include a statement including any changes in other materials, equipment, or other work that would be required if the proposed product is incorporated in the materials, equipment, or other work that would be required if the proposed product is incorporated in the work. The burden of proof of the merit of the proposed product is on the proposer. The Design Professional's decision on approval of a proposed product will be final.

   The following will be cause for rejection of a proposed substitution:

   a. Requests submitted by subcontractors, material suppliers, and individuals other than Bidders;

   b. Requests submitted without adequate documentation;

   c. Requests received after the specified cut-off date.

4. When the Design Professional approves a product submission before receipt of bids, the approval will be included in an Addendum, and Bidders may include the pricing of this product in their bid. Bidders shall not rely on approvals made in any other manner.

5. In proposing a non-specified product or a substitution, the Bidder represents and warrants that each proposed product will not result in any changes to the Project, including changes to the Work of other contractors, or any decrease in the performance of any equipment or systems to be installed in the Project and agrees to pay any additional costs incurred by the Owner and the Owner's consultants as a result of a non-specified or substitute product that is accepted.

6. Following the award of the Contract, there shall be no substitutions for specified products, except pursuant to a Change Order. The Owner in its sole discretion may decline to consider a substitution for a Change Order.

K. ALTERNATES

1. The Owner may request bids on alternates. If the Owner requests bids on alternates, the Bidder should include the cost of the alternates requested on its Bid Form.

2. At the time of awarding the Contract, the Owner will select or reject alternates as it determines is in its best interest. A Bidder's failure to include on its Bid Form the cost of an alternate selected by the Owner and applicable to the Bidder's work shall render the bid non-responsive and be grounds for the rejection of the bid. Otherwise, the failure to include the cost of an alternate will not be deemed material.

3. The Bidder acknowledges that although there is an estimate for the cost of the Project, the market conditions may and frequently do result in the estimate being different from the sum of the bids received, either higher or lower. The Bidder understands that the Owner may include alternates, which may include deduct alternates as well as add alternates, to give it flexibility to build the Project with the funds available. The Bidder further understands and acknowledges that use of add and deduct alternates is a long held customary practice in the construction industry in the State of Ohio. The Bidder also acknowledges that the Owner will not make a decision about the alternates on which to base the award of contracts until the bids are received, and the Owner can compare its available funds with the base bids and the cost or savings from selecting different alternates. The Bidder understands that the award to the Bidder submitting the lowest responsible bid will be based on the lowest base bid plus selected alternates, and may result in an award to a Bidder other than the Bidder that submitted the lowest base bid.

4. If, during the progress of the Work, the Owner desires to reinstate any alternate not included in the Contract, the Owner reserves the right to reinstate the alternate at the price bid by the Contractor provided that such action is taken in sufficient time so as not to delay the progress of the work or cause the Contractor additional expense.

L. UNIT PRICES

1. Where unit prices are requested in the Bid Form the Bidder should quote a unit price. Unless otherwise expressly provided in the Contract Documents, such unit prices shall include all labor, materials, and services necessary for the timely and proper installation of the item for which the unit prices are requested. The unit prices quoted in the bid shall be the basis for any Change Orders entered into under the Owner-Contractor Agreement, unless the Design Professional determines that the use of such unit prices will cause substantial inequity to either the Contractor or the Owner.

M. ADDENDA

1. The Owner reserves the right to issue Addenda changing, altering, or supplementing the Contract Documents prior to the time set for receiving bids. The Design Professional will issue the Addenda to clarify bidders' questions and/or to change, alter, or supplement the Contract Documents.

2. Any explanation, interpretation, correction, or modification of the Contract Documents will be issued in writing in the form of an Addendum, which shall be the only means considered binding; explanations, interpretations, etc., made by any other means shall NOT be legally binding. All Addenda shall become a part of the Contract Documents.

3. Bidders shall submit written questions to **Kyle Zepernick, Oregon Group Architects, Inc., at kzepernick@oregongroup.com by the date and time outlined in Section C.3** to allow sufficient time for the Design Professional to respond. All Addenda will be issued, except as hereafter provided, and e-mailed or otherwise furnished to persons who have obtained Contract Documents for the Project, at least seventy-two (72) hours prior to the published time for the opening of bids, excluding Saturdays, Sundays, and legal holidays. If any Addendum is issued within such seventy-two (72) hour period, then the time for opening of bids shall be extended one (1) week with no further advertising of bids required.

4. Copies of each Addendum will be sent only to the Bidders to whom Contract Documents have been issued and to Plan Rooms where copies of the Contract Documents are maintained. Receipt of Addenda shall be indicated by Bidders in the space provided on the Bid Form. Bidders are responsible for acquiring issued Addenda in time to incorporate them into their bid. Bidders should contact the Design Professional prior to bid submittal to verify the number of Addenda issued.

5. Each Bidder shall carefully read and review the Contract Documents and immediately bring to the attention of the Design Professional any error, omission, inconsistency, or ambiguity therein.

6. If a Bidder fails to indicate receipt of all Addenda through the last Addendum issued by the Design Professional on its Bid Form, the bid of such Bidder will be deemed to be responsive only if:

   a. The bid received clearly indicates that the Bidder received the Addendum, such as where the Addendum added another item to be bid upon and the Bidder submitted a bid on that item; or

   b. The Addendum involves only a matter of form or is one which has either no effect or has merely a trivial or negligible effect on price, quantity, quality, or delivery of the item bid upon.

N. INTERPRETATION

1. If a Bidder contemplating submitting a bid for the proposed Project is in doubt as to the true meaning of any part of the Contract Documents, it may submit a written request for an interpretation thereof to **Kyle Zepernick, Oregon Group Architects, Inc., at kzepernick@oregongroup.com by the deadline for questions per paragraph M.3 above**. Any interpretation of the proposed documents will be made by Addendum only, duly signed by the Design Professional, and a copy of such Addendum will be mailed or delivered to each Bidder receiving a set of Contract Documents and each plan room where the Contract Documents are maintained. The Owner will not be responsible for any other explanation or interpretation of the proposed documents.

2. In interpreting the Contract Documents, words describing materials that have a well-known technical or trade meaning, unless otherwise specifically defined in the Contract Documents, shall be construed in accordance with the well-known meaning recognized by the trade.

3. Bidders are responsible for notifying the Owner and the Design Professional in a timely manner of any ambiguities, inconsistencies, errors, or omissions in the Contract Documents. The Bidder shall not, at any time after the execution of the Contract, be compensated for a claim alleging insufficient data, incomplete Contract Documents, or incorrectly assumed conditions regarding the nature or character of the Work, if no request was made by the Bidder prior to the bid opening.

O. STATE SALES AND USE TAXES

1. The Owner is a political subdivision of the State of Ohio and is exempt from taxation under the Ohio Sales Tax and Use Tax Laws. Building materials that the successful Bidder purchases for incorporation into the Project will be exempt from state sales and use taxes if the successful Bidder provides a properly completed Ohio Department of Taxation Construction Contract Exemption Certificate to the vendors or suppliers when the materials are acquired. The Owner will execute properly completed certificates on request.

P. DATE FOR SUBSTANTIAL COMPLETION/ DATE FOR FINAL COMPLETION /LIQUIDATED DAMAGES

1. The Date for Substantial Completion (aka Contract Time), Date for Final Completion, and Liquidated Damages shall be as defined and set forth in the Owner-Contractor Agreement. **By submitting its Bid, each Bidder agrees that the period for performing its Work is reasonable**.

Q. OWNER'S RIGHT TO WAIVE DEFECTS AND IRREGULARITIES

1. The Owner reserves the right to waive any and all irregularities provided that the defects and irregularities do not affect the amount of the bid in any material respect or otherwise give the Bidder a competitive advantage.

R. MODIFICATION/WITHDRAWAL OF BIDS

1. Modification. A Bidder may modify its bid by written communication to the Owner addressed to the Owner's Representative at any time prior to the scheduled closing time for receipt of bids, provided such written communication is received by Owner's Representative prior to the bid deadline. The written communication shall 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 until the sealed bid is opened. If the Bidder's written instructions with the change in bid reveal the bid amount in any way prior to the bid opening, the bid may be rejected as non-responsive.
2. Withdrawal Prior to Bid Deadline. A Bidder may withdraw its bid at any time for any reason prior to the bid deadline for the opening of bids. The request to withdraw shall be made in writing to and received by the Owner prior to the time of the bid opening.
3. Withdrawal after Bid Deadline.
    a. All bids shall remain valid and open for acceptance for a period of at least 60 days after the bid opening; provided, however, that a Bidder may withdraw its bid from consideration after the bid deadline when all of the following apply:
        (1) the price bid was substantially lower than the other bids;
        (2) the reason for the bid being substantially lower was a clerical mistake, rather than a mistake in judgment, and was due to an unintentional and substantial error in arithmetic or an unintentional omission of a substantial quantity of work, labor, or material;
        (3) the bid was submitted in good faith; and
        (4) the Bidder provides written notice to the Owner, to the attention of the Owner's Representative, within two (2) business days after the bid opening for which the right to withdraw is claimed.
    b. No bid may be withdrawn under this provision if the result would be the awarding of the contract on another bid for the bid package from which the Bidder is withdrawing its bid to the same Bidder.
    c. If a bid is withdrawn under this provision, the Owner may award the Contract to another Bidder determined by the Owner to be the lowest responsible bidder or the Owner may reject all bids and advertise for other bids. In the event the Owner advertises for other bids, the withdrawing Bidder shall pay the costs incurred in connection with the rebidding by the Owner, including the cost of printing new Contract Documents, required advertising, and printing and mailing notices to prospective bidders, if the Owner finds that such costs would not have been incurred but for such withdrawal.

S. COMPLIANCE WITH APPLICABLE LAWS

1. By submitting a bid for Work on the Project, the Bidder acknowledges that it is in compliance with applicable federal, state, and local laws and regulations, including, but not limited to, the following:
    a. Equal Employment Opportunity/Nondiscrimination. The Bidder agrees that if it is awarded a contract that in the hiring of employees for performance of work under the contract or any subcontract, neither it nor any subcontractor, or any person acting on its behalf or its subcontractor's behalf, by reason of race, creed, sex, disability as defined in Section 4112.01 of the Ohio Revised Code, or color, shall discriminate against any citizen of the state in the employment of labor or workers who are qualified and available to perform work to which the employment relates. The Bidder further agrees that neither it nor any subcontractor or any person on its behalf or on behalf of any subcontractor, in any manner,

shall discriminate against or intimidate any employees hired for the performance of the work under the contract on account of race, creed, sex, disability as defined in Section 4112.01 of the Ohio Revised Code, or color.

b. Ethics Laws. The Bidder represents that it is familiar with all applicable ethics law requirements, including without limitation Sections 102.04 and 3517.13 of the Ohio Revised Code, and certifies that it is in compliance with such requirements.

T. FINDINGS FOR RECOVERY

1. By submitting its bid, each Bidder certifies for reliance of the Owner that it has no unresolved finding for recovery against it issued by the Auditor of the State of Ohio on or after January 1, 2001, except as permitted by Section 9.24 (F) of the Ohio Revised Code.

U. PREVAILING WAGES

N/A

END OF INSTRUCTIONS TO BIDDERS

BID FORM

1.01 BID SUBMITTED BY:

_____
(Contractor)

Date bid submitted: _____

1.02 DELIVER TO:

Valley View Local School District Board of Education
ATTN: Valorie Hill, Treasurer
59 Peffley Street
Germantown, Ohio 45327

1.03 Having carefully reviewed the Instructions to Bidders, Drawings, Specifications and other Contract Documents for the Project titled the **Board Office Renovation Project** including having also received, read, and taken into account the following Addenda:

Addendum No.	Dated
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

and likewise having inspected the site and the conditions affecting and governing the Project, the undersigned hereby proposes to furnish all materials and to perform all labor, as specified and described in the said Specifications and/or as shown on the said Drawings for all Work necessary to complete the Project on a timely basis and in accordance with the Contract Documents regardless of whether expressly provided for in such Specifications and Drawings.

1.04 Before completing the Bid Form, the undersigned represents that it has carefully reviewed the Request for Bids, Instructions to Bidders, this Bid Form, Form of Bid Guaranty and Contract Bond, Contractor's Affidavit (O.R.C. 5719.042), Owner-Contractor Agreement, Drawings, Project Specifications, and other Contract Documents. Failure to comply with provisions of the Contract Documents may be cause for disqualification of the bid.

1.05 BONDS AND CONTRACT: If the undersigned is notified of bid acceptance, it agrees to furnish required bonds as indicated in the Instructions to Bidders.

1.06 COMPLETION OF WORK: In submitting a bid, the undersigned agrees to execute the Owner-Contractor Agreement in the form included in the Contract Documents and to complete its Work as required by the Contract Documents.

NOTE A: The wording of the Bid Form shall be used throughout, without change, alteration, or addition. Any change may cause it to be rejected.

NOTE B: Bidder is cautioned to bid only on the Brands or Standards specified.

NOTE C: If there is an inconsistency or conflict in the Bid amount, the lowest amount shall control, whether expressed in numbers or words.

2.01 BID:

Include the cost of all labor and material for the contract listed below. Bidder is to fill in all blanks related to the Bid Package for which a bid is being submitted. If no bid is submitted for an item, leave the item blank or insert "NO BID" in the blank. For alternate items, indicate whether the amount stated is in addition to or a deduction from the base bid amount (if there is no indication whether the amount for an alternate is an addition or a deduction, the amount shall be a deduction).

2.02 Bidder will complete the Work in accordance with the Contract Documents for the following price(s):

Lump Sum – All Work.

_____ Dollars ($ _____)
(Words) (Figures)

2.03 Alternates: N/A

2.04 Unit Prices: N/A

3.01 INSTRUCTIONS FOR SIGNING

A. The person signing for a sole proprietorship must be the sole proprietor or his authorized representative. The name of the sole proprietor must be shown below.

B. The person signing for a partnership must be a partner or his authorized representative.

C. The person signing for a corporation must be the president, vice president or other authorized representative; or he must show authority, by affidavit, to bind the corporation.

D. The person signing for some other legal entity must show his authority, by affidavit, to bind the legal entity.

4.01 BIDDER CERTIFICATIONS. The Bidder hereby acknowledges that the following representations in this bid are material and not mere recitals:

1. **The Bidder acknowledges that this is a public project involving public funds, and that the Owner expects and requires that each successful Bidder adhere to the highest ethical and performance standards. The Bidder by submitting its bid pledges and agrees that (a) it will act at all times with absolute integrity and truthfulness in its dealings with the Owner and the Design Professional, (b) it will use its best efforts to cooperate with the Owner and the Design Professional and all other Contractors on the Project and at all times will act with professionalism and dignity in its dealings with the Owner, Design Professional and other Contractors, (c) it will assign only competent supervisors and workers to the Project, each of whom is fully qualified to perform the tasks that are assigned to him/her, and (d) it has read, understands and will comply with the terms of the Contract Documents.**

2. The Bidder represents that it has had a competent person carefully and diligently review each part of the Contract Documents, including any Divisions of the Specifications and parts of the Drawings that are not directly applicable to the Work on which the Bidder is submitting its bid. By submitting its bid, each Bidder represents and agrees, based upon its careful and diligent review of the Contract Documents, that it is not aware of any conflicts, inconsistencies, errors or omissions in the Contract Documents for which it has not notified the Design Professional in writing at least ten (10) days prior to the bid opening. If there are any such conflicts, inconsistencies, errors or omissions in the Contract Documents, the Bidder (i) will provide the labor, equipment or materials of the better quality or greater quantity of Work; and/or (ii) will comply with the more stringent requirements. The Bidder will not be entitled to any additional compensation for any conflicts, inconsistencies, errors or omissions that would have been discovered by such careful and diligent review, unless it has given such prior written notice to Design Professional.

3. The Bidder represents that it has had a competent person carefully and diligently inspect and examine the entire site for the Project and the surrounding area, including all parts of the site applicable to the Work for which it is submitting its bid, and carefully correlate the results of the inspection with the requirements of the Contract Documents. The Bidder agrees that its bid shall include all costs attributable to site and surrounding area conditions that would have been discovered by such careful and diligent inspection and examination of the site and the surrounding area, and the Bidder shall not be entitled to any Change Order, additional compensation, or additional time on account of conditions that could have been discovered by such an investigation.

4. The Bidder represents, understands and agrees that a) the Claim procedures in the General Conditions as modified for the Project are material terms of the Contract Documents, b) if it has a Claim, it will have its personnel provide complete and accurate information to complete and submit the Statement of Claim form on a timely basis, c) the proper completion and timely submission of a Statement of Claim form is a condition precedent to any change in the Contract Sum or the Contract Time(s), and d) the proper and timely submission of the Statement of Claim form provides the Owner and the Design Professional with necessary information so that the Owner may investigate the Claim and mitigate its damages.

5. The Bidder represents that the bid contains the name of every person interested therein and is based upon the Standards specified by the Contract Documents.

6. The Bidder and each person signing on behalf of the Bidder certifies, and in the case of a bid by joint venture, each member thereof certifies as to such member's entity, under penalty of perjury, that to the best of the undersigned's knowledge and belief: (a) the Base Bid, any Unit Prices and any Alternate bid in the bid have been arrived at independently without collusion, consultation, communication or agreement, or for the purpose of restricting competition as to any matter relating to such Base Bid, Unit Prices or Alternate bid with any other Bidder; (b) unless otherwise required by law, the Base Bid, any Unit Prices and any Alternate bid in the bid have not been knowingly disclosed by the Bidder and will not knowingly be disclosed by the Bidder prior to the bid opening, directly or indirectly, to any other Bidder who would have any interest in the Base Bid, Unit Prices or Alternate bid; (c) no attempt has been made or will be made by the Bidder to induce any other Person to submit or not to submit a bid for the purpose of restricting competition; and (d) the statements made in this Bid Form are true and correct.

7. The Bidder will execute the form of Owner/Contractor Agreement in the form included with the Contract Documents, if a Contract is awarded on the basis of this bid, and if the Bidder does not execute the Contract Form for any reason, other than as authorized by law, the Bidder and the Bidder's Surety are liable to the Owner.

8. The Bidder certifies that the upon the award of a Contract, the Contractor will ensure that all of the Contractor's employees, while working on the Project site, will not purchase, transfer, use or possess illegal drugs or alcohol or abuse prescription drugs in any way.

9. The Bidder agrees to furnish any information requested by the Design Professional or the Owner's authorized representative to evaluate that the Bidder has submitted the lowest responsible bid and that the bid is responsive to the specifications.

10. The Bidder certifies that it has no unresolved findings for recovery issued by the Auditor of State.

11. The Bidder certifies that it is aware of and in compliance with the requirements of Ohio Revised Code Section 3517.13 regarding campaign contributions.

12. The Bidder further states that it is a duly licensed contractor, for the type of work proposed, in accordance with the local requirements, and that all fees, permits, etc., pursuant to submitting this Bid have been paid in full.

LEGAL NAME OF BIDDER: _____

BIDDER IS (check one): __ sole proprietor __ partnership __ corporation __ other legal entity

NAME & TITLE OF PERSON LEGALLY AUTHORIZED TO BIND BIDDER TO A CONTRACT:

_____
Name Title

DATE SIGNED: _____

SIGNATURE: _____

ADDRESS: _____

_____

TELEPHONE: _____

FAX: _____

FEDERAL TAX I.D. # _____

When the Bidder is a partnership or a joint venture, state name and address of each partner in the partnership or participant in the joint venture below:

_____ _____

_____ _____

Name

_____

Address

_____ _____

_____ _____

Name

_____

Address

_____ _____

_____ _____

Name

_____

Address

_____ _____

_____ _____

Name

_____

Address

_____ _____

_____ _____

Name

_____

Address

END OF SECTION

CONTRACTOR'S QUALIFICATION STATEMENT

SUBMITTED TO: _____
_____
_____
_____

NAME OF PROJECT: _____

SUBMITTED BY: _____

CONTRACTOR PROJECT CONTACT NAME: _____

ADDRESS: _____

EMAIL: _____

PHONE: _____

PRINCIPAL OFFICE: _____

☐ Corporation
☐ Partnership
☐ Individual
☐ Joint Venture
☐ Other

#	Question	Response
1 - Organization		
1.1	How many years has your organization been in business as a Contractor in the construction industry?	
1.2	How many years has your organization been in business under its present business name?	
1.2.1	Under what other or former names has your organization operated?	
1.3	Is your organization a corporation? If yes, answer #1.3.1 – 1.3.6	
1.3.1	Date of incorporation	
1.3.2	State of incorporation	

1.3.3	President's name	
1.3.4	Vice President's name(s)	
1.3.5	Secretary's name	
1.3.6	Treasurer's name	
1.4	Is your organization a partnership? If yes, answer #1.4.1 – 1.4.3	
1.4.1	Date of organization	
1.4.2	Type of partnership (if applicable)	
1.4.3	Name(s) of general partner(s)	
1.5	Is your organization individually owned? If yes, answer #1.5.1 – 1.5.2	
1.5.1	Date of organization	
1.5.2	Name of owner	
1.6	If the form of your organization is other than those listed above, describe it and name the principals.	

2 - Licensing		
2.1	List jurisdictions and trade categories in which your organization is legally qualified to do business, and indicate registration or license numbers, if applicable.	
2.2	List jurisdictions in which your organization's partnership or trade name is filed.	
2.3	List any suspension or revocations of any professional license of any director, officer, owner, or managerial employees of your organization, to the extent that any work to be performed on this Project is within the field of such licensed profession.	
3 - Financing: After bid opening, within 24 hours of a request made by the Owner or Design Professional, the apparent low Bidder and any other Bidder must submit additional financial information as requested.		
4 - References		
4.1	Trade References	

4.2	Bank References	
4.3	Surety – name of bonding company	
4.4	Surety – name and address of agent	
5 – Claims and Organization History		
5.1	Attach your organization's record for both resolved and unresolved findings of the Auditor of the State of Ohio for recovery as defined in Section 9.24 of the Ohio Revised Code. If none, state "none".	
5.2	Does your organization participate in a drug-free workplace program?	
5.3	Has your organization ever failed to complete any work or failed to complete any work by the substantial completion date, final completion date, or in a timely manner? If yes, attach details.	
5.4	Within the last five years, has your organization or any of its officers prosecuted any Claims, had any Claims prosecuted against it or them, or been involved in or is currently involved in any mediation or arbitration proceedings or lawsuits related to any construction project, or has any judgments or awards outstanding against it or them? If the answer is yes, please attach the details for each Claim, including the names and telephone numbers of the persons who are parties, the amount of the Claim, the type of Claim and basis for the Claim, and the outcome. Note: As used in this document "Claim" means a Claim initiated under the Contract Documents for a project or relating to the Work for a project, including Claims made against performance bonds secured by the Contractor on other construction projects.	

5.5	Within the last five years, has your organization received a citation, notice of violation, or other form of written violation relating to federal, state, and local laws, rules and regulations including but not limited to the Occupational Safety and Health Act, the Ohio Prevailing Wage laws, and Ohio ethics laws? If yes, please attach details and reason(s) for each instance and the outcome including any fines or penalties imposed.	
5.6	Within the last five years, has any officer or principal of your organization ever been an officer or principal of another organization when it failed to complete a construction contract? If the answer is yes, please attach details for each instance, including the names and telephone numbers of the persons who are parties to the contract, and the reason(s) the contract was not completed.	
5.7	If any of the following members of your organization's management – president, chairman of the board, or any director – operates or has operated another construction company during the last five years, identify the member of management and the name of the construction company.	
5.8	If your organization is operating under a trade name registration with the Secretary of State for the State of Ohio, identify the entity for which the trade name is registered. If none, state "none."	
5.9	If your organization is a division or wholly-owned subsidiary of another entity or has another relationship with another entity, identify the entity of which it is a division or wholly-owned subsidiary or with which it has another relationship and also identify the nature of the relationship. If none, state "not applicable."	
5.10	List any projects within the previous five years where a public entity determined that your organization was not a responsible bidder, including the name of the public entity, the reasons given by the public entity, and an explanation thereof.	
6 - Experience		

6.1	List the categories of work that your organization normally performs with its own forces	
6.2	State average annual amount of construction work your organization has performed during the last five years	
6.3	State total amount of work in progress and under contract	
6.4	Describe the size and experience of your organization's work force and your equipment and facilities, in relation to your organization's ability to complete the Project successfully and on time.	

6.5 In the chart below, provide the following information for each contract your organization has had during the last five years, including current contracts, where the Contract Sum is/was 50% or more of the bid amount for this Project, including add alternates.
Include details regarding timeliness of performance and quality of work.

List the original contract price for each project, the amount of any change orders or cost overruns on each, and the reasons for the change orders or cost overruns, and your organization's record for complying with and meeting completion deadlines on construction projects.

If there are more than ten of these contracts only provide information on the most recent ten contracts, including current contracts.

Project/Scope of Work	Original Contract Sum	Amount of any change orders or cost overruns and reasons	Completion deadlines met?	Owner's Contact & Telephone Number	Engineer's or Architect's Representative Name & Telephone Number

Project/Scope of Work	Original Contract Sum	Amount of any change orders or cost overruns and reasons	Completion deadlines met?	Owner's Contact & Telephone Number	Engineer's or Architect's Representative Name & Telephone Number

Project/Scope of Work	Original Contract Sum	Amount of any change orders or cost overruns and reasons	Completion deadlines met?	Owner's Contact & Telephone Number	Engineer's or Architect's Representative Name & Telephone Number

6.6 In the chart below, provide the following information for each project your organization has had during the last five years, which your organization believes is of comparable or greater size and complexity than the Owner's project. If there are more than five of these projects, only provide information on the most recent five projects, including current projects.

Project and Scope of Work	Contract Sum	Owner's Contact & Telephone Number	Engineer's or Architect's Representative Name & Telephone Number

6.7	In the chart below, list the construction education, training and construction experience for each person who will fill a management role on the Project, including without limitation the Project Executive, Project Engineer, Project Manager, and Project Superintendent. For each person listed, include with the other information, the last three projects on which the person worked and the name and telephone number of the design professional and the Owner. Attach a separate sheet if necessary, identifying the question number.

Name/Role	Education and Training	Project #1, Owner & A/E Contact, Telephone Number	Project #2, Owner & A/E Contact, Telephone Number	Project #3, Owner & A/E Contact, Telephone Number

6.8	In the chart below, list construction projects your organization has in progress with an original Contract Sum of more than $100,000.00, giving the name of project, owner and its telephone number, design professional and its telephone number, contract amount, percent complete and scheduled completion date. Attach a separate sheet if necessary, identifying the question number.

Project/Scope of Work	Contract Sum	Scheduled Completion Date	% Complete	Owner's Contact & Telephone Number	Engineer's or Architect's Representative Name & Telephone Number

Additional Criteria. The Owner, in its discretion, reserves the right to request additional information and documentation relating to the foregoing and related to any of the criteria listed in the Bidding and Contract Documents after the bid opening. The Owner may consider such information and documentation in determining which bidder is the lowest responsible. The Owner, in its discretion, may consider and give such weight to any and all criteria as it deems appropriate.

Certification. The undersigned certifies for the reliance of the Owner that after diligent investigation, to the best of the undersigned's belief, the information provided with this Contractor's Qualification Statement is true, accurate and not misleading.

SIGNATURE_____

Dated at this ____ day of _____, 20__.

Name of Organization: _____

By: _____[PRINT NAME]

Signature: _____

Title: _____

_____, being duly sworn, deposes and says that the information provided herein is true and sufficiently complete so as not to be misleading. The notarial act certified hereby is a jurat. An oath or affirmation was administered to the signer with regard to the notarial act certified to hereby.

Subscribed and sworn before me this _____ day of _____ 20__.

_____
Notary Public

My Commission Expires: _____

SEAL

OWNER-CONTRACTOR AGREEMENT

Owner:

Valley View Local School District Board of Education
59 Peffley Street
Germantown, Ohio 45327

Project: Board Office Renovation Project

Location: 6027 Farmersville Pike, Germantown, Ohio 45327

Contractor:

_____
_____
_____

Contact: _____
Phone: _____
Email: _____

Owner, a political subdivision of the State of Ohio, and Contractor have entered into this Owner-Contractor Agreement ("Agreement") and is effective as of _____ (the "Effective Date"; provided however that if no date is inserted, the Effective Date shall be the date the Agreement is signed by the Owner).

The Project Owner and Contractor agree as follows:

1. WORK.

1.1. Contractor will furnish all the labor, services, materials, plant, equipment, tools, scaffolds, appliances, and all other things (collectively called the "Work") necessary for the timely and proper completion of the Project.

1.2. Contractor must at all times furnish sufficient skilled workers, materials, and equipment to perform the Work in strict conformance with the Contract Documents and to the entire satisfaction of Owner, so as to complete the Project by the Date for Substantial Completion. All materials and equipment provided must be new, free from all defects, fit for the purpose for which intended, and merchantable.

1.3. Contractor will assign a competent Project Supervisor. At the Owner's request, Contractor will replace the Project Supervisor, provided that the request is reasonable. Owner will not be responsible for the acts or omissions of the Project Supervisor or his assistants.

1.4. Contractor shall be responsible for cutting, fitting, or patching required to complete the Work or it make its parts fit together properly.

2. CONTRACT DOCUMENTS.

2.1. The Contract Documents consist exclusively of the following documents incorporated by reference:

A. Legal Notice;
B. Instructions to Bidders;
C. Bid Form;
D. Owner-Contractor Agreement, including all exhibits attached hereto;
E. Drawings and Specifications prepared by Oregon Group Architects, Inc.;
F. Executed Bid Guaranty and Contract Bond;
G. Sales & Use Tax/ Construction Contract Exemption Certificate;
H. Statement of Claim Form;
I. Design Professional's Certificate of Substantial Completion;
J. Contractor's Affidavit of Payment or Amounts Withheld;
K. Contractor's Waiver and Release Affidavit;
L. Subcontractors/ Suppliers Waiver and Release Affidavit;
M. Contractor's Final Waiver and Release Affidavit;
N. Subcontractors/ Suppliers Final Waiver and Release Affidavit;
O. Pre-Bid Substitution Form;
P. Addenda issued;
Q. Executed Contractor's Personal Property Tax Affidavit (O.R.C. 5719.042);
R. Modifications issued after the execution of the contract, including:

a. A written amendment to the Agreement signed by both parties;
b. A Change Order; or
c. A Construction Change Directive

2.2. Contractor will use the State of Ohio Subcontract Form for all subcontracted Work, in accordance with ORC Section 153.503(C) and OAC Section 153:1-3-02.

2.3. Unless otherwise stated in the Contract Documents, words that have well-known technical or construction industry meanings are used in the Contract Documents in accordance with such recognized meanings. Days shall mean calendar days unless noted otherwise.

3. OWNER REPRESENTATIVE AND DESIGN PROFESSIONAL.

3.1. Design Professional. The Design Professional for this Project is Oregon Group Architects, Inc. The Design Professional prepared the drawings and specifications for the Work. The Design Professional will also provide construction administration services for the Project. The Contractor will coordinate with the Design Professional, as instructed by the Owner.

3.2. Erick Depew, Director of Operations, is the Owner's Representative with respect to all matters involving Owner.

3.2.1. Except as specifically stated to the contrary elsewhere in this Agreement, Contractor will direct all communications to Owner through the Owner's Representative.

3.3. Contractor will coordinate the Work with the Owner and Owner's separate contractors, consultants, or other agents. Contractor will provide access to the Work at all times.

4. TIME FOR COMPLETION AND PROJECT COORDINATION.

4.1. Contract Time. The Work shall commence as of the Effective Date of this Agreement (the "Date of Commencement"), with all associated Work being completed on or before **August 3, 2026** (the "Date for Substantial Completion").

4.1.1. Substantial Completion. Substantial Completion is the stage in the progress of the Work when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work for its intended use. Notwithstanding anything in the Contract Documents to the contrary, this shall include, but is not limited to, start up and successful testing of all systems and equipment. For purposes of releasing retainage in accordance with Ohio Revised Code 153.13, Substantial Completion shall not be effective until a certified payment application for release of such retainage has been received by Owner.

4.1.2. Within thirty days of Substantial Completion of the Work or a designated portion thereof, as certified by the Design Professional or confirmed by the Owner, and Owner's receipt of consent of the Contractor's surety, if any, the Owner shall make a payment of retainage applying to such Work and any interest thereon accrued. Such payment shall be adjusted for Work that is incomplete or not in accordance with the requirements of the Contract Documents. The Owner is entitled to withhold 200% of the value of such incomplete or nonconforming Work as necessary to assure Final Completion, per Ohio Revised Code 153.13.

4.1.3. Date of Final Completion. Final Completion shall mean that the Work is complete in all respects in accordance with the Contract Documents and the Contractor has submitted to the Owner all required documents. The date of Final Completion shall be within **21** calendar days from the Date of Substantial Completion.

4.2. Time is of the Essence. THE DATES IN THE CONTRACT DOCUMENTS ARE OF THE ESSENCE OF THIS AGREEMENT. CONTRACTOR WILL PROSECUTE ITS WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, INCLUDING ANY AMENDMENTS THERETO.

4.3. Contractor's Construction and Submittal Schedules

4.3.1. The Contractor shall prepare for Owner's review and approval the construction schedule ("Construction Schedule") and a corresponding detailed schedule of values pursuant to the Ohio Revised Code Section 153.13 within seven (7) calendar days after the Effective Date. The schedule of values must be broken

out into labor and materials for each line item. The Contractor shall prepare the Construction Schedule in Critical Path Method ("CPM") format unless provided otherwise in the Contract Documents or otherwise in writing by the Owner. Each major category of Work shall be shown separately in the Construction Schedule with all the significant activities involved, showing durations of time, manpower requirements, and restraints. The Construction Schedule is for the purpose of coordinating the timing, phasing, and sequence of the Work of the Contractor and shall not change or modify the Date for Substantial Completion. The Date for Substantial Completion shall only be changed or modified by Change Order, other Modification, or a Claim that is Finally Resolved, regardless of the dates in the Construction Schedule.

4.3.1.1. The Contractor shall update the Construction Schedule each month;

4.3.1.2. The Construction Schedule shall be manpower loaded;

4.3.1.3. The Contractor shall, on a weekly basis, prepare and submit to the Owner a written report describing the activities begun or finished during the preceding week, Work in progress, expected completion of the Work, a look-ahead projection of all activities to be started or finished in the upcoming two (2) weeks, including without limitation the Contractor's workforce crew size and total resource hours associated with such Work and any other information requested;

4.3.1.4. The float in the Construction Schedule and any updates to it shall belong to the Owner. Float shall mean the amount of time by which activities may be delayed without affecting the Date for Substantial Completion; and

4.3.1.5. The Contractor's obligation to submit requested scheduling information is a material term of its Contract. If the Contractor fails to submit requested scheduling information in writing within five (5) days of a request for such information from the Owner, the Contractor shall pay and the Owner may withhold from the Contractor Liquidated Damages at the rate of Fifty Dollars ($50.00) a day for each calendar day thereafter that the Contractor fails to submit the requested information.

4.3.2. The Contractor shall perform the Work in accordance with the most recent Construction Schedule submitted to the Owner, provided that the Contractor shall comply with any orders under Section 4.3.3. However, preparation of such schedule shall not constitute a waiver of the Owner's rights under the Contract to have the Work completed by the Date for Substantial Completion.

4.3.3. If the Owner determines that the performance of the Work has not progressed so that it is likely that the Contractor will not achieve Substantial Completion of its Work by the Date for Substantial Completion, the Owner shall have the right to order the Contractor to take corrective measures necessary to expedite the Work, including, without limitation: (i) working additional shifts or overtime; (ii) supplying additional manpower, equipment, and facilities, and (iii) other similar measures ("Corrective Measures"). If the Owner orders the Contractor to take such corrective measures, the Contractor shall take and continue such Corrective Measures until the Owner is satisfied that the Contractor is likely to achieve Substantial Completion of its Work by its Date for Substantial Completion.

4.3.3.1. The Contractor shall not be entitled to adjustment in the Contract Sum in connection with the Corrective Measures required by the Owner pursuant to this Section 4.3.3, unless the Contractor is able to establish that it is entitled to additional compensation under the terms of the Contract Documents.

4.4. Delays and Accelerations.

4.4.1. Notice of Delays. Contractor will give Owner written notice of any delay affecting its Work in the form and with the information specified in the Contract Documents within forty-eight (48) hours of the commencement of the delay; provided that the 48-hour notice will be extended to ten (10) days for unusually severe weather conditions not reasonably anticipatable. The failure to give the required notice constitutes an irrevocable waiver of Contractor's right to seek an extension of time and/or additional compensation/damages for the delay.

4.4.2. Acceleration of the Work. Owner may require Contractor to accelerate its Work by adding workers or working additional shifts, extended shifts or overtime, so that the Work is in final form before the Date for Substantial Completion. If Owner requires Contractor to accelerate its Work, Contractor will within five (5) days take the required action, and Owner thereafter will issue a Change Order increasing the Contract Sum to pay for Contractor's additional costs of accelerating its Work so that the Work is in final form before the Date

for Substantial Completion. If there is a dispute as to whether Contractor is entitled to a Change Order for accelerating its Work, Contractor must proceed to accelerate its Work without waiting for a Change Order or payment of any additional compensation, but may reserve its right to make a claim against Owner for its additional costs incurred in accelerating its Work. Contractor's additional costs for accelerating its Work will be determined in accordance with Section 4.4.3.

4.4.3. Compensation for Acceleration of the Work.

4.4.3.1. Owner's Obligation to Pay. When Owner initiates the acceleration of the Work, Owner will pay Contractor, as provided in Section 4.4.3.2, for Contractor accelerating its Work so that its Work is substantially complete by the Date for Substantial Completion. However, when Contractor's Work is ordered to be accelerated as a result of Contractor's own fault or the fault of its subcontractors or suppliers, Owner will not pay Contractor for such acceleration.

4.4.3.2. Compensation for Acceleration of the Work. To the extent that Owner requires Contractor to accelerate its Work so that the Work is in final form before the Date for Substantial Completion, Owner will pay Contractor for Contractor's reasonable additional costs of accelerating its Work, as determined in accordance with this section. The additional costs of accelerating the Work will be (a) any premium for overtime, additional shift work, or extended shift work, (b) the cost of any additional supervision or general conditions required by the acceleration, (c) out of pocket cost of any additional equipment required for the acceleration, (d) to the extent Contractor can document lost productivity due to the acceleration, the cost associated with such lost productivity, and (e) overhead, including home office overhead, and profit equal to 10% of the total amount of the other items for which additional compensation is permitted under this section. The foregoing are the only additional compensation and/or damages Contractor will be entitled to receive for accelerating its Work so that it is complete before the Date for Substantial Completion. As a condition precedent to its recovery of additional compensation, Contractor must provide Owner with full information about the costs of accelerating its Work in the form and format requested by Owner.

5. CORRECTIVE ACTION.

5.1. If Owner determines that Contractor is in default by not cooperating or coordinating its Work properly with its subcontractors, not supplying sufficient skilled workers, not cleaning up the Project, not furnishing the necessary materials, equipment, or any temporary services or facilities to perform the Work in strict conformance with the Contract Documents, or Contractor is not on schedule, or is not otherwise performing its obligations under the Contract Documents, CONTRACTOR MUST WITHIN TWO (2) BUSINESS DAYS AFTER NOTICE OF SUCH DETERMINATION, (1) COMMENCE SUCH ACTION AS IS NECESSARY TO CORRECT THE DEFICIENCIES NOTED BY OWNER, (2) PROCEED TO CORRECT SUCH DEFICIENCIES WITHIN FIFTEEN (15) DAYS OF SUCH NOTICE OR, (3) IF OWNER INSTRUCTS CONTRACTOR TO TAKE URGENT CORRECTIVE ACTION TO PROTECT PERSONS OR PROPERTY, IMMEDIATELY TAKE SUCH CORRECTIVE ACTION, including but not limited to increasing the number of skilled workers, providing temporary services or facilities, and cleaning up the Project. Such corrective action shall be taken and continued without interruption and without waiting to initiate any dispute under this Agreement or the resolution of any dispute initiated under this Agreement. Failure to comply with this provision shall be an additional default.

6. COMPENSATION.

6.1. Contract Sum. The Contract Sum to be paid by Owner to Contractor, as provided herein, for the satisfactory performance and completion of the Work and all of the duties, obligations and responsibilities of Contractor under this Agreement and the other Contract Documents is $_____. The Contract Sum includes the following:

6.1.1. [Not Used.]

6.1.2. [Not Used.]

6.1.3. [Not Used.]

6.1.4. [Not Used.]

6.2. The Contract Sum includes all federal, state, county, municipal, and other taxes imposed by law, including but not limited to any sales, use, and personal property taxes payable by or levied against Contractor on account of the Work or the materials incorporated into the Work. Contractor is responsible to pay any such taxes.

6.3. The Contract Sum includes fees and costs for any required building permit as well as other permits, fees, licenses, and inspections by government agencies necessary for proper execution and completion of the Work that are customarily secured after execution of the Contract and legally required at the time negotiations are concluded. Contractor is responsible to secure any such permits, fees, licenses, and inspections.

6.4. Liquidated Damages.

6.4.1. Contractor must achieve Substantial Completion by the date stated in Section 4.1 and Final Completion by the date stated in Section 4.1.3. By entering into this Agreement, Contractor agrees that the period for performing the Work is reasonable and that Contractor can achieve Substantial Completion and Final Completion by the dates identified in this Agreement.

6.4.2. Liquidated Damages for Substantial Completion. If Contractor does not achieve Substantial Completion of its Work on the Project by the Date for Substantial Completion stated in Section 4.1, Contractor shall pay the Owner (and the Owner may set off from sums coming due Contractor) liquidated damages in the per diem amount stated in the following chart for each calendar day beyond the Date for Substantial Completion, as may be modified in accordance with the Contract Documents, that the Contractor fails to achieve Substantial Completion.

Contract Sum Amount	Dollars Per Day
$0.01 to $50,000.00	$100.00
$50,000.01 to $150,000.00	$200.00
$150,000.01 to $500,000.00	$300.00
$500,000.01 to $750,000.00	$400.00
$750,000.01 to $1,000,000.00	$500.00
$1,000,000.01 to $2,000,000.00	$700.00
More than $2,000,000.00	$1,000.00

6.4.3. Liquidated Damages for Final Completion. If Contractor does not achieve Final Completion of its Work on the Project by the date of Final Completion stated in Section 4.1.3, Contractor shall pay the Owner (and the Owner may set off from sums coming due Contractor) liquidated damages in the per diem amount stated in the following chart for each calendar day beyond the Date of Final Completion, as may be modified in accordance with the Contract Documents, that the Contractor fails to achieve Final Completion.

Contract Sum Amount	Dollars Per Day
$0.01 to $50,000.00	$50.00
$50,000.01 to $150,000.00	$100.00
$150,000.01 to $500,000.00	$150.00
$500,000.01 to $750,000.00	$200.00
$750,000.01 to $1,000,000.00	$250.00
$1,000,000.01 to $2,000,000.00	$350.00
More than $2,000,000.00	$500.00

6.4.4. Contractor acknowledges by signing this Agreement with Owner that the amounts of liquidated damages represent a reasonable estimate of the actual damages Owner would incur if the Work is not substantially complete or finally complete by the foregoing dates and that the damages that may result from the failure to substantially complete or finally complete the work by the foregoing dates are uncertain and difficult to ascertain. No waiver of consequential damages shall preclude the Owner from recovering liquidated damages. In the event Contractor fails to achieve Substantial Completion by the date of Final Completion, Contractor shall accrue liquidated damages for both Substantial Completion and Final Completion until each respective date is met.

6.4.5. Nothing in this Section 6.4 shall preclude the Owner from recovering its actual damages from the Contractor for third-party claims against the Owner or damages not associated with delay.

7. PAYMENT AND RETAINAGE.

7.1. Payment.

7.1.1. Applications for Payment. Payment applications shall be submitted on a monthly basis and shall reflect the amount of Work completed as of the date the application for payment is submitted consistent with the schedule of values. Payment applications must be received by the Owner not later than the fifteenth (15th) day of the month; payment applications received after the 15th day of the month will be deemed to be received in the following month and will be held for payment during the following payment period. With each application for payment the Contractor shall submit one copy of the following documentation:

(a) Invoice for Work performed and materials and equipment provided for the previous pay period;

(b) If required for the Project, the Certified Payroll Report for payment of prevailing wages;

(c) Lien waivers from itself and all subcontractors, suppliers, and any other party that performed Work or supplied materials for the Project in a form acceptable to the Owner for the Work performed during the current billing period; and

(d) Such other supplemental information as the Owner may require. Such other information may include a schedule of all materials and equipment stored on site.

7.1.2. Owner may withhold payment in whole or in part, and may demand that Contractor refund amounts previously paid, to protect Owner from loss because of:

(a) Contractor's default or failure to perform any of its obligations under the Contract Documents, including but not limited to: failure to provide sufficient skilled workers; Work, including equipment or materials, which is defective or otherwise does not conform to the Contract Documents; failure to conform to the Contract Time or Construction Schedule; and failure to follow the directions of or instructions from Owner;

(b) Contractor's default or failure to perform any of its obligations under another contract that it has with Owner;

(c) The filing of third party claims, or reasonable evidence that third party claims have been or will be filed;

(d) The Work has not proceeded to the extent set forth in the application for payment;

(e) Any representations made by Contractor are untrue;

(f) The failure of Contractor to make payments to its Subcontractors;

(g) Damage to Owner's property or the property of another person or laborer;

(h) The determination that there is a substantial possibility that the Work cannot be completed for the unpaid balance of the Contract Sum; and/or

(i) Liens filed or reasonable evidence indicating the probable filing of such liens.

7.1.3. Owner will pay Contractor within thirty (30) days after receipt of the Contractor's certified payment application, provided that the payment application has been properly submitted on a timely basis and is accompanied by all of the required documentation and certified by the Design Professional or Owner. Amounts unpaid after thirty (30) days after Owner's receipt of the certified payment application shall bear interest at the rate of zero percent (0%).

7.2. Retainage.

7.2.1. Amount of Retainage.

7.2.1.1. Payments for Labor. Payments for labor incorporated into the Work will be at the rate of 96% of the amount set forth in Contractor's payment application and approved by Owner, unless the parties agree otherwise.

7.2.1.2. Payments for Materials and Equipment. Payments for materials and equipment will be at the rate of 92% of the invoice cost of materials and equipment delivered to the Project site or other storage site approved by Owner. The balance of the invoice cost will be payable when the materials or equipment are incorporated into the Work. Incorporated into the Work means such materials and equipment are installed and conform to the requirements of the Contract Documents. When payment is made on account of materials or equipment not yet incorporated into the Project, such materials and equipment will become the property of Owner; provided that if such materials or equipment are stolen, destroyed, or damaged before being fully incorporated into the Project, Contractor shall be required to replace them at its expense.

7.2.1.3. No Subcontractor shall be paid at a rate lower than the rate being paid to the Contractor by the Owner.

7.2.2. Interest on Retainage.

7.2.2.1. Contractor agrees that Owner may hold retained amounts in the project construction fund and is not required to deposit the retained funds into a separate interest-bearing savings account. The balance of the retained funds, plus any interest, will be paid to Contractor within thirty days of Final Completion of the Project, as its final payment for the Project, less any amounts reasonably needed to cover damages or costs incurred by Owner related to the Work.

7.2.3. Documentation. Upon request, Contractor immediately will supply Owner with requested information so as to verify the amounts due to Contractor, including but not limited to original invoices for materials and equipment and documents showing that Contractor has paid for such materials and equipment, and so as to verify that amounts due laborers, subcontractors, and materialmen have been paid to them.

7.3. Final Payment.

7.3.1. The final application for payment shall be itemized and submitted after completion of the Work specified for the Project. Contractor shall ensure that the final application for payment shall contain one (1) copy of each of the following documents, if not previously delivered to Owner.

(a) All items required in Section 7.1.1;

(b) Contractor's Certificate of Insurance;

(c) Contractor's Workers' Compensation Certificate;

(d) Consent of Contractor's Surety to Payment;

(e) An assignment to Owner of all warranties obtained or obtainable by Contractor from manufacturers and suppliers of equipment and materials incorporated into the Work by written instrument of assignment in a form acceptable to Owner; and

(f) Such other documentation as required by the Contract Documents, Owner, or applicable law, including but not limited to, the final certified payroll report and required Affidavit of Compliance if Prevailing Wages are required for the Project.

7.3.2. The making of Final Payment by Owner does not constitute a waiver of Claims by Owner for the following:

(a) Liens, Claims, security interests, or encumbrances arising out of the Contract Documents that are unsettled;

(b) Failure of the Work to comply with the requirements of the Contract Documents;

(c) Terms of warranties required by the Contract Documents;

(d) Claims for Indemnification;

(e) Claims about which Owner has given Contractor notice; or

(f) Claims arising after Final Payment.

8. CHANGES IN THE WORK.

8.1. Change Orders.

8.1.1. A Change Order is a written instrument signed by Owner and Contractor stating their agreement upon a change in the Work, the amount of the adjustment or the method for computing the amount of the adjustment of the Contract Sum, if any, and the extent of the adjustment in the Contract Time, if any.

8.1.2. All Change Orders shall be submitted with any supporting documentation requested by the Owner in advance of the performance of the Work that is the subject of the Change Order and must be approved by the Owner in writing in advance of the performance of the Work that is the subject of the Change Order.

8.1.3. The agreement on any Change Order shall constitute a final settlement of all matters relating to the change in the Work that is the subject of the Change Order, including but limited to all direct, indirect, and cumulative costs that include reasonable overhead and profit associated with such change and any and all adjustments to the Contract Sum and in the Contract Time. Total cumulative overhead and profit for Contractor and all Subcontractors on any add or deduct Change Order shall not exceed 15% of the total cost of labor and material. The Contractor shall not proceed with any change in the Work without a signed Change Order. The Contractor's failure to timely seek and obtain such authorization as specified herein, shall constitute an irrevocable waiver by the Contractor of an adjustment to the Contract Sum or the Contract Time for the related work.

8.2. Construction Change Directives.

8.2.1. A Construction Change Directive is a written order prepared and signed by the Owner, directing a change in the Work prior to agreement on adjustment, if any, in the Contract Sum or Contract Time, or both. The Owner may by Construction Change Directive, without invalidating the Contract, order changes in the Work within the general scope of the Contract consisting of additions, deletions, or other revisions, the Contract Sum and Contract Time being adjusted accordingly.

8.2.2. A Construction Change Directive shall be used in the absence of total agreement of a Change Order.

8.2.3. Upon receipt of a Construction Change Directive, the Contractor shall promptly proceed with the change in the Work involved and advise the Owner of the Contractor's agreement or disagreement with the method, if any, provided in the Construction Change Directive for determining the proposed adjustment in the Contract Sum or Contract Time.

8.2.4. When the Owner and Contractor agree with adjustments in the Contract Sum and Contract Time, such agreement shall be effective immediately, and the Owner will prepare a Change Order. Change Orders may be issued for all or any part of a Construction Change Directive.

8.2.5. If the Contractor disagrees with the adjustment in the Contract Time or the Contract Sum, the Contractor may make a Claim in accordance with applicable provisions of Article 9.

9. CLAIMS AND DISPUTES.

9.1. A Claim is a demand or assertion by one of the parties seeking, as a matter of right, adjustment, or interpretation of the terms of the Contract Documents, payment of money, extension of time, or other relief with respect to the terms of the Contract Documents, provided that Owner's decision to adjust or withhold payment under Section 7.1.2 will not be considered a Claim. The responsibility to substantiate claims shall rest with the party making the Claim. Contractor will not knowingly (as "knowingly" is defined in the federal False Claims Act, 31 U.S.C. Section 3729, *et seq.*) present or cause to be presented a false or fraudulent Claim. As a condition precedent to making a claim, Contractor must submit an affidavit sworn to before a notary public or other person authorized to administer oaths in the State of Ohio and executed by an authorized representative of Contractor, which states that:

> The Claim submitted herewith complies with Section 9.1 of the Owner-Contractor Agreement, which provides that "Contractor will not knowingly present or cause to be presented a false or fraudulent Claim."

9.2. Subject to the requirements of Article 9, if Contractor wishes to make a Claim for an increase in the Contract Sum, written notice must be given before proceeding to execute the Work.

9.3. Subject to the requirements of Article 9, if Contractor wishes to make a Claim for additional time, the required written notice must include an estimate of cost and probable effect of delay on progress of the Work. In the event of continuing delay, only one Claim is necessary. If adverse weather conditions are the basis for a Claim for additional time, such claim must be documented by data substantiating that weather conditions were abnormal for the period of time and could not have been reasonably anticipated, and that weather conditions had an adverse effect on the scheduled construction.

9.3.1. The delays for which the Contractor is entitled to additional time are "Excusable Delays." The only Excusable Delays are those delays on the critical path which the Contractor establishes were: (a) caused by the Owner or those in privity of contract with the Owner, (b) physical damage to the Project over which the Contractor has no control, (c) labor disputes beyond the control of the Contractor, (d) work days lost due to weather conditions as provided under Section 4.4.1, (e) concealed or unknown conditions under Section 9.4, and (f) other unforeseeable delays beyond the control of the Contractor and its subcontractors and suppliers of any tier. The delays for which the Contractor is entitled to additional time and money are "Compensable Delays." The only Compensable Delays are those Excusable Delays which the Contractor establishes were proximately caused by an improper action or failure to act by the Owner. Owner, in its sole and reasonable discretion, shall determine whether a delay entitles Contractor to time extension or additional compensation.

9.4. If conditions are encountered at the site which are (1) subsurface or otherwise concealed physical conditions that differ materially from those indicated in the Contract Documents or (2) unknown physical conditions of an unusual nature that differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, then the Contractor shall give written notice to the Owner and the Design Professional, if any, promptly before conditions are disturbed and in no event later than forty-eight (48) hours after first observance of the conditions. If the conditions are materially different and cause an increase or decrease in the Contractor's cost of, or time required for, performance of any part of the Work, Owner will issue an appropriate Change Order.

9.5. Contractor must make all claims by written affidavit per Article 9 within seven (7) days after the occurrence of the event giving rise to the Claim. Proper notice of delay as required under Section 4.4.1 is a condition precedent to entitlement of a Claim. Failure to do so results in an irrevocable waiver of the Claim.

9.6. Within ten (10) days of its receipt of a written request, Contractor must make available to Owner or its representative any books, records, or other documents in its possession or to which it has access relating to any Claim and must require its Subcontractors, regardless of tier, and materialmen to do likewise.

9.7. If a Contractor's Claim has not been resolved at the time of Substantial Completion, the Contractor's exclusive remedy is to file suit in the Common Pleas Court for the county in which the Project is located within 90 days of Substantial Completion, unless the parties otherwise agree in writing, else such Claim is waived. Each party waives its right to remove any such suit to federal court.

9.8. Unless otherwise agreed in writing, Contractor shall continue its Work on the Project and shall maintain progress during any mediation, arbitration, or litigation proceedings, and the Owner shall continue to make payments to the Contractor in accordance with this Agreement, however, the Owner shall be under no

obligation to make payments on or against any claim or amounts in dispute during the pendency of any mediation, arbitration, or litigation proceeding to resolve those claims or amounts in dispute.

9.9. Settlement Offers. If the Contractor initiates a claim, the Owner may make settlement offers to settle the Claim at any time up to the date of trial. Such settlement offers shall be subject to Rule 408 (Compromise and Offers of Compromise) of the Ohio Rules of Evidence. If at any stage of the litigation, including any appeals, the Contractor's Claim is dismissed or found to be without merit, or if the damages awarded to the Contractor on its Claim do not exceed the Owner's last settlement offer, the Contractor shall be liable to the Owner and shall reimburse the Owner for all the Owner's attorneys' fees and expenses, and arising out of or related to such Claim since the date of such last settlement offer.

9.10. Waiver of Claims for Consequential Damages. The Contractor waives Claims against the Owner for consequential damages arising out of or relating to this Contract. This waiver includes damages incurred by the Contractor for principal office expenses including the compensation of personnel stationed there, for losses of financing, business and reputation, and for loss of profit except anticipated profit arising directly from the Work. This waiver is applicable, without limitation, to all consequential damages due to the Owner's termination of the Agreement in accordance with this Agreement.

10. DEFAULT OF CONTRACTOR.

10.1. Events of Default. Each of the following constitutes an event of default of Contractor:

10.1.1. Contractor's failure to perform any of its obligations under the Contract Documents or failure to proceed to commence to correct such failure in accordance with Section 5.1.

10.1.2. Contractor's failure to pay its obligations incurred in connection with this Agreement as they become due or Contractor's insolvency.

10.2. Owner's Remedies. Upon the occurrence of an event of default, Owner has the following remedies, which are cumulative:

10.2.1. Order Contractor to stop the Work, which Contractor must do immediately;

10.2.2. To perform through others all or any part of the Work remaining to be done and to deduct the cost thereof from the unpaid balance of the Contract Sum or, if the unpaid balance of the Contract Sum is inadequate, to demand reimbursement of amounts previously paid to Contractor;

10.2.3. To terminate this Agreement and take possession of, for the purpose of completing the Work or any part of it, all materials, equipment, scaffolds, tools, appliances, and other items belonging to or possessed by Contractor, all of which Contractor hereby transfers and assigns to Owner for such purpose, and to employ any person or persons to complete the Work, including Contractor's employees, and Contractor will not be entitled to receive any further payment until the Work is completed;

10.2.4. To accept assignment of Contractor's subcontracts for the Project, pursuant to any prior rights of the surety, if any, and, at the Owners' sole discretion, to further assign the subcontracts to a successor contractor or other entity provided that (i) the Owner terminates this Agreement for cause, and (ii) provides written notice of such assignment to both Contractor and Subcontractor; and/or,

10.2.5. All other remedies that Owner may have at law or in equity or otherwise under the Contract Documents.

10.3. Termination of Agreement. The termination of this Agreement will be without prejudice to Owner's rights and remedies, including without limitation Owner's right to be indemnified by Contractor.

10.4. Payments Due Contractor. If the unpaid balance of the Contract Sum exceeds the cost of finishing the Project, including any costs, expenses, or damages incurred by Owner as a result of the event of default, including attorneys' and consultants' fees and the administrative expense of Owner's staff, such excess shall be paid to Contractor. If such costs exceed the unpaid balance, Contractor is responsible to pay the difference to Owner. The obligations under this section will survive termination of this Agreement.

11. DEFAULT OF OWNER.

11.1.1. Events of Default. The following constitutes the exclusive events of default of Owner:

11.1.1.1. Failure of Owner to perform any express material obligation under the Contract Documents and to correct such failure within thirty (30) days after receipt of written notice thereof from Contractor specifying the default and the necessary corrective action.

11.2. Contractor's Remedy.

11.2.1. Contractor's sole and exclusive remedy for the default of Owner shall be to follow the procedure set forth in Article 9.

11.2.2. Notwithstanding Section 11.2.1, if Owner fails to pay Contractor undisputed amounts as payment becomes due, Contractor may, upon fifteen (15) days written notice, stop the Work until payment of the undisputed amount owing has been received.

12. SUSPENSION OR TERMINATION FOR THE CONVENIENCE OF OWNER.

12.1. Suspension for the Convenience of Owner.

12.1.1. Owner may, without cause, order Contractor to suspend, delay, or interrupt the Work in whole or in part for such period of time as Owner may determine.

12.1.2. An equitable adjustment will be made for increases in the Contract Time and cost of performance of the Work, including profit and overhead on the increased cost of performance, caused by the suspension, delay or interruption, provided that the total cost of profit and overhead shall not exceed ten percent (10%) of the amount of the increased cost not attributable to profit or overhead. No adjustment will be made to the extent that:

(a) performance is, was or would have been so suspended, delayed, or interrupted by another cause for which Contractor is responsible; or

(b) an equitable adjustment is made or denied under another provision of this Agreement for a concurrent event.

12.2. Termination for the Convenience of Owner.

12.2.1. Owner may, in its discretion and without cause, upon three (3) business days' written notice to Contractor terminate this Agreement for Owner's convenience.

12.2.2. Upon receipt of a written notice from Owner terminating this Agreement for the Owner's convenience and without cause, the Contractor will (i) immediately cease performing any or all portions of the Work, unless otherwise directed by the Owner, in which case the Contractor will take the action directed by the Owner, (ii) immediately take all reasonable and necessary action to protect and preserve the Work, and (iii) unless otherwise directed by Owner, terminate or assign all agreements with Subcontractors and suppliers.

12.2.3. If this Agreement is terminated for the Owner's convenience and there exists no event of Contractor's default, as defined in this Agreement, the Contractor shall be entitled to receive payment (i) for Work properly executed up to the date the notice of termination is received by Contractor, including overhead and profit up to the date of termination, and (ii) for Work performed at the direction of the Owner on and after the date on which the notice of termination is received by the Contractor, as determined by the procedures applicable to Change Orders.

12.2.4. If this Agreement is terminated for the Owner's convenience and there exists an event of Contractor's default, as defined in this Agreement, Contractor will be entitled to receive only such sums as it would be entitled to receive following the occurrence of an event of default under this Agreement.

12.2.5. The termination of this Agreement will be without prejudice to any rights or remedies that exist at the time of termination.

13. INSURANCE, INDEMNIFICATION, AND BOND.

13.1. Contractor must maintain commercial general liability insurance in the minimum amount of $1,000,000.00 per incident and $2,000,000.00 aggregate, worker's compensation coverage as required by the Ohio Revised

Code, automobile liability coverage in the minimum amount of $1,000,000.00 per accident and $2,000,000 aggregate, and an umbrella policy in the minimum amount of $5,000,000.00, unless Owner approves other coverage limits in writing. Excess or umbrella coverage may be used to meet these levels of insurance. The Owner and Design Professional shall be named as an additional insured on the Contractor's insurance policies. The Contractor shall provide a certificate of insurance showing the required coverages, with the Owner named as a certificate holder and as an additional insured; Contractor also agrees to provide Owner with at least thirty (30) days' notice prior to any changes in coverage of the required insurance. The Contractor shall maintain all such coverage for a period of 3 years after the Date for Final Completion.

13.1.1. The Contractor shall maintain Contractors Errors & Omissions Liability Insurance insuring against errors and omissions arising from the Work if the Work involves any construction management or the preparation of plans and drawings, with limits of not less than $1,000,000.00 per claim. Such policy shall not contain any exclusions directed toward any types of materials, services or processes involved in the Work. The retroactive date for coverage will be no later than the commencement date of design and will state that in the event of cancellation or nonrenewal the discovery period for insurance claims will be at least three (3) years or otherwise as by written agreement with the Owner.

13.2. Insurance furnished by the Owner, if any, is not intended to and does not cover equipment and materials before they are physically incorporated into the Work or tools. Contractor bears the entire risk of loss with respect to tools, equipment, and materials. Contractor is responsible for damages to Owner's property and to adjacent property caused by or related to the Work or actions by Contractor's employees or those of its subcontractors.

13.3. The Contractor shall purchase and maintain, in a company or companies lawfully authorized to do business in the jurisdiction in which the Project is located, property insurance on an "all-risk" or equivalent policy form, including builder's risk, in the amount of the initial Contract Sum, plus the value of subsequent modifications and cost of materials supplied and installed by others, comprising total value for the entire Project at the site on a replacement cost basis without optional deductibles. Such property insurance shall be maintained, unless otherwise provided in the Contract Documents or otherwise agreed in writing by all persons and entities who are beneficiaries of such insurance, until final payment has been made as provided in Section 7.3 or until no person or entity other than the Owner has an insurable interest in the property required by this Section 13.3 to be covered, whichever is later. The insurance shall include interests of the Owner, the Contractor, Subcontractors, and Sub-subcontractors in the Project.

13.4. Owner and Contractor waive all rights, including all rights of subrogation, against each other and against Subcontractors, Sub-subcontractors, consultants, agents, and employees of the other for damages during construction, but only to the extent covered by (and not prohibited by) any applicable property insurance or builder's risk insurance, except such rights as they may have to the proceeds of such insurances.

13.5. To the maximum extent permitted by law, Contractor shall indemnify and hold harmless Owner and Owner's consultants, agents, and employees from and against all claims, damages, losses, and expenses, including but not limited to attorneys' and consultants' fees, arising out of or related to the performance of the Work, including but not limited to the failure of Contractor to perform its obligations under the Contract Documents, any claims for bodily injury, sickness, disease, or death or to injury to or destruction of or loss of use of real or personal property, claims for additional storage and handling charges, liens against funds, claims related to the alleged failure of the Contractor to perform in accordance with the Contract Documents, and/or claims related to the removal, handling, or use of any hazardous materials. Owner may withhold amounts equal to any sums for which it is entitled to be indemnified from the amounts otherwise due Contractor under the Contract Documents.

13.6. In claims against any person or entity indemnified under this Contract by an employee of Contractor, a Subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, the indemnification obligations under this Contract shall not be limited by a limitation on amount or type of damages, compensation, or benefits payable for Contractor or Subcontractor under workers' compensation acts, disability benefits acts, or other employee benefits acts. Contractor expressly waives any protection or immunity with respect to Workers' Compensation claims related to indemnification given under this Agreement.

13.7. Contract Bond.

13.7.1. The Contractor shall provide a contract bond to guaranty payment and performance of the Work, as required by Ohio law. When the Contractor delivers the executed counterparts of the Agreement to the Owner, the Contractor shall deliver such bond to the Owner, along with other documents as may be required.

13.7.1.1. If the surety on any bond furnished by the Contractor is declared bankrupt or becomes insolvent or its right to do business is terminated in any state where any part of the Project is located or it ceases to meet the requirements of the Agreement or Ohio law, the Contractor shall promptly notify the Owner and shall, within twenty (20) days after the event giving rise to such notification, provide another bond and surety, both of which shall comply with the requirements of the Contract Documents and Ohio law.

13.7.2. Upon the request of any person or entity appearing to be a potential beneficiary of bonds covering payment of obligations arising under the Contract, the Contractor shall promptly furnish a copy of the bonds or shall authorize a copy to be furnished.

13.7.3. Material Default or Termination. If the Owner notifies the Contractor's surety that the Contractor is in material default or terminates the Contract, the surety will promptly and within twenty-one (21) days investigate the claimed material default or termination. If the Owner gives a notice of material default and then terminates the Contract, the surety shall complete its investigation within twenty-one (21) days of the notice of material default. As part of such investigation, the surety shall visit the offices of the Contractor and Owner to review the available project records. If the surety proposes to take over the Work, the surety shall do so no later than the expiration of the twenty-one (21) day period or ten (10) days after the date the Owner terminates the Contract, whichever is later. If the Owner terminates the Work, and the surety proposed to provide a replacement contractor, the replacement contractor shall be fully capable of performing the Work in accordance with the Contract Documents, including meeting all of the requirements of the Contract Documents. If the Contractor is terminated, the replacement contractor shall not be the Contractor. The surety will provide the Owner with the results of its investigation, including any written report or documents. This Section 13.7.3 is in addition to the Owner's rights under this Agreement to terminate the Contractor for cause and is not intended to create any rights of the surety, including but not limited to the right to take over the Contractor's obligations.

14. WARRANTIES. In addition to any other warranties, guarantees, or obligations set forth in the Contract Documents or applicable as a matter of law and not in limitation of the terms of the Contract Documents, Contractor warrants and guarantees that:

(a) Owner will have good title to the Work and all materials and equipment incorporated into the Work will be new;

(b) The Work and all materials and equipment incorporated into the Work will be free from all defects, including any defects in workmanship or materials;

(c) The Work and all equipment incorporated into the Work will be fit for the purpose for which intended;

(d) The Work and all materials and equipment incorporated into the Work will be merchantable; and,

(e) The Work and all materials and equipment incorporated into the Work will conform in all respects to the Contract Documents.

Upon notice of the breach of any of the foregoing warranties or guarantees or any other warranties or guarantees under the Contract Documents, Contractor, in addition to any other requirements in the Contract Documents, shall commence to correct such breach and all resulting damage within two (2) business days after written notice from the Owner. Contractor shall correct such breach and damage to the satisfaction of Owner within fifteen (15) days of such notice except when an extension of time is granted in writing by Owner; provided that if such notice is given after final payment hereunder, such 2-day period will be extended to seven (7) days and such 15-day period shall be extended to thirty (30) days. If Contractor fails to commence to correct such breach and damage, or to correct such breach and damage as provided above, Owner, upon written notice to Contractor and without prejudice to any of its other rights or remedies, may correct the deficiencies. Contractor upon written notice from Owner shall pay Owner, within ten (10) days after the date of such notice, all of Owner's costs and expenses incurred in connection with or related to such correction and/or breach, including without limitation Owner's administrative, legal, design, and consulting expenses. The foregoing warranties and obligations of Contractor will survive the final payment and/or termination of this Agreement. If the Contractor fails to pay the Owner any amounts due under this Article 14, Contractor will pay

Owner, in addition to the amounts due, a late payment fee of one and one-half percent (1.5%) per month for each month or part thereof that the payments are not paid when due.

15. GENERAL.

15.1. Modification. No modification or waiver of any of the terms of this Agreement or of any other Contract Documents shall be effective against a party unless set forth in writing and signed by or on behalf of a party, which in the case of Owner shall require the signature of Owner pursuant to a specific resolution of Owner. Under no circumstances will forbearance, including the failure or repeated failure to insist upon compliance with the terms of the Contract Documents, constitute the waiver or modification of any such terms. The parties acknowledge that no person has authority to modify this Agreement or the other Contract Documents or to waive any of its or their terms, except as expressly provided in this Paragraph.

15.2. Assignment. Contractor may not assign this Agreement without the written consent of Owner, which Owner may withhold in its sole discretion.

15.3. Third Parties. Nothing contained in this Agreement shall create a contractual relationship with or a cause of action in favor of a third party against either Owner or Contractor.

15.4. Law and Jurisdiction. All questions regarding the validity, intention, or meaning of this Agreement or any modifications of it relating to the rights and obligations of the parties shall be construed and resolved under the laws of the State of Ohio. Any suit, which may be brought to enforce any provision of this Agreement or any remedy with respect hereto, shall be brought in the Common Pleas Court for the county in which the Project is located, and each party hereby expressly consents to the jurisdiction of such court. Each party waives its right to remove any such suit to federal court.

15.5. Statute of Limitations. Regardless of any provision to the contrary, the statute of limitations with respect to any defective or non-conforming Work that is not discovered by Owner will not commence until the discovery of such defective or non-conforming Work by Owner.

15.6. Notices. Notices, requests, or demands by either party shall be in writing, unless otherwise expressly authorized, and shall be personally served; forwarded by expedited messenger service; sent by facsimile transmission; sent by electronic mail with delivery confirmation; or be given by registered or certified mail, return receipt requested, postage prepaid, and addressed to the party at the address set forth at the beginning of this Agreement. Any party may change its address by giving written notice hereunder. All notices, requests, and demands shall be deemed received upon receipt in the case of personal delivery or delivery by expedited messenger service, including leaving the notice at the address provided herein during normal business hours; upon the expiration of forty-eight (48) hours from the time of deposit in the United States mail; or, in the case of a notice given by electronic mail or facsimile transmission, upon the expiration of 24 hours after the transmission is sent.

15.7. Construction. The parties acknowledge that each party has reviewed this Agreement and the other Contract Documents and has voluntarily entered into this Agreement. Accordingly, the normal rule of construction to the effect that any ambiguities are to be resolved against the drafting party shall not be employed in the interpretation of this Agreement, the other Contract Documents, or any amendments or exhibits to it or them.

15.8. Approvals. Except as expressly provided herein, the approvals and determinations of Owner will be subject to the sole discretion of Owner and will be valid and binding on Contractor, provided only that they be made in good faith, *i.e.*, honestly. If Contractor challenges any such approval or determination, Contractor bears the burden of proving by clear and convincing evidence that it was not made in good faith.

15.9. Partial Invalidity. If any term or provision of this Agreement is found to be illegal, unenforceable, or in violation of any laws, statutes, ordinances, or regulations of any public authority having jurisdiction, then, notwithstanding such term or provision, this Agreement shall remain in full force and effect, and such term shall be deemed stricken; provided this Agreement shall be interpreted, when possible, so as to reflect the intentions of the parties as indicated by any such stricken term or provision.

15.10. Compliance with Laws and Regulations. Contractor, at its expense, must comply with all applicable federal, state, and local laws, rules, and regulations applicable to the Work, including but not limited to ORC Chapter 4115 regarding prevailing wage rates, if applicable.

15.11. Project Safety. Contractor must follow all applicable safety and health regulations during the progress of the Project and monitor all of its employees and its subcontractors for compliance with such safety and health regulations. In undertaking the responsibilities set forth in this section, Contractor does not assume any duty or responsibility to the employees of any Subcontractor or supplier, regardless of tier. Owner assumes no responsibility for the development, review, or implementation of any project safety plan or for Project safety and has no authority to direct the means and methods of Contractor.

15.12. Equal Opportunity. Contractor will not, and it will ensure that its Subcontractors, regardless of tier, do not, discriminate against any employee or applicant for employment because of race, religion, color, sex, or national origin. Such action includes but is not limited to the following: employment, upgrading, demotion, transfer, recruitment or recruiting advertising, layoff or termination, rates of pay or other forms of compensation, and selection for training, including apprenticeship. Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the policies of nondiscrimination. Contractor is responsible to ensure that each of its Subcontractors, regardless of tier, states in all solicitations or advertisements for employees placed by them or on their behalf that all qualified applicants will receive consideration for employment without regard to race, religion, color, sex, or national origin.

15.13. No Findings for Recovery. The Contractor represents that the Contractor is not subject to a finding for recovery under Section 9.24, Ohio Revised Code, or that the Contractor has taken the appropriate remedial steps required under Section 9.24, Ohio Revised Code, or otherwise qualifies under this section. If this representation and warranty is found to be false, the Contract is void, and Contractor will immediately repay Owner any funds paid to Contractor under this Contract.

15.14. Non-Discrimination. Contractor agrees:

(a) Per Section 153.59 of the Ohio Revised Code in the hiring of employees for the performance of Work under this Agreement or in any subcontract, neither the Contractor, subcontractor, nor any person acting on behalf of either of them, shall by reason of race, creed, sex, disability, military status as defined in Section 4112.01 of the Revised Code, or color, discriminate against any citizen of the state in the employment of labor or workers who are qualified and available to perform the Work to which the employment relates.

(b) That neither the Contractor, subcontractor, nor any person acting on behalf of either of them, shall, in any manner, discriminate against or intimidate any employee hired for the performance of Work under this Agreement on account of race, creed, sex, disability, military status as defined in Section 4112.01 of the Revised Code, or color.

(c) That there shall be deducted from the amount payable to the Contractor by the Owner under this Agreement a forfeiture of twenty-five dollars ($25.00) as required by Ohio Revised Code Section 153.60 for each person who is discriminated against or intimidated in violation of this Agreement.

(d) That this Agreement may be canceled or terminated by the Owner and all money to become due hereunder may be forfeited for a second or subsequent violation of the terms of this section of this Agreement.

15.15. Use of Owner's Facilities. Contractor will ensure that neither its employees, nor its Subcontractor's or material supplier's employees, regardless of tier, do any of the following without the express prior written consent of Owner:

(a) use Owner's facilities including but not limited to, common areas, rest rooms, or phones;

(b) use or bring any alcoholic beverages, controlled substances, or firearms on any property owned by Owner;

(c) use any radios, tape or compact disc players, or sound amplification equipment; and

(d) interact in any manner with building occupants, except where necessary to preserve the safety of building occupants.

Contractor must conspicuously post notice of the prohibitions listed in this section at the Project site in the same location as OSHA notices are required to be posted and shall verbally inform all of Contractor's

employees, and the employees of Contractor's Subcontractors and materialmen, regardless of tier, of such prohibitions. The notice must be in a form acceptable to Owner.

15.16. Entire Agreement. This Agreement and the other Contract Documents constitute the entire agreement among the parties with respect to their subject matter and will supersede all prior and contemporaneous, oral or written, agreements, negotiations, communications, representations, and understandings with respect to such subject matter, and no person is justified in relying on such agreements, negotiations, communications, representations, or understandings.

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed by their properly authorized representatives.

Owner: **Valley View Local School District Board of Education**	**Contractor:**
_____ *Signature*	_____ *Signature*
By: _____ *Printed Name and Title*	By: _____ *Printed Name and Title*
Date: _____	Date: _____

CERTIFICATE OF FUNDS
(ORC Section 5705.41)

The undersigned, Treasurer of the Owner, hereby certifies in connection with the Agreement to which this Certificate is attached that the amount required to meet the obligations under the contract, obligation, or expenditure for the services described in the attached agreement, has been lawfully appropriated for the purpose, and is in the treasury or in process of collection to the credit of an appropriate fund, free from any outstanding obligation or encumbrance.

Dated: _____ _____
Treasurer

(ORC Section 5705.412)

The undersigned Treasurer, Board President, and the Superintendent of the Owner, hereby certify that the Owner has in effect for the term of the contract the authorization to levy taxes including the renewal or replacement of existing levies which, when combined with the estimated revenue from all other sources available to the Owner at the time of this certification, are sufficient to provide the operating revenues necessary to enable the Owner to maintain all personnel and programs for all the days set forth in its adopted school calendars for the current fiscal year and for a number of days in succeeding fiscal years equal to the number of days instruction was held or is scheduled for the current fiscal year.

Dated: _____

By: _____
Treasurer

By: _____
Superintendent

By: _____
Board President

CONTRACTOR'S PERSONAL PROPERTY TAX AFFIDAVIT
(O.R.C. § 5719.042)

State of Ohio
County of _____, ss:

_____, being first duly sworn, deposes and says that he is the
(Name)

_____ of _____ with offices located at
(Title) (Contractor)

_____, and as its duly
(Address of Contractor)

authorized representative, states that effective this _____ day of _____, 20___,

_____
(Name of Contractor)

( ) is charged with delinquent personal property taxes on the general list of personal property as set forth below:

County	Amount (include total amount penalties and interest thereon)
_____ County	$_____
_____ County	$_____
_____ County	$_____

( ) is not charged with delinquent personal property taxes on the general list of personal property in any Ohio county.

_____
(Affiant)

Sworn to and subscribed before me by the above-named affiant this _____ day of _____, 20__.
The notarial act certified hereby is a jurat. An oath or affirmation was administered to the signer with regard to the notarial act certified to hereby.

_____
(Notary Public)

My commission expires

_____, 20__

BID GUARANTY AND CONTRACT BOND

(O.R.C. § 153.571)

KNOW ALL PERSONS BY THESE PRESENTS, that we, the undersigned _____ _____ ("Contractor") as principal and _____ _____ as surety are hereby held and firmly bound unto the **Valley View Local School District Board of Education**, as obligee in the penal sum of the dollar amount of the bid submitted by the principal to the obligee on _____, 20__, to undertake the construction of the **Board Office Renovation Project** ("Project"). The penal sum referred to herein shall be the dollar amount of the principal's bid to the obligee, incorporating any additive or deductive Alternates made by the principal on the date referred to above to the obligee, which are accepted by the obligee. In no case shall the penal sum exceed the amount of _____ Dollars ($_____). (If the foregoing blank is not filled in, the penal sum will be the full amount of the principal's bid, including add Alternates. Alternatively, if the blank is filled in the amount stated must not be less than the full amount of the bid including add Alternates, in dollars and cents. A percentage is not acceptable.) For the payment of the penal sum 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 above named principal has submitted a bid for work on the Project.

Now, therefore, if the obligee accepts the bid of the principal and the principal fails to enter into a proper contract in accordance with the bid, plans, details, specifications, and bills of material; and in the event the principal pays to the obligee the difference not to exceed ten percent (10%) of the penalty hereof between the amount specified in the bid and such larger amount for which the obligee may in good faith contract with the next lowest bidder to perform the work covered by the bid; or in the event the obligee does not award the contract to the next lowest bidder and resubmits the project for bidding, the principal pays to the obligee the difference not-to-exceed ten percent (10%) of the penalty hereof between the amount specified in the bid, or the costs, in connection with the resubmission, of printing new contract documents, required advertising, and printing and mailing notices to prospective bidders, whichever is less, then this obligation shall be null and void, otherwise to remain in full force and effect; if the obligee accepts the bid of the principal and the principal within ten (10) days after the awarding of the contract enters into a proper contract in accordance with the bid, plans, details, specifications, and bills of material, which said contract is made a part of this bond the same as though set forth herein.

Now also, if the said principal shall well and faithfully do and perform the things agreed by said principal to be done and performed according to the terms of said contract; and shall pay all lawful claims of subcontractors, materialmen, and laborers, for labor performed and materials furnished in the carrying forward, performing, or completing of said contract; we agreeing and assenting that this undertaking shall be for the benefit of any materialman or laborer having a just claim, as well as for the obligee herein; then this obligation shall be void; otherwise the same shall remain in full force and effect; and surety shall indemnify the obligee against all damage suffered by failure of the principal to perform the contract according to its provisions and in accordance with the plans, details, specifications, and bills of material therefor and to pay all lawful claims of subcontractors, materialmen, and laborers for labor performed or material furnished in carrying forward, performing, or completing the contract and surety further agrees and assents that this undertaking is for the benefit of any subcontractor, materialman, or laborer having a just claim, as well as for the obligee; 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 said surety hereby stipulates and agrees that no modifications, omissions, or additions in or to the terms of the said contract or in or to the plans or specifications therefore shall in any wise affect the obligations of said surety on its bond, and does hereby waive notice of any such modifications, omissions or additions to the terms of the contract or to the work or to the specifications.

Signed and sealed this _____ day of _____, 20__.

_____
PRINCIPAL

By: _____

Printed Name & Title: _____

_____
SURETY

By: _____

Printed Name & Title: _____

_____

Surety's Address: _____

_____

Surety's Telephone Number: _____

Surety's Fax Number: _____

_____
SURETY'S AGENT

Surety's Agent's Address: _____

_____

Surety's Agent's Telephone Number: _____

Surety's Agent's Fax Number: _____

NOTE: The Contract Bond form that follows is to be used ONLY by a bidder that is awarded a contract and submits a form of bid guaranty other than the combined Bid Guaranty and Contract Bond with its bid. If a bidder submits a combined Bid Guaranty and Contract Bond, then the bid guaranty becomes the contract bond when the contract is awarded.

AIA Bid Bond or Payment and Performance Bond forms are not acceptable for this Project.

CONTRACT BOND
(O.R.C. § 153.57)

KNOW ALL PERSONS BY THESE PRESENTS, that we, the undersigned ("Contractor"), as principal, and _____, as surety, are hereby held and firmly bound unto the **Valley View Local School District Board of Education** ("Owner") as obligee, in the penal sum of ___ _____ Dollars ($), 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.

THE CONDITION OF THE ABOVE OBLIGATION IS SUCH that whereas, the above-named principal did on the _____ day of _____, 20__, enter into a contract with the Owner for construction of the **Board Office Renovation Project** ("Project"), which said contract is made a part of this bond the same as though set forth herein:

Now, if the said Contractor shall well and faithfully do and perform the things agreed by the Contractor to be done and performed according to the terms of said contract; and shall pay all lawful claims of subcontractors, materialmen, and laborers, for labor performed and materials furnished in the carrying forward, performing, or completing of said contract; we agreeing and assenting that this undertaking shall be for the benefit of any materialman or laborer having a just claim, as well as for the obligee herein; then this obligation shall be void; otherwise the same shall remain in full 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 said surety hereby stipulates and agrees that no modifications, omissions, or additions in or to the terms of the said contract or in or to the plans or specifications therefore shall in any wise affect the obligations of said surety on its bond, and does hereby waive notice of any such modifications, omissions or additions to the terms of the contract or to the work or to the specifications.

Signed and sealed this _____ day of _____, 20__.

_____
(PRINCIPAL)

By: _____

Printed Name & Title: _____

_____

_____
(SURETY)

By: _____

Printed Name & Title: _____

_____

Surety's Address: _____

_____

_____

Surety's Telephone Number: _____

Surety's Fax Number: _____

_____
NAME OF SURETY'S AGENT

Surety's Agent's Address: _____

_____

_____

Surety's Agent's Telephone Number: _____

Surety's Agent's Fax Number: _____

Department of Taxation
tax.ohio.gov

Sales and Use Tax
Construction Contract Exemption Certificate

STEC CC
Rev. 04/24

Identification of Contract:

Contractee's (owner's) name: Valley

Exact location of job/project: 6027 Farmersville Pike, Germantown, Ohio 45327

Name of job/project as it appears on contract documentation: Board Office Renovations Project

The undersigned hereby certifies that the tangible personal property purchased under this exemption certificate is purchased exempt of the tax for incorporation into:

☐	A building used exclusively for charitable purposes by a nonprofit organization operated exclusively for charitable purposes as defined in Ohio Revised Code (R.C.) section 5739.02(B)(12);	☐	Real property that is owned, or will be accepted for ownership at the time of completion, by the United States government, its agencies, the state of Ohio or an Ohio political subdivision;
☐	A horticulture structure or livestock structure for a person engaged in the business of horticulture or producing livestock;	☑	Real property under a construction contract with the United States government, its agencies, the state of Ohio, or an Ohio political subdivision;
☐	The original construction of a sports facility under R.C. section 307.696;	☐	A building under a construction contract with an organization exempt from taxation under section 501(c)(3) of the Internal Revenue Code of 1986 when the building is to be used exclusively for the organization's exempt purposes;
☐	A hospital facility entitled to exemption under R.C. section 140.08;		
☐	A computer data center entitled to exemption under R.C. 122.175; ___% exempt per OH Dept. of Development	☐	A house of public worship or religious education;
☐	A megaproject entitled to exemption as described in R.C. 5739.02(B)(13).	☐	Building and construction materials and services sold for incorporation into real property comprising a convention center that qualifies for property tax exemption under R.C. 5709.084 (until one calendar year after the construction is completed).
☐	Real property outside this state if such materials and services, when sold to a construction contractor in the state in which the real property is located for incorporation into real property in that state, would be exempt from a tax on sales levied by that state;		

The original of this certificate must be signed by the owner/contractee and/or government official and must be retained by the prime contractor. Copies must be maintained by the owner/contractee and all subcontractors. When copies are issued to suppliers when purchasing materials, each copy must be signed by the contractor or subcontractor making the purchase.

Prime Contractor
Name _____
Signed by _____
Title _____
Street address _____
City, state, ZIP code _____
Date _____

Owner/Contractee
Name Valley View LSD Board of Education
Signed by _____
Title _____
Street address 59 Peffley Street
City, state, ZIP code Germantown, Ohio 45327
Date _____

Subcontractor
Name _____
Signed by _____
Title _____
Street address _____
City, state, ZIP code _____
Date _____

Political Subdivision
Name _____
Signed by _____
Title _____
Street address _____
City, state, ZIP code _____
Date _____

STATEMENT OF CLAIM FORM

Claim No. ___ for Contractor

1. Name of Contractor: _____

2. Date written claim given:_____.

3. Contractor's representative to contact regarding the claim:

   Name:_____ Title: _____
   Telephone No. _____ (office) FAX No. _____

   E-mail: _____

4. General description of claim:

_____
_____
_____

5. Contract Documents. If the claim is based upon any part or provision in the Contract Documents, including but not limited to pages in the Drawings and/or paragraphs in the Specifications, Owner-Contractor Agreement, General Conditions or Supplementary General Conditions, state upon which parts or provisions the claim is based:

_____
_____
_____

6. Delay claims:
   6.1 Date delay commenced: _____
   6.2 Duration or expected duration of the delay, if known: _____
   6.3 Apparent cause of the delay and part of critical path affected:

_____
_____
_____

   6.4 Expected impact of the delay and recommendations for minimizing such impact:

_____
_____
_____

7. Additional compensation. Set forth in detail all additional compensation to which the Contractor believes it is entitled with respect to this claim:

_____
_____
_____

8. Instructions for Completing the Statement of Claim Form ("Instructions"). The Instructions are incorporated in this Form.

9. Truth of Claim. By submitting this claim, the Contractor and its representative certify that after conscientious and thorough review and to the best of his or her knowledge and belief a) the Contractor has complied fully with the Instructions, b) the information in this Statement of Claim is accurate, c) the Contractor is entitled to recover the compensation in paragraph 7, and d) the Contractor has not knowingly presented a false or fraudulent claim. The Contractor by its authorized representative must acknowledge this Statement of Claim before a notary public.

CONTRACTOR: _____

By: _____

Name and Title:_____

Date: _____

CONTRACTOR'S ACKNOWLEDGMENT

State of _____,

County of _____, ss:

_____ first being sworn, states that after conscientious and thorough review, the statements made in attached Statement of Claim Form are complete and true to the best of his or her knowledge and belief.

_____

Sworn to before me a notary public by _____ on _____ __, 20__. The notarial act certified hereby is a jurat. An oath or affirmation was administered to the signer with regard to the notarial act certified to hereby.

_____
Notary Public

WHEN COMPLETED, FORWARD A COPY OF THIS NOTICE AND STATEMENT OF CLAIM FORM TO THE OWNER AND DESIGN PROFESSIONAL.

INSTRUCTIONS FOR COMPLETING THE STATEMENT OF CLAIM FORM

1. Completing the Statement of Claim Form ("Claim Form") is a material term of the Contract. The Claim Form tells the Owner and Design Professional that the Contractor is making a Claim and that they need to act promptly to mitigate the effects of the occurrence giving rise to the Claim. The Claim Form also provides them with information so that they can mitigate such effects. The Contractor acknowledges that constructive knowledge of the conditions giving rise to the Claim through job meetings, correspondence, site observations, etc. is inadequate notice, because knowledge of these conditions does not tell the Owner and Design Professional that the Contractor will be making a Claim and most often is incomplete.

2. If the space provided in the Claim Form is insufficient, the Contractor, as necessary to provide complete and detailed information, must attach pages to the Claim Form with the required information.

3. Paragraph 4. The Contractor must state what it wants, *i.e.*, time and/or compensation, and the reason why it is entitled to time and/or compensation.

4. Paragraph 5. The Contractor must identify the exact provisions of the Contract Documents it is relying on in making its Claim. For example, if the Claim is for a change in the scope of the Contractor's Work, the Contractor must identify the specific provisions of the Specifications, and the Plan sheets and details that provide the basis for the scope change.

5. Paragraph 6. This paragraph applies to delay claims, including delays that the Contractor believes result in constructive acceleration. The Contractor must identify the cause of the delay, party or parties responsible, and what the party did or did not do that caused the delay, *i.e.*, specific work activities. The Contractor acknowledges that general statements are not sufficient, and do not provide the Owner with sufficient information to exercise the remedies available to the Owner or to mitigate the effects of the delay.

   For example, if the Contractor claims a slow response time on submittals caused a delay, the Contractor must identify the specific submittals, all relevant dates, and then show on the applicable schedule, by circling or highlighting, the activities immediately affected by the delays. Also for example, if the Contractor claims it was delayed by another Contractor, the Contractor must identify the delaying Contractor, specifically what the delaying Contractor did or did not do that caused the delay, and then show the applicable schedule, by circling or highlighting, the activities immediately affected by the delays. Further by example, if the Contractor seeks an extension of time for unusually severe weather, the Contractor must submit comparative weather data along with a record of the actual weather at the job site and job site conditions.

6. Paragraph 6.4. Time is of the essence under the Contract Documents. If there is a delay, it is important to know what can be done to minimize the impact of the delay. It therefore is important that the Contractor provide specific recommendations on how to do so.

7. Paragraph 7. The Contractor must provide a specific and detailed breakdown of the additional compensation it seeks to recover. For future compensation, the Contractor shall provide its best estimate of such compensation.

8. Paragraph 8 and Acknowledgment. By submitting this Claim, the Contractor and its representative certify that after conscientious and thorough review and to the best of his or her knowledge and belief a) the Contractor has complied fully with the Instructions, b) the information in this Claim Form is accurate, c) the Contractor is entitled to recover the compensation in paragraph 7, and d) the Contractor has not knowingly presented a false or fraudulent claim. The Contractor by its authorized representative must acknowledge this Statement of Claim before a notary public.

End of Instructions

CERTIFICATE OF SUBSTANTIAL COMPLETION

Project:	Contract For:
Board Office Renovation Project	General Contract
Owner:	CONTRACTOR: [insert name and address]
Valley View Local School District Board of Education	_____

The Design Professional hereby certifies that the Date for Substantial Completion of the Contractor's Work as set forth in the Owner-Contractor Agreement is:

_____
(Insert Date for Substantial Completion of the Work)

The Design Professional hereby certifies that the Date for Substantial Completion in the Contractor's Agreement with the Owner (the "Agreement"), as extended by Change Orders and Claims submitted by the Contractor that have been Finally Resolved, as defined below, is:

1. Date for Substantial Completion in the Agreement (above): _____
2. Additional days added to Date for Substantial Completion by Change Order: _____
3. Additional days added by Claims that have been Finally Resolved: _____
4. Date for Substantial Completion in the Contract Adjusted by days under No. 2 and No. 3 _____

"Finally Resolved" means that the Design Professional has made a decision (or declined to make a decision) on the Claim under the General Conditions and that any litigation regarding the Claim has been concluded.

The Design Professional certifies that the Contractor's Work to the best of the Design Professional's knowledge, information, and belief was Substantially Complete, as Substantial Completion is defined in the Contract Documents, on _____.

The Design Professional hereby certifies that the difference between (a) the Date for Substantial Completion adjusted by the days under No. 2 and No. 3 above and (b) the date the Contractor's Work was Substantially Complete is _____ days.

NOTICES OF DELAY. The Design Professional hereby certifies that all "NOTICES OF DELAY" submitted by the Contractor and described in the General Conditions are attached to this Certificate. This certification is solely for the purpose of identifying all "NOTICES OF DELAY" submitted by the Contractor and is not intended to imply that any of these NOTICES OF DELAY were properly submitted in accordance with Contract Documents or are valid.

STATEMENT OF CLAIM FORMS. The Design Professional hereby certifies that all Statement of Claim Forms described in the General Conditions and submitted by the Contractor are attached to this Certificate. This certification is solely for the purpose of identifying all Statement of Claim Forms submitted by the Contractor and is not intended to imply that any of these Statement of Claim Forms were properly submitted in accordance with Contract Documents or are valid.

PUNCHLIST ITEMS. A list of items to be completed by the Contractor is attached to this Certificate. The failure to include items on this list does not change the responsibility of the Contractor to complete its Work in accordance with the Contract Documents. The Contractor shall complete all items on the Punchlist in accordance with the Contract Documents.

Security, maintenance, utilities, damage to the Work and insurance are the responsibility of the Owner and the Contractor based on their operations pursuant to final completion of the Work.

Copies of this Certificate were provided to the Contractor and the Owner on _____

Signature: _____

Date: _____

CONTRACTOR'S AFFIDAVIT AND CERTIFICATION WITH LIST OF SUBCONTRACTORS AND SUPPLIERS WITH ANY AMOUNTS WITHHELD

PROJECT:
Board Office Renovation

CONTRACTOR:

In Support of PAYMENT APPLICATION No.: _____

For the Period Through: _____

STATE OF _____:
: SS,
COUNTY OF _____:

The undersigned after first being sworn swears that a) all previous progress payments received on account of the Work have been applied on account to discharge Contractor's legitimate obligations associated with prior Applications for Payment; b) set forth below is a complete list of its Subcontractors and Suppliers; and c) set forth below is a complete description of all amounts withheld from any Subcontractor or Supplier and the reason why. Attach additional sheets if necessary.

Typed or Printed Name of Subcontractor or Supplier	Address of Subcontractor or Supplier	Telephone Number of Subcontractor or Supplier

Typed or Printed Name of Subcontractor or Supplier	Address of Subcontractor or Supplier	Telephone Number of Subcontractor or Supplier

WITHHOLDINGS FROM SUBCONTRACTORS AND/OR SUPPLIERS:

Typed or Printed Name of Subcontractor or Supplier	Amount Withheld	Reason for Withholding

Moreover, Contractor certifies that, except for as set forth immediately above, Contractor has paid all of its subcontractors and suppliers who were due to be paid with the proceeds of the prior Application for Payment and Contractor acknowledges that Owner is relying upon such certification when paying Contractor the amount asked for in the payment application that this Affidavit and Certification supports.

CONTRACTOR: [insert name]

_____

BY: _____
(Signature of authorized representative

NOTARY PUBLIC

Subscribed and sworn to before me on this date by _____ on behalf of _____. The notarial act certified hereby is a jurat. An oath or affirmation was administered to the signer with regard to the notarial act certified to hereby.

_____
Signature of Notary Public

Notary Public: _____

My Commission Expires: _____

CONTRACTOR'S WAIVER & RELEASE AFFIDAVIT
("AFFIDAVIT")

Project: **Board Office Renovation**

The undersigned hereby acknowledges receipt of payment for all Work on the Project through the date of the prior Application for Payment by the **Valley View Local School District Board of Education** (the "Owner") with which it has a contract for the Project.

In return for said payment, and/or pursuant to certain contractual obligations of the undersigned, the undersigned hereby waives and releases any rights it has or may have through the date of the last Application for Payment to any and all types of claims relating to the Project, including without limitation claims of payment, Mechanic's Lien, stop notice, equitable lien, labor and material bond, breach of contract or unjust enrichment, or any other claim against the Owner, for any labor, materials, or equipment the undersigned may have delivered or provided to the Project, except for any Claims the undersigned has made by properly and timely submitting a Statement of Claim form. The undersigned further certifies that this Affidavit covers claims by all contractors, subcontractors, and suppliers who may have provided any labor, material, or equipment to the Project through the undersigned or at the undersigned's request. The undersigned acknowledges that all such contractors, subcontractors, sub-subcontractors and suppliers have signed an affidavit in the form of this Affidavit releasing any and all claims against the Owner, except for any Claims the undersigned has made by properly and timely submitting a Statement of Claim form. The undersigned hereby represents and warrants that it has paid any and all welfare, pension, vacation or other contributions required to be paid on account of the employment by the undersigned of any laborers on the Project.

This Affidavit is for the benefit of, and may be relied upon by the Owner. The undersigned hereby agrees to indemnify, defend and hold harmless each of the foregoing, the Project, work of improvement, and real property from any and all claims, or liens that are or should have been released in accordance with this Affidavit.

_____
Company Name

_____
Authorized Signature (Company Officer)

_____
Title

_____
Date

State of: _____ County of _____

Subscribed and sworn to before me this_____ day of _____. The notarial act certified hereby is a jurat. An oath or affirmation was administered to the signer with regard to the notarial act certified to hereby.

Notary Public: _____

My Commission Expires: _____

SUBCONTRACTORS, SUPPLIERS
WAIVER & RELEASE AFFIDAVIT
("AFFIDAVIT")

Project: **Board Office Renovation**

The undersigned hereby acknowledges receipt of payment for all Work on the Project through the date of the prior Application for Payment by the Contractor ("Contractor") with which it has a contract.

In return for said payment, and/or pursuant to certain contractual obligations of the undersigned, the undersigned hereby waives and releases any rights it has or may have through the date of the Contractor's last Application for Payment and to any and all types of claims relating to the Project, including without limitation claims of payment, Mechanic's Lien, stop notice, equitable lien, labor and material bond, breach of contract or unjust enrichment, or any other claim against the Contractor, the Contractor's surety, and/or the **Valley View Local School District Board of Education** (the "Owner"), for any labor, materials, or equipment the undersigned may have delivered or provided to the Project, except for any Claims the undersigned has made by properly and timely submitting a Statement of Claim form, a copy of which has been delivered to the Owner. The undersigned further certifies that this Affidavit covers claims by all contractors, subcontractors and suppliers through the date of the Contractor's last Application for Payment who may have provided any labor, material, or equipment to the Project through the undersigned or at the undersigned's request. The undersigned acknowledges that all such contractors, subcontractors, sub-subcontractors and suppliers have signed an affidavit in the form of this Affidavit releasing any and all claims against the Contractor, the Contractor's surety, and/or the Owner, except for any Claims made by properly and timely submitting a Statement of Claim form a copy of which has been delivered to the Owner. The undersigned hereby represents and warrants that it has paid any and all welfare, pension, vacation or other contributions required to be paid on account of the employment by the undersigned of any laborers on the Project.

The undersigned agrees that upon receipt of the payment from the Contractor with respect to the Contractor's current Application for Payment, it shall, if applicable, immediately execute and cause to be filed or recorded a legally effective Satisfaction of Lien, Release of Lien, or any other legal instrument necessary to cause prejudicial dismissal and release of any lien, encumbrance, lawsuit, or other claim against the Contractor, the Contractor's surety and the Owner, the property where the Project is located, and/or any surety bond posted by the Contractor or the Owner to the extent of the foresaid payment. Upon request of the Contractor, the undersigned shall provide proof of having complied with this obligation.

This Affidavit is for the benefit of, and may be relied upon by, the Contractor, the Contractor's surety and the Owner. The undersigned hereby agrees to indemnify, defend and hold harmless each of the foregoing, the Project, its Work, and real property from any and all claims, or liens that are or should have been released in accordance with this Affidavit and from any liability, cost, or expense incurred as a result of any breach of this Affidavit by the undersigned.

_____
Company Name

_____
Authorized Signature (Company Officer)

_____
Title

_____
Date

State of: _____ County of _____

Subscribed and sworn to before me this_____ day of _____. The notarial act certified hereby is a jurat. An oath or affirmation was administered to the signer with regard to the notarial act certified to hereby.

Notary Public: _____

My Commission Expires: _____

CONTRACTOR'S FINAL WAIVER & RELEASE AFFIDAVIT
("AFFIDAVIT")

Project: **Board Office Renovation**

In consideration for payment received from the **Valley View Local School District Board of Education** (the "Owner") in the amount requested in Contractor's Final Application for Payment to the Owner, the receipt of which is hereby acknowledged, the undersigned Contractor hereby waives and releases any rights it has or may have to any and all types of claims relating to the Project, including without limitation claims of payment, Mechanic's Lien, stop notice, equitable lien, labor and material bond, breach of contract or unjust enrichment, or any other claim against the Owner, for any labor, materials, or equipment the undersigned may have delivered or provided to the Project, except for any Claims the undersigned has made by properly and timely submitting a Statement of Claim form. The undersigned further certifies that this Affidavit covers claims by all contractors, subcontractors, and suppliers who may have provided any labor, material, or equipment to the Project through the undersigned or at the undersigned's request. The undersigned acknowledges that all such contractors, subcontractors, sub-subcontractors and suppliers have signed an affidavit in the form of this Affidavit releasing any and all claims against the Owner, except for any Claims the undersigned has made by properly and timely submitting a Statement of Claim form. The undersigned hereby represents and warrants that it has paid any and all welfare, pension, vacation or other contributions required to be paid on account of the employment by the undersigned of any laborers on the Project.

This Affidavit is for the benefit of, and may be relied upon by the Owner. The undersigned hereby agrees to indemnify, defend and hold harmless each of the foregoing, the Project, work of improvement, and real property from any and all claims, or liens that are or should have been released in accordance with this Affidavit.

_____
Company Name

_____
Authorized Signature (Company Officer)

_____
Title

_____
Date

State of: _____ County of _____

Subscribed and sworn to before me this_____ day of _____. The notarial act certified hereby is a jurat. An oath or affirmation was administered to the signer with regard to the notarial act certified to hereby.

Notary Public: _____

My Commission Expires: _____

SUBCONTRACTORS, SUPPLIERS
FINAL WAIVER & RELEASE AFFIDAVIT
("AFFIDAVIT")

Project: **Board Office Renovation**

Upon receipt of payment in the amount of $_____ received from _____ ("Prime Contractor") the undersigned Subcontractor or Supplier waives and relinquishes all rights of lien or claim that it may have either in law or equity (including but not limited to rights under Ohio Mechanics' Lien Laws, O.R.C. 1311.01 *et seq.*) with respect to the construction project known as the **Board Office Renovation Project** ("the Project"), for all labor, all equipment, and/or materials provided to or on behalf of the Project throughout its entirety, except for claims previously made pursuant to the agreement in place between Subcontractor or Supplier and Prime Contractor, and any lien previously perfected and remaining unreleased.

The undersigned Subcontractor or Supplier acknowledges and agrees that such payment represents final payment in full for all such labor, equipment and/or materials including retainage, if any, and that the Subcontractor or Supplier has completed its work on the Project. The undersigned Subcontractor or Supplier certifies that all amounts have been paid by the Subcontractor or Supplier for all work or materials furnished by others to the Subcontractor or Supplier for which the Subcontractor or Supplier has received previous payments from Prime Contractor, and Subcontractor or Supplier acknowledges that Prime Contractor is now making payment to the Subcontractor or Supplier in reliance upon such certification. The undersigned Subcontractor or Supplier further certifies that it will pay all amounts lawfully owing for all work or materials furnished by others to the Subcontractor or Supplier with the payment received from Contractor referenced herein.

This Affidavit is for the benefit of, and may be relied upon by, the Contractor, the Contractor's surety and the Owner. The undersigned hereby agrees to indemnify, defend and hold harmless each of the foregoing, the Project, its Work, and real property from any and all claims, or liens that are or should have been released in accordance with this Affidavit and from any liability, cost, or expense incurred as a result of any breach of this Affidavit by the undersigned.

IN WITNESS WHEREOF, the undersigned has caused this Affidavit to be executed by its authorized representative as of the date indicated below.

THE INDIVIDUAL SIGNING THIS AFFIDAVIT REPRESENTS THAT HE/SHE IS AUTHORIZED TO DO SO.

SUBCONTRACTOR OR SUPPLIER:

_____
Company Name

_____
Authorized Signature (Company Officer)

_____
Title

_____
Date

State of: _____ County of _____

Subscribed and sworn to before me this_____ day of _____. The notarial act certified hereby is a jurat. An oath or affirmation was administered to the signer with regard to the notarial act certified to hereby.

Notary Public: _____

My Commission Expires: _____

PRE-BID SUBSTITUTION FORM

Note. Certain brands of material or apparatus are specified. Each bid will be based on these brands, which may be referred to in the Contract Documents as Standards. The use of another brand (referred to as a substitution or proposed equal in the Contract Documents, when a bidder or the contractor seeks to have a different brand of material or apparatus than that specified approved by the Owner for use in the Project) may be requested as provided in the Instructions to Bidders.

The detailed procedures for submitting substitutions are set forth in Paragraph J of the Instructions to Bidders.

Specification Section	Brand or Name Specified	Proposed Substitution

DOCUMENT 00 01 10

TABLE OF CONTENTS

END OF SECTION

SECTION 01 10 00

SUMMARY

PART 1 - GENERAL

1.01 SUMMARY OF WORK

A. Project Identification: As follows:
   1. Project: Valley View Schools Board of Education Office Renovation
      6027 Farmersville Pike
      Germantown, Ohio 45327

B. Contract Documents, dated January 23, 2026, were prepared by Oregon Group Architects, Inc. 300 S. Patterson Blvd. Dayton, OH 45402, 937-228-1511.

C. Building Permit application for the Valley View Schools Board of Education Office Renovation scope of work has been submitted to the Montgomery County Building Department and the Building Permit application fee has been paid. All applicable permit fees shall be paid by the contractors.

D. The building will be occupied during construction. There is an operational Pre-School program and YMCA before and after school program that will continue to operate during construction. Contractors will be limited in working hours inside the building. Contractors may work the hours of Monday through Friday 6am-6pm. Excessively odorous and noisy work will need to be coordinated with Owner and must occur before 8:45am. Work that affects building power or other systems shall be coordinated with Owner minimum 14 calendar days prior to work starting. Power outages that would affect any other spaces within the building will need to occur after hours and be coordinated with Owner.

E. Contractor shall pay all aid-to-construction costs associated with the project.

F. The Work consists of renovation of a portion of the old Valley View High School building in Germantown, Ohio. The renovated space will become the new offices for the school district's Board of Education. Staff and their furnishings will be removed from the area of work before work begins.

G. Sustainability: It is the intent of this project to have the building constructed using sustainable means and methods. However, no third-party environmental performance certification is to be pursued for this project. The construction documents incorporate requirements to meet these sustainable measures.

END OF SECTION

SECTION 01 31 00

PROJECT MANAGEMENT AND COORDINATION

PART 1 GENERAL

1.01 RELATED DOCUMENTS

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

1.02 SUMMARY

A. This Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:
   1. General project coordination procedures.
   2. Conservation.
   3. Administrative and supervisory personnel.
   4. Project meetings.
   5. Requests for Information (RFI's).

B. Each contractor shall participate in coordination requirements. Certain areas of responsibility will be assigned to a specific contractor.

C. Related Sections include the following:
   1. Section 01 78 39 Project Documentation and Closeout Procedures for coordinating closeout of the Contract.

1.03 DEFINITIONS

A. RFI: Request for Information: Written request from Contractor seeking interpretation or clarification of the Contract Documents.

1.04 COORDINATION

A. Coordination: Each contractor shall coordinate its construction operations with those of other contractors and entities to ensure efficient and orderly installation of each part of the Work. Each contractor shall coordinate its operations with operations included in different Sections, which depend on each other for proper installation, connection, and operation.
   1. Schedule construction operations in sequence as required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
   2. Coordinate installation of different components with other contractors to ensure maximum accessibility for required maintenance, service, and repair.
   3. Make adequate provisions to accommodate items scheduled for later installation.
   4. Where availability of space is limited, coordinate installation of different components to ensure maximum performance and accessibility for required maintenance, service, and repair of all components, including mechanical and electrical.

B. Prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and list of attendees at meetings.

1. Prepare similar memoranda for Owner and separate contractors if coordination of their Work is required.

C. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities and activities of other contractors to avoid conflicts and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:
1. Preparation of Contractor's Construction Schedule.
2. Preparation of the Schedule of Values.
3. Installation and removal of temporary facilities and controls.
4. Delivery and processing of submittals.
5. Progress meetings.
6. Preinstallation conferences.
7. Project closeout activities.
8. Startup and adjustment of systems.
9. Project closeout activities.

D. Conservation: Coordinate construction activities to ensure that operations are carried out with consideration given to conservation of energy, water, and materials.
1. Salvage materials and equipment involved in performance of, but not actually incorporated into, the Work. Refer to other Sections for disposition of salvaged materials that are designated as Owner's property.

1.05 SUBMITTALS

A. Key Personnel Names: Within 10 days of starting construction operations, submit a list of key personnel assignments, including superintendent and other personnel in attendance at Project site. Identify individuals and their duties and responsibilities; list addresses and telephone numbers, including home and office telephone numbers. Provide names, addresses, and telephone numbers of individuals assigned as standbys in the absence of individuals assigned to Project.

1.06 ADMINISTRATIVE AND SUPERVISORY PERSONNEL

A. General: In addition to Project superintendent, provide other administrative and supervisory personnel as required for proper performance of the Work.
1. Include qualified personnel necessary for coordination of operations with other contractors.

1.07 PROJECT MEETINGS

A. General: Schedule and conduct meetings and conferences at Project site, unless otherwise indicated.
1. Attendees: Inform participants and others involved, and individuals whose presence is required, of date and time of each meeting. Notify Owner and Associate of scheduled meeting dates and times.
2. Agenda: Prepare the meeting agenda. Distribute the agenda to all invited attendees.
3. Minutes: Architect shall record significant discussions and agreements achieved and distribute the meeting minutes to everyone concerned within three days of the meeting.

B. Preconstruction Conference: Schedule a preconstruction conference before starting construction, at a time convenient to Owner and Associate, but no later than 15 days after execution of the Agreement. Hold the conference at Project site or another convenient location. Conduct the meeting to review responsibilities and personnel assignments.
1. Attendees: Authorized representatives of Owner, Associate, and their consultants; Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the conference. All participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.

2. Agenda: Discuss items of significance that could affect progress, including the following:
   a. Tentative construction schedule.
   b. Phasing.
   c. Critical work sequencing and long-lead items.
   d. Designation of key personnel and their duties.
   e. Procedures for processing field decisions and Change Orders.
   f. Procedures for RFIs.
   g. Procedures for testing and inspecting.
   h. Procedures for processing Applications for Payment.
   i. Distribution of the Contract Documents.
   j. Submittal procedures.
   k. Preparation of Record Documents.
   l. Use of the premises.
   m. Work restrictions.
   n. Owner's occupancy requirements.
   o. Responsibility for temporary facilities and controls.
   p. Construction waste management and recycling.
   q. Parking availability.
   r. Office, work, and storage areas.
   s. Equipment deliveries and priorities.
   t. First aid.
   u. Security.
   v. Progress cleaning.
   w. Working hours.
3. Minutes: Associate will record and distribute meeting minutes.

C. Preinstallation Conferences: Conduct a preinstallation conference at Project site before each construction activity that requires coordination with other construction.
   1. Attendees: Installer and representatives of manufacturers and fabricators involved in or affected by the installation and its coordination or integration with other materials and installations that have preceded or will follow, shall attend the meeting. Advise Associate of scheduled meeting dates.
   2. Agenda: Review progress of other construction activities and preparations for the particular activity under consideration, including requirements for the following:
      a. The Contract Documents.
      b. Options.
      c. Related RFI's.
      d. Related Change Orders.
      e. Purchases.
      f. Deliveries.
      g. Submittals.
      h. Review of mockups.
      i. Possible conflicts.
      j. Compatibility problems.
      k. Time schedules.
      l. Weather limitations.
      m. Manufacturer's written recommendations.
      n. Warranty requirements.
      o. Compatibility of materials.
      p. Acceptability of substrates.
      q. Temporary facilities and controls.
      r. Space and access limitations.
      s. Regulations of authorities having jurisdiction.
      t. Testing and inspecting requirements.

u. Installation procedures.
v. Coordination with other work.
w. Required performance results.
x. Protection of adjacent work.
y. Protection of construction and personnel.

3. Record significant conference discussions, agreements, and disagreements, including required corrective measures and actions.
4. Reporting: Distribute minutes of the meeting to each party present and to parties who should have been present.
5. Do not proceed with installation if the conference cannot be successfully concluded. Initiate whatever actions are necessary to resolve impediments to performance of the Work and reconvene the conference at earliest feasible date.

D. Progress Meetings: Conduct progress meetings at bi-weekly intervals. Coordinate dates of meetings with preparation of payment requests.
1. Attendees: In addition to representatives of Owner and Associate, each contractor, subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
2. Agenda: Review and correct or approve minutes of previous progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to status of Project.
a. Contractor's Construction Schedule: Review progress since the last meeting. Determine whether each activity is on time, ahead of schedule, or behind schedule, in relation to Contractor's Construction Schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.
1) Review schedule for next period.
b. Review present and future needs of each entity present, including the following:
1) Interface requirements.
2) Sequence of operations.
3) Status of submittals.
4) Deliveries.
5) Off-site fabrication.
6) Access.
7) Site utilization.
8) Temporary facilities and controls.
9) Work hours.
10) Hazards and risks.
11) Progress cleaning.
12) Quality and work standards.
13) Status of correction of deficient items.
14) Field observations.
15) RFI's.
16) Status of proposal requests.
17) Pending changes.
18) Status of Change Orders.
19) Pending claims and disputes.
20) Documentation of information for payment requests.
3. Minutes: Associate will record and distribute to Contractor the meeting minutes.
4. Reporting: Distribute minutes of the meeting to each party present and to parties who should have been present.

a. Schedule Updating: Revise Contractor's Construction Schedule after each progress meeting where revisions to the schedule have been made or recognized. Issue revised schedule concurrently with the report of each meeting.

E. Coordination Meetings: Conduct Project coordination meetings at regular intervals. Project coordination meetings are in addition to specific meetings held for other purposes, such as progress meetings and preinstallation conferences.
1. Attendees: Each contractor, subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
2. Agenda: Review and correct or approve minutes of the previous coordination meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to status of Project.
a. Contractor's Construction Schedule: Review progress since the last coordination meeting. Determine whether each contract is on time, ahead of schedule, or behind schedule, in relation to Combined Contractor's Construction Schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.
b. Schedule Updating: Revise Contractor's Construction Schedule after each coordination meeting where revisions to the schedule have been made or recognized. Issue revised schedule concurrently with report of each meeting.
c. Review present and future needs of each contractor present, including the following:
1) Interface requirements.
2) Sequence of operations.
3) Status of submittals.
4) Deliveries.
5) Off-site fabrication.
6) Access.
7) Site utilization.
8) Temporary facilities and controls.
9) Work hours.
10) Hazards and risks.
11) Progress cleaning.
12) Quality and work standards.
13) Change Orders.
d. Review Coordination Drawings and discuss anticipated work in Coordination Areas.
3. Reporting: Record meeting results and distribute copies to everyone in attendance and to others affected by decisions or actions resulting from each meeting.

1.08 REQUEST FOR INFORMATION (RFI's)

A. Procedure: Immediately on discovery of the need for interpretation of the Contract Documents, and if not possible to request interpretation at Project meeting, prepare and submit an RFI on the form found on the SAO web page.
1. RFI's shall originate with Contractor. RFI's submitted by entities other than Contractor will be returned with no response.
2. Coordinate and submit RFI's in a prompt manner to avoid delays in Contractor's work or work of subcontractors.

B. Content of the RFI: Include a detailed, legible description of item needing interpretation and the following:
1. Project name.

2. Date.
3. Name of Contractor.
4. Name of Associate.
5. RFI number, numbered sequentially.
6. Specification Section number and title and related paragraphs, as appropriate.
7. Drawing number and detail references, as appropriate.
8. Field dimensions and conditions, as appropriate.
9. Contractor's suggested solution(s). If Contractor's solution(s) impact the Contract Time or the Contract Sum, Contractor shall state impact in the RFI.
10. Contractor's signature.
11. Attachments: Include drawings, descriptions, measurements, photos, Product Data, Shop Drawings, and other information necessary to fully describe items needing interpretation.
    a. Supplementary drawings prepared by Contractor shall include dimensions, thicknesses, structural grid references, and details of affected materials, assemblies, and attachments.

C. Associate's Action: Associate will review each RFI, determine action required, and return it. Allow seven working days for Associate's response for each RFI. RFI's received after 1:00 p.m. will be considered as received the following working day.
   1. The following RFI's will be returned without action:
      a. Requests for approval of submittals.
      b. Requests for approval of substitutions.
      c. Requests for coordination information already indicated in the Contract Documents.
      d. Requests for adjustments in the Contract Time or the Contract Sum.
      e. Requests for interpretation of Associate's actions on submittals.
      f. Incomplete RFI's or RFI's with numerous errors.
   2. Associate's action may include a request for additional information, in which case Associate's time for response will start again.
   3. Associate's action on RFI's that may result in a change to the Contract Time or the Contract Sum may be eligible for Contractor to submit Change Proposal according to Division 01 Section "Contract Modification Procedures."
      a. If Contractor believes the RFI response warrants change in the Contract Time or the Contract Sum, notify Associate in writing within 10 days of receipt of the RFI response.

D. On receipt of Associate's action, update the RFI log and immediately distribute the RFI response to affected parties. Review response and notify Associate within seven days if Contractor disagrees with response.

E. RFI Log: Prepare, maintain, and submit a tabular log of RFI's organized by the RFI number. Submit log weekly. Include the following:
   1. Project name.
   2. Name and address of Contractor.
   3. Name and address of Associate.
   4. RFI number including RFI's that were dropped and not submitted.
   5. RFI description.
   6. Date the RFI was submitted.
   7. Date Associate's response was received.
   8. Identification of related Minor Change in the Work, Construction Change Directive, and Proposal Request, as appropriate.
   9. Identification of related Field Order, Work Change Directive, and Proposal Request, as appropriate.

PART 2 PRODUCTS (Not Used)

PART 3 EXECUTION

3.01 GENERAL COORDINATION PROVISIONS

A. Inspection of Conditions: Require that the Installer of each major component to inspect both the substrate and conditions under which the Work is to be performed. Do not proceed until unsatisfactory conditions have been corrected in an acceptable manner.

B. Coordinate temporary enclosures with required inspections and tests to minimize the necessity of uncovering completed construction for that purpose.

3.02 CLEANING AND PROTECTION

A. Clean and protect construction in progress and adjoining materials in place, during handling and installation. Apply protective covering where required to assure protection from damage or deterioration at Contract Completion.

B. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to assure operability without damaging effects.

C. Limiting Exposures: Supervise construction operations to assure that no part of the construction completed or in progress, is subject to harmful, damaging, or otherwise deleterious exposure during the construction period.

3.03 FINAL CLEANING

A. Execute final cleaning prior to final project assessment.

B. Clean interior and exterior glass, surfaces exposed to view; remove temporary labels, stains and foreign substances, polish transparent and glossy surfaces, vacuum carpeted and soft surfaces.

C. Clean equipment and fixtures to sanitary condition with cleaning materials appropriate to surface and material being cleaned.

D. Replace filters of operating equipment.

E. Clean debris from roofs, gutters, downspouts, and drainage systems.

F. Clean site; sweep paved areas, rake clean landscaped surfaces.

G. Remove waste and surplus materials, rubbish, and construction facilities from site.

3.04 CUTTING AND PATCHING

A. Employ skilled and experienced installer to perform cutting and patching.

B. Submit written request in advance of cutting or altering elements affecting:

1. Structural integrity of element.
2. Integrity of weather-exposed or moisture-resistant elements.
3. Efficiency, maintenance, or safety of element.
4. Visual qualities of sight exposed elements.
5. Work of Owner or separate contractor.

C. Execute cutting, fitting, and patching, including excavation and fill, to complete Work, and to:
1. Fit the several parts together, to integrate with other Work.
2. Uncover Work to install or correct ill-timed Work.
3. Remove and replace defective and non-conforming Work.
4. Remove samples of installed Work for testing.
5. Provide openings in elements of Work for penetrations of mechanical and electrical Work.

D. Execute work by methods to avoid damage to other Work, and to provide proper surfaces to receive patching and finishing.

E. Cut masonry and concrete materials using masonry saw or core drill.

F. Restore Work with new products in accordance with requirements of Contract Documents.

G. Fit Work tight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.

H. Maintain integrity of wall, ceiling, or floor construction; completely seal voids.

I. At penetrations of fire rated walls, partitions, ceiling, or floor construction, completely seal voids with fire rated material in accordance with Section 07 84 00, to full thickness of penetrated element.

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

K. Identify hazardous substances or conditions exposed during the Work to Architect/Engineer for decision or remedy.

3.05 SPECIAL PROCEDURES

L. Materials: As specified in product sections; match existing with new products and salvaged products for patching and extending work.

M. Employ skilled and experienced installer to perform alteration work.

N. Cut, move, or remove items as necessary for access to alterations and renovation Work. Replace and restore at completion.

O. Remove unsuitable material not marked for salvage, including rotted wood, corroded metals, and deteriorated masonry and concrete. Replace materials as specified for finished Work.

P. Remove debris and abandoned items from area and from concealed spaces.

Q. Prepare surface and remove surface finishes to permit installation of new work and finishes.

R. Close openings in exterior surfaces to protect existing work from weather and extremes of temperature and humidity.

S. Remove, cut, and patch Work in manner to minimize damage and to permit restoring products and finishes to original or specified condition.

T. Refinish existing visible surfaces to remain in renovated rooms and spaces, to specified renewed condition for each material, with neat transition to adjacent finishes.

U. Where new Work abuts or aligns with existing, provide smooth and even transition. Patch Work to match existing adjacent Work in materials, texture and appearance unless noted otherwise.

V. When finished surfaces are cut so that smooth transition with new Work is not possible, terminate existing surface along straight line at natural line of division and submit recommendation to Architect/Engineer for review.

W. Where change of plane of 1/4 inch or more occurs, submit recommendation for providing smooth transition; to Architect/Engineer for review.

X. Trim existing doors to clear new floor finish. Refinish trim to original or specified condition.

Y. Patch or replace portions of existing surfaces which are damaged, lifted, discolored, or showing other imperfections.

Z. Finish surfaces as specified in individual product sections.

END OF SECTION

SECTION 01 32 16

CONSTRUCTION PROGRESS SCHEDULE

PART 1 GENERAL

1.1 SECTION INCLUDES

A. References.

B. Quality assurance.

C. Format.

D. Schedules.

E. Submittals.

F. Review and evaluation.

G. Updating schedules.

H. Distribution.

1.2 REFERENCES

A. CPM in Construction Management - Project Management with CPM, O'Brien, McGraw-Hill Book Company, New York.

1.3 QUALITY ASSURANCE

A. Contractor's Administrative Personnel: 5 years minimum experience in using and monitoring CPM schedules on comparable projects.

1.4 FORMAT

A. Listings: Reading from left to right, in ascending order for each activity. Identify each activity with applicable specification section number.

B. Diagram Sheet Size: 24 inches high x 36 inches wide.

C. Scale and Spacing: To allow for notations and revisions.

1.5 SCHEDULES

A. Prepare network analysis diagrams and supporting mathematical analyses using Critical Path Method, under concepts and methods outlined in AGC's "The Use of CPM in Construction - A Manual for General Contractors and the Construction Industry".

B. Illustrate order and interdependence of activities and sequence of work; how start of given activity depends on completion of preceding activities, and how completion of activity may restrain start of subsequent activities.

C. Illustrate complete sequence of construction by activity, identifying work of separate stages. Indicate dates for submittals and return of submittals; dates for procurement and delivery of critical products; and dates for installation and provision for testing. Include legend for symbols and abbreviations used.

D. Mathematical Analysis: Tabulate each activity of detailed network diagrams, using calendar dates, and identify for each activity:
   1. Preceding and following event numbers.
   2. Activity description.
   3. Estimated duration of activity, in maximum 5 day intervals.
   4. Earliest start date.
   5. Earliest finish date.
   6. Actual start date.
   7. Actual finish date.
   8. Latest start date.
   9. Latest finish date.
   10. Total and free float; accrue float time to Owner and to Owner's benefit.
   11. Percentage of activity completed.
   12. Responsibility.

E. Analysis Program: Capable of accepting revised completion dates, and re-computation of scheduled dates and float.

F. Required Sorts: List activities in sorts or groups:
   1. By preceding work item or event number from lowest to highest.
   2. By longest float, then in order of early start.
   3. By responsibility in order of earliest possible start date.
   4. In order of latest allowable start dates.
   5. In order of latest allowable finish dates.
   6. Listing of basic input data generating report.
   7. Listing of activities on critical path.

G. Contractor shall schedule work based on a five day 8-hour work week, Monday thru Friday. Coordinate any additional work hours with Sinclair Police and staff. See Alternates.

H. Construction shall be complete no later than dates indicated in the project summary or Bid From included in this specification book.

1.6 SUBMITTALS

A. Within 10 days after date of Owner-Contractor Agreement, established in Notice to Proceed, submit proposed preliminary network diagram defining planned operations for first 60 days of Work, with general outline for remainder of Work.

B. Participate in review of preliminary and complete network diagrams jointly with Architect/Engineer.

C. Within 20 days after joint review of proposed preliminary network diagram, submit draft of proposed complete network diagram for review. Include written certification that major Subcontractors have reviewed and accepted proposed schedule.

D. Submit updated network schedules with each Application for Payment, minimum every 30 days.

E. Submit number of opaque reproductions Contractor requires, plus two copies Architect/Engineer will retain.

1.7 REVIEW AND EVALUATION

A. Participate in joint review and evaluation of network diagrams and analysis with Architect/Engineer at each submittal.

B. Evaluate project status to determine work behind schedule and work ahead of schedule.

C. After review, revise network diagrams and analysis incorporating results of review, and resubmit within 7 days.

1.8 UPDATING SCHEDULES

A. Maintain schedules to record actual start and finish dates of completed activities.

B. Indicate progress of each activity to date of revision, with projected completion date of each activity. Annotate diagrams to graphically depict current status of Work.

C. Identify activities modified since previous submittal, major changes in Work, and other identifiable changes.

D. Indicate changes required to maintain Date of Substantial Completion.

E. Submit sorts required to support recommended changes.

F. Prepare narrative report to define problem areas, anticipated delays, and impact on schedule. Report corrective action taken or proposed and its effect.

1.9 DISTRIBUTION

A. Following joint review, distribute copies of updated schedules to Contractor's project site file, to Subcontractors, suppliers, Architect/Engineer, Owner, and other concerned parties.

B. Instruct recipients to promptly report, in writing, problems anticipated by projections shown in schedules.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

END OF SECTION

SECTION 01 33 00

SUBMITTAL PROCEDURES

PART 1 GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. This Section includes administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other submittals, including:
   1. Contractor's Construction Schedule.
   2. Submittal Schedule.
   3. Structural Steel Fabrication Certification.

B. Related Sections include the following:
   1. See other Division 1 sections and other contract documents for requirements for administrative submittals. Such submittals include, but are not limited to: Permits, Applications for Payment, Performance and Payment Bonds, Insurance Certificates, Lists of Subcontractors and Suppliers.
   1. Divisions 02 through 49 Sections for specific requirements for submittals in those Sections.

1.3 DEFINITIONS

A. Action Submittals: Written and graphic information that requires Associate's responsive action.

B. Informational Submittals: Written information that does not require Associate's responsive action. Submittals may be rejected for not complying with requirements.

1.4 SUBMITTAL PROCEDURES

A. Coordination: Coordinate preparation and processing of submittals with performance of construction activities. Transmit each submittal sufficiently in advance of performance of related construction activities to avoid delay.
   1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
   2. Coordinate transmittal of different types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination.
      a) Associate reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.

B. Submittals Schedule: Comply with requirements in Division 01 Section "Construction Progress Schedule" for list of submittals and time requirements for scheduled performance of related construction activities.

C. Processing Time: Allow sufficient time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Associate's receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals sufficient in advance of the Work to permit processing, including resubmittals.
   1. Initial Review: Allow 15 days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Associate will advise Contractor when a submittal being processed must be delayed for coordination.

2. Intermediate Review: If intermediate submittal is necessary, process it in same manner as initial submittal.
3. Resubmittal Review: Allow 15 days for review of each resubmittal.
4. Sequential Review: Where sequential review of submittals by Associate's consultants, Owner, or other parties is indicated, allow 21 days for initial review of each submittal.

1.05 SUBMITTAL PROCEDURES

A. All submittals shall be transmitted electronically to the Architect in a PDF format.
   1. Contractor shall utilize Adobe Acrobat (or similar software) to have the full ability to add comments, edits, signatures, etc. to the submittals and information submitted.
   2. Contractor shall not simply download information directly from a manufacturer's website without a review of the information and identifying the particular products being utilized. Submittals transmitted to the Architect in this manner will be rejected and require re-submittal.

A. Transmit each submittal with Architect's Approved Cover Sheet. Each submittal shall have a cover sheet. Identify Project, Contractor, subcontractor and supplier; pertinent drawing and detail number, and specification section number, appropriate to submittal. Cover Sheet will be page 1 of the PDF.

B. Sequentially number transmittal forms. Mark revised submittals with original number and sequential alphabetic suffix.

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

D. Schedule submittals to expedite Project and deliver to Architect/Engineer. Coordinate submission of related items.

E. For each submittal for review, allow 5 days excluding delivery time to and from Contractor.

F. Identify variations from Contract Documents and product or system limitations which may be detrimental to successful performance of completed Work.

G. Allow space on submittals for Contractor and Architect/Engineer review stamps.

H. When revised for resubmission, identify changes made since previous submission.

I. Distribute copies of reviewed submittals as appropriate (electronically as appropriate). Instruct parties to promptly report inability to comply with requirements.

J. Resubmittals: Make resubmittals in same form and number of copies as initial submittal. Note date and content of previous submittal. Note date and content of revision in label or title block and clearly indicate extent of revision. Resubmit submittals until they are approved.

K. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, installers, authorities having jurisdiction, and others as necessary for performance of construction activities. Show distribution on transmittal forms.

PART 2 PRODUCTS

A. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.
   1. If information must be specially prepared for submittal because standard printed data are not suitable for use, submit as Shop Drawings, not as Product Data.
   2. Mark each copy of each submittal to show which products and options are applicable.
   3. Include the following information, as applicable:

Manufacturer's written recommendations.

a) Manufacturer's product specifications.
b) Manufacturer's installation instructions.
c) Standard color charts.
d) Manufacturer's catalog cuts.
e) Wiring diagrams showing factory-installed wiring.
f) Printed performance curves.
g) Operational range diagrams.
h) Mill reports.
i) Standard product operation and maintenance manuals.
j) Compliance with specified referenced standards.
k) Testing by recognized testing agency.
l) Application of testing agency labels and seals.
m) Notation of coordination requirements.
1) Submit Product Data before or concurrent with Samples.
2) Preliminary Submittal: Submit a preliminary single-copy of product data where selection of options is required.
3) Number of Copies: Submit two copies of Product Data, unless otherwise indicated. Associate will return one copy. Mark up and retain one returned copy as a Project Record Document.

B. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data.
1) Preparation: Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:
Dimensions.

a) Identification of products and materials included.
b) Fabrication and installation drawings.
c) Roughing-in and setting diagrams.
d) Wiring diagrams showing field-installed wiring, including power, signal, and control wiring.
e) Shop work manufacturing instructions.
f) Templates and patterns.
g) Schedules.
h) Design calculations.
i) Compliance with specified standards.
j) Notation of coordination requirements.
k) Notation of dimensions established by field measurement.
l) Relationship to adjoining construction clearly indicated.
m) Seal and signature of professional engineer if specified.
n) Wiring Diagrams: Differentiate between manufacturer-installed and field-installed wiring.

C. Samples: Submit Samples for review of kind, color, pattern, and texture for a check of these characteristics with other elements and for a comparison of these characteristics between submittal and actual component as delivered and installed.
1. Transmit Samples that contain multiple, related components such as accessories together in one submittal package.
2. Identification: Attach label on unexposed side of Samples that includes the following:
Generic description of Sample.
a) Product name and name of manufacturer.
b) Sample source.

c) Number and title of appropriate Specification Section.

3. Disposition: Maintain sets of approved Samples at Project site, available for quality-control comparisons throughout the course of construction activity. Sample sets may be used to determine final acceptance of construction associated with each set.

D. Samples that may be incorporated into the Work are indicated in individual Specification Sections. Such Samples must be in an undamaged condition at time of use.

1. Samples not incorporated into the Work, or otherwise designated as Owner's property, are the property of Contractor.

2. Samples for Initial Selection: Submit manufacturer's color charts consisting of units or sections of units showing the full range of colors, textures, and patterns available.

3. Number of Samples: Submit one full set(s) of available choices where color, pattern, texture, or similar characteristics are required to be selected from manufacturer's product line. Associate will return submittal with options selected.

4. Samples for Verification: Submit full-size units or Samples of size indicated, prepared from same material to be used for the Work, cured and finished in manner specified, and physically identical with material or product proposed for use, and that show full range of color and texture variations expected. Samples include, but are not limited to, the following: partial sections of manufactured or fabricated components; small cuts or containers of materials; complete units of repetitively used materials; swatches showing color, texture, and pattern; color range sets; and components used for independent testing and inspection.

5. Number of Samples: Submit two sets of Samples. Associate will retain one Sample sets; remainder will be returned.

a. Submit a single Sample where assembly details, workmanship, fabrication techniques, connections, operation, and other similar characteristics are to be demonstrated.

b. If variation in color, pattern, texture, or other characteristic is inherent in material or product represented by a Sample, submit at least three sets of paired units that show approximate limits of variations.

E. Product Schedule or List: As required in individual Specification Sections, prepare a written summary indicating types of products required for the Work and their intended location.

1. Comply with General Conditions Article 15.1.
a) Mark up and retain one returned copy as a Project Record Document.

F. Contractor's Construction Schedule: Comply with requirements specified Section 01 32 16.

G. Submittals Schedule: Comply with requirements specified in General Conditions Article 9.2 and Division 01 Section "Construction Progress Schedule."

H. Application for Payment: Comply with requirements specified in Division 1 and contract documents.

I. Schedule of Values: Comply with requirements specified Division 1. Subcontract List: Prepare a written summary identifying individuals or firms proposed for each portion of the Work, including those who are to furnish products or equipment fabricated to a special design.

J. Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, names and addresses of Associates and owners, and other information specified.

K. Welding Certificates: Prepare written certification that welding procedures and personnel comply with requirements in the Contract Documents. Submit record of Welding Procedure Specification (WPS) and Procedure Qualification Record (PQR) on AWS forms. Include names of firms and personnel certified.

L. Installer Certificates: Prepare written statements on manufacturer's letterhead certifying that Installer complies with requirements in the Contract Documents and, where required, is authorized by manufacturer for this specific Project.

M. Manufacturer Certificates: Prepare written statements on manufacturer's letterhead certifying that manufacturer complies with requirements in the Contract Documents. Include evidence of manufacturing experience where required.

N. Product Certificates: Prepare written statements on manufacturer's letterhead certifying that product complies with requirements in the Contract Documents.

O. Material Certificates: Prepare written statements on manufacturer's letterhead certifying that material complies with requirements in the Contract Documents.

P. Material Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements in the Contract Documents.

Q. Product Test Reports: Prepare written reports indicating current product produced by manufacturer complies with requirements in the Contract Documents. Base reports on evaluation of tests performed by manufacturer and witnessed by a qualified testing agency, or on comprehensive tests performed by a qualified testing agency.

R. Research/Evaluation Reports: Prepare written evidence, from a model code organization acceptable to authorities having jurisdiction, that product complies with building code in effect for Project. Include the following information:

1) Name of evaluation organization.
2) Date of evaluation.
3) Time period when report is in effect.
4) Product and manufacturers' names.
5) Description of product.
6) Test procedures and results.
7) Limitations of use.

S. Schedule of Tests and Inspections: Comply with requirements specified in Division 01 Section "Quality Requirements."

T. Preconstruction Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of tests performed before installation of product, for compliance with performance requirements in the Contract Documents.

U. Compatibility Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of compatibility tests performed before installation of product. Include written recommendations for primers and substrate preparation needed for adhesion.

V. Field Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of field tests either performed during installation of product or after product is installed in its final location, for compliance with requirements in the Contract Documents.

W. Maintenance Data: Prepare written and graphic instructions and procedures for operation and normal maintenance of products and equipment. Comply with requirements specified in Division 01 Section "Closeout Procedures."

X. Design Data: Prepare written and graphic information, including, but not limited to, performance and design criteria, list of applicable codes and regulations, and calculations. Include list of assumptions and other performance and design criteria and a summary of loads. Include load diagrams if applicable. Provide name and version of software, if any, used for calculations. Include page numbers.

Y. Manufacturer's Instructions: Prepare written or published information that documents manufacturer's recommendations, guidelines, and procedures for installing or operating a product or

equipment. Include name of product and name, address, and telephone number of manufacturer. Include the following, as applicable:

1) Preparation of substrates.
2) Required substrate tolerances.
3) Sequence of installation or erection.
4) Required installation tolerances.
5) Required adjustments.
6) Recommendations for cleaning and protection.

Z. Manufacturer's Field Reports: Prepare written information documenting factory-authorized service representative's tests and inspections. Include the following, as applicable:

1) Name, address, and telephone number of factory-authorized service representative making report.
2) Statement on condition of substrates and their acceptability for installation of product.
3) Statement that products at Project site comply with requirements.
4) Summary of installation procedures being followed, whether they comply with requirements and, if not, what corrective action was taken.
5) Results of operational and other tests and a statement of whether observed performance complies with requirements.
6) Statement whether conditions, products, and installation will affect warranty.
7) Other required items indicated in individual Specification Sections.

AA. Insurance Certificates and Bonds: Prepare written information indicating current status of insurance or bonding coverage. Include name of entity covered by insurance or bond, limits of coverage, amounts of deductibles, if any, and term of the coverage.

BB. Material Safety Data Sheets (MSDSs): Submit information directly to Owner; do not submit to Associate.

1) Associate will not review submittals that include MSDSs and will return the entire submittal for resubmittal.

CC. Performance and Design Criteria: Where professional design services or certifications by a design professional are specifically required of Contractor by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated.

1) If criteria indicated are not sufficient to perform services or certification required, submit a written request for additional information to Associate.

DD. Delegated-Design Submittal: In addition to Shop Drawings, Product Data, and other required submittals, submit three copies of a statement, signed and sealed by the responsible design professional, for each product and system specifically assigned to Contractor to be designed or certified by a design professional.

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

PART 3 EXECUTION

1.5 CONTRACTOR'S REVIEW

1) Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to Associate.
2) Approval Stamp: Stamp each submittal with a uniform, approval stamp. Include Project name and location, submittal number, Specification Section title and number, name of reviewer, date of Contractor's ap-

proval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents.

1.6 ASSOCIATE'S / ACTION

1) General: Associate will not review submittals that do not bear Contractor's approval stamp and will return them without action.
2) Action Submittals: Associate will review each submittal, make marks to indicate corrections or modifications required, and return it. Associate will stamp each submittal with an action stamp and will mark stamp appropriately to indicate action taken, as follows:
3) Informational Submittals: Associate will review each submittal and will not return it, or will return it if it does not comply with requirements. Associate will forward each submittal to appropriate party.
4) Partial submittals are not acceptable, will be considered nonresponsive, and will be returned without review.
5) Submittals not required by the Contract Documents may not be reviewed and may be discarded.

END OF SECTION

SECTION 01 40 00

QUALITY REQUIREMENTS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Quality control and control of installation.

B. Tolerances.

C. References.

D. Labeling.

E. Mock-up requirements.

F. Testing and inspection services.

G. Manufacturers' field services.

H. Examination.

I. Preparation.

1.2 QUALITY CONTROL AND CONTROL OF INSTALLATION

A. Monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce Work of specified quality.

B. Comply with manufacturers' instructions, including each step in sequence.

C. When manufacturers' instructions conflict with Contract Documents, request clarification from Architect/Engineer before proceeding.

D. Comply with specified standards as minimum quality for the Work except where more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.

E. Perform Work by persons qualified to produce required and specified quality.

F. Verify field measurements are as indicated on Shop Drawings or as instructed by manufacturer.

G. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, or disfigurement.

1.3 TOLERANCES

A. Monitor fabrication and installation tolerance control of products to produce acceptable Work. Do not permit tolerances to accumulate.

B. Comply with manufacturers' tolerances. When manufacturers' tolerances conflict with Contract Documents, request clarification from Architect/Engineer before proceeding.

C. Adjust products to appropriate dimensions; position before securing products in place.

1.4 REFERENCES

A. For products or workmanship specified by association, trade, or other consensus standards, comply with requirements of standard, except when more rigid requirements are specified or are required by applicable codes.

B. Conform to reference standard by date of issue current on date for receiving bids, except where specific date is established by code.

C. Obtain copies of standards where required by product specification sections.

D. When specified reference standards conflict with Contract Documents, request clarification from Architect/Engineer before proceeding.

E. Neither contractual relationships, duties, nor responsibilities of parties in Contract nor those of Architect/Engineer shall be altered from Contract Documents by mention or inference otherwise in reference documents.

1.5 LABELING

A. Attach label from agency approved by authority having jurisdiction for products, assemblies, and systems required to be labeled by applicable code.

B. Label Information: Include manufacturer's or fabricator's identification, approved agency identification, and the following information, as applicable, on each label.
   1. Model number.
   2. Serial number.
   3. Performance characteristics.

1.6 MOCK-UP REQUIREMENTS

A. Tests will be performed under provisions identified in this section and identified in respective product specification sections.

B. Assemble and erect specified items with specified attachment and anchorage devices, flashings, seals, and finishes.

C. Accepted mock-ups shall be comparison standard for remaining Work.

D. Where mock-up has been accepted by Architect/Engineer and is specified in product specification sections to be removed; remove mock-up and clear area when directed to do so by Architect/Engineer.

1.7 MANUFACTURERS' FIELD SERVICES

A. When specified in individual specification sections, require material or product suppliers or manufacturers to provide qualified staff personnel to observe site conditions, conditions of surfaces and installation, quality of workmanship, start-up of equipment, test, adjust and balance of equipment, and to initiate instructions when necessary.

B. Report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturers' written instructions.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify existing site conditions and substrate surfaces are acceptable for subsequent Work. Beginning new Work means acceptance of existing conditions.

B. Verify existing substrate is capable of structural support or attachment of new Work being applied or attached.

C. Examine and verify specific conditions described in individual specification sections.

D. Verify utility services are available, of correct characteristics, and in correct locations.

3.2 PREPARATION

A. Clean substrate surfaces prior to applying next material or substance.

B. Seal cracks or openings of substrate prior to applying next material or substance.

C. Apply manufacturer required or recommended substrate primer, sealer, or conditioner prior to applying new material or substance in contact or bond.

END OF SECTION

SECTION 01 50 00

TEMPORARY FACILITIES AND CONTROLS

PART 1 GENERAL

1.01 GENERAL

A. This Section is not intended to limit types and amounts of temporary construction facilities and controls required. All temporary facilities and controls must be coordinated with Owner staff and located as indicated in documents. Omission from this Section will not be accepted as an application that such temporary activity is not required for successful completion of the work and compliance with requirements of the Contract Documents.

B. Any Contractor requiring one of the temporary services before it can be provided as specified, or whose requirements with respect to a particular service differ from the service specified, shall provide such service as suits his needs, at his own expense and in a manner satisfactory to the Associate.

C. Maintain all temporary facilities and keep in good operating condition. Maintenance personnel necessary to perform this work shall be provided in accordance with the requirements. Maintenance time will include normal working hours for all trades and start up and shut down overtime as required. Terminate and remove temporary facilities when they are no longer necessary.

1.02 RELATED DOCUMENTS

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

1.03 SUMMARY

A. This Section includes requirements for temporary utilities, support facilities, and security and protection facilities.

B. Related Sections include the following:

1. Division 01 Section "Submittal Procedures" for procedures for submitting copies of implementation and termination schedule and utility reports.
2. Division 01 Section "Closeout Procedures" for progress cleaning requirements.

1.04 WEATHER PROTECTION

A. It is the intent of these Specifications to have each Contractor protect his work and existing or adjacent property against weather, to maintain his work, materials, apparatus and fixtures free from injury or damage in accordance with the General Conditions during the entire construction period. Work likely to be damaged shall be covered or protected at the end of each day's work. Any work damaged by failure to provide protection required, shall be removed and replaced with new work at the Contractor's expense.

B. General Contractor

1) Remove all snow and ice as may be required for proper protection and execution of the work and protection and safety of the public.
2) No openings shall be left open at end of the working day.

C. Mud and Water Control: Water shall not be permitted to accumulate on the site or adjacent areas. All personnel and vehicle accesses shall be stoned and continually maintained free of mud, dirt and debris. During construction, grades in and adjacent to the project site shall be maintained to facilitate positive drainage. Sanitary sewer lines or manholes shall not be used for water disposal.

1.05 SUBMITTALS

A. Implementation and Termination Schedule: Submit a schedule indicating implementation and termination of each temporary utility within 15 days of the date established for commencement of the work.

B. Site Plan: Show temporary facilities, utility hookups, staging areas, and parking areas for construction personnel.

1.06 QUALITY ASSURANCE

A. Regulations: Comply with industry standards and applicable law as and regulations if authorities having jurisdiction, including but no limited to:

1. Building Code requirements.
2. Health and safety regulations.
3. Utility company regulations.
4. Police, Fire Department and Rescue Squad rules.
5. Environmental protection regulations.

B. Standards: Comply with NFPA Code 241, "Building Construction and Demolition Operations," ANSI-A10 Series standards for "Safety Requirements for Construction and Demolition," and NECA Electrical Design Library "Temporary Electrical Facilities."

1. Refer to "Guidelines for Bid conditions for Temporary Job Utilities and Services," prepared jointly by AGC and ASC, for industry recommendations.
2. Electric Service: Comply with NECA, NEMA, and UL standards and regulations for temporary electric service. Install service to comply with NFPA 70.

C. Tests and Inspections: Arrange for authorities having jurisdiction to test and inspect each temporary utility before use. Obtain required certifications and permits.

1.07 PROJECT CONDITIONS

A. Conditions of Use: Do not allow hazardous dangers or unsanitary conditions or public nuisances to develop or persist on the site.

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

PART 2 PRODUCTS

2.01 MATERIALS

A. Exterior Portable Chain-Link Fencing: Minimum 2-inch(50-mm), 9-gage, galvanized steel, chain-link fabric fencing; minimum 6 feet (1.8 m) high with galvanized steel pipe posts; minimum 2-3/8-inch-(60-mm-) OD line posts and 2-7/8-inch-(73-mm-) OD corner and pull posts, with 1-5/8-inch-(42-mm-) OD top and bottom rails. Provide galvanized steel bases for supporting posts.

B. Water: Provide potable water approved by local health authorities.

2.02 TEMPORARY FACILITIES

A. Common-Use Field Office: Owner will provide a room of sufficient size with table and chairs for weekly progress meetings. If contractor requires additional storage space for its use then contractor shall provide as necessary. No Contractor's office trailer will be permitted on site.

B. Temporary facilities and controls include, but are not limited to, the following:

1. Temporary facilities and controls.
2. Temporary sediment and erosion control.
3. Temporary drainage, including drainage ditches, dry wells, stabilization ponds, and containers.
4. Storm water control.
5. Temporary toilet fixtures, wash facilities, and drinking water facilities, including disposable supplies.
6. Temporary enclosure for building exterior, except as indicated.
7. Temporary roads and paved areas.
8. Provide periodic cleaning of existing roads where used by construction traffic.
9. Dewatering facilities and drains.
10. Excavation support and protection.
11. Special hoisting requirements for construction activities.
12. General waste disposal facilities.
13. Temporary fire-protection equipment.
14. Barricades, warning signs, and lights.
15. Security enclosure and lockup.
16. Environmental protection.
17. Electric generators for temporary power. Noise may not disturb occupants of building.
18. Lighting, including site lighting.
19. Sheds sized, furnished, and equipped to accommodate materials and equipment for construction operations. Sheds, equipment and store combustible materials must be stored in Contractor's staging areas, coordinate with Owner.

2.03 EQUIPMENT

A. Fire Extinguishers: Portable, UL rated; with class and extinguishing agent as required by locations and classes of fire exposures.

B. HVAC Equipment: Owner authorizes use of permanent HVAC system.

1. Use of gasoline-burning space heaters, open-flame heaters, or salamander-type heating units is prohibited.
2. Permanent HVAC System: Use of permanent HVAC system for temporary use during construction is permitted, provide filter with MERV of 8 at each return air grille in system and remove at end of construction.

PART 3 EXECUTION

3.01 INSTALLATION, GENERAL

A. Locate facilities where they will serve Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required by progress of the Work.

B. Provide each facility ready for use when needed to avoid delay. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.

3.02 TEMPORARY UTILITY INSTALLATION

A. General: Install temporary service or connect to existing service.

1. Arrange with utility company, Owner, and existing users for time when service can be interrupted, if necessary, to make connections for temporary services.

B. Water Service: Contractor may use existing restroom water service for normal construction tasks.

C. Sanitary Facilities: Contractors may use existing restrooms. Contractor shall maintain and keep facilities clean.

D. Heating: Provide temporary heating required by construction activities for curing or drying of completed installations or for protecting installed construction from adverse effects of low temperatures

or high humidity. Select equipment that will not have a harmful effect on completed installations or elements being installed.

E. Ventilation and Humidity Control: Provide temporary ventilation required by construction activities for curing or drying of completed installations or for protecting installed construction from adverse effects of high humidity. Select equipment that will not have a harmful effect on completed installations or elements being installed. Coordinate ventilation requirements to produce ambient condition required and minimize energy consumption.

F. Electric Power Service: Contractor may use existing building's electric service to work area.

G. Lighting: Provide temporary lighting with local switching that provides adequate illumination for construction operations, observations, inspections, and traffic conditions.

H. Telephone Service: Telephone service will not be available on site. Contractor's designated contact shall carry cell phone 24 hours a day, 7 days a week for emergency contact.

3.03 SUPPORT FACILITIES INSTALLATION

A. General: Comply with the following:

1. Maintain support facilities until near Final Completion. Remove before Final Completion. Personnel remaining after Final Completion will be permitted to use permanent facilities, under conditions acceptable to Owner.

B. Temporary Roads and Paved Areas: Construct and maintain temporary roads and paved areas adequate for construction operations. Locate temporary roads and paved areas in same location as permanent roads and paved areas. Extend temporary roads and paved areas, within construction limits indicated, as necessary for construction operations.

1. Provide dust-control treatment that is nonpolluting and non-tracking. Reapply treatment as required to minimize dust.
2. Recondition base after temporary use, including removing contaminated material, regrading, proof rolling, compacting, and testing.

C. Traffic Controls: Comply with requirements of authorities having jurisdiction.

1. Protect existing site improvements to remain including curbs, pavement, and utilities.
2. Maintain access for fire-fighting equipment and access to fire hydrants.

D. Waste Disposal: Waste must be removed from site on a daily basis.

E. Lifts and Hoists: Provide facilities necessary for hoisting materials and personnel.

1. Truck cranes and similar devices used for hoisting materials are considered "tools and equipment" and not temporary facilities. Lifts and hoists must be removed from site at the end of each day.

F. Temporary Use of Permanent Stairs: Cover finished, permanent stairs with protective covering of plywood or similar material so finishes will be undamaged at time of acceptance.

3.04 SECURITY AND PROTECTION FACILITIES INSTALLATION

A. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction in ways and by methods that comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.

1. Comply with work restrictions specified in Division 01.

B. Temporary Enclosures: Provide temporary enclosures for protection of construction, in progress and completed, from inmate access, exposure, foul weather, other construction operations, and similar activities if necessary. Provide temporary weathertight enclosure for building exterior if necessary.

1. Where heating or cooling is needed and permanent enclosure is not complete, insulate temporary enclosures.

C. Temporary Fire Protection: Install and maintain temporary fire-protection facilities of types needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 241.

1. Prohibit smoking, vaping on property.
2. Supervise welding operations, combustion-type temporary heating units, and similar sources of fire ignition according to requirements of authorities having jurisdiction.
3. Develop and supervise an overall fire-prevention and -protection program for personnel at Project site. Review needs with local fire department and establish procedures to be followed. Instruct personnel in methods and procedures. Post warnings and information.

3.05 OPERATION, TERMINATION, AND REMOVAL

A. Supervision: Enforce strict discipline in use of temporary facilities. To minimize waste and abuse, limit availability of temporary facilities to essential and intended uses.

B. Maintenance: Maintain facilities in good operating condition until removal.

1. Maintain operation of temporary enclosures, heating, cooling, humidity control, ventilation, and similar facilities on a 24-hour basis where required to achieve indicated results and to avoid possibility of damage.

C. Temporary Facility Changeover: Do not change over from using temporary security and protection facilities to permanent facilities until Final Completion.

D. Termination and Removal: Remove each temporary facility when needed for its service has ended, when it has been replaced by authorized use of a permanent facility, or no later than Final Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with temporary facility. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.

1. Materials and facilities that constitute temporary facilities are property of Contractor.
2. Remove temporary roads. Where area is intended for landscape development, remove soil and aggregate fill that do not comply with requirements for fill or subsoil. Remove materials contaminated with road oil, asphalt and other petrochemical compounds, and other substances that might impair growth of plant materials or lawns. Repair or replace street paving, curbs, and sidewalks at temporary entrances, as required by authorities having jurisdiction.
3. At Final Completion, clean and renovate permanent facilities used during construction period. Comply with final cleaning requirements specified in Division 01 Section "Closeout Procedures."

END OF SECTION

SECTION 01 57 19

INDOOR AIR QUALITY (IAQ) MANAGEMENT

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes:
1. Special requirements for Indoor Air Quality (IAQ) management during construction operations.
a. Control of emissions during construction.
b. Moisture control during construction.

B. Related Sections:
1. 01 40 00 – Quality Requirements: Meetings and project coordination.
3. 01 78 39 – Project Record and Close-Out Documents.
4. 01 81 13 – Submittals

C. It is the intent to have the building constructed using sustainable means and methods. The construction documents incorporate requirements to meet these sustainable measures. The Contractors shall review all sustainable design measures including 01 70 00 Execution & Close-Out Requirements.

1.2 DEFINITIONS

A. Definitions pertaining to sustainable development: As defined in ASTM E2114.

B. Adequate ventilation: Ventilation, including air circulation and air changes, required to cure materials, dissipate humidity, and prevent accumulation of particulates, dust, fumes, vapors, or gases.

C. Hazardous Materials: Any material that is regulated as a hazardous material in accordance with 49 CFR 173, requires a Material Safety Data Sheet (MSDS) in accordance with 29 CFR 1910.1200, or which during end use, treatment, handling, storage, transportation or disposal meets or has components which meet or have the potential to meet the definition of a Hazardous Waste in accordance with 40 CFR 261. Throughout this specification, hazardous material includes hazardous chemicals. See "AHERAS Asbestos Management Plan" included in these specifications.
1. Hazardous materials include: pesticides, biocides, and carcinogens as listed by recognized authorities, such as the Environmental Protection Agency (EPA) and the International Agency for Research on Cancer (IARC).

D. Indoor Air Quality (IAQ): The composition and characteristics of the air in an enclosed space that affect the occupants of that space. The indoor air quality of a space refers to the relative quality of air in a building with respect to contaminants and hazards and is determined by the level of indoor air pollution and other characteristics of the air, including those that impact thermal comfort such as air temperature, relative humidity and air speed.

E. Interior final finishes: Materials and products that will be exposed at interior, occupied spaces; including flooring, wallcovering, finish carpentry, and ceilings.

F. Packaged dry products: Materials and products that are installed in dry form and are delivered to the site in manufacturer's packaging; including carpets, resilient flooring, ceiling tiles, and insulation.

G. Wet products: Materials and products installed in wet form, including paints, sealants, adhesives, special coatings, and other materials which require curing.

1.4 SUBMITTALS

A. Indoor Air Quality (IAQ) Management Plan: Not less than 10 days before the Pre-construction meeting, prepare and submit an IAQ Management Plan including, but not limited to, the following:
   1. Procedures for control of emissions during construction.
      a. Identify schedule for application of interior finishes.
   2. Procedures for moisture control during construction.
      a. Identify porous materials and absorptive materials.
      b. Identify schedule for inspection of stored and installed absorptive materials.
   3. Revise and resubmit Plan as required by Owner.
      a. Approval of Contractor's Plan will not relieve the Contractor of responsibility for compliance with applicable environmental regulations.

B. Product Data:
   1. Submit product data for filtration media used during construction and during operation. Include Minimum Efficiency Reporting Value (MERV).
   2. Material Safety Data Sheets: Submit MSDSs for inclusion in Operation and Maintenance Manual for the following products.
      a. Adhesives.
      b. Floor and wall patching/leveling materials.
      c. Caulking and sealants.
      d. Insulating materials.
      e. Fireproofing and firestopping.
      f. Carpet.
      g. Paint.
      h. Clear finish for wood surfaces.
      i. Lubricants.
      j. Cleaning products.

PART 2 - PRODUCTS

PART 3 - EXECUTION

3.1 IAQ MANAGEMENT - EMISSIONS CONTROL

A. During construction operations, follow the recommendations in SMACNA IAQ Guidelines for Occupied Buildings under Construction.

B. HVAC Protection:
   1. Seal return registers during construction operations.
   2. Provide temporary exhaust during construction operations
   3. To the greatest extent possible, isolate and/or shut down the return side of the HVAC system during construction. When ventilation system must be operational during construction activities, provide temporary filters.

C. Source Control: Provide low and zero VOC materials as specified.

D. Pathway Interruption: Isolate areas of work as necessary to prevent contamination of clean or occupied spaces. Provide pressure differentials and/or physical barriers to protect clean or occupied spaces.

E. Housekeeping: During construction, maintain project and building products and systems to prevent contamination of building spaces.

F. Temporary Ventilation: Provide an ACH (air changes per hour) of 1.5 or more and as follows:
1. Provide minimum 48 hour pre-ventilation of packaged dry products prior to installation. Remove from packaging and ventilate in a secure, dry, well-ventilated space free from strong contaminant sources and residues. Provide a temperature range of 60 degrees F minimum to 90 degree F maximum continuously during the ventilation period. Do not ventilate within limits of Work unless otherwise approved by Architect.
2. Provide adequate ventilation during and after installation of interior wet products and interior final finishes.
3. Provide filtration media with a Minimum Efficiency Reporting Value (MERV) of 8 as determined by ASHRAE 52.2 during construction and filtration media with a MERV of 13 during Owner occupancy. Coordinate with work of Division 23 - Heating Ventilating and Air Conditioning (HVAC).

G. Scheduling: Schedule construction operations involving wet products prior to packaged dry products to the greatest extent possible.

3.2 IAQ MANAGEMENT - MOISTURE CONTROL

A. Housekeeping:
1. Keep materials dry. Protect stored on-site and installed absorptive materials from moisture damage.
2. Verify that installed materials and products are dry prior to sealing and weatherproofing the building envelope.
3. Install interior absorptive materials only after building envelope is sealed and weatherproofed.

B. Inspections: Document and report results of inspections; state whether of not inspections indicate satisfactory conditions.
1. Examine materials for dampness as they arrive. If acceptable to Architect/Owner, dry damp materials completely prior to installation; otherwise, reject materials that arrive damp.
2. Examine materials for mold as they arrive and reject materials that arrive contaminated with mold.
3. Inspect stored and installed absorptive materials regularly for dampness and mold growth. Inspect weekly and after each rain event.
   a. Where stored on-site or installed absorptive materials become wet, notify Architect. Inspect for damage. If acceptable to Architect/Owner, dry completely prior to closing in assemblies; otherwise, remove and replace with new materials.
3. Basement: Monitor basement and crawlspace humidity and dehumidify when relative humidity is greater than 85 percent for more than 2 weeks or at the first sign of mold growth.
4. Site drainage: Verify that final grades of site work and landscaping drain surface water and ground water away from the building.
6. Plumbing: Verify satisfactory pressure test of pipes and drains is performed before closing in and insulating lines.
7. Condensate pans are sloped and plumbed correctly

1. Access panels are installed to allow for inspection and cleaning of coils and ductwork downstream of coils
2. Ductwork and return plenums are air sealed
3. Duct insulation is installed and sealed
4. Chilled water line and refrigerant line insulation are installed and sealed.

C. Schedule:
1. Schedule work such that absorptive materials, including but not limited to porous insulations, paper-faced gypsum board, ceiling tile, and finish flooring, are not installed until they can be protected from rain and construction-related water.
2. Weather-proof as quickly as possible. Schedule installation of moisture-control materials, including but not limited to air barriers, flashing, exterior sealants and roofing, at the earliest possible time.

D. Testing for Moisture Content: Test moisture content of porous materials and absorptive materials to ensure that they are dry before sealing them into an assembly. Document and report results of testing. Where tests are not satisfactory, dry materials and retest. If satisfactory results cannot be obtained with retest, remove and replace with new materials.
1. Concrete: Moisture test prior to finish flooring application as specified in Division 09 Moisture test as per one or more of the following; unless otherwise indicated, acceptable upper limits for concrete are < 4% top inch; < 85% headspace RH; <3 lbs/1000ft2/day:
   a. ASTM D4263 Test Method for Indicating Moisture in Concrete by the Plastic Sheet Method
   b. ASTM F1869 Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride
   c. ASTM F2170 Test Method for Determining Relative Humidity in Concrete Floor Slabs Using In Situ Probes
2. Wood: Moisture test as per ASTM D4444 - Standard Test Methods for Use and Calibration of Hand-Held Moisture Meters; unless otherwise indicated acceptable upper limits for wood products are < 20% at center of piece; < 15% at surface.
3. Gypsum Board, Gypsum Plaster, Insulation, and other absorptive materials: Moisture test with a Pinless Moisture Meter to assess patterns of moisture, if any.

END OF SECTION

SECTION 01 60 00

PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

A. Provide products of same kind from a single source. The term "product" includes the terms "material," "equipment," "system," and similar terms.

B. Deliver, store, and handle products according to manufacturer's written instructions, using means and methods that will prevent damage, deterioration, and loss, including theft.
   1. Schedule delivery to minimize long-term storage and to prevent overcrowding construction spaces.
   2. Deliver in manufacturer's original sealed packaging with labels and written instructions for handling, storing, protecting, and installing.
   3. Inspect products at time of delivery for compliance with the Contract Documents and to ensure items are undamaged and properly protected.
   4. Store heavy items in a manner that will not endanger supporting construction.
   5. Store products subject to damage on platforms or pallets, under cover in a weathertight enclosure, with ventilation adequate to prevent condensation. Maintain temperature and humidity within range required.

PART 2 - PRODUCTS

2.1 PRODUCT OPTIONS

A. Provide products that comply with the Contract Documents, are undamaged, and are new at the time of installation.
   1. Provide products complete with accessories, trim, finish, and other devices and components needed for a complete installation and the intended use and effect.

B. Do not attach manufacturer's labels or trademarks, except for required nameplates, on surfaces exposed to view in occupied spaces or on the exterior.

C. Select products as follows:
   1. Where compliance with performance requirements is specified, provide products that comply and are recommended in writing by the manufacturer for the application.
   2. Where compliance with codes, regulations, or standards, is specified, select a product that complies with the codes, regulations, or standards referenced.

D. Unless otherwise indicated, A/E will select color, pattern, and texture of each product from manufacturer's full range of standard options.

E. Sustainability: It is the intent of this project to have the building constructed using sustainable means and methods. However, no third-party environmental performance certification is to be pursued for this project. The construction documents incorporate requirements to meet these sustainable measures. The Contractors shall review all sustainable design measures and shall closely coordinate activities with the General Contractor.

F. Submittals: Provide manufacturer's documentation and technical submittals as necessary to indicate sustainable measures. These submittals are in addition to other submittals.

END OF SECTION

SECTION 01 70 00

EXECUTION AND CLOSEOUT REQUIREMENTS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Closeout procedures.

B. Final cleaning.

C. Starting of systems.

D. Demonstration and instructions.

E. Testing, adjusting and balancing.

F. Protecting installed construction.

G. Project record documents.

H. Operation and maintenance data.

I. Manual for materials and finishes.

J. Manual for equipment and systems.

K. Spare parts and maintenance products.

L. Product warranties and product bonds.

M. Maintenance service.

1.2 CLOSEOUT PROCEDURES

A. Submit written certification that Contract Documents have been reviewed, Work has been inspected, and that Work is complete in accordance with Contract Documents and ready for Architect/Engineer's review.

B. Provide submittals to Architect/Engineer required by authorities having jurisdiction.

C. Submit final Application for Payment identifying total adjusted Contract Sum, previous payments, and sum remaining due.

D. Owner will occupy portions of building during construction. Coordinate access and any required shutdowns with owner.

1.3 FINAL CLEANING

A. Execute final cleaning prior to final project assessment.

B. Clean interior and exterior glass, surfaces exposed to view; remove temporary labels, stains and foreign substances, polish transparent and glossy surfaces, vacuum carpeted and soft surfaces.

C. Clean equipment and fixtures to sanitary condition with cleaning materials appropriate to surface and material being cleaned.

D. Replace filters of operating equipment.

E. Remove waste and surplus materials, rubbish, and construction facilities from site.

1.4 STARTING OF SYSTEMS

A. Coordinate schedule for start-up of various equipment and systems.

B. Notify Architect/Engineer and Owner seven days prior to start-up of each item.

C. Verify each piece of equipment or system has been checked for proper lubrication, drive rotation, belt tension, control sequence, and for conditions which may cause damage.

D. Verify tests, meter readings, and specified electrical characteristics agree with those required by equipment or system manufacturer.

E. Verify wiring and support components for equipment are complete and tested.

F. Execute start-up under supervision of applicable Contractors' personnel in accordance with manufacturers' instructions.

G. When specified in individual specification Sections, require manufacturer to provide authorized representative to be present at site to inspect, check, and approve equipment or system installation prior to start-up, and to supervise placing equipment or system in operation.

H. Submit a written report in accordance with Section 01 33 00 - Submittal Procedures that equipment or system has been properly installed and is functioning correctly.

1.5 DEMONSTRATION AND INSTRUCTIONS

A. Demonstrate operation and maintenance of products to Owner's personnel one week prior to date of Substantial Completion.

B. Utilize operation and maintenance manuals as basis for instruction. Review contents of manual with Owner's personnel in detail to explain all aspects of operation and maintenance.

C. Demonstrate start-up, operation, control, adjustment, trouble-shooting, servicing, maintenance, and shutdown of each item of equipment at agreed time at designated location.

D. Prepare and insert additional data in operations and maintenance manuals when need for additional data becomes apparent during instruction.

E. Required instruction time for each item of equipment and system is specified in individual sections.

1.6 TESTING, ADJUSTING AND BALANCING

A. Owner will appoint and employ services of independent firm to perform testing, adjusting, and balancing.

B. Reports will be submitted by independent firm to Architect/Engineer indicating observations and results of tests and indicating compliance or non-compliance with requirements of Contract Documents.

1.7 PROTECTING INSTALLED CONSTRUCTION

A. Protect installed Work and provide special protection where specified in individual specification sections.

B. Provide temporary and removable protection for installed products. Control activity in immediate work area to prevent damage.

C. Provide protective coverings at walls, projections, jambs, sills, and soffits of openings.

D. Protect finished floors, stairs, and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects, by protecting with durable sheet materials.

E. Prohibit traffic or storage upon waterproofed or roofed surfaces. When traffic or activity is necessary, obtain recommendations for protection from waterproofing or roofing material manufacturer.

F. Prohibit traffic from landscaped areas.

1.8 PROJECT RECORD DOCUMENTS

A. Maintain on site one set of the following record documents; record actual revisions to the Work:
   1. Drawings.
   2. Specifications.
   3. Addenda.
   4. Change Orders and other modifications to the Contract.
   5. Reviewed Shop Drawings, Product Data, and Samples.
   6. Manufacturer's instruction for assembly, installation, and adjusting.

B. Ensure entries are complete and accurate, enabling future reference by Owner.

C. Store record documents separate from documents used for construction.

D. Record information concurrent with construction progress, not less than weekly.

E. Specifications: Legibly mark and record at each product section description of actual products installed, including the following:
   1. Manufacturer's name and product model and number.
   2. Product substitutions or alternates utilized.
   3. Changes made by Addenda and modifications.

F. Record Drawings and Shop Drawings: Legibly mark each item to record actual construction including:
   1. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of the Work.
   2. Field changes of dimension and detail.
   3. Details not on original Contract drawings.

G. Submit documents to Architect/Engineer with claim for final Application for Payment.

1.9 OPERATION AND MAINTENANCE DATA

A. Submit data bound in 8-1/2 x 11 inch (A4) text pages, three D side ring binders with durable plastic covers.

B. Prepare binder cover with printed title "OPERATION AND MAINTENANCE INSTRUCTIONS", title of project.

C. Internally subdivide binder contents with permanent page dividers, logically organized as described below; with tab titling clearly printed under reinforced laminated plastic tabs.

D. Drawings: Provide with reinforced punched binder tab. Bind in with text; fold larger drawings to size of text pages.

E. Contents: Prepare Table of Contents for each volume, with each product or system description identified, typed on white paper, in three parts as follows:
   1. Part 1: Directory, listing names, addresses, and telephone numbers of Architect/Engineer, Contractor, Subcontractors, and major equipment suppliers.
   2. Part 2: Operation and maintenance instructions, arranged by system and subdivided by specification section. For each category, identify names, addresses, and telephone numbers of Subcontractors and suppliers. Identify the following:
      a. Significant design criteria.
      b. List of equipment.
      c. Parts list for each component.
      d. Operating instructions.
      e. Maintenance instructions for equipment and systems.
      f. Maintenance instructions for special finishes, including recommended cleaning methods and materials, and special precautions identifying detrimental agents.
   3. Part 3: Project documents and certificates, including the following:
      a. Shop drawings and product data.
      b. Air and water balance reports.
      c. Certificates.
      d. Originals of warranties and bonds.

1.10 MANUAL FOR EQUIPMENT AND SYSTEMS

A. Submit one copy of completed volumes 10 days prior to final inspection. Draft copy be reviewed and returned after final inspection, with Architect/Engineer comments. Revise content of document sets as required prior to final submission.

B. Submit one set of revised final volumes in final form within 10 days after final inspection.

C. Each Item of Equipment and Each System: Include description of unit or system, and component parts. Identify function, normal operating characteristics, and limiting conditions. Include performance curves, with engineering data and tests, and complete nomenclature and model number of replaceable parts.

D. Panelboard Circuit Directories: Provide electrical service characteristics, controls, and communications.

E. Include color coded wiring diagrams as installed.

F. Operating Procedures: Include start-up, break-in, and routine normal operating instructions and sequences. Include regulation, control, stopping, shut-down, and emergency instructions. Include summer, winter, and special operating instructions.

G. Maintenance Requirements: Include routine procedures and guide for preventative maintenance and trouble shooting; disassembly, repair, and reassembly instructions; and alignment, adjusting, balancing, and checking instructions.

H. Include servicing and lubrication schedule, and list of lubricants required.

I. Include manufacturer's printed operation and maintenance instructions.

J. Include sequence of operation by controls manufacturer.

K. Include original manufacturer's parts list, illustrations, assembly drawings, and diagrams required for maintenance.

L. Include control diagrams by controls manufacturer as installed.

M. Include Contractor's coordination drawings, with color coded piping diagrams as installed.

N. Include charts of valve tag numbers, with location and function of each valve, keyed to flow and control diagrams.

O. Include list of original manufacturer's spare parts, current prices, and recommended quantities to be maintained in storage.

P. Include test and balancing reports as specified in Section 01 40 00 - Quality Requirements.

Q. Additional Requirements: As specified in individual product specification sections.

R. Include listing in Table of Contents for design data, with tabbed dividers and space for insertion of data.

1.11 SPARE PARTS AND MAINTENANCE PRODUCTS

A. Furnish spare parts, maintenance, and extra products in quantities specified in individual specification sections.

B. Deliver to Project site and place in location as directed by Owner; obtain receipt prior to final payment.

1.12 PRODUCT WARRANTIES AND PRODUCT BONDS

A. Obtain warranties and bonds executed in duplicate by responsible subcontractors, suppliers, and manufacturers, within ten days after completion of applicable item of work.

B. Execute and assemble transferable warranty documents and bonds from subcontractors, suppliers, and manufacturers.

C. Verify documents are in proper form, contain full information, and are notarized.

D. Co-execute submittals when required.

E. Submit prior to final Application for Payment.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

END OF SECTION

SECTION 01 74 19

CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes:
1. Construction waste management plan.
2. Construction waste recycling.

1.2 REFERENCES

A. ASTM International:
1. ASTM E1609 - Standard Guide for Development and Implementation of a Pollution Prevention Program.

1.3 PLAN REQUIREMENTS

A. Develop and implement construction waste management plan in accordance with ASTM E1609 and as approved by the Owner and Architect.

B. Intent:
1. Divert construction, demolition, and land clearing debris from landfill disposal.
2. Redirect recyclable material back to manufacturing process.
3. Generate cost savings or increase minimal additional cost to Project for waste disposal.

1.4 SUBMITTALS

A. Section 01 33 00 - Submittal Procedures: Requirements for submittals.

B. Construction Plan: Submit construction waste management plan describing methods and procedures for implementation and monitoring compliance including the following:
1. Transportation company hauling construction waste to waste processing facilities.
2. Recycling and adaptive reuse processing facilities and waste type each facility will accept.
3. Construction waste materials anticipated for recycling and adaptive reuse.
4. On site sorting and site storage methods.

C. Submit documentation prior to Substantial Completion substantiating construction waste management plan was maintained and goals were achieved.
1. Trash: Quantity by weight deposited in landfills. Include associated fees, transportation costs, container rentals, and taxes for total cost of disposal.
2. Salvaged Material: Quantity by weight with destination for each type of material salvaged for resale, recycling, or adaptive reuse. Include associated fees, transportation costs, container rentals, and taxes for total cost of disposal. Also include reimbursements due to salvage resale.
3. Total Cost: Indicate total cost or savings for implementation of construction waste management plan.

1.5 CONSTRUCTION WASTE MANAGEMENT PLAN

A. Construction Waste Landfill Diversion: Minimum 20 percent by weight of construction waste materials for duration of Project through resale, recycling, or adaptive reuse. This shall apply to the General Trades Contractor only.

B. Implement construction waste management plan at start of construction.

C. Distribute approved construction waste management plan to subcontractors and others affected by Plan Requirements.

D. Oversee plan implementation, instruct construction personnel for plan compliance, and document plan results.

E. Purchase Products to prevent waste by:
1. Ensuring correct quantity of each material is delivered to site.
2. Choosing products with minimal or no packaging.
3. Requiring suppliers to use returnable pallets or containers.
4. Requiring suppliers to take or buy-back rejected or unused items.

1.6 CONSTRUCTION WASTE RECYCLING

A. Use source separation method or co-mingling method suitable to sorting and processing method of selected recycling center. Dispose non-recyclable trash separately into landfill.

B. Source Separation Method: Recyclable materials separated from trash and sorted into separate bins or containers, identified by waste type, prior to transportation to recycling center.

C. Co-Mingling Method: Recyclable materials separated from trash and placed in unsorted bins or container for sorting at recycling center.

D. Materials suggested for recycling include:
1. Packing materials including paper, cardboard, foam plastic, and sheeting.
2. Recyclable plastics.
3. Miscellaneous metals.
4. Carpeting materials.
5. Glass
6. Etc.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION

3.1 CONSTRUCTION WASTE COLLECTION

A. Collect construction waste materials in marked bins or containers and arrange for transportation to recycling centers or adaptive salvage and reuse processing facilities.

B. Maintain recycling and adaptive reuse storage and collection area in orderly arrangement with materials separated to eliminate co-mingling of materials required to be delivered separately to waste processing facility.

C. Store construction waste materials to prevent environmental pollution, fire hazards, hazards to persons and property, and contamination of stored materials.

D. Cover construction waste materials subject to disintegration, evaporation, settling, or runoff to prevent polluting air, water, and soil.

3.2 CONSTRUCTION WASTE RECYCLING AND DISPOSAL

A. The following materials are required to be recycled and weight tickets provided as a submittal item and in O&M manuals.
   1. Recycle all metals and provide weight tickets.
   2. Weight tickets must be provided for everything recyclable.

B. Disposal of Non-carpet demolished materials.
   1. General: except for items or materials indicated to be recycled, reused, salvaged, reinstalled or otherwise indicated to remain Owner's property, remove demolished materials from Project site.
      a. Do not allow demolished materials to accumulate on site. Remove at the end of every work session.
      b. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
   2. Burning: Do not burn demolished materials.
   3. Disposal: Transport demolished material off Owner's property and legally disposes of them.

END OF SECTION

SECTION 01 78 39

PROJECT RECORD AND CLOSE-OUT DOCUMENTS

PART 1 - GENERAL

1.01 SUMMARY

A. This Section includes administrative and procedural requirements for Project Record Documents, including the following:
   1. Record Drawings.
   2. Record Specifications.
   3. Record Product Data.

B. See related Divisions 1 through 33 Sections for specific requirements for Project Record Documents of the Work in those Sections.

C. See Section 01 70 00 Execution and Closeout Requirements.

1.02 SUBMITTALS

A. Record Drawings: Comply with the following:
   1. Number of Copies: Contractor shall submit one set of as-built drawings.
   2. The Owner or his representative shall monitor the preparation of record documents through out the course of the work and the Contractor shall make available copies of record documents for review by the Owner on a regular (monthly) basis.

B. Record Specifications: Submit one copy of Project's Specifications, including addenda and contract modifications.

C. Record Product Data: Submit one copy of each Product Data submittal. This may be included with the Operations and Maintenance Manuals and shall include all products and equipment.

D. Guarantees & Warranties: Submit in accordance with related Division 1 sections and individual sections.

PART 2 - PRODUCTS

2.01 RECORD DRAWINGS

A. Record Prints: Maintain one set of prints of the Contract Drawings and Shop Drawings.
   1. Preparation: Mark Record Prints to show the actual installation where installation varies from that shown originally. Require individual or entity who obtained record data, whether individual or entity is Installer, subcontractor, or similar entity, to prepare the marked-up Record Prints.
      a. Give particular attention to information on concealed elements that would be difficult to identify or measure and record later.
      b. Record data as soon as possible after obtaining it. Record and check the markup before enclosing concealed installations.
      c. Mark the Contract Drawings to show actual physical conditions, completely and accurately.

d. Mark record sets with red-colored pencil. Use other colors to distinguish between changes for different categories of the Work at same location.
e. Note Construction alternate numbers, Change Order numbers, and similar identification, where applicable.

2.02 RECORD SPECIFICATIONS

A. Preparation: Mark Specifications to indicate the actual product installation where installation varies from that indicated in Specifications, addenda, and contract modifications.

2.03 OPERATING AND MAINTENANCE MANUALS

A. Contractor shall submit Operation and Maintenance Manuals in accordance with related Division 1 sections.

2.04 RECORD PRODUCT DATA

A. Preparation: Mark Product Data to indicate the actual product installation where installation varies substantially from that indicated in Product Data submittal.

2.05 MISCELLANEOUS RECORD SUBMITTALS

A. Provide Inspection Certificates as issued by the authorities having jurisdiction.

PART 3 - EXECUTION

3.01 RECORDING AND MAINTENANCE

A. Recording: Maintain one copy of each submittal during the construction period for Project Record Document purposes. Post changes and modifications to Project Record Documents as they occur; do not wait until the end of Project.

B. Maintenance of Record Documents and Samples: Store Record Documents and Samples in the field office apart from the Contract Documents used for construction. Do not use Project Record Documents for construction purposes. Maintain Record Documents in good order and in a clean, dry, legible condition, protected from deterioration and loss. Provide access to Project Record Documents for Architect's reference during normal working hours.

END OF SECTION

SECTION 02 41 16

SELECTIVE DEMOLITION

PART 1 GENERAL

1.1 SECTION INCLUDES

A. This Section Includes:
1. Demolition of designated select structures and features at the Old Valley View High School Building in Germantown, Ohio, including:
2. Disposal of demolished materials.
3. All manpower, coordination, permitting associated with any street/sidewalk closures necessitated by the demolition.
4. All labor, materials, equipment, special tools and services required for the complete demolition and removal of the associated items indicated.
5. All labor, materials, tools and equipment required for the work and not specified under another Section, whether or not specifically referred to herein.

B. Intent:
1. It is not the intent of the Specifications to include all items of demolition, selective demolition of miscellaneous site components and related required work. The Specifications are provided to describe (in conjunction with the Drawings) the general scope of the demolition requirements.
2. Bidder must, before submitting his bid, carefully examine the Demolition Drawings & Specifications, and the Reference Drawings and visit the project site and fully familiarize himself with the buildings and all conditions affecting the Work, and then determine for himself the full extent of demolition, selective demolition and other work required.

C. Brief Overview of Demolition Work:
1. Existing entities indicated to be demolished shall be completely demolished, except items/portions specifically indicated to remain.
   a. All demolished materials shall be removed from the site. This work includes (but is not limited to) complete removal of slabs, remaining building components & furnishings, mechanical/electrical/plumbing equipment/piping/ wiring/conduit (within buildings, adjacent to buildings, roof/wall-mounted, and under-slab), septic system structures, and exterior paving.
2. Loose fill shall also be removed as part of the Demolition scope where such loose fill is unsuitable for re-compaction on site.
3. Existing building utility services shall be disconnected as necessary prior to the start of Demolition activities.
4. Contractor shall completely remove existing utilities to the property line and cap unless specifically indicated otherwise. Extent of utility removal is described on the Demolition Site Plans. Demolition Contractor shall hire qualified Plumbing, Electrical and other specialized contractors as required to perform utility disconnections. Coordinate with Utility Companies as required.
5. Mention herein of certain items of selective demolition is for general information only and is not intended to limit the scope of such work or to preclude any other items of selective demolition that are necessary for proper, safe and expeditious execution and completion of the work.
6. The Owner will remove any desired items to be salvaged prior to demolition of the building. The Owner reserves the right to remove (with the Owner's own forces) any objects/components from the building(s) prior to demolition. Any objects left in the building at the scheduled time for demolition to begin shall be considered part of the demolition work to be removed from the site by the Demolition Contractor.

7. Demolition Material: All material removed and not designated for salvage shall become the property of the Demolition Contractor and shall be removed from the site. Items of salvable value to the Contractor may be removed as the work progresses. Salvaged items must be transported from the site as they are removed. Storage or sale of removed items on the site will not be permitted.

D. Hazardous Materials:
1. Category II Asbestos-Containing Material (ACM): If unexpected or suspected Category II ACM is discovered during demolition operations, contact the Architect immediately to coordinate testing by the Abatement Consultant and (if required) removal by the Abatement Contractor.
2. Category I Non-Friable ACM: The building may contain Category I Non-Friable materials which are assumed to be asbestos-containing. Such materials that are in good condition may be left in place during demolition activities as long as they are not rendered friable and waste is not compacted by tracked equipment. These materials shall not be taken to a recycling facility that will subject these materials to grinding or crushing operations. These materials shall be disposed of at an EPA construction and demolition debris landfill that accepts non-friable asbestos waste or an EPA regulated asbestos landfill.
3. Other Hazardous Materials: If unexpected hazardous material is discovered during demolition operations, contact the Architect immediately to coordinate testing by the Abatement Consultant and (if possible) removal by the Abatement Contractor.
4. See Hazardous Materials Assessment Report by Dayton Environmental Testing included in these specifications for reference.

E. Related Documents: The provisions of the General Conditions and the Sections included under Division 00 & 01 are included as a part of this Section as though bound herein.

1.2 QUALITY ASSURANCE

A. Regulatory Requirements:
1. Conform to applicable local codes for demolition of structures, safety of adjacent buildings and structures, dust control and runoff control.
2. Submit for and obtain required permits and licenses from authorities having jurisdiction. Pay all associated fees including disposal charges. This includes Ohio Environment Protection agency (OEPA) permits that may be required for the removal of any underground fuel storage tanks, storm water pollution prevention and earthwork; and any other governmental agency or authority having jurisdiction.
3. Notify affected utility companies before starting work and comply with utility company requirements.
4. Do not close or obstruct roadways, sidewalks or fire hydrants without permits.
5. Barricade and mark hazards as necessary.
6. Conform to applicable regulatory procedures when discovering hazardous or contaminated materials. Notify Construction Manager immediately upon discovery of hazardous or contaminated materials. Do not commence removals, remediation or abatement without authorization from the Construction Manager.
7. Comply with applicable requirement of NFPA 241.75 "Safeguarding Building Construction & Demolition Operations".
8. Do not remove any part of the Work that will leave the remaining work unstable until adequate temporary bracing and shoring have been provided.
9. Erosion Control: Provide any required erosion control and maintain throughout duration of project. Remove at completion of project.

B. Performance Criteria:
1. Fire: Do not use means, methods, techniques or procedures that would produce any fire hazard.
2. Water: Do not use means, methods, techniques or procedures that would produce excessive water run-off and/or water pollution.

3. Air Pollution: Do not use means, methods, techniques or procedures that would produce uncontrolled dust, fumes or other damaging air pollution.

1.3 SUBMITTALS

A. Submittal shall specifically include:
   1. Schedule: Prior to start of work, submit proposed schedule, methods and operations of building demolition to the Architect for review. Include in the schedule the coordination for shut-off, capping and continuation of utility services as required.
   2. Procedures for protecting materials and adjacent structures to remain including shoring and/or bracing if required.
   3. Certification that any asbestos-containing material that was abated and/or disposed of under this Section was legally disposed of in accordance with accepted standards.

1.4 EXISTING CONDITIONS

A. Items indicated for demolition will be discontinued in use and vacated prior to start of Work.

B. The Owner assumes no responsibility for condition of items to be demolished.

PART 2 PRODUCTS (Not Used)

PART 3 EXECUTION

3.1 EXAMINATION AND PREPARATION

A. Examine areas and conditions where demolition work is to be performed. Verify existing conditions before starting work. Report in writing to the Architect prevailing conditions that will adversely affect satisfactory execution of the Work of this Section. Do not proceed with Work until unsatisfactory conditions have been corrected. By beginning Work, Contractor accepts conditions and assumes responsibility for correcting unsuitable conditions encountered at no additional cost to the Owner.

B. Utilities:
   1. Locate, identify and protect existing utilities to remain. Notify Ohio Utilities Protection Service (OUPS) for all public property as required by law prior to starting work. On all remaining property not covered by OUPS, have a specialty contractor locate all existing utilities in affected areas prior to demolition. The Contractor is responsible for damage to utilities and shall repair any that are damaged at no additional cost to the Owner.
   2. Not all utilities on the site will be demolished. Refer to Plans for general extent of demolished utilities. Utilities shall be handled as follows:
      a. Remaining, unmodified: Utilities (primarily those surrounding and serving in-service buildings/structures) intended to remain in service throughout the demolition/construction process and beyond shall be protected and maintained in operation during construction and demolition activities.
      b. Remaining, modified: Utilities intended to remain in service, but must be modified to accommodate the new work (e.g. the addition of a new catch basin or the adjustment of a grate elevation), shall be protected and maintained in service, but shall be modified as described and as required to accommodate the new work. Modification work shall be done using materials and methods appropriate to the existing materials and conditions and shall be in compliance with all authorities having jurisdiction.
      c. Remaining, capped: Utilities intended to be partially demolished with a remaining portion to be capped shall be carefully removed as to not damage the portion of the utilities intended to remain. Capping of utilities shall be done with materials consistent with material to be capped and shall be done by workers qualified to perform such work. Coordinate capping of utilities

with Utility companies.

d. Abandoned: Utilities intended to be taken out of service and abandoned in place shall be appropriately disconnected and left abandoned below grade. Where such utilities are exposed due to new grading, such utilities shall be demolished to a point where they will be concealed below grade.
e. Abandoned, filled: Utilities intended to be taken out of service, filled with lean concrete and left abandoned in place shall be uncovered as required to facilitate and verify filing operations. Once filled, any such excavations shall be filled with suitable fill material.
f. Newly installed: New utilities installed in conjunction with the construction of a new building. Such utilities shall be protected from damage from demolition activities.

C. Provide, erect and maintain erosion control devices, dust and noise control measures, temporary barriers and security devices as necessary.

D. Protect appurtenances and structures which are not indicated to be demolished. Repair damage caused by demolition operations at no additional cost to the Owner. Do not perform work until adequate safety and protection measures have been provided.

E. Prevent movement or settlement of adjacent structures. Provide bracing and shoring as required.

F. Review the demolition scheduling, protection requirements and disposal methods with all subcontractors prior to start of work.

3.2 CONSTRUCTION

A. Demolition Requirements:
1. Conduct demolition to minimize interference with adjacent structures or pavements.
2. Stop operations immediately if adjacent structures appear to be in danger. Notify Architect immediately. Do not resume operations until directed by the Architect.
3. Conduct operations with minimum interference to public or private access. Maintain access and egress at all times.
4. Obtain written permission from adjacent property owners when demolition equipment will traverse, infringe upon, or limit access to their property.
5. Sprinkle soil and demolition work area with water to minimize dust. Provide hoses and water connections for this purpose.
6. Comply with governing regulations pertaining to environmental protection.
7. Coordinate removal of any components of construction that are owned by Utility Companies (e.g. exterior transformers). Contact appropriate companies to coordinate disconnection and removal.

B. Demolition:
1. Disconnect and remove designated utilities within demolition areas.
2. Verify structures are unoccupied; then demolish structures completely and remove from site using methods as required to complete work within limitations of governing regulations.
3. Proceed with demolition in systematic manner, from top of structure to ground. Use of explosives is prohibited.
4. Locate demolition equipment and remove materials using procedures to prevent excessive loading to supporting walls, floors, or framing.
5. Demolish concrete and masonry in small sections.
6. Demolish and remove below grade construction and concrete slabs on grade, except where indicated to remain.
7. Protection: Ensure the safe passage of persons around the area of demolition. Conduct operations to prevent injury to adjacent buildings, structures, other facilities and persons.
8. Remove abandoned underground storm and sanitary pipe and structure where indicated and

where encountered in clearing the site and establishing sub-grade.

C. Filling Voids:
   1. Completely fill below grade areas and voids existing or resulting from demolition or removal of structures (foundations, basements, pits, wells, cisterns, etc.) using approved select fill materials consisting of stone, gravel and sand free from debris, trash, frozen materials, roots and other organic matter.
   2. Remove standing water, frost, frozen or unsuitable material, trash and debris from areas to be filled before fill placement.
   3. Place fill materials in horizontal layers and compact each layer at optimum moisture content of fill material to proposed density.
   4. Grade surface to match adjacent grades and to provide flow of surface drainage after fill placement and compaction.
   5. Where indicated and/or where existing abandoned pipe or structures occur more than 2' below subgrade elevation, fill with a cementitious, flowable fill, unless such pipe/structures are indicated to be removed, in which case they shall be completely removed from site.

D. Disposal of Demolished Materials:
   1. Remove debris, rubbish and other materials resulting from demolition operations from site. Provide for frequent and prompt removal of debris.
   2. No burning permitted.
   3. Transport materials removed from demolished structures with appropriate vehicles and dispose off-site to areas which are approved for disposal by governing authorities having jurisdiction and appropriate property owners.
   4. Avoid spillage by covering and securing loads when hauling on or adjacent to public streets or highways.
      a. Remove spillage and sweep, wash or otherwise clean project site, streets or highways.
      b. Comply with local and national regulations.

3.3 CLEANING AND REPAIR

A. Clean adjacent structures and pavement of dust, dirt and debris caused by demolition operations, as directed by Construction manager and governing authorities. Return adjacent areas to conditions existing prior to the start of the work.

B. Any damage done to existing structures, pavement or utilities shall be restored to pre-demolition condition at no cost to the Owner.

END OF SECTION

SECTION 02 82 13

LEAD AND ASBESTOS CONTAINING MATERIALS

PART 1 – GENERAL

1.01 WORK INCLUDED:

A. In general, the work shall include that noted in the specifications, drawings and whenever hazardous materials are encountered. Within the office suite area of work, abate all identified asbestos containing materials identified in the reports included in these specifications. The contract time includes the abatement work identified in the report.

B. Contractor shall be responsible and liable for removal and disposal of the identified suspected hazardous materials necessary to complete the identified scope. The Owner and its employees will not dictate the work.

C. An asbestos inspection has been conducted. Reports are included in these specifications. Contractor shall assume all existing paint finishes could be lead containing paint and take appropriate precautions. Copies of these reports are included in these specifications.

1. Contractor (bidder) shall consider the Reports in preparing their bid and shall include any and all environmental consulting services, permits, safe work practices, proper abatement costs, clearance testing costs, and environmental remediation costs that may be required to legally and properly remove, abate or remediate the identified hazards that may be affected by the work of this contract.
2. Unless specifically designated to be abated by the scope of work; if the hazardous materials will not be disturbed by the work of this contract, it shall remain as-is and the contractor shall protect the hazardous materials from damage or disturbance during the performance of the work of this contract.
3. If hazardous materials to remain are required to be disturbed during construction, the contractor shall perform work in accordance with the governmental regulations and requirements indicated below.

1.02 REMOVAL, DISPOSAL, ETC.:

A. When removing, abating and disposing of hazardous materials, the work shall follow the following general requirements:

B. The work of removing and disposing of asbestos and PCB's shall be performed in accordance with the following governmental regulations:

1. U.S. Environmental Protection Agency Regulations.
2. U.S. Department of Labor - Occupational Safety and Health Administration (OSHA) Regulations applicable to the areas in which this project occurs.
3. State of Ohio Department of Health and local health department requirements.
4. HUD Interim Guidelines for hazard identification and abatement, Latest Edition - Lead Paint.

C. Contractor(s) involved in lead based paint or asbestos removal shall:

1. Be responsible for obtaining approval for a waste disposal site.
2. Post the EPA and OSHA regulations and any applicable state and local government regulations at the job site.
3. Be licensed by the State of Ohio and/or EPA to perform asbestos removal.
4. Evidence of such shall be provided to the Owner prior to the execution of the contract documents.
5. Be responsible and liable for all testing and removal and disposal of the suspected hazardous materials.
6. The Owner and its employees will not give advice, make recommendations and/or specify this work.
7. The execution of this work shall be the responsibility of the Contractor or his subs and shall indemnify the Owner of any wrongdoing or violation.

D. The Contractor shall bear all expense and liability for testing, removal and disposal of these materials throughout the building.

PART 2 – PRODUCTS (WHEN REQUIRED)

A. Furnish all materials necessary to construct proper barriers to seal off contaminated areas according to OSHA, EPA and State Regulations.

B. Provide proper containers, tools and equipment for the removal and disposal of contaminated materials in authorized locations.

PART 3 – EXECUTION

A. The Bid Documents are intended to describe the intent and scope of work but do not, nor intend to "specify" or describe neither how the abatement is to be performed nor how the debris is to be disposed of. The contractor is instructed to strictly comply with the latest editions of the following regulations and all other regulatory requirements. The regulations shall "specify" and guide the execution of the work.

B. The Contractor shall be fully responsible for the proper legal removal and disposal of hazardous materials affected by the work. All work shall be performed by trained individuals in accordance with the requirements of this Section, and all current EPA, federal, state and local laws and regulations.

C. Common renovation activities like sanding, cutting, and demolition can create hazardous lead dust and chips by disturbing lead-based paint, which can be harmful to adults and children. To protect against this risk, the EPA issued a rule requiring the use of lead-safe practices and other actions aimed at preventing lead poisoning. Under the rule, contractors performing renovation, repair and painting projects that disturb lead based paint in homes, dwellings, child care facilities, and schools built before 1978 must be certified and must follow specific work practices to prevent lead contamination. The EPA requires that firms performing renovation, repair, and painting projects that disturb lead-based paint in pre-1978 homes, dwellings, child care facilities and schools be certified by the EPA and that they use certified renovators who are trained by EPA-approved training providers to follow lead-safe work practices. For additional information refer to www.epa.gov.

D. As a result of this EPA Lead-Safe Work Practices rule, the Contractor shall comply with this EPA regulation and include the cost of compliance in the Base Bid unless the test results or EPA criteria for application of this rule permit exemption from the Lead-Safe Work Practices rule.

E. If the Contractor observes any suspected hazardous (LBP, asbestos or other) containing materials during this work, not identified in owner's reports, he shall immediately notify the Owner. The Owner will investigate and pay for any sampling and testing that may be required.

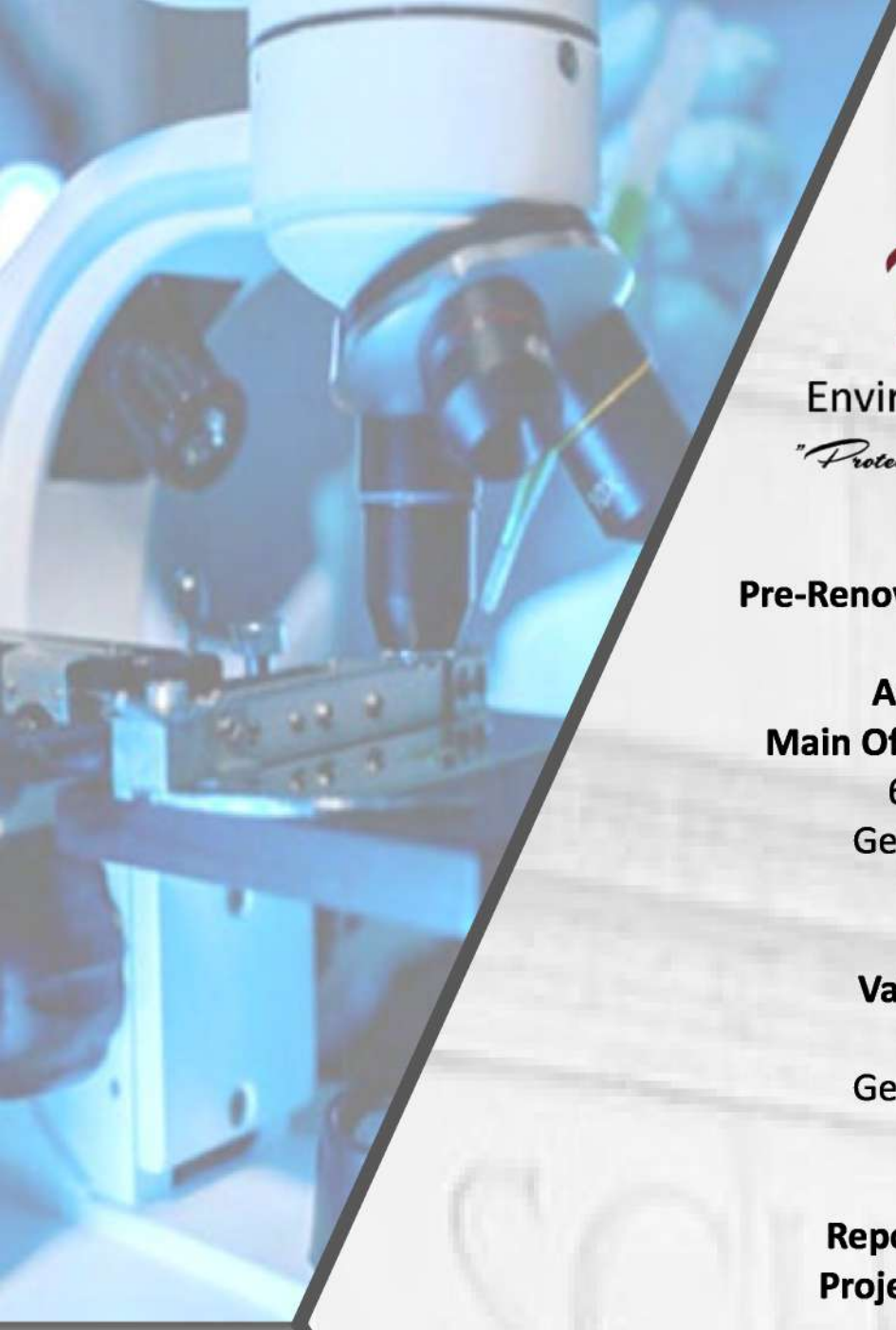
1. U.S. Environmental Protection Agency (EPA) Regulations for Asbestos (Code of Federal Regulations, Title 40, Part 61, Subparts A, M and part 763, U.S. Department of Labor Occupational Safety and Health Administration (OSHA) Asbestos Regulations (Code of Federal Regulations, Title 29, Part 1910, Section 1910, 1001, Section 1910.134 and Section 1926.58).
2. U.S. Environmental Protection Agency Office of Toxic Substances Document, "Asbestos-Containing Materials in School Buildings, Part 1 and Part 2.
3. U.S. Environmental Protection Agency Office of Pesticides and Toxic Substances publication "Guidance or Controlling Friable Asbestos-Containing Materials in Buildings" (EPA 560/5-83-002).
4. National Institute for Occupational Safety and Health (NIOSH) publications, Respiratory Protection. An Employer's Manual and "Respiratory Protection. . . A Guide for the Employee."
5. U.S. Department of Transportation (DOT) Hazardous Materials" Regulations. Code of Federal Regulation, Title 49.
6. American National Standards Institute (ANSI) publications "Fundamentals Governing the Design and Operation of Local Exhaust System" (29.2-79) and "Practices for Respiratory

Protection" 288.2-80.
7. Underwriters Laboratories, Inc. (UC) publication "Test Performance of High Efficiency Particulate Air Filter Units" (586-77 R1982).
8. Any and all other state and local ordinances, regulations, or rules pertaining to asbestos, including its storage, transportation, and disposal.
9. State of Ohio Department of Health, Chapter 3701-34, State of Ohio revised code, Department of Health.

END OF SECTION

SECTION 02 28 13

HAZARDOUS MATERIAL ASASESSMENT REPORT



Dayton
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Pre-Renovation Asbestos Survey Report

Administration Building
Main Office Area Renovation Project
6027 Farmersville Pike
Germantown, Ohio 45327

Prepared for:
Valley View Local Schools
59 Peffley Street
Germantown, Ohio 45327
(937) 855-6581

Report Date: January 6, 2026
Project Number: 25-054-1213

Prepared by:
Dayton Environmental Testing, LLC
2750-B Indian Ripple Road, Suite 211
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January 6, 2026

Mr. Erick Depew
Director of Operations
Valley View Local Schools
6027 Farmersville Pike
Germantown, Ohio 45327
(937) 855-6581
erick.depew@valleyview.k12.oh.us

Re: Pre-Renovation Asbestos Survey Report
Valley View Local Schools
Administration Building – Main Office Area Renovation Project
6027 Farmersville Pike
Germantown, Ohio 45327

DET Project Number: 25-054-1213

Dear Mr. Depew,

Dayton Environmental Testing, LLC (DET) has prepared this report to document the purpose, scope, methodology, and results of the Pre-Renovation Asbestos Survey completed for the Main Office Area of the Administration Building located at 6027 Farmersville Pike in Germantown, Ohio (Project Site).

PURPOSE AND SCOPE

The National Emission Standards for Hazardous Air Pollutants (NESHAP) 40 CFR Part 61, Subpart M and the Ohio Administrative Code (OAC) Chapter 3745-20 both require the owner or operator of any renovation operation have the affected facility or part of the facility where a renovation operation will occur thoroughly inspected for asbestos, prior to the commencement of the renovation. In Ohio, this inspection must be performed by a certified Asbestos Hazard Evaluation Specialist.

Valley View Local Schools (Client) requested that DET to perform a pre-demolition asbestos survey limited to the main office area located at the Project Site. This survey is limited to the interior portions of the spaces within the red boundaries as depicted on the building floor plan in Attachment B (Project Area).

This survey specifically excludes exterior wall systems, exterior window systems, and heating system components, including plumbing lines and their associated insulation

within the Project Area, as well as all other materials and areas beyond the Project Area. Per the Client, these materials will not be disturbed during the planned renovation activities per the Client.

INSPECTION METHODOLOGY

This assessment was performed by DET Project Manager and Ohio-certified Asbestos Hazard Evaluation Specialist Kenneth Lee on December 16, 2025.

Samples were randomly collected from selected homogeneous areas sampled in accordance with the sampling procedures described under the Asbestos Hazard Emergency Response Act (AHERA). Each sample was collected and placed in a clean, sealable vial or sealed bag and labeled with a unique sample identification number. This sample number was recorded on an Asbestos Bulk Sampling Log and the sample vial or bag. Supplemental information was also recorded on the Asbestos Bulk Sampling Log, including inspection date, the building name (or number), a brief description and location of the sample, and the type of material sampled (e.g., ceiling tile). The Asbestos Bulk Sampling Log is included in Attachment B.

LABORATORY ANALYSIS

Samples collected by DET during this assessment were transported, under chain of custody, to Eurofins Built Environment Testing East (Eurofins) in Cary, North Carolina for analysis. Eurofins is fully accredited by the National Voluntary Laboratory Accreditation Program (NVLAP # 101768-0), the agency sponsored by the National Institute of Standards and Technology providing EPA accreditation of laboratories analyzing bulk samples for asbestos content by Polarized Light Microscopy (PLM) under AHERA.

Bulk samples were analyzed for asbestos content using EPA Method 600/M4-82/020, and when applicable EPA Method 600/R-93/116. Bulk sample analysis incorporates the use of stereoscopic microscopy and PLM coupled with dispersion staining. The analytical methods listed above, which the EPA currently recommends for the determination of asbestos in bulk samples of friable insulation materials, can be used for qualitative identification of six (6) morphologically different types of asbestos fibers: chrysotile, amosite, crocidolite, anthophyllite, tremolite, and actinolite asbestos.

The EPA method specifies that the asbestos content in a bulk sample shall be estimated and reported as a finite percentage (rounded to the nearest percent) within the range of 0 to 100. Minute quantities of asbestos in bulk samples may be reported as "trace" or less than 1 percent (<1%). The analytical method determined the "*area percent*" asbestos or the percentage of the area of a microscopic field of view that is occupied by asbestos fibers.

Under NESHAP, if bulk analysis indicates that a sample to be less than ten percent asbestos by visual estimation the material can either be assumed ACM or reanalyzed using PLM point

counting procedures. If conducted, the analytical results of the PLM point counting are used to determine whether or not the material is ACM, rather than the results of the original PLM bulk analysis.

The results of bulk samples are reported in a standard written laboratory report. The written report includes the client's name, the laboratory identification numbers assigned to each bulk sample upon receipt by the laboratory sample custodian, and the sample number assigned to each bulk sample during the building inspection. The composition of the bulk sample is reported in percentages of asbestos (i.e., chrysotile, amosite, crocidolite, or other) and non-asbestos (i.e., cellulose, fiberglass, synthetic, or other) components.

SUMMARY OF ASBESTOS

Confirmed ACM

PLM bulk analysis indicated that asbestos was detected in the following materials:

- Black flooring mastic (under floor tiles, carpeting, and epoxy flooring)
- Floor tile
- Panel insulation
- Sink undercoating
- Door frame caulking
- Ceiling texture compound
- Vermiculite wall cavity insulation

Assumed ACM

The following components could not be thoroughly inspected for ACM without causing significant damage or compromising the integrity of the item. As a result, the following materials are assumed to be ACM:

- Door insulation and associated materials
- Acoustical ceiling tile mastic
- Flexible HVAC duct connector cloth

Additional details of the materials assessed for asbestos during this asbestos inspection are summarized on the Asbestos Inspection and Assessment Summary in Attachment A. This summary includes where the material is located, material color, material description, the analytical result, and the estimated quantities of ACM, if applicable.

Excluded Suspect ACM

The Client indicated that the following suspect ACM within the Project Area will not be disturbed by renovations; therefore, these materials are excluded from this survey:

- Exterior wall systems
- Exterior window systems
- Heating system and associated heating hot water plumbing lines and their associated insulation

If the scope of the project expands to include disturbance of the materials listed above, they must either be assumed as ACM or properly sampled to determine if they are ACM.

CONCLUSIONS AND RECOMMENDATIONS

An Ohio-licensed Asbestos Hazard Abatement Contractor must remove any ACM that will be disturbed by the project prior to the start of renovation activities.

Additionally, AHERA requires that an Asbestos Hazard Abatement Project Design (abatement specifications) be prepared prior to removal or disturbance of greater than 3 square feet of ACM that is friable or will become friable during the project, along with post abatement air clearance. Please notify DET if you would like a proposal for these services.

LIMITATIONS

DET used reasonable efforts to inspect all areas of the building; however, DET cannot guarantee that additional suspect ACM will not be encountered during demolition activities. Any suspect ACM discovered during the course of demolition should be assumed to be ACM unless confirmed otherwise by an Ohio-certified Asbestos Hazard Evaluation Specialist.

This assessment excludes all subsurface materials and/or utilities.

The results and findings of this report are based on PLM bulk analysis only. Currently, federal and state regulations only require the use of PLM bulk analysis for compliance purposes; however, due to limitations of this analytical method to detect small fiber sizes and fibers obscured by cellulose and organic material, the EPA recommends transmission electron microscopy (TEM) confirmation for all organically bound non-friable material and cellulose containing ceiling tile samples found not to contain asbestos using PLM bulk analysis. Please notify DET within 30 days from the date of this report if you would like TEM confirmation for any samples.

We appreciate the opportunity to provide this service to you. Please do not hesitate to contact me if you have any questions regarding this report, or if we can be of further assistance.

Respectfully,

Dayton Environmental Testing, LLC

Michael B. Lee, CIEC
Senior Project Manager
Ohio Asbestos Hazard Evaluation Specialist # ES34954

Kenneth R. Lee
Project Manager
Ohio-Certified Asbestos Hazard Evaluation Specialist # ES35910

ATTACHMENTS

A - Asbestos Inspection and Assessment Summary
B - Building Floor Plan
C - Laboratory Analytical Report
D - Photographs
E - Qualifications of Assessors
F - Laboratory's NVLAP Certificate

ATTACHMENT A

ASBESTOS INSPECTION AND ASSESSMENT SUMMARY

Dayton
Environmental Testing, LLC

Asbestos Inspection and Assessment Summary

Administrative Building - Main Office Area Renovation Project
6027 Farmersville Pike, Germantown, Ohio 45327
Project Number: 25-054-1213

HA ID #	Material	Description	Locations of Material	*Friable or Non-Friable	*NESHAP Category	Sample Numbers Collected	Photo #	Laboratory Results	Asbestos Determination	*Estimated Quantity
1	Duct Insulation & Wrap	White Canvas Wrap on White/Beige Foil Paper Wrap and Beige Fiberglass Insulation	Various Locations Throughout Project Area	Not Applicable	Not Applicable	1-1 1-2 1-3	1	No Asbestos Detected	Non-ACM	Not Applicable
2	Terrazzo Flooring	White Binder with Various Shades of Brown Stone	Corridors and Entrance Area	Not Applicable	Not Applicable	2-1 2-3	2	No Asbestos Detected	Non-ACM	Not Applicable
3	Panel Insulation	White to Brown Insulation Associated with Interior Metal Clad Window Panels	Room A, 4 Wall Panels Below Windows to Corridor on West Side	Friable	Friable RACM	3-1 3-2	3 27	50% Chrysotile Asbestos	ACM	30 Square Feet
4	Carpet Adhesive and Residual Mastic	Yellow and Gray Carpet Adhesive and Residual Black Mastic	Room A, Beneath Carpet Tile	Non-Friable	Category I Non-Friable	4-1 4-2	4	2% Chrysotile Asbestos	ACM	425 Square Feet
5	Suspended Acoustical Ceiling Tile	2' x 4' Suspended Acoustical Tile, White with Small Holes and Dots	Various Locations Throughout Project Area	Not Applicable	Not Applicable	5-1 5-2	5	No Asbestos Detected	Non-ACM	Not Applicable
6	Pipe Insulation	Gray Insulation with Canvas Wrap Associated with Pipe Fittings	Various Locations Throughout Project Area	Not Applicable	Not Applicable	6-1 6-2 6-3	6	No Asbestos Detected	Non-ACM	Not Applicable
7	Epoxy Floor Coating, Floor Leveler, and Residual Floor Mastic	Blue, Black, Gray, and White Epoxy Coating with Floor Leveler, and Residual Black Floor Mastic	Room E and Restrooms F, K, and L	Non-Friable	Category I Non-Friable	7-1 7-2	7	Epoxy = No Asbestos Detected Leveling Compound = No Asbestos Detected Mastic = 2% Chrysotile Asbestos	ACM	300 Square Feet
8	Window Glazing Compound	White, Hard Window Glazing Compound Associated with Interior Windows	Various Locations Throughout Project Area	Not Applicable	Not Applicable	8-1 8-2	8	No Asbestos Detected	Non-ACM	Not Applicable
9	Floor Tile and Floor Tile Mastic	9" x 9" Gray Floor Tile White Streaks with Black Floor Tile Mastic	Rooms B, C, and I Beneath Carpeting	Non-Friable	Category I Non-Friable	9-1 9-2	9	Floor Tile = 5% Chrysotile Asbestos Mastic = 7% Chrysotile Asbestos	ACM	400 Square Feet

Dayton
Environmental Testing, LLC

Asbestos Inspection and Assessment Summary

Administrative Building - Main Office Area Renovation Project
6027 Farmersville Pike, Germantown, Ohio 45327
Project Number: 25-054-1213

HA ID #	Material	Description	Locations of Material	*Friable or Non-Friable	*NESHAP Category	Sample Numbers Collected	Photo #	Laboratory Results	Asbestos Determination	*Estimated Quantity
10	Floor Tile, Floor Tile Mastic, and Carpet Adhesive	12" x 12" Off-White Floor Tile with Gray Marbling with Black Mastic and Transparent Carpet Adhesive	Room J Beneath Carpeting	Non-Friable	Category I Non-Friable	10-1 10-2	10	Floor Tile = No Asbestos Detected Black Mastic = 5% Chrysotile Asbestos Carpet Adhesive = No Asbestos Detected	ACM	425 Square Feet
11	Plumbers Putty	Gray, Pliable Plumbers Putty	Various Locations Throughout Project Area	Not Applicable	Not Applicable	11-1 11-2	11	No Asbestos Detected	Non-ACM	Not Applicable
12	Floor Tile, Floor Tile Mastic, and Carpet Adhesive	9" x 9" Light Gray Floor Tile with Black Mastic and Yellow Carpet Adhesive	Rooms D, M, and P, all Beneath Carpeting	Non-Friable	Category I Non-Friable	12-1 12-2	12	Floor Tile = 5% Chrysotile Asbestos Mastic = 7% Chrysotile Asbestos Carpet Adhesive = No Asbestos Detected	ACM	450 Square Feet
13	Floor Tile, Floor Tile Mastic, and Carpet Adhesive	9" x 9" Off-White Floor Tile with Black Mastic and Green Carpet Adhesive	Hallway G, Beneath Carpeting	Non-Friable	Category I Non-Friable	13-1 13-2	13	Floor Tile = 5% Chrysotile Asbestos Mastic = 7% Chrysotile Asbestos Carpet Adhesive = No Asbestos Detected	ACM	180 Square Feet
14	Floor Leveler, Residual Floor Tile Mastic, and Carpet Adhesive	Gray Floor Leveler Over Residual Black Floor Tile Mastic and Yellow Carpet Adhesive	Rooms H, Beneath Carpeting	Non-Friable	Category I Non-Friable	14-1 14-2	14	Floor Leveler = No Asbestos Detected Black Mastic = 5% Chrysotile Asbestos Carpet Adhesive = No Asbestos Detected	ACM	150 Square Feet
15	Sink Undercoating	Gray/Blue Sink Undercoating	Underside of Sinks in Rooms I and J	Non-Friable	Category II Non-Friable	15-1 15-2	15	10% Chrysotile Asbestos	ACM	10 Square Feet
16	Caulk	Tan Caulk Associated with Metal Interior Door Frames	Metal Door Frames: 5 Each Thru CMU Corridor walls and 2 Each Thru Brick Walls Into Room A	Non-Friable	Category II Non-Friable	16-1 16-2	16	2% Chrysotile Asbestos	ACM	8 Square Feet

Dayton
Environmental Testing, LLC

Asbestos Inspection and Assessment Summary

Administrative Building - Main Office Area Renovation Project
6027 Farmersville Pike, Germantown, Ohio 45327
Project Number: 25-054-1213

HA ID #	Material	Description	Locations of Material	*Friable or Non-Friable	*NESHAP Category	Sample Numbers Collected	Photo #	Laboratory Results	Asbestos Determination	*Estimated Quantity
17	Caulk	Black, Pliable Caulk Associated with Laminate Countertop	Various Locations Throughout Project Area	Not Applicable	Not Applicable	17-1 17-2	17	No Asbestos Detected	Non-ACM	Not Applicable
18	Cove Base Adhesive	Tan Adhesive Associated with 4" Blue Cove Base	Various Locations Throughout Project Area	Not Applicable	Not Applicable	18-1 18-2	18	No Asbestos Detected	Non-ACM	Not Applicable
19	Seam Tape	Paper/Foil Tape Associated with Fiberglass Pipe Insulation	Various Locations Throughout Project Area	Not Applicable	Not Applicable	19-1 19-2 19-3	19	No Asbestos Detected	Non-ACM	Not Applicable
20	Interior Metal Partition Wall Insulation	Light Brown Fiber with Brown Specks	Various Locations Throughout Project Area	Not Applicable	Not Applicable	20-1 20-2 20-3	20	No Asbestos Detected	Non-ACM	Not Applicable
21	Cove Base Adhesive	Tan Adhesive Associated with 4" Black Cove Base	Various Locations Throughout Project Area	Not Applicable	Not Applicable	21-1 21-2	21	No Asbestos Detected	Non-ACM	Not Applicable
22	Drywall Board and Joint Compound	White Drywall Board with White Joint Compound	Various Locations Throughout Project Area	Not Applicable	Not Applicable	22-1 22-2 22-3	22	No Asbestos Detected	Non-ACM	Not Applicable
23	Paneling Mastic	Light Brown Mastic Associated with Wall Paneling	Various Locations Throughout Project Area	Not Applicable	Not Applicable	23-1 23-2	23	No Asbestos Detected	Non-ACM	Not Applicable
24	Floor Tile, Floor Tile Mastic, and Carpet Adhesive	9" x 9" White Floor Tile with Black Mastic and Yellow Carpet Adhesive	Rooms N and O, Beneath Carpeting	Non-Friable	Category I Non-Friable	24-1 24-2	24	Floor Tile = Assumed ACM Unless Confirmed Negative by TEM Black Mastic = 3% Chrysotile Asbestos Carpet Adhesive = No Asbestos Detected	**ACM**	250 Square Feet
25	Suspended Acoustical Ceiling Tile	2' x 4' Suspended Acoustical Tile, White with Light Sand Texture	Various Locations Throughout Project Area	Not Applicable	Not Applicable	25-1 25-2	25	No Asbestos Detected	Non-ACM	Not Applicable
26	Texture Compound	White Spray-Applied Ceiling Texture Compound	Ceilings of Corridors and Entrance Vestibule Areas	Non-Friable	Category II Non-Friable	No Samples	26	See Historical Sampling Data on File with Local Education Agency	**Previously Confirmed ACM**	3,750 Square Feet

Dayton
Environmental Testing, LLC

Asbestos Inspection and Assessment Summary

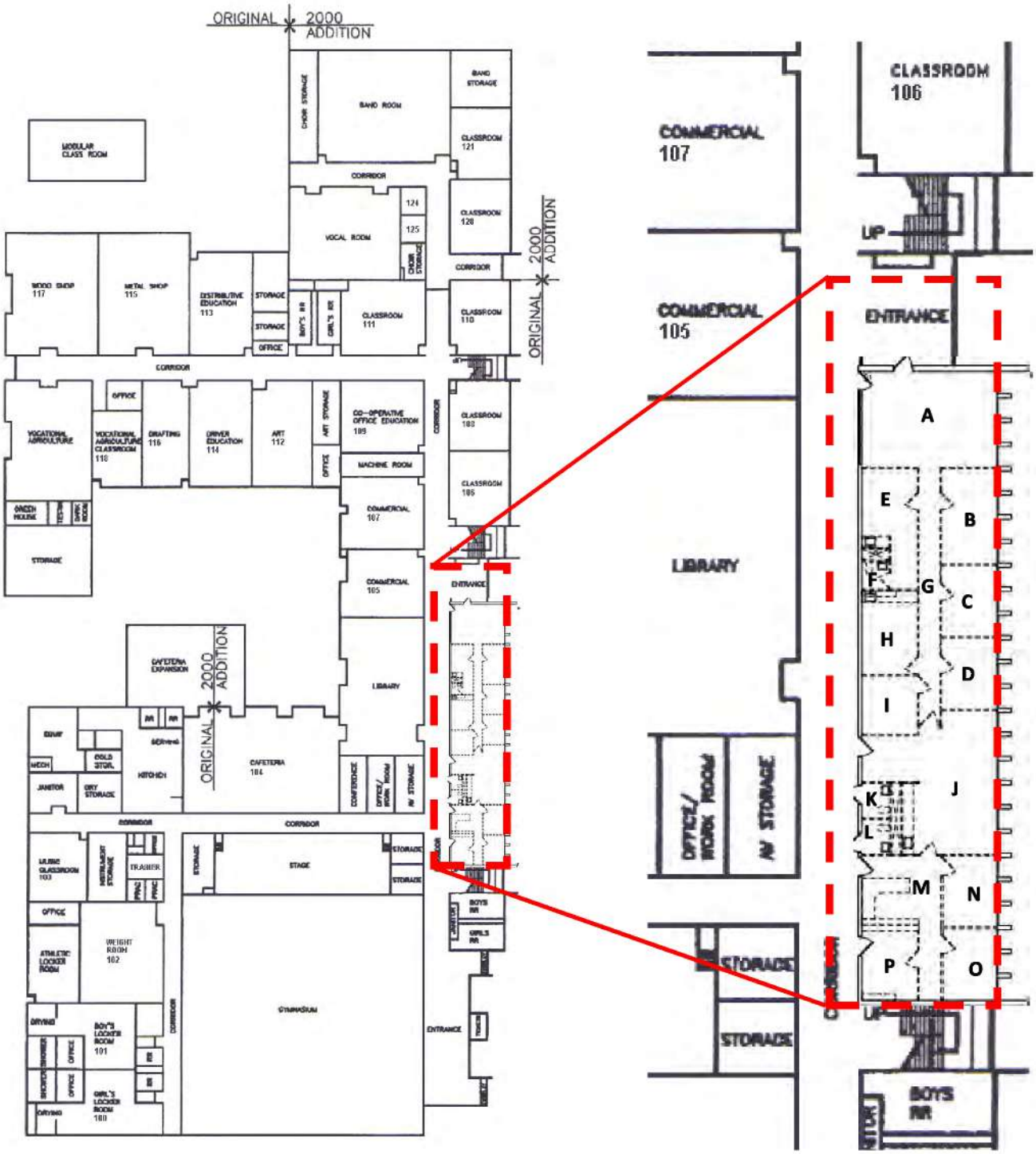
Administrative Building - Main Office Area Renovation Project
6027 Farmersville Pike, Germantown, Ohio 45327
Project Number: 25-054-1213

HA ID #	Material	Description	Locations of Material	*Friable or Non-Friable	*NESHAP Category	Sample Numbers Collected	Photo #	Laboratory Results	Asbestos Determination	*Estimated Quantity
27	Door Insulation and Associated Materials	Various Door Types (Materials Including But Not Limited to Insulation, Window Glazing Compound, Sealants, Gaskets, etc.)	Doors Throughout Project Area	Non-Friable	Category II Non-Friable	No Samples	27	Not Applicable	Assumed ACM	350 Square Feet
28	Vermiculite	Vermiculite Insulation Inside Wall Cavities	Assumed Inside Brick and Concrete Block Wall Cavities Throughout Project Area	Friable	Friable RACM	See Historical Sampling Records	28	See Historical Sampling Data on File with Local Education Agency	Previously Confirmed ACM	2,000 Square Feet
29	Acoustical Ceiling Tile and Associated Mastic	12" x 12" Acoustical Ceiling Tile with Directional Fissures and Holes Located Between Concrete Ceiling Deck	Ceilings of Corridors and Entrance Vestibule Areas	Non-Friable	Category II Non-Friable	See Historical Sampling Records	26	Ceiling Tile = No Asbestos Detected Mastic = Assumed ACM	Assumed ACM	425 Square Feet
30	Flexible HVAC Duct Connector	Flexible HVAC Duct Connector	Main Office Area Mechanical Room (Floor Plan Letter I)	Non-Friable	Category II Non-Friable	No Samples	30	Not Applicable	Assumed ACM	4 Square Feet

*This assessment is based on overall condition at the time of DET's site visit, and is subject to change based on condition of ACM at the time of abatement or demolition, as well as, the techniques that will be utilized during these activates. The building owner and demolition contractor are ultimately responsible to ensure that an Ohio-certified Asbestos Hazard Evaluation Specialist assesses the condition, friability, and category of Confirmed and Assumed ACM prior to the start of abatement and renovation. All quantities listed in this table are estimates only and limited to the Project Area. Additional quantities may exist in other areas of the building. The abatement contractor is responsible to field verify the friability, quantity, and NESHAP category of all ACMs prior to submitting any bids. DET does not guarantee quantities listed above.

ATTACHMENT B

BUILDING FLOOR PLAN



1st Floor

The pre-renovation asbestos survey is limited to areas within these boundaries.

Building Floor Plan **Administration Building—Main Office Area Renovation Project** 6027 Farmersville Germantown Pike, Germantown, Ohio 45327		
Description: Main Office Area Renovation		Drawn By: MBL
Project #: 25-054-1213	Date: January 6, 2026	PAGE 1 OF 1
Dayton Environmental Testing, LLC	2750-B Indian Ripple Road Suite 211 Dayton, Ohio 45440 (937) 751-7872 www.daytontesting.com	

ATTACHMENT C

LABORATORY ANALYTICAL REPORT WITH CHAIN-OF-CUSTODAY FORM AND BULK SAMPLING LOG

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December 30, 2025

Michael Lee
DAYTON ENVIRONMENTAL TESTING LLC
35 Compark Rd
Dayton, OH 45459

CLIENT PROJECT: 25-054-1213, Former Valley View High School - Office
LAB CODE: 713485-1

Dear Michael,

Enclosed are asbestos analysis results for PLM Bulk samples received at our laboratory on December 22, 2025. The samples were analyzed for asbestos using polarizing light microscopy (PLM) per the EPA 600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials and EPA 40 CFR Appendix E to Subpart E of Part 763: Interim Method of the Determination of Asbestos in Bulk Insulation Samples.

Sample results containing >1% asbestos are considered asbestos-containing materials (ACMs) per EPA regulatory requirements. The detection limit for the EPA 600 Method is <1% by calibrated visual estimate.

Thank you for your business and we look forward to continuing good relations.

Kind Regards,

Kamila Reichert

Kamila Reichert,
Laboratory Director

NVLAP 101768-0

eurofins | Built Environment Testing

ASBESTOS ANALYTICAL REPORT
By: Polarized Light Microscopy

Prepared for

DAYTON ENVIRONMENTAL TESTING LLC

CLIENT PROJECT:	25-054-1213, Former Valley View High School - Office
LAB CODE:	713485-1
TEST METHOD:	EPA 600 / R93 / 116 and EPA 40 CFR Appendix E to Subpart E of Part 763
REPORT DATE:	12/30/25
TOTAL SAMPLES ANALYZED:	65
# SAMPLES >1% ASBESTOS:	26
TOTAL LAYERS ANALYZED:	97

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Asbestos Report Summary
By: Polarized Light Microscopy

Project: 25-054-1213, Former Valley View High School - Office

Lab Code: 713485-1

Method: EPA 600 / R93 / 116 and EPA 40 CFR Appendix E to Subpart E of Part 763

Client ID	Lab ID	Layer	Sample Description	Asbestos %
1-1	3973140	Layer A	White woven wrap	None Detected
		Layer B	White/beige wrap	None Detected
		Layer C	Beige glass insulation	None Detected
1-2	3973141	Layer A	White woven wrap	None Detected
		Layer B	White/beige wrap	None Detected
		Layer C	Beige glass insulation	None Detected
1-3	3973142	Layer A	White woven wrap	None Detected
		Layer B	White/beige wrap	None Detected
		Layer C	Beige glass insulation	None Detected
2-1	3973143		Off-white insulation	None Detected
2-3	3973144		Off-white insulation	None Detected
3-1	3973145	Layer A	White insulation	Chrysotile 50%
		Layer B	Brown insulation	None Detected
3-2	3973146	Layer A	White insulation	Chrysotile 50%
		Layer B	Brown insulation	None Detected
4-1	3973147		Tan/black adhesive/mastic	Chrysotile 2%
4-2	3973148		Tan/black adhesive/mastic	Chrysotile 2%
5-1	3973149		Beige ceiling tile	None Detected
5-2	3973150		Beige ceiling tile	None Detected
6-1	3973151	Layer A	White woven wrap	None Detected
		Layer B	Gray fitting insulation	None Detected
6-2	3973152		Gray fitting insulation	None Detected
6-3	3973153	Layer A	White woven wrap	None Detected
		Layer B	Gray fitting insulation	None Detected

Asbestos Report Summary
By: Polarized Light Microscopy

Project: 25-054-1213, Former Valley View High School - Office

Lab Code: 713485-1

Method: EPA 600 / R93 / 116 and EPA 40 CFR Appendix E to Subpart E of Part 763

Client ID	Lab ID	Layer	Sample Description	Asbestos %
7-1	3973154	Layer A	White/blue floor coating	None Detected
		Layer B	White flooring leveling material	None Detected
		Layer C	Black mastic	Chrysotile <1%
7-2	3973155	Layer A	White/blue floor coating	None Detected
		Layer B	Blue flooring leveling material	None Detected
		Layer C	Black/tan mastic	Chrysotile 2%
8-1	3973156		White glazing	None Detected
8-2	3973157		White glazing	None Detected
9-1	3973158		Beige floor tile	Chrysotile 5%
9-1 (2)	3984229		Black mastic	Chrysotile 7%
9-2	3973159		Beige floor tile	Chrysotile 5%
9-2 (2)	3984230		Black mastic	Chrysotile 7%
10-1	3973160	Layer A	Clear carpet adhesive	None Detected
		Layer B	Beige floor tile	None Detected
10-1 (2)	3984237		Black mastic	None Detected
10-2	3973161	Layer A	Clear carpet adhesive	None Detected
		Layer B	Beige floor tile	None Detected
10-2 (2)	3984238		Black mastic	Chrysotile 5%
11-1	3973162		Beige/gray sealant material	None Detected
11-2	3973163		Beige/gray sealant material	None Detected
12-1	3973164	Layer A	Tan carpet adhesive	None Detected
		Layer B	Beige floor tile	Chrysotile 5%
12-1 (2)	3984296		Black mastic	Chrysotile 7%
12-2	3973165	Layer A	Tan carpet adhesive	None Detected
		Layer B	Beige floor tile	Chrysotile 5%
12-2 (2)	3984298		Black mastic	Chrysotile 7%

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Asbestos Report Summary
By: Polarized Light Microscopy

Project: 25-054-1213, Former Valley View High School - Office

Lab Code: 713485-1

Method: EPA 600 / R93 / 116 and EPA 40 CFR Appendix E to Subpart E of Part 763

Client ID	Lab ID	Layer	Sample Description	Asbestos %
13-1	3973166	Layer A	Green carpet adhesive	None Detected
		Layer B	Beige floor tile	Chrysotile 5%
13-1 (2)	3984306		Black mastic	Chrysotile 7%
13-2	3973167	Layer A	Green carpet adhesive	None Detected
		Layer B	Beige floor tile	Chrysotile 5%
13-2 (2)	3984307		Black mastic	Chrysotile 7%
14-1	3973168	Layer A	Tan carpet adhesive	None Detected
		Layer B	Gray leveling compound	None Detected
		Layer C	Black mastic	Chrysotile 5%
		Layer D	Green mastic	None Detected
14-2	3973169	Layer A	Tan carpet adhesive	None Detected
		Layer B	Gray leveling compound	None Detected
		Layer C	Black mastic	Chrysotile 5%
		Layer D	Green mastic	None Detected
		Layer E	Gray concrete	None Detected
15-1	3973170		Gray/blue sink undercoating	Chrysotile 10%
15-2	3973171		Gray/blue sink undercoating	Chrysotile 10%
16-1	3973172		Tan caulk	Chrysotile 2%
16-2	3973173		Tan caulk	Chrysotile 2%
17-1	3973174		Black caulk	None Detected
17-2	3973175		Black caulk	None Detected
18-1	3973176		Tan cove base adhesive	None Detected
18-2	3973177		Tan cove base adhesive	None Detected
19-1	3973178		White/beige/silver tape	None Detected
19-2	3973179		White/beige/silver tape	None Detected
19-3	3973180		White/beige/silver tape	None Detected

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Asbestos Report Summary
By: Polarized Light Microscopy

Project: 25-054-1213, Former Valley View High School - Office

Lab Code: 713485-1

Method: EPA 600 / R93 / 116 and EPA 40 CFR Appendix E to Subpart E of Part 763

Client ID	Lab ID	Layer	Sample Description	Asbestos %
20-1	3973181		Beige glass insulation	None Detected
20-2	3973182		Beige glass insulation	None Detected
20-3	3973183		Beige glass insulation	None Detected
21-1	3973184		Tan cove base adhesive	None Detected
21-2	3973185		Tan cove base adhesive	None Detected
22-1	3973186	Layer A	White joint compound	None Detected
		Layer B	White drywall	None Detected
			Composite (Composited Layers: A, B)	0%
22-2	3973187	Layer A	White joint compound	None Detected
		Layer B	White drywall	None Detected
			Composite (Composited Layers: A, B)	0%
22-3	3973188	Layer A	White joint compound	None Detected
		Layer B	White drywall	None Detected
			Composite (Composited Layers: A, B)	0%
23-1	3973189		Tan panel mastic	None Detected
23-2	3973190		Tan panel mastic	None Detected
24-1	3973191	Layer A	Tan carpet adhesive	None Detected
		Layer B	Off-white floor tile	None Detected
24-1 (2)	3984547		Black mastic	Chrysotile 3%
24-2	3973192	Layer A	Tan carpet adhesive	None Detected
		Layer B	Off-white floor tile	None Detected
24-2 (2)	3984599		Black mastic	Chrysotile 3%
25-1	3973193		Beige ceiling tile	None Detected
25-2	3973194		Beige ceiling tile	None Detected

eurofins | Built Environment Testing

ASBESTOS BULK ANALYSIS
By: Polarized Light Microscopy

Client: DAYTON ENVIRONMENTAL TESTING LLC
35 Compark Rd
Dayton, OH 45459

Lab Code: 713485-1
Date Received: 12/22/25
Date Analyzed: 12/30/25
Date Reported: 12/30/25

Project: 25-054-1213, Former Valley View High School - Office

Method: ASBESTOS BULK PLM, EPA 600 METHOD

Client ID / Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS Fibrous		Non-Fibrous		ASBESTOS %
1-1 Layer A 3973140	Woven Wrap	Homogeneous White Fibrous Loose	95%	Cellulose	<1% 5%	Paint Binder	None Detected
Layer B 3973140	Wrap	Homogeneous White/beige Fibrous Loosely Bound	30% 30%	Cellulose Glass	<1% 30% 10%	Paint Foil Binder	None Detected
Layer C 3973140	Glass Insulation	Homogeneous Beige Fibrous Loose	100%	Glass			None Detected
1-2 Layer A 3973141	Woven Wrap	Homogeneous White Fibrous Loose	95%	Cellulose	<1% 5%	Paint Binder	None Detected
Layer B 3973141	Wrap	Homogeneous White/beige Fibrous Loosely Bound	30% 30%	Cellulose Glass	<1% 30% 10%	Paint Foil Binder	None Detected
Layer C 3973141	Glass Insulation	Homogeneous Beige Fibrous Loose	100%	Glass			None Detected

ASBESTOS BULK ANALYSIS
By: Polarized Light Microscopy

Client: DAYTON ENVIRONMENTAL TESTING LLC
35 Compark Rd
Dayton, OH 45459

Lab Code: 713485-1
Date Received: 12/22/25
Date Analyzed: 12/30/25
Date Reported: 12/30/25

Project: 25-054-1213, Former Valley View High School - Office

Method: ASBESTOS BULK PLM, EPA 600 METHOD

Client ID / Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS Fibrous		Non-Fibrous		ASBESTOS %
1-3	Woven Wrap	Homogeneous	95%	Cellulose	<1%	Paint	None Detected
Layer A		White			5%	Binder	
3973142		Fibrous					
		Loose					
Layer B	Wrap	Homogeneous	30%	Cellulose	<1%	Paint	None Detected
3973142		White/beige	30%	Glass	30%	Foil	
		Fibrous			10%	Binder	
		Loosely Bound					
Layer C	Glass Insulation	Homogeneous	100%	Glass			None Detected
3973142		Beige					
		Fibrous					
		Loose					
2-1	Insulation	Homogeneous			30%	Calc Carb	None Detected
3973143		Off-white			70%	Binder	
		Non-Fibrous					
		Loose					
Sample appears to be insulation. No terrazzo flooring present.							
2-3	Insulation	Homogeneous			30%	Calc Carb	None Detected
3973144		Off-white			70%	Binder	
		Non-Fibrous					
		Loose					
Sample appears to be insulation. No terrazzo flooring present.							
3-1	Insulation	Homogeneous			<1%	Paint	Chrysotile 50%
Layer A		White			25%	Calc Carb	
3973145		Fibrous			25%	Binder	
		Bound					
Layer B	Insulation	Homogeneous	90%	Cellulose	10%	Perlite	None Detected
3973145		Brown					
		Fibrous					
		Loose					

ASBESTOS BULK ANALYSIS
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Project: 25-054-1213, Former Valley View High School - Office

Method: ASBESTOS BULK PLM, EPA 600 METHOD

Client ID / Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS Fibrous		Non-Fibrous		ASBESTOS %
3-2 Layer A 3973146	Insulation	Homogeneous White Fibrous Bound			<1% 25% 25%	Paint Calc Carb Binder	Chrysotile 50%
Layer B 3973146	Insulation	Homogeneous Brown Fibrous Loose	90%	Cellulose	10%	Perlite	None Detected
4-1 3973147	Adhesive/Mastic	Homogeneous Tan/black Non-Fibrous Bound			40% 58%	Tar Mastic	Chrysotile 2%
Unable to separate mastic and adhesive for analysis.							
4-2 3973148	Adhesive/Mastic	Homogeneous Tan/black Non-Fibrous Bound			40% 58%	Tar Mastic	Chrysotile 2%
Unable to separate mastic and adhesive for analysis.							
5-1 3973149	Ceiling Tile	Homogeneous Beige Fibrous Loosely Bound	50% 30%	Cellulose Glass	5% 15%	Paint Perlite	None Detected
5-2 3973150	Ceiling Tile	Homogeneous Beige Fibrous Loosely Bound	50% 30%	Cellulose Glass	5% 15%	Paint Perlite	None Detected

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Project: 25-054-1213, Former Valley View High School - Office

Method: ASBESTOS BULK PLM, EPA 600 METHOD

Client ID / Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS Fibrous		Non-Fibrous		ASBESTOS %
6-1 Layer A 3973151	Woven Wrap	Homogeneous White Fibrous Loose	95%	Cellulose	5%	Binder	None Detected
Layer B 3973151	Fitting Insulation	Homogeneous Gray Fibrous Loose	15%	Glass	25% 60%	Calc Carb Binder	None Detected
6-2 3973152	Fitting Insulation	Homogeneous Gray Fibrous Loose	15%	Glass	25% 60%	Calc Carb Binder	None Detected
6-3 Layer A 3973153	Woven Wrap	Homogeneous White Fibrous Loose	95%	Cellulose	5%	Binder	None Detected
Layer B 3973153	Fitting Insulation	Homogeneous Gray Fibrous Loose	15%	Glass	25% 60%	Calc Carb Binder	None Detected

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Project: 25-054-1213, Former Valley View High School - Office

Method: ASBESTOS BULK PLM, EPA 600 METHOD

Client ID / Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS Fibrous	Non-Fibrous		ASBESTOS %
7-1 Layer A 3973154	Floor Coating	Homogeneous White/blue Non-Fibrous Bound		100%	Binder	None Detected
Layer B 3973154	Flooring Leveling Material	Homogeneous White Non-Fibrous Bound		15% 85%	Calc Carb Binder	None Detected
Layer C 3973154	Mastic	Homogeneous Black Non-Fibrous Bound		100%	Tar	Chrysotile <1%
7-2 Layer A 3973155	Floor Coating	Homogeneous White/blue Non-Fibrous Bound		100%	Binder	None Detected
Layer B 3973155	Flooring Leveling Material	Homogeneous Blue Non-Fibrous Bound		15% 85%	Calc Carb Binder	None Detected
Layer C 3973155	Mastic	Homogeneous Black/tan Non-Fibrous Bound		70% 28%	Tar Mastic	Chrysotile 2%
Unable to separate mastics for analysis.						
8-1 3973156	Glazing	Homogeneous White Non-Fibrous Bound		15% 85%	Calc Carb Binder	None Detected

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Project: 25-054-1213, Former Valley View High School - Office

Method: ASBESTOS BULK PLM, EPA 600 METHOD

Client ID / Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS Fibrous	Non-Fibrous		ASBESTOS %
8-2 3973157	Glazing	Homogeneous White Non-Fibrous Bound		15% 85%	Calc Carb Binder	None Detected
9-1 3973158	Floor Tile	Homogeneous Beige Non-Fibrous Bound		95%	Vinyl	Chrysotile 5%
9-1 (2) 3984229	Mastic	Homogeneous Black Non-Fibrous Bound		93%	Tar	Chrysotile 7%
9-2 3973159	Floor Tile	Homogeneous Beige Non-Fibrous Bound		95%	Vinyl	Chrysotile 5%
9-2 (2) 3984230	Mastic	Homogeneous Black Non-Fibrous Bound		93%	Tar	Chrysotile 7%
10-1 Layer A 3973160	Carpet Adhesive	Homogeneous Clear Non-Fibrous Bound		100%	Mastic	None Detected
Layer B 3973160	Floor Tile	Homogeneous Beige Non-Fibrous Bound		100%	Vinyl	None Detected

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Project: 25-054-1213, Former Valley View High School - Office

Method: ASBESTOS BULK PLM, EPA 600 METHOD

Client ID / Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS Fibrous		Non-Fibrous		ASBESTOS %
10-1 (2) 3984237	Mastic	Homogeneous Black Non-Fibrous Bound			80% 20%	Tar Binder	None Detected
10-2 Layer A 3973161	Carpet Adhesive	Homogeneous Clear Non-Fibrous Bound			100%	Mastic	None Detected
Layer B 3973161	Floor Tile	Homogeneous Beige Non-Fibrous Bound			100%	Vinyl	None Detected
10-2 (2) 3984238	Mastic	Homogeneous Black Non-Fibrous Bound			95%	Tar	Chrysotile 5%
11-1 3973162	Sealant Material	Homogeneous Beige/gray Non-Fibrous Bound	10%	Cellulose	90%	Binder	None Detected
11-2 3973163	Sealant Material	Homogeneous Beige/gray Non-Fibrous Bound	10%	Cellulose	90%	Binder	None Detected

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Method: ASBESTOS BULK PLM, EPA 600 METHOD

Client ID / Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS Fibrous	Non-Fibrous		ASBESTOS %
12-1 Layer A 3973164	Carpet Adhesive	Homogeneous Tan Non-Fibrous Bound		100%	Mastic	None Detected
Layer B 3973164	Floor Tile	Homogeneous Beige Non-Fibrous Bound		95%	Vinyl	Chrysotile 5%
12-1 (2) 3984296	Mastic	Homogeneous Black Non-Fibrous Bound		93%	Tar	Chrysotile 7%
12-2 Layer A 3973165	Carpet Adhesive	Homogeneous Tan Non-Fibrous Bound		100%	Mastic	None Detected
Layer B 3973165	Floor Tile	Homogeneous Beige Non-Fibrous Bound		95%	Vinyl	Chrysotile 5%
12-2 (2) 3984298	Mastic	Homogeneous Black Non-Fibrous Bound		93%	Tar	Chrysotile 7%

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Project: 25-054-1213, Former Valley View High School - Office

Method: ASBESTOS BULK PLM, EPA 600 METHOD

Client ID / Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS Fibrous	Non-Fibrous		ASBESTOS %
13-1 Layer A 3973166	Carpet Adhesive	Homogeneous Green Non-Fibrous Bound		100%	Mastic	None Detected
Layer B 3973166	Floor Tile	Homogeneous Beige Non-Fibrous Bound		95%	Vinyl	Chrysotile 5%
13-1 (2) 3984306	Mastic	Homogeneous Black Non-Fibrous Bound		93%	Tar	Chrysotile 7%
13-2 Layer A 3973167	Carpet Adhesive	Homogeneous Green Non-Fibrous Bound		100%	Mastic	None Detected
Layer B 3973167	Floor Tile	Homogeneous Beige Non-Fibrous Bound		95%	Vinyl	Chrysotile 5%
13-2 (2) 3984307	Mastic	Homogeneous Black Non-Fibrous Bound		93%	Tar	Chrysotile 7%

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Method: ASBESTOS BULK PLM, EPA 600 METHOD

Client ID / Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS Fibrous	Non-Fibrous		ASBESTOS %
14-1 Layer A 3973168	Carpet Adhesive	Homogeneous Tan Non-Fibrous Bound		100%	Mastic	None Detected
Layer B 3973168	Leveling Compound	Homogeneous Gray Non-Fibrous Bound		100%	Binder	None Detected
Layer C 3973168	Mastic	Homogeneous Black Non-Fibrous Bound		95%	Tar	Chrysotile 5%
Layer D 3973168	Mastic	Homogeneous Green Non-Fibrous Bound		100%	Mastic	None Detected

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Method: ASBESTOS BULK PLM, EPA 600 METHOD

Client ID / Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS Fibrous	Non-Fibrous		ASBESTOS %
14-2 Layer A 3973169	Carpet Adhesive	Homogeneous Tan Non-Fibrous Bound		100%	Mastic	None Detected
Layer B 3973169	Leveling Compound	Homogeneous Gray Non-Fibrous Bound		100%	Binder	None Detected
Layer C 3973169	Mastic	Homogeneous Black Non-Fibrous Bound		95%	Tar	Chrysotile 5%
Layer D 3973169	Mastic	Homogeneous Green Non-Fibrous Bound		100%	Mastic	None Detected
Layer E 3973169	Concrete	Homogeneous Gray Non-Fibrous Tightly Bound		20% 35% 45%	Calc Carb Silica Binder	None Detected
15-1 3973170	Sink Undercoating	Homogeneous Gray/blue Non-Fibrous Bound		90%	Binder	Chrysotile 10%
15-2 3973171	Sink Undercoating	Homogeneous Gray/blue Non-Fibrous Bound		90%	Binder	Chrysotile 10%

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Date Received: 12/22/25
Date Analyzed: 12/30/25
Date Reported: 12/30/25

Project: 25-054-1213, Former Valley View High School - Office

Method: ASBESTOS BULK PLM, EPA 600 METHOD

Client ID / Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS Fibrous		Non-Fibrous		ASBESTOS %
16-1 3973172	Caulk	Homogeneous Tan Non-Fibrous Bound			5% 93%	Paint Caulk	Chrysotile 2%
16-2 3973173	Caulk	Homogeneous Tan Non-Fibrous Bound			5% 93%	Paint Caulk	Chrysotile 2%
17-1 3973174	Caulk	Homogeneous Black Non-Fibrous Bound			<1% 100%	Paint Caulk	None Detected
17-2 3973175	Caulk	Homogeneous Black Non-Fibrous Bound			<1% 100%	Paint Caulk	None Detected
18-1 3973176	Cove Base Adhesive	Homogeneous Tan Non-Fibrous Bound			100%	Mastic	None Detected
18-2 3973177	Cove Base Adhesive	Homogeneous Tan Non-Fibrous Bound			100%	Mastic	None Detected
19-1 3973178	Tape	Homogeneous White/beige/silver Fibrous Loosely Bound	30% 25%	Cellulose Glass	5% 10% 30%	Paint Mastic Foil	None Detected

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Project: 25-054-1213, Former Valley View High School - Office

Method: ASBESTOS BULK PLM, EPA 600 METHOD

Client ID / Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS Fibrous		Non-Fibrous		ASBESTOS %
19-2 3973179	Tape	Homogeneous White/beige/silver Fibrous Loosely Bound	30% 25%	Cellulose Glass	5% 10% 30%	Paint Mastic Foil	None Detected
19-3 3973180	Tape	Homogeneous White/beige/silver Fibrous Loosely Bound	30% 25%	Cellulose Glass	5% 10% 30%	Paint Mastic Foil	None Detected
20-1 3973181	Glass Insulation	Homogeneous Beige Fibrous Loose	100%	Glass			None Detected
20-2 3973182	Glass Insulation	Homogeneous Beige Fibrous Loose	100%	Glass			None Detected
20-3 3973183	Glass Insulation	Homogeneous Beige Fibrous Loose	100%	Glass			None Detected
21-1 3973184	Cove Base Adhesive	Homogeneous Tan Non-Fibrous Bound			100%	Mastic	None Detected
21-2 3973185	Cove Base Adhesive	Homogeneous Tan Non-Fibrous Bound			100%	Mastic	None Detected

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Method: ASBESTOS BULK PLM, EPA 600 METHOD

Client ID / Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS Fibrous		Non-Fibrous		ASBESTOS %
22-1 Layer A 3973186	Joint Compound	Homogeneous White Non-Fibrous Bound			30% 70%	Calc Carb Binder	None Detected
Layer B 3973186	Drywall	Homogeneous White Fibrous Bound	20%	Cellulose	80%	Gypsum	None Detected
				Composite (Composited Layers: A, B)			0%
22-2 Layer A 3973187	Joint Compound	Homogeneous White Non-Fibrous Bound			30% 70%	Calc Carb Binder	None Detected
Layer B 3973187	Drywall	Homogeneous White Fibrous Bound	20%	Cellulose	80%	Gypsum	None Detected
				Composite (Composited Layers: A, B)			0%
22-3 Layer A 3973188	Joint Compound	Homogeneous White Non-Fibrous Bound			30% 70%	Calc Carb Binder	None Detected
Layer B 3973188	Drywall	Homogeneous White Fibrous Bound	20%	Cellulose	80%	Gypsum	None Detected
				Composite (Composited Layers: A, B)			0%

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ASBESTOS BULK ANALYSIS
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Project: 25-054-1213, Former Valley View High School - Office

Method: ASBESTOS BULK PLM, EPA 600 METHOD

Client ID / Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS Fibrous	Non-Fibrous		ASBESTOS %
23-1 3973189	Panel Mastic	Homogeneous Tan Non-Fibrous Bound		100%	Mastic	None Detected
23-2 3973190	Panel Mastic	Homogeneous Tan Non-Fibrous Bound		100%	Mastic	None Detected
24-1 Layer A 3973191	Carpet Adhesive	Homogeneous Tan Non-Fibrous Bound		100%	Mastic	None Detected
Layer B 3973191	Floor Tile	Homogeneous Off-white Non-Fibrous Bound		100%	Vinyl	None Detected
24-1 (2) 3984547	Mastic	Homogeneous Black Non-Fibrous Bound		97%	Tar	Chrysotile 3%
24-2 Layer A 3973192	Carpet Adhesive	Homogeneous Tan Non-Fibrous Bound		100%	Mastic	None Detected
Layer B 3973192	Floor Tile	Homogeneous Off-white Non-Fibrous Bound		100%	Vinyl	None Detected

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Method: ASBESTOS BULK PLM, EPA 600 METHOD

Client ID / Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS Fibrous		Non-Fibrous		ASBESTOS %
24-2 (2) 3984599	Mastic	Homogeneous Black Non-Fibrous Bound			97%	Tar	Chrysotile 3%
25-1 3973193	Ceiling Tile	Homogeneous Beige Fibrous Loosely Bound	50% 30%	Cellulose Glass	5% 15%	Paint Perlite	None Detected
25-2 3973194	Ceiling Tile	Homogeneous Beige Fibrous Loosely Bound	50% 30%	Cellulose Glass	5% 15%	Paint Perlite	None Detected

LEGEND:
Non-Anth = Non-Asbestiform Anthophyllite
Non-Trem = Non-Asbestiform Tremolite
Calc Carb = Calcium Carbonate

METHOD: EPA 600 / R93 / 116 and EPA 40 CFR Appendix E to Subpart E of Part 763

REPORTING LIMIT: 1% by calibrated visual estimation

REGULATORY LIMIT: 1%

Due to the limitations of the EPA 600 / R93 / 116 method, nonfriable organically bound materials (NOBs) such as vinyl floor tiles can be difficult to analyze via polarized light microscopy (PLM). EPA recommends that all NOBs analyzed by PLM, and found not to contain asbestos, be further analyzed by Transmission Electron Microscopy (TEM). Please note that PLM analysis of dust and soil samples for asbestos is not covered under NVLAP accreditation. Estimated measurement of uncertainty is available on request.

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Information provided by customer includes customer sample ID and sample description.

Katelyn Wix
Analyst

DATA QA: Samantha Webster
12/30/2025

APPROVED BY: Kamila Reichert,
Laboratory Director

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RES Job #: 713485

SUBMITTED BY		INVOICE TO		CONTACT INFORMATION		SERIES
Company:	DAYTON ENVIRONMENTAL TESTING LLC	Company:	DAYTON ENVIRONMENTAL TESTING LLC	Contact:	Michael Lee	-1 PLM Standard
Address:	35 Compark Rd	Address:	35 Compark Rd	Phone:	(937) 751-7872	
	Dayton, OH 45459		Dayton, OH 45459	Fax:		
				Cell:	(937) 751-7872	
Project Number and/or P.O. #:	25-054-1213	Project Zip Code:		Final Data Deliverable Email Address:		
Project Description/Location:	Former Valley View High School - Office			lee@daytontesting.com		

ASBESTOS LABORATORY

PLM / PCM / TEM / NYS DTL RUSH PRIORITY STANDARD

CHEMISTRY LABORATORY

Dust RUSH PRIORITY STANDARD

Metals RUSH PRIORITY STANDARD *PRIOR NOTICE REQUIRED FOR SAME DAY TAT

Organics* SAME DAY RUSH PRIORITY STANDARD

MICROBIOLOGY LABORATORY

Viable Analysis** PRIORITY STANDARD

**TAT DEPENDENT ON SPEED OF MICROBIAL GROWTH

Medical Device Analysis RUSH STANDARD

Mold Analysis RUSH PRIORITY STANDARD

****Turnaround times establish a laboratory priority, subject to laboratory volume and are not guaranteed. Additional fees apply for afterhours, weekends and holidays.****

Special Instructions:

VALID MATRIX CODES

Air = A	Bulk = B
Dust = D	Food = F
Paint = P	Soil = S
Surface = SU	Swab = SW
Tape = T	Wipe = W
Drinking Water = DW	
Waste Water = WW	
ASTM E1792 approved wipe media only	

LAB NOTES

OH

Client Sample ID Number (Sample ID's must be unique)	REQUESTED ANALYSIS: ASBESTOS — PLM - PLM Short Report (EPA/600/R-93/116)	TEM	PCM	NYS	CHEMISTRY — DUST	METALS	ORGANICS	MICROBIOLOGY — VIABLES	MEDICAL	MOLD	ICO	Sample Volume (L) / Area	Sample Temperature (°C)	Length(or Aliquots) x Width(or Area/Aliquot)	Matrix Code	# of Containers	Date Collected mm/dd/yy	Time Collected hh:mm	Laboratory Analysis Instructions
1 1-1	X														B				
2 1-2	X														B				
3 1-3	X														B				
4 2-1	X														B				
5 2-3	X														B				
6 3-1	X														B				
7 3-2	X														B				
8 4-1	X														B				
9 4-2	X														B				
10 5-1	X														B				
11 5-2	X														B				
12 6-1	X														B				
13 6-2	X														B				

Eurofins Built Environment Testing East, LLC establishes a unique Lab Sample ID, for each sample, by preceding each unique Client Sample ID with the laboratory RES Job Number.
Eurofins Built Environment Testing East, LLC will analyze incoming samples based on information received and will not be responsible for errors or omissions in calculations resulting from the inaccuracy of original data. By signing, client/company representative agrees that submission of the following samples for requested analysis as indicated on this Chain of Custody shall consitute an analytical services agreement with payment terms of NET30. Failure to comply with payment terms may result in a 18% APR finance charge.

Relinquished By:		Date/Time: 12/22/2025 18:03:48	Sample Condition: Acceptable
Received By:	John Foernzler	Date/Time: 12/22/2025 18:03:48	Carrier: Fed-Ex

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RES Job #: **713485**

Submitted By: **DAYTON ENVIRONMENTAL TESTING LLC**

		REQUESTED ANALYSIS												VALID MATRIX CODES									LAB NOTES
														Air = A					Bulk = B				OH
														Dust = D					Food = F				
														Paint = P					Soil = S				
														Surface = SU					Swab = SW				
														Tape = T					Wipe = W				
														Drinking Water = DW									
														Waste Water = WW									
														ASTM E1792 approved wipe media only									
		PLM - PLM Short Report (EPA/600/R-93/116)	TEM	PCM	NYS	DUST	METALS	ORGANICS	VIABLES	MEDICAL	MOLD	ICO		Sample Volume (L) / Area	Sample Temperature (°C)	Length(or Aliquots) x Width(or Area/Aliquot)	Matrix Code	# of Containers	Date Collected mm/dd/yy	Time Collected hh:mm		Laboratory Analysis Instructions
	Client Sample ID Number (Sample ID's must be unique)	ASBESTOS				CHEMISTRY			MICROBIOLOGY			ICO										
14	6-3	X															B					
15	7-1	X															B					
16	7-2	X															B					
17	8-1	X															B					
18	8-2	X															B					
19	9-1	X															B					
20	9-2	X															B					
21	10-1	X															B					
22	10-2	X															B					
23	11-1	X															B					
24	11-2	X															B					
25	12-1	X															B					
26	12-2	X															B					
27	13-1	X															B					
28	13-2	X															B					
29	14-1	X															B					
30	14-2	X															B					
31	15-1	X															B					
32	15-2	X															B					
33	16-1	X															B					
34	16-2	X															B					
35	17-1	X															B					
36	17-2	X															B					
37	18-1	X															B					
38	18-2	X															B					
39	19-1	X															B					
40	19-2	X															B					
41	19-3	X															B					
42	20-1	X															B					
43	20-2	X															B					

eurofins | Built Environment Testing

RES Job #: **713485**

Submitted By: **DAYTON ENVIRONMENTAL TESTING LLC**

REQUESTED ANALYSIS												VALID MATRIX CODES		LAB NOTES
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												Dust = D	Food = F	
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												ASTM E1792 approved wipe media only		

Client Sample ID Number (Sample ID's must be unique)	PLM - PLM Short Report (EPA/600/R-93/116)	TEM	PCM	NYS	DUST	METALS	ORGANICS	VIABLES	MEDICAL	MOLD	ICO	Sample Volume (L) / Area	Sample Temperature (°C)	Length(or Aliquots) x Width(or Area/Aliquot)	Matrix Code	# of Containers	Date Collected mm/dd/yy	Time Collected hh:mm	Laboratory Analysis Instructions
	ASBESTOS				CHEMISTRY			MICROBIOLOGY			ICO								
44 20-3	X														B				
45 21-1	X														B				
46 21-2	X														B				
47 22-1	X														B				
48 22-2	X														B				
49 22-3	X														B				
50 23-1	X														B				
51 23-2	X														B				
52 24-1	X														B				
53 24-2	X														B				
54 25-1	X														B				
55 25-2	X														B				

713485

55

eurofins | CEI

CHAIN OF CUSTODY

730 SE Maynard Road, Cary, NC 27511
Tel: 866-481-1412; Fax: 919-481-1442

LAB USE ONLY:
CEI Lab Code:
CEI Lab I.D. Range:

COMPANY INFORMATION	PROJECT INFORMATION
CEI CLIENT #:	Job Contact: Michael Lee
Company: Dayton Environmental Testing, LLC	Email / Tel: Lee@DaytonTesting.com / (937) 751-7872
Address: 2750-B Indian Ripple Road, Suite 211	Project Name: Former Valley View High School - Office
Dayton, Ohio 45440	Project ID#: 25-054-1213
Email: Lee@DaytonTesting.com	PO #:
Tel: (937) 751-7872 Fax:	STATE SAMPLES COLLECTED IN: Ohio

IF TAT IS NOT MARKED STANDARD 3 DAY TAT APPLIES.

ASBESTOS	METHOD	TURN AROUND TIME					
		4 HR	8 HR	1 DAY	2 DAY	3 DAY	5 DAY
PLM BULK	EPA 600	☐	☐	☐	☐	☐	☒
PLM POINT COUNT (400)	EPA 600	☐	☐	☐	☐	☐	☐
PLM POINT COUNT (1000)	EPA 600	☐	☐	☐	☐	☐	☐
PLM GRAV w POINT COUNT	EPA 600		☐	☐	☐	☐	☐
PLM BULK	CARB 435		☐	☐	☐	☐	☐
PCM AIR	NIOSH 7400	☐	☐	☐	☐	☐	☐
TEM AIR	EPA AHERA	☐	☐	☐	☐	☐	☐
TEM AIR	NIOSH 7402	☐	☐	☐	☐	☐	☐
TEM AIR (PCME)	ISO 10312	☐	☐	☐	☐	☐	☐
TEM AIR	ASTM 6281-15	☐	☐	☐	☐	☐	☐
TEM BULK	CHATFIELD		☐	☐	☐	☐	☐
TEM DUST WIPE	ASTM D6480-05 (2010)	☐	☐	☐	☐	☐	☐
TEM DUST MICROVAC	ASTM D5755-09 (2014)	☐	☐	☐	☐	☐	☐
TEM SOIL	ASTM D7521-16			☐	☐	☐	☐
TEM VERMICULITE	CINCINNATI METHOD			☐	☐	☐	☐
TEM QUALITTATIVE	IN-HOUSE METHOD		☐	☐	☐	☐	☐
OTHER:		☐	☐	☐	☐	☐	☐

REMARKS / SPECIAL INSTRUCTIONS:
See Attached Asbestos Bulk Sampling Log

☒ Accept Samples
☐ Reject Samples

Relinquished By:	Date/Time	Received By:	Date/Time
Ken Lee	12/18/2025 - 1800	EM	12/19/25 1:36 pm

Samples will be disposed of 30 days after analysis

Dayton
Environmental Testing, LLC

Asbestos Bulk Sampling Log

Former Valley View High School - Office Renovation
6027 Farmersville Pike, Germantown, Ohio 45327
Project Number: 25-054-1213

Sample #	Group #	Collection Date	Material	Color/Description	Sample Location	Collected By
1-1	1	12/16/2025	Duct Insulation & Wrap	Canvas wrap on foil, paper and fiber glass with adhesives	Front wall of HVAC air handler unit in office mechanical room, "Room I"	Kenneth Lee ES35910
1-2	1	12/16/2025	Duct Insulation & Wrap	Canvas wrap on foil, paper and fiber glass with adhesives	Side wall of HVAC air handler unit in office mechanical room, "Room I"	Kenneth Lee ES35910
1-3	1	12/16/25	Duct Insulation & Wrap	Canvas wrap on foil, paper and fiber glass with adhesives	Air duct above HVAC air handler unit in office mechanical room, "Room I"	Kenneth Lee ES35910
2-1	2	12/16/25	Terrazzo Floor	White binder with various shades of brown stone ground smooth	Corridor near main office entry door	Kenneth Lee ES35910
2-3	2	12/16/2025	Terrazzo Floor	White binder with various shades of brown stone ground smooth	South west corner of entry vestibule by main office	Kenneth Lee ES35910
3-1	3	12/16/2025	Insulation associated with interior metal clad window panels	Gray, brown, fibrous	Main office reception room, "Room A" interior east panel behind rececption desk	Kenneth Lee ES35910
3-2	3	12/16/2025	Insulation associated with interior metal clad window panels	Gray, brown, fibrous	Main office reception room, interior east panel by door to corridor	Kenneth Lee ES35910
4-1	4	12/16/2025	Carpet Adhesive & Tile Mastic associated with carpet tile	Black, yellow, gray	Main office reception room, "Room A", NW corner near enty door	Kenneth Lee ES35910
4-2	4	12/16/2025	Carpet Adhesive & Tile Mastic associated with carpet tile	Black, yellow, gray	Main office reception room, "Room A", NE corner	Kenneth Lee ES35910
5-1	5	12/16/2025	Suspended Acoustical Ceiling Tile	2'x4', white, small holes, dots	Main reception office near main entry door from corridor "Room A"	Kenneth Lee ES35910
5-2	5	1213/25	Suspended Acoustical Ceiling Tile	2'x4', white, small holes, dots	Men's faculty rest room "Room K"	Kenneth Lee ES35910
6-1	6	12/16/2025	Pipe Fitting Insulation	TSI Hard Pipe Fitting- gray with canvas wrap, 3"	Clinic "Room E" above ceiling grid at sink	Kenneth Lee ES35910
6-2	6	12/16/2025	Pipe Fitting Insulation	TSI Hard Pipe Fitting- gray with canvas wrap, 4"	Clinic "Room E" above ceiling grid at sink	Kenneth Lee ES35910
6-3	6	12/16/2025	Pipe Fitting Insulation	TSI Hard Pipe Fitting- gray with canvas wrap, 3"	Principal"s office, "Room B" above ceiling grid at middle window	Kenneth Lee ES35910

7-1	7	12/16/2025	Epoxy Floor Coating, Leveler & Mastic	Blue, black, gray & white epoxy coating over floor lever and black mastic	Clinic "Room E" behind entry door	Kenneth Lee ES35910
7-2	7	12/16/2025	Epoxy Floor Coating, Leveler & Mastic	Blue, black, gray & white epoxy coating over floor lever and black mastic	Teachers women's "Room L" rest room beneath storage container	Kenneth Lee ES35910
8-1	8	12/16/2025	Interior Window Glaze	Off white, hard	Interior window in main office reception, "Room A", SW behind desk	Kenneth Lee ES35910
8-2	8	12/16/2025	Interior Window Glaze	Off white, hard	Interior window in main office reception, "Room A", NE in front of desk	Ken Lee ES35910
9-1	9	12/16/2025	Floor Tile & Associated Mastic	9"x9" floor tile, gray with white streaks	Office areas mechanical "Room I" south east side	Ken Lee ES35910
9-2	9	12/16/25	Floor Tile & Associated Mastic	9"x9" floor tile, gray with white streaks	Office areas mechanical "Room I" north east side	Ken Lee ES35910
10-1	10	12/16/2025	Floor Tile and Mastic with Carpet Adhesive	12" Vinyl Composition Tile- off white with gray marbling and black mastic with transparent carpet adhesive	Teacher's lounge "Room J" floor by sink	Ken Lee ES35910
10-2	10	12/16/2025	Floor Tile and Mastic with Carpet Adhesive	12" Vinyl Composition Tile- off white with gray marbling and black mastic with transparent carpet adhesive	Teachers lounge "Room J" floor near south west corner	Ken Lee ES35910
11-1	11	12/16/2025	Putty	Gray, plyable, plumbers putty	Mechanical "Room I" front bottom of HVAC unit	Ken Lee ES35910
11-2	11	12/16/2025	Putty	Gray, plyable, plumbers putty	Mechanical "Room I" front bottom of HVAC unit	Ken Lee ES35910
12-1	12	12/16/2025	Floor Tile and Mastic with Carpet Adhesive	9"x9" Floor Tile- light gray and black mastic with yellow carpet adhesive	Middle of "Office D" directly across from mechanical room	Ken Lee ES35910
12-2	12	12/16/2025	Floor Tile and Mastic with Carpet Adhesive	9"x9" Floor Tile- light gray and black mastic with yellow carpet adhesive	Behind secretary desk in "Room M"	Ken Lee ES35910
13-1	13	12/16/2025	Floor Tile and Mastic with Carpet Adhesive	9"x9" Floor Tile- off white and black mastic with green carpet adhesive	Office hallway "G" outside mechanical room	Ken Lee ES35910
13-2	13	12/16/2025	Floor Tile and Mastic with Carpet Adhesive	9"x9" Floor Tile- off white and black mastic with green carpet adhesive	Office hallway "G" outside clinic "Room E"	Ken Lee ES35910
14-1	14	12/16/2025	Floor Leveler, Mastic and Adhesive	Gray floor leveler, black floor tile mastic (mastic only) with yellow carpet adhesive on top	Just inside door to "Room H"- office north of mechanical room	Ken Lee ES35910
14-2	14	12/16/2025	Floor Leveler, Mastic and Adhesive	Gray floor leveler, black floor tile mastic (mastic only) with yellow carpet adhesive on top	SW corner of "Room H"- office north of mech. room beneath the solid carpet	Ken Lee ES35910
15-1	15	12/16/2025	Sound Dampening Material Associated with Sinks	Gray	Office "Room D" beneath sink	Ken Lee ES35910
15-2	15	12/16/2025	Sound Dampening Material Associated with Sinks	Gray	Teacher's lounge "Room J' beneath sink	Ken Lee ES35910
16-1	16	12/16/2025	Caulk Associated with Metal Interior Door Frames	Tan	Teacher's lounge "Room J" west door frame to corridor	Ken Lee ES35910
16-2	16	12/16/2025	Caulk Associated with Metal Interior Door Frames	Tan	"Room M" west door frame leading to corridor	Ken Lee ES35910

17-1	17	12/16/2025	Caulk Associated with Laminate Countertop	Black, plyable	Clinic "Room E" sink counter top	Ken Lee ES35910
17-2	17	12/16/2025	Caulk Associated with Laminate Countertop	Black, plyable	Clinic "Room E" sink counter top	Ken Lee ES35910
18-1	18	12/16/2025	Adhesive Associated with 4" Blue Vinyl Cove Base	Tan	Teacher's lounge "J" by door leading west to corridor	Ken Lee ES35910
18-2	18	12/16/2025	Adhesive Associated with 4" Blue Vinyl Cove Base	Tan	Teacher's lounge "J" by door at south end	Ken Lee ES35910
19-1	19	12/16/2025	Seam Tape Associated with Pipe Insulation	Paper, foil, adhesive	Clinic "E" above ceiling grid	Ken Lee ES35910
19-2	19	12/16/2025	Seam Tape Associated with Pipe Insulation	Paper, foil, adhesive	Clinic "E" above ceiling grid	Ken Lee ES35910
19-3	19	12/16/2025	Seam Tape Associated with Pipe Insulation	Paper, foil, adhesive	Clinic "E" above ceiling grid	Ken Lee ES35910
20-1	20	12/16/2025	Interior Metal Partition Wall Insulation	Light brown fiber with brown specks	Middlw of north wall in mechanical "Room I"	Ken Lee ES35910
20-2	20	12/16/2025	Interior Metal Partition Wall Insulation	Light brown fiber with brown specks	East wall on south end of "Room M" hall	Ken Lee ES35910
20-3	20	12/16/2025	Interior Metal Partition Wall Insulation	Light brown fiber with brown specks	East wall in "Room H"	Ken Lee ES35910
21-1	21	12/16/2025	Adhesive Associated with 4" Black Vinyl Cove Base	Tan	"Room N" by door	Ken Lee ES35910
21-2	21	12/16/2025	Adhesive Associatede with 4" Black Vinyl Cove Base	Tan	"Room M" by door to W corridor	Ken Lee ES35910
22-1	22	12/16/2025	Drywall and Joint Compound	White gypsum & paper	Office "N" by door beneath wall paneling	Ken Lee ES35910
22-2	22	12/16/2025	Drywall and Joint Compound	White gypsum & paper	Office "O" corner by door beneath wall paneling	Ken Lee ES35910
22-3	22	12/16/25	Drywall and Joint Compound	White gypsum & paper	Office "N" by door beneath wall paneling	Ken Lee ES35910
23-1	23	12/16/2025	Mastic Associated with Wall Paneling	Light brown	Office "N" by door beneath wall paneling	Ken Lee ES35910
23-2	23	12/16/2025	Mastic Associated with Wall Paneling	Light brown	Office "O" by door beneath wall paneling	Ken Lee ES35910
24-1	24	12/16/2025	Floor Tile and Mastic with Carpet Adhesive	9"x9" white floor tile and black mastic with yellow carpet adhesve	Office "O" by door.	Ken Lee ES35910
24-2	24	12/16/2025	Floor Tile and Mastic with Carpet Adhesive	9"x9" white floor tile and black mastic with yellllow carpet adhesive	Office "N" corner by door	Ken Lee ES35910
25-1	25	12/16/2025	Suspended Acoustical Ceiling Tile	2'x4' white, light sand texture	Office "O" middle west side ceiling	Ken Lee ES35910
25-2	25	12/16/2025	Suspended Acoustical Ceiling Tile	2'x4' white, light sand texture	Teacher's lounge "J" south end ceiling by door	Ken Lee ES35910
				Ken Lee		

ATTACHMENT D

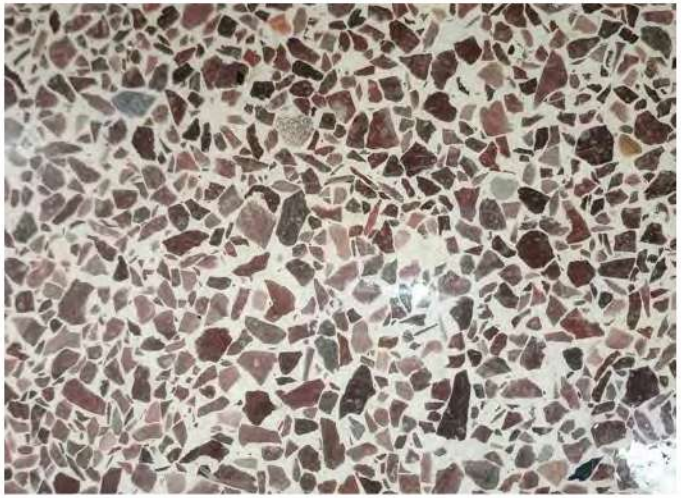
PHOTOGRAPHS

Dayton
Environmental Testing, LLC

Photographs

Pre-Renovation Asbestos Survey
Administration Building—Main Office Area Renovation Project
6027 Farmersville Pike, Germantown, Ohio 45327
Date of Photographs: December 16, 2025

Photograph 1



Photograph 2

Photograph 3

Photograph 4

Dayton
Environmental Testing, LLC

Photographs

Pre-Renovation Asbestos Survey
Administration Building—Main Office Area Renovation Project
6027 Farmersville Pike, Germantown, Ohio 45327
Date of Photographs: December 16, 2025

Photograph 5

Photograph 6

Photograph 7

Photograph 8

Photographs

Pre-Renovation Asbestos Survey
Administration Building—Main Office Area Renovation Project
6027 Farmersville Pike, Germantown, Ohio 45327
Date of Photographs: December 16, 2025

Photograph 9

Photograph 10

Photograph 11

Photograph 12

Dayton
Environmental Testing, LLC

Photographs

Pre-Renovation Asbestos Survey
Administration Building—Main Office Area Renovation Project
6027 Farmersville Pike, Germantown, Ohio 45327
Date of Photographs: December 16, 2025

Photograph 13

Photograph 14

Photograph 15

Photograph 16

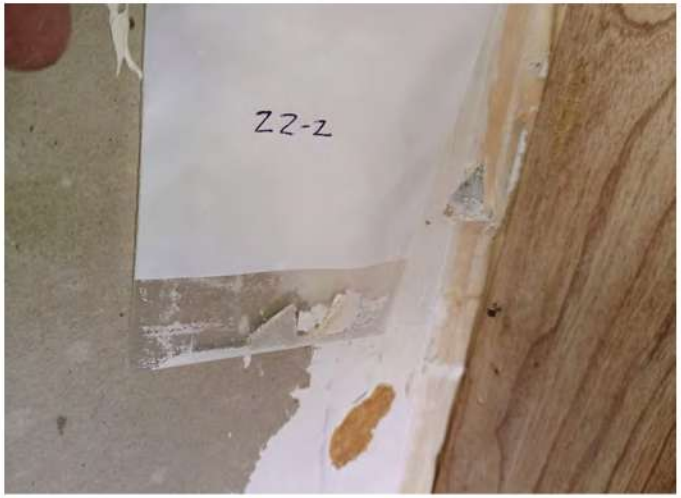
Photograph 17

Photograph 18

Photograph 19

Photograph 20

Photograph 21



Photograph 22

Photograph 23

Photograph 24

Dayton
Environmental Testing, LLC

Photographs

Pre-Renovation Asbestos Survey
Administration Building—Main Office Area Renovation Project
6027 Farmersville Pike, Germantown, Ohio 45327
Date of Photographs: December 16, 2025

Photograph 25

Photograph 26

Photograph 27

Photograph 28

Photograph 30

ATTACHMENT E

QUALIFICATIONS OF ASSESSORS

5/19/2025

Kenneth Lee
1281 Elmdale Dr
Kettering, OH 45409

RE: Evaluation Specialist
Certification Number: ES35910
Expiration Date: 6/9/2026

Dear Kenneth Lee:

This letter and enclosed certification card approves your request to be certified as an asbestos Evaluation Specialist. You must present your card upon request at any project site while performing duties. Copies of cards are not acceptable as proof of certification.

This certification may be revoked by the Director of the Ohio Environmental Protection Agency (EPA) for violation of any of the requirements of 3745-22 or 3745-20 of the Ohio Administrative Code.

If you have any questions, please contact the Asbestos Program at 614-644-0226 or by email at asbestoslicensing@epa.ohio.gov.

Sincerely,

Brandon M. Schwenderman

Brandon Schwenderman
Manager, Business Operations Support Section
Ohio EPA - Division of Air Pollution Control

TSI TRAINING SERVICES INTERNATIONAL

Asbestos Building Inspector Refresher

Certificate

This is to certify

Kenneth Lee

XXX-XX-7748

has attended and successfully completed the Asbestos Hazard Emergency Response Act mandatory course for the Asbestos Building Inspector Refresher and has passed an examination in that course with a minimum score of 70% or better. Training was in accordance with 40 CFR Part 763 (AHERA). The above student received the requisite training for asbestos accreditation under Title II of the Toxic Substances Control Act and State of Indiana requirements under 326 IAC 18-2 and Chapter 3745-22 Ohio Administrative Code, and the Illinois Department of Public Health (IDPH) under section 855.120 of Title 77. IDPH recognition based on student request.

Training Manager	Expiration Date	Date(s) of Course	Examination Date	Course Location
	1/8/2026	1/8/2025	1/8/2025	Columbus, OH

33150 Lakeland Blvd.
Cleveland, OH 44095
www.TSItraining.com

Course Certificate No. **25 TSI 550879 ir**

TSi

TRAINING SERVICES INTERNATIONAL

Asbestos Management Planner Refresher

Certificate

This is to certify

Kenneth Lee

XXX-XX-7748

has attended and successfully completed the Asbestos Hazard Emergency Response Act mandatory course for the Asbestos Management Planner Refresher and has passed an examination in that course with a minimum score of 70% or better. Training was in accordance with 40 CFR Part 763 (AHERA). The above student received the requisite training for asbestos accreditation under Title II of the Toxic Substances Control Act and State of Indiana requirements under 326 IAC 18-2 and Chapter 3745-22 Ohio Administrative Code, and the Illinois Department of Public Health (IDPH) under section 855.120 of Title 77. IDPH recognition based on student request.

Training Manager	Expiration Date	Date(s) of Course	Examination Date	Course Location
	1/8/2026	1/8/2025	1/8/2025	Columbus, OH

33150 Lakeland Blvd.
Cleveland, OH 44095
www.TSItraining.com

Course Certificate No. **25 TSI 550889 mpr**

Ohio Environmental Protection Agency

Mike DeWine, Governor
Jon Husted, Lt. Governor
Anne M. Vogel, Director

2/19/2025

Michael Lee
Michael B. Lee
P.O. Box 1084
Marysville, OH 43040

RE: Evaluation Specialist
Certification Number: ES34954
Expiration Date: 3/10/2026

Dear Michael Lee:

This letter and enclosed certification card approves your request to be certified as an asbestos Evaluation Specialist. You must present your card upon request at any project site while performing duties. Copies of cards are not acceptable as proof of certification.

This certification may be revoked by the Director of the Ohio Environmental Protection Agency (EPA) for violation of any of the requirements of 3745-22 or 3745-20 of the Ohio Administrative Code.

If you have any questions, please contact the Asbestos Program at 614-644-0226 or by email at asbestoslicensing@epa.ohio.gov.

Sincerely,

Brandon M. Schwendeman

Brandon Schwendeman
Manager, Business Operations Support Section
Ohio EPA - Division of Air Pollution Control

The InService Training Network

Asbestos Building Inspector and Management Planner Refresher Courses

Michael Lee

has successfully completed the Asbestos Building Inspector and Management Planner Refresher Courses and passed by at least 70% the course examinations for accreditation under Section 206 of the Toxic Substance Control Act, Title II, and Indiana 326 IAC 18-2
Provided by: The InService Training Network, Inc., 705D Lakeview Plaza Blvd, Worthington, OH 43085 (614) 436-0980

Course Dates: October 15, 2025

Examination Date: October 15, 2025

Course Director: Kurt Varga

Course Location: Worthington, Ohio

Expiration Date: October 15, 2026

Certificate Numbers: ITNIR7827 & ITNMPR7827

ATTACHMENT F

LABORATORY'S NVLAP CERTIFICATE

United States Department of Commerce
National Institute of Standards and Technology

Certificate of Accreditation to ISO/IEC 17025:2017

NVLAP LAB CODE: 101768-0

Eurofins Built Environment Testing East- Cary, NC

Cary, NC

is accredited by the National Voluntary Laboratory Accreditation Program for specific services, listed on the Scope of Accreditation, for:

Asbestos Fiber Analysis

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communique on ISO/IEC 17025).

2025-04-01 through 2026-03-31

Effective Dates

For the National Voluntary Laboratory Accreditation Program

SECTION 03 30 00

CAST-IN-PLACE CONCRETE

PART 1 - GENERAL

When the information in this Specification Section conflicts with information on the Structural Construction Drawings, the Structural Construction Drawings shall prevail.

1.1 SUMMARY

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

1.2 ACTION SUBMITTALS

A. Material Certificates: For each of the following, signed by manufacturers:
   1. Fiber reinforcement.
   2. Waterstops.
   3. Curing compounds.
   4. Floor and slab treatments.
   5. Vapor retarders.

B. Design Mixtures: For each concrete mixture.

C. Steel Reinforcement Shop Drawings: Placing Drawings that detail fabrication, bending, and placement.

1.3 INFORMATIONAL SUBMITTALS

A. Slab Jointing Plan: Contractor to indicate location of slab-on-grade contraction joints and construction joints.
   1. Joints shall be spaced in a square or rectangular pattern with aspect ratio not to exceed 1.5:1.
   2. Spacing shall not exceed 36 times the slab thickness (in inches).

B. Field quality-control reports, including floor surface flatness and levelness measurements indicating compliance with specified tolerances.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Steel Reinforcement: Deliver, store, and handle steel reinforcement to prevent bending and damage. Avoid damaging coatings on steel reinforcement.

B. Waterstops: Store waterstops under cover to protect from moisture, sunlight, dirt, oil, and other contaminants.

1.5 QUALITY ASSURANCE

A. Manufacturer Qualifications: A firm experienced in manufacturing ready-mixed concrete products and that complies with ASTM C 94 requirements for production facilities and equipment.

B. Testing Agency Qualifications: An independent agency, qualified according to ASTM C 1077 and ASTM E 329 for testing indicated.

1.6 PRECONSTRUCTION TESTING

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

1.7 FIELD CONDITIONS

A. Cold-Weather Placement: Comply with ACI 306.1.

1. Do not use calcium chloride, salt, or other materials containing antifreeze agents or chemical accelerators unless otherwise specified and approved in mixture designs.

B. Hot-Weather Placement: Comply with ACI 301.

PART 2 - PRODUCTS

2.1 CONCRETE, GENERAL

A. ACI Publications: Comply with the following unless modified by requirements in the Contract Documents:

1. ACI 301.
2. ACI 117.

2.2 FORM-FACING MATERIALS

A. Smooth-Formed Finished Concrete: Form-facing panels that provide continuous, true, and smooth concrete surfaces. Furnish in largest practicable sizes to minimize number of joints.
1. Plywood, metal, or other approved panel materials.
2. Exterior-grade plywood panels, suitable for concrete forms, complying with DOC PS 1, and as follows:
a. High-density overlay, Class 1 or better.
b. Medium-density overlay, Class 1 or better; mill-release agent treated and edge sealed.
c. Structural 1, B-B or better; mill oiled and edge sealed.
d. B-B (Concrete Form), Class 1 or better; mill oiled and edge sealed.

B. Chamfer Strips: Wood, metal, PVC, or rubber strips.

C. Form-Release Agent: Commercially formulated form-release agent that does not bond with, stain, or adversely affect concrete surfaces and does not impair subsequent treatments of concrete surfaces. Provide rust inhibitor.

D. Form Ties: Factory-fabricated, removable or snap-off glass-fiber-reinforced plastic or metal form ties designed to resist lateral pressure of fresh concrete on forms and to prevent spalling of concrete on removal.
1. Furnish units that leave no corrodible metal closer than 1 inch to the plane of exposed concrete surface.

2. Furnish ties that, when removed, leave holes no larger than 1 inch in diameter in concrete surface.
3. Furnish ties with integral water-barrier plates to walls indicated to receive dampproofing or waterproofing.

2.3 CONCRETE MATERIALS

A. Cementitious Materials:

1. Portland Cement: ASTM C 150, Type I/II, gray.
2. Fly Ash: ASTM C 618, Class F or C.
3. Slag Cement: ASTM C 989/C 989M, Grade 100 or 120.

B. Normal-Weight Aggregates: ASTM C 33, graded.

1. Maximum Coarse-Aggregate Size: 1 inch nominal.
2. Fine Aggregate: Free of materials with deleterious reactivity to alkali in cement.

C. Air-Entraining Admixture: ASTM C 260.

D. Chemical Admixtures: Certified by manufacturer to be compatible with other admixtures and that do not contribute water-soluble chloride ions exceeding those permitted in hardened concrete. Do not use calcium chloride or admixtures containing calcium chloride.

1. Water-Reducing Admixture: ASTM C 494, Type A.
2. Retarding Admixture: ASTM C 494, Type B.
3. Water-Reducing and Retarding Admixture: ASTM C 494, Type D.
4. High-Range, Water-Reducing Admixture: ASTM C 494, Type F.
5. High-Range, Water-Reducing and Retarding Admixture: ASTM C 494, Type G.
6. Plasticizing and Retarding Admixture: ASTM C 1017, Type II.

E. Water: ASTM C 94 and potable.

2.4 STEEL REINFORCEMENT

A. Reinforcing Bars: ASTM A 615, Grade 60, deformed.

B. Epoxy-Coated Reinforcing Bars: ASTM A 615, Grade 60, deformed bars,, epoxy coated, with less than 2 percent damaged coating in each 12-inch bar length.

C. Plain-Steel Welded-Wire Reinforcement: ASTM A 1064, plain, fabricated from as-drawn steel wire into flat sheets.

2.5 REINFORCEMENT ACCESSORIES

A. Bar Supports: Bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcing bars and welded-wire reinforcement in place. Manufacture bar supports from steel wire, plastic, or precast concrete according to CRSI's "Manual of Standard Practice."

B. Joint Dowel Bars: ASTM A 615, Grade 60, plain-steel bars, cut true to length with ends square and free of burrs.

C. Epoxy-Coated Joint Dowel Bars: ASTM A 615, Grade 60, plain-steel bars, ASTM A 775 epoxy coated.

D. Epoxy Repair Coating: Liquid, two-part, epoxy repair coating; compatible with epoxy coating on reinforcement and complying with ASTM A 775.

2.6 FIBER REINFORCEMENT

A. Synthetic Macro-Fiber: Blended monofilament and fibrillated polypropylene macro-fibers engineered and designed for use in concrete, complying with ASTM C 1116, Type III, no less than 2 inches long.

B. Fiber shall be accepted by the Steel Deck Institute for replacement of non-structural welded-wire-fabric in slab-on-metal deck applications per ASTM D 7508 and SDI C-2017 (paragraph 2.1,D,2).

C. Acceptable Manufacturers:
1. Forta-Ferro, Forta Corporation
2. Tuf-Strand SF,Euclid

2.7 WATERSTOPS

A. Self-Expanding Butyl Strip Waterstops: Manufactured rectangular or trapezoidal strip, butyl rubber with sodium bentonite or other hydrophilic polymers, for adhesive bonding to concrete, 3/4 by 1 inch.

2.8 VAPOR RETARDERS

A. Sheet Vapor Retarder: ASTM E 1745, Class A, 15 mils thick low-permeance polyolefin. Include manufacturer's recommended adhesive or pressure-sensitive tape.
1. Products shall include:
   a. Carlisle Coatings & Waterproofing, Inc.; Blackline 400.
   b. Fortifiber Building Systems Group; Moistop Ultra 15.
   c. Grace Construction Products, W. R. Grace & Co.; Florprufe 120.
   d. Meadows, W. R., Inc.; Perminator 15 mil.
   e. Reef Industries, Inc.; Griffolyn 15 mil.
   f. Stego Industries, LLC; Stego Wrap 15 mil Class A.

2.9 CURING MATERIALS

A. Evaporation Retarder: Waterborne, monomolecular film forming, manufactured for application to fresh concrete.

B. Absorptive Cover: AASHTO M 182, Class 2, burlap cloth made from jute or kenaf, weighing approximately 9 oz./sq. yd. when dry.

C. Moisture-Retaining Cover: ASTM C 171, polyethylene film or white burlap-polyethylene sheet.

D. Water: Potable.

Verify with manufacturer that retained products have been tested against interference with bonding of floor covering (choose 1 of 4 below, typically).

E. Clear, Waterborne, Membrane-Forming Curing Compound: ASTM C 309, Type 1, Class B, **dissipating**.

F. Clear, Waterborne, Membrane-Forming Curing Compound: ASTM C 309, Type 1, Class B, **nondissipating**, certified by curing compound manufacturer to not interfere with bonding of floor covering.

G. Clear, **Solvent-Borne**, Membrane-Forming Curing and Sealing Compound: ASTM C 1315, Type 1, Class A.

H. Clear, **Waterborne**, Membrane-Forming Curing and Sealing Compound: ASTM C 1315, Type 1, Class A.

2.10 RELATED MATERIALS

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

B. Round Concrete Cast-In-Place Column Fiber Forms: Multiple layers of 100 percent recycled paperboard, spirally wound, and laminated with adhesive.
1. Interior Surface: Smooth with spiral seam. Alathon release and moisture barrier coating.
2. Exterior Surface: Micryl moisture barrier coating.
3. Spiral Mark: Impart visible spiral mark on concrete columns.
4. 1-piece, 1-time-use forms.
5. Recyclable.

2.11 CONCRETE MIXTURES, GENERAL

A. Prepare design mixtures for each type and strength of concrete, proportioned on the basis of laboratory trial mixture or field test data, or both, according to ACI 301.
1. Use a qualified independent testing agency for preparing and reporting proposed mixture designs based on laboratory trial mixtures.

B. Cementitious Materials: Limit percentage, by weight, of cementitious materials other than portland cement in concrete as follows:
1. Fly Ash: 25 percent.
2. Combined Fly Ash and Pozzolan: 25 percent.
3. Ground Granulated Blast-Furnace Slag: 50 percent.
4. Combined Fly Ash or Pozzolan and Ground Granulated Blast-Furnace Slag: 50 percent portland cement minimum, with fly ash or pozzolan not exceeding 25 percent.

C. Admixtures: Use admixtures according to manufacturer's written instructions.
1. Use water-reducing and -retarding admixture when required by high temperatures, low humidity, or other adverse placement conditions.
2. Use water-reducing admixture in pumped concrete, concrete required to be watertight, and concrete with a w/c ratio below 0.50.

2.12 CONCRETE MIXTURES FOR BUILDING ELEMENTS

A. Footings: Proportion Normal-Weight Concrete mixture as follows:

1. Minimum Compressive Strength: 3000 psi at 28 days.
2. Maximum W/C Ratio: 0.53.
3. Slump Limit: 4 inches, plus or minus 1 inch.

B. Foundation Walls: Proportion Normal-Weight Concrete mixture as follows:

1. Minimum Compressive Strength: 4000 psi at 28 days.
2. Maximum W/C Ratio: 0.48.
3. Slump Limit: 5 inches, plus or minus 1 inch.
4. Air Content: 6 percent, plus or minus 1.5 percent at point of delivery for 1-inch nominal maximum aggregate size.

C. Exterior Slabs-on-Grade: Proportion Normal-Weight Concrete mixture as follows:
1. Minimum Compressive Strength: 4500 psi at 28 days.
2. Minimum Cementitious Materials Content: 520 lb/cu. yd.
3. Maximum W/C Ratio: 0.45.
4. Slump Limit: 4 inches, plus or minus 1 inch.
5. Air Content: 6 percent, plus or minus 1.5 percent at point of delivery for 1-inch nominal maximum aggregate size.

D. Interior Slabs-on-Grade including Equipment Housekeeping Pads: Proportion Normal-Weight Concrete mixture as follows:
1. Minimum Compressive Strength: 4000 psi at 28 days.
2. Minimum Cementitious Materials Content: 520 lb/cu. yd.
3. Maximum W/C Ratio: 0.48.
4. Slump Limit: 4 inches, plus or minus 1 inch.
5. Air Content: Do not allow air content of trowel-finished floors to exceed 3 percent.
6. Synthetic Macro-Fiber: Uniformly disperse in concrete mixture at manufacturer's recommended rate, but not less than a rate of 3.0 lb/cu. yd.

E. Utility Trench Backfill: Proportion normal-weight concrete mixture as follows:
1. Minimum Compressive Strength: 100 psi at 28 days.
2. Unconfined compression strength per ASTM D4832

F. Flowable Fill at foundations: Proportion normal-weight concrete mixture as follows:
1. Minimum Compressive Strength: 100 psi at 28 days.
2. Unconfined compression strength per ASTM D4832

G. Lean Concrete fill at soft soils: Proportion normal-weight concrete mixture as follows:
1. Minimum Compressive Strength: 1500 psi at 28 days.

2.13 FABRICATING REINFORCEMENT

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

2.14 CONCRETE MIXING

A. Ready-Mixed Concrete: Measure, batch, mix, and deliver concrete according to ASTM C 94, and furnish batch ticket information.

1. When air temperature is between 85 and 90 deg F, reduce mixing and delivery time from 1-1/2 hours to 75 minutes; when air temperature is above 90 deg F, reduce mixing and delivery time to 60 minutes.

PART 3 - EXECUTION

3.1 FORMWORK INSTALLATION

A. Design, erect, shore, brace, and maintain formwork, according to ACI 301, to support vertical, lateral, static, and dynamic loads, and construction loads that might be applied, until structure can support such loads.

B. Construct formwork so concrete members and structures are of size, shape, alignment, elevation, and position indicated, within tolerance limits of ACI 117.

C. Limit concrete surface irregularities, designated by ACI 347 as abrupt or gradual, as follows:
1. Class A, 1/8 inch for smooth-formed finished surfaces.
2. Class C, 1/2 inch for rough-formed finished surfaces.

D. Chamfer exterior corners and edges of permanently exposed concrete.

E. Clean forms and adjacent surfaces to receive concrete. Remove chips, wood, sawdust, dirt, and other debris just before placing concrete.

F. Retighten forms and bracing before placing concrete, as required, to prevent mortar leaks and maintain proper alignment.

G. Coat contact surfaces of forms with form-release agent, according to manufacturer's written instructions, before placing reinforcement.

3.2 REMOVING AND REUSING FORMS

A. General: Formwork for sides of beams, walls, columns, and similar parts of the Work that does not support weight of concrete may be removed after cumulatively curing at not less than 50 deg F for 24 hours after placing concrete. Concrete has to be hard enough to not be damaged by form-removal operations, and curing and protection operations need to be maintained.

B. When forms are reused, clean surfaces, remove fins and laitance, and tighten to close joints. Align and secure joints to avoid offsets. Do not use patched forms for exposed concrete surfaces unless approved by Architect.

3.3 STEEL REINFORCEMENT INSTALLATION

A. General: Comply with CRSI's "Manual of Standard Practice" for fabricating, placing, and supporting reinforcement.

1. Do not cut or puncture vapor retarder. Repair damage and reseal vapor retarder before placing concrete.

B. Clean reinforcement of loose rust and mill scale, earth, ice, and other foreign materials that reduce bond to concrete.

C. Accurately position, support, and secure reinforcement against displacement. Locate and support reinforcement with bar supports to maintain minimum concrete cover. Do not tack weld crossing reinforcing bars.

D. Set wire ties with ends directed into concrete, not toward exposed concrete surfaces.

E. Epoxy-Coated Reinforcement: Repair cut and damaged epoxy coatings with epoxy repair coating according to ASTM D 3963. Use epoxy-coated steel wire ties to fasten epoxy-coated steel reinforcement.

3.4 EMBEDDED ITEM INSTALLATION

A. Place and secure anchorage devices and other embedded items required for adjoining work that is attached to or supported by cast-in-place concrete. Use setting drawings, templates, diagrams, instructions, and directions furnished with items to be embedded.

B. Install anchor rods, accurately located, to elevations required and complying with tolerances in Section 7.5 of AISC's "Code of Standard Practice for Steel Buildings and Bridges."

C. Coordinate pipe, sleeves, conduits, and other utilities prior to placing concrete.

3.5 VAPOR-RETARDER INSTALLATION

A. Sheet Vapor Retarders: Place, protect, and repair sheet vapor retarder according to ASTM E 1643 and manufacturer's written instructions.

1. Lap joints 6 inches and seal with manufacturer's recommended tape.

3.6 JOINTS

A. General: Construct joints true to line with faces perpendicular to surface plane of concrete.

B. Construction Joints: Install so strength and appearance of concrete are not impaired, at locations indicated or as approved by Architect.
1. Form keyed joints as indicated. Embed keys at least 1-1/2 inches into concrete.
2. Space vertical joints in walls not to exceed the guildelines as described on the contract documents. Locate joints beside piers integral with walls, near corners, and in concealed locations where possible.
3. Use a bonding agent at locations where fresh concrete is placed against hardened or partially hardened concrete surfaces.

C. Contraction Joints in Slabs-on-Grade: Form weakened-plane contraction joints, sectioning concrete into areas as indicated. Construct contraction joints for a depth equal to at least one-fourth of concrete thickness as follows:
1. Sawed Joints: Form contraction joints with power saws equipped with shatterproof abrasive or diamond-rimmed blades. Cut 1/8-inch- wide joints into concrete when cutting action does not tear, abrade, or otherwise damage surface and before concrete develops random contraction cracks.

D. Isolation Joints in Slabs-on-Grade: Install joint-filler strips at slab junctions with vertical surfaces, such as column pedestals, foundation walls, grade beams, and other locations, as indicated.
1. Extend joint-filler strips full width and depth of joint, terminating flush with finished concrete surface unless otherwise indicated.
2. Terminate full-width joint-filler strips not less than 1/2 inch or more than 1 inch below finished concrete surface where joint sealants, specified in Section 079200 "Joint Sealants," are indicated.
3. Install joint-filler strips in lengths as long as practicable. Where more than one length is required, lace or clip sections together.

4. Provide round isolation joints at all steel columns. Size round column fiber forms to maintain minimum 1-1/2" clearance of base plate.

E. Doweled Joints: Install dowel bars and support assemblies at joints where indicated. Lubricate or asphalt coat one-half of dowel length to prevent concrete bonding to one side of joint.

3.7 WATERSTOP INSTALLATION

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

3.8 CONCRETE PLACEMENT

A. Before placing concrete, verify that installation of formwork, reinforcement, and embedded items is complete and that required inspections are completed.

B. Do not add water to concrete during delivery, at Project Site, or during placement unless explicitly noted on approved mix design.

C. Deposit concrete continuously in one layer or in horizontal layers of such thickness that no new concrete is placed on concrete that has hardened enough to cause seams or planes of weakness. If a section cannot be placed continuously, provide construction joints as indicated. Deposit concrete to avoid segregation.

1. Consolidate placed concrete with mechanical vibrating equipment according to ACI 301.

D. Deposit and consolidate concrete for floors and slabs in a continuous operation, within limits of construction joints, until placement of a panel or section is complete.
1. Consolidate concrete during placement operations so concrete is thoroughly worked around reinforcement and other embedded items and into corners.
2. Maintain reinforcement in position on chairs during concrete placement.
3. Screed slab surfaces with a straightedge and strike off to correct elevations.
4. Slope surfaces uniformly to drains where required.
5. Begin initial floating using bull floats or darbies to form a uniform and open-textured surface plane, before excess bleedwater appears on the surface. Do not further disturb slab surfaces before starting finishing operations.

E. Cold-Weather Placement: Comply with ACI 306.1 and as follows. Protect concrete work from physical damage or reduced strength that could be caused by frost, freezing actions, or low temperatures.
1. When average high and low temperature is expected to fall below 40 deg F for three successive days, maintain delivered concrete mixture temperature within the temperature range required by ACI 301.
2. Do not use frozen materials or materials containing ice or snow. Do not place concrete on frozen subgrade or on subgrade containing frozen materials.
3. Do not use calcium chloride, salt, or other materials containing antifreeze agents or chemical accelerators unless otherwise specified and approved in mixture designs.

F. Hot-Weather Placement: Comply with ACI 301 and as follows:
1. Maintain concrete temperature below 90 deg F at time of placement. Chilled mixing water or chopped ice may be used to control temperature, provided water equivalent of ice is calculated to total amount of mixing water. Using liquid nitrogen to cool concrete is Contractor's option.
2. Fog-spray forms, steel reinforcement, and subgrade just before placing concrete. Keep subgrade uniformly moist without standing water, soft spots, or dry areas.

3.9 FINISHING FORMED SURFACES

A. Rough-Formed Finish: As-cast concrete texture imparted by form-facing material with tie holes and defects repaired and patched. Remove fins and other projections that exceed specified limits on formed-surface irregularities.

1. Apply to concrete surfaces not exposed to public view.

B. Smooth-Formed Finish: As-cast concrete texture imparted by form-facing material, arranged in an orderly and symmetrical manner with a minimum of seams. Repair and patch tie holes and defects. Remove fins and other projections that exceed specified limits on formed-surface irregularities.

1. Apply to concrete surfaces exposed to public view, to receive a rubbed finish, or to be covered with a coating or covering material applied directly to concrete.

C. Rubbed Finish: Apply the following to smooth-formed-finished as-cast concrete where indicated:
1. Grout-Cleaned Finish: Wet concrete surfaces and apply grout of a consistency of thick paint to coat surfaces and fill small holes. Mix 1 part portland cement to 1-1/2 parts fine sand with a 1:1 mixture of bonding admixture and water. Add white portland cement in amounts determined by trial patches, so color of dry grout matches adjacent surfaces. Scrub grout into voids and remove excess grout. When grout whitens, rub surface with clean burlap and keep surface damp by fog spray for at least 36 hours.

D. Related Unformed Surfaces: At tops of walls, horizontal offsets, and similar unformed surfaces adjacent to formed surfaces, strike off smooth and finish with a texture matching adjacent formed surfaces. Continue final surface treatment of formed surfaces uniformly across adjacent unformed surfaces unless otherwise indicated.

3.10 FINISHING FLOORS AND SLABS

A. General: Comply with ACI 302.1R recommendations for screeding, restraightening, and finishing operations for concrete surfaces. Do not wet concrete surfaces.

B. Float Finish: Consolidate surface with power-driven floats or by hand floating if area is small or inaccessible to power-driven floats. Restraighten, cut down high spots, and fill low spots. Repeat float passes and restraightening until surface is left with a uniform, smooth, granular texture.

1. Apply float finish to surfaces to receive trowel finish and to be covered with fluid-applied or sheet waterproofing, built-up or membrane roofing, or sand-bed terrazzo.

C. Trowel Finish: After applying float finish, apply first troweling and consolidate concrete by hand or power-driven trowel. Continue troweling passes and restraighten until surface is free of trowel marks and uniform in texture and appearance. Grind smooth any surface defects that would telegraph through applied coatings or floor coverings.

1. Apply a trowel finish to surfaces exposed to view or to be covered with resilient flooring, carpet, ceramic or quarry tile set over a cleavage membrane, paint, or another thin-film-finish coating system.
2. Finish surfaces to the following tolerances, according to ASTM E 1155, for a randomly trafficked floor surface:
   a. Specified overall values of flatness, F(F) 35; and of levelness, F(L) 25; with minimum local values of flatness, F(F) 24; and of levelness, F(L) 17.

D. Trowel and Fine-Broom Finish: Apply a first trowel finish to surfaces where ceramic or quarry tile is to be installed by either thickset or thinset method. While concrete is still plastic, slightly scarify surface with a fine broom.

1. Comply with flatness and levelness tolerances for trowel-finished floor surfaces.

E. Broom Finish: Apply a broom finish to exterior concrete platforms, steps, ramps, and elsewhere as indicated.

1. Immediately after float finishing, slightly roughen trafficked surface by brooming with fiber-bristle broom perpendicular to main traffic route. Coordinate required final finish with Architect before application.

3.11 MISCELLANEOUS CONCRETE ITEMS

A. Filling In: Fill in holes and openings left in concrete structures after work of other trades is in place unless otherwise indicated. Mix, place, and cure concrete, as specified, to blend with in-place construction. Provide other miscellaneous concrete filling indicated or required to complete the Work.

B. Equipment Housekeeping Pads:
1. Coordinate sizes and locations of concrete bases with actual equipment provided.
2. Construct concrete bases 4 inches high unless otherwise indicated; and extend base not less than 6 inches in each direction beyond the maximum dimensions of supported equipment unless otherwise indicated or unless required for seismic anchor support.
3. Install hooked dowel rods to connect concrete base to concrete floor. Unless otherwise indicated, install dowel rods on 18-inch centers around the full perimeter of concrete base.
4. For supported equipment, install epoxy-coated anchor bolts that extend through concrete base, and anchor into structural concrete substrate.
5. Prior to pouring concrete, place and secure anchorage devices. Use setting drawings, templates, diagrams, instructions, and directions furnished with items to be embedded.
6. Cast anchor-bolt insert into bases. Install anchor bolts to elevations required for proper attachment to supported equipment.

3.12 CONCRETE PROTECTING AND CURING

A. General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures. Comply with ACI 306.1 for cold-weather protection and ACI 301 for hot-weather protection during curing.

B. Evaporation Retarder: Apply evaporation retarder to unformed concrete surfaces if hot, dry, or windy conditions cause moisture loss approaching 0.2 lb/sq. ft. x h before and during finishing operations. Apply according to manufacturer's written instructions after placing, screeding, and bull floating or darbying concrete, but before float finishing.

C. Formed Surfaces: Cure formed concrete surfaces. If forms remain during curing period, moist cure after loosening forms. If removing forms before end of curing period, continue curing for remainder of curing period.

D. Unformed Surfaces: Begin curing immediately after finishing concrete. Cure unformed surfaces, including floors and slabs, concrete floor toppings, and other surfaces.

E. Cure concrete according to ACI 308.1, by one or a combination of the following methods:

1. Moisture Curing: Keep surfaces continuously moist for not less than seven days.
2. Moisture-Retaining-Cover Curing: Cover concrete surfaces with moisture-retaining cover for curing concrete, placed in widest practicable width, with sides and ends lapped at least 12 inches, and sealed by waterproof tape or adhesive. Cure for not less than seven days. Immediately repair any holes or tears during curing period, using cover material and waterproof tape.
3. Curing Compound: Apply uniformly in continuous operation by power spray or roller according to manufacturer's written instructions. Recoat areas subjected to heavy rainfall within three hours after initial application. Maintain continuity of coating and repair damage during curing period.

    a. Removal: After curing period has elapsed, remove curing compound without damaging concrete surfaces by method recommended by curing compound manufacturer unless manufacturer certifies curing compound does not interfere with bonding of floor covering used on Project.

4. Curing and Sealing Compound: Apply uniformly to floors and slabs indicated in a continuous operation by power spray or roller according to manufacturer's written instructions. Recoat areas subjected to heavy rainfall within three hours after initial application. Repeat process 24 hours later and apply a second coat. Maintain continuity of coating and repair damage during curing period.

3.13 CONCRETE SURFACE REPAIRS

A. Defective Concrete: Repair and patch defective areas when approved by Architect. Remove and replace concrete that cannot be repaired and patched to Architect's approval.

B. Perform structural repairs of concrete, subject to Architect's approval, using epoxy adhesive and patching mortar. Notify Architect of repairs and provide detailed methods for approval prior to beginning repairs.

C. Patching Mortar: Mix dry-pack patching mortar, consisting of 1 part portland cement to 2-1/2 parts fine aggregate passing a No. 16 sieve, using only enough water for handling and placing.

D. Repairing Formed Surfaces: Surface defects include color and texture irregularities, cracks, spalls, air bubbles, honeycombs, rock pockets, fins and other projections on the surface. Defects also include stains and other discolorations in public view that cannot be removed by cleaning.
    1. Immediately after form removal, cut out honeycombs, rock pockets, and voids more than 1/2 inch in any dimension to solid concrete. Limit cut depth to 3/4 inch. Make edges of cuts perpendicular to concrete surface. Clean, dampen with water, and brush-coat holes and voids with bonding agent. Fill and compact with patching mortar before bonding agent has dried. Fill form-tie voids with patching mortar or cone plugs secured in place with bonding agent.
    2. Repair defects on surfaces by blending white portland cement and standard portland cement so that, when dry, patching mortar matches surrounding color. Patch a test area at inconspicuous locations to verify mixture and color match before proceeding with patching. Compact mortar in place and strike off slightly higher than surrounding surface.

E. Repairing Unformed Surfaces: Test unformed surfaces, such as floors and slabs, for finish and verify surface tolerances specified for each surface. Correct low and high areas. Test surfaces sloped to drain for trueness of slope and smoothness; use a sloped template.
    1. Repair finished surfaces containing defects. Surface defects include spalls, popouts, honeycombs, rock pockets, crazing and cracks in excess of 0.01 inch wide or that penetrate to reinforcement or completely through unreinforced sections regardless of width, and other objectionable conditions.
    2. After concrete has cured at least 14 days, correct high areas by grinding.
    3. Correct low areas scheduled to remain exposed with a repair topping. Cut out low areas to ensure a minimum repair topping depth of 1/4 inch to match adjacent floor elevations. Prepare, mix, and

apply repair topping and primer according to manufacturer's written instructions to produce a smooth, uniform, plane, and level surface.

4. Correct other low areas scheduled to receive floor coverings with a repair underlayment. Prepare, mix, and apply repair underlayment and primer according to manufacturer's written instructions to produce a smooth, uniform, plane, and level surface. Feather edges to match adjacent floor elevations.
5. Repair defective areas, except random cracks and single holes 1 inch or less in diameter, by cutting out and replacing with fresh concrete. Remove defective areas with clean, square cuts and expose steel reinforcement with at least a 3/4-inch clearance all around. Dampen concrete surfaces in contact with patching concrete and apply bonding agent. Mix patching concrete of same materials and mixture as original concrete, except without coarse aggregate. Place, compact, and finish to blend with adjacent finished concrete. Cure in same manner as adjacent concrete.
6. Repair random cracks and single holes 1 inch or less in diameter with patching mortar. Groove top of cracks and cut out holes to sound concrete and clean off dust, dirt, and loose particles. Dampen cleaned concrete surfaces and apply bonding agent. Place patching mortar before bonding agent has dried. Compact patching mortar and finish to match adjacent concrete. Keep patched area continuously moist for at least 72 hours.

3.14 FIELD QUALITY CONTROL

A. Special Inspections: Owner will engage a special inspector to perform field tests and inspections and prepare test reports.

B. Inspections:
1. Steel reinforcement placement.
2. Headed bolts and studs.
3. Verification of use of required design mixture.
4. Concrete placement, including conveying and depositing.
5. Curing procedures and maintenance of curing temperature.

C. Concrete Tests: Testing of composite samples of fresh concrete obtained according to ASTM C 172 shall be performed according to the following requirements:
1. Testing Frequency: Obtain one composite sample for each day's pour of each concrete mixture exceeding 5 cu. yd., but less than 25 cu. yd., plus one set for each additional 50 cu. yd. or fraction thereof.
2. Slump: ASTM C 143; one test at point of placement for each composite sample, but not less than one test for each day's pour of each concrete mixture. Perform additional tests when concrete consistency appears to change.
3. Air Content: ASTM C 231, pressure method, for normal-weight concrete; one test for each composite sample, but not less than one test for each day's pour of each concrete mixture.
4. Concrete Temperature: ASTM C 1064; one test hourly when air temperature is 40 deg F and below or 80 deg F and above, and one test for each composite sample.
5. Unit Weight: ASTM C 567; one test for each composite sample, but not less than one test for each day's pour of each concrete mixture.
6. Compression Test Specimens: ASTM C 31.
7. Compressive-Strength Tests: ASTM C 39; test one set of two laboratory-cured specimens at 7 days and one set of two specimens at 28 days.
    a. Test one set of two field-cured specimens at 7 days and one set of two specimens at 28 days.
    b. A compressive-strength test shall be the average compressive strength from a set of two specimens obtained from same composite sample and tested at age indicated.
8. When strength of field-cured cylinders is less than 85 percent of companion laboratory-cured cylinders, Contractor shall evaluate operations and provide corrective procedures for protecting and curing in-place concrete.

9. Strength of each concrete mixture will be satisfactory if every average of any three consecutive compressive-strength tests equals or exceeds specified compressive strength and no compressive-strength test value falls below specified compressive strength by more than 500 psi.
10. Test results shall be reported in writing to Architect, concrete manufacturer, and Contractor within 48 hours of testing. Reports of compressive-strength tests shall contain Project identification name and number, date of concrete placement, name of concrete testing and inspecting agency, location of concrete batch in Work, design compressive strength at 28 days, concrete mixture proportions and materials, compressive breaking strength, and type of break for both 7- and 28-day tests.
11. Nondestructive Testing: Impact hammer, sonoscope, or other nondestructive device may not be used.
12. Additional Tests: Testing and inspecting agency shall make additional tests of concrete when test results indicate that slump, air entrainment, compressive strengths, or other requirements have not been met, as directed by Architect. Testing and inspecting agency may conduct tests to determine adequacy of concrete by cored cylinders complying with ASTM C 42 or by other methods as directed by Architect.
13. Additional testing and inspecting, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.
14. Correct deficiencies in the Work that test reports and inspections indicate do not comply with the Contract Documents.

D. Measure floor and slab flatness and levelness according to ASTM E 1155 within 48 hours of finishing.

END OF SECTION

SECTION 04 20 00
UNIT MASONRY

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Concrete block and brick veneer.

B. Mortar and grout.

C. Reinforcement and anchorage.

D. Lintels.

E. Accessories.

1.02 RELATED REQUIREMENTS

A. Section 03 20 00 - Concrete Reinforcing: Reinforcing steel for grouted masonry.

B. Section 04 05 11 - Mortar and Masonry Grout.

1.03 REFERENCE STANDARDS

A. ASTM A615/A615M - Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement; 2018, with Editorial Revision (2018).

B. ASTM A641/A641M - Standard Specification for Zinc-Coated (Galvanized) Carbon Steel Wire; 2009a (Reapproved 2014).

C. ASTM A951/A951M - Standard Specification for Steel Wire for Masonry Joint Reinforcement; 2016.

D. ASTM C90 - Standard Specification for Loadbearing Concrete Masonry Units; 2016a.

E. ASTM C270 - Standard Specification for Mortar for Unit Masonry; 2014a.

F. ASTM C476 - Standard Specification for Grout for Masonry; 2018.

1.04 SUBMITTALS

A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.

B. Product Data: Provide data for masonry units, fabricated wire reinforcement, mortar, and masonry accessories.

PART 2 PRODUCTS

2.01 CONCRETE MASONRY UNITS

A. Concrete Block: Comply with referenced standards and as follows:

1. Size: Standard units with nominal face dimensions of 16 by 8 inches (400 by 200 mm) and nominal depths as indicated on drawings for specific locations.
2. Load-Bearing Units: ASTM C90, normal weight.

2.02 CLAY MASONRY UNITS

A. Brick: Comply with referenced standards and as follows:

1. Size: Standard units with nominal face dimensions to match existing in face dimensions as indicated on drawings for specific locations.
2. Brick Units: ASTM C216, Type FBS or better, Grade MW or better. Face to match existing.

2.03 MORTAR AND GROUT MATERIALS

A. Mortar and Grout: As specified in Section 04 05 11.

2.04 REINFORCEMENT AND ANCHORAGE

A. Single Wythe Joint Reinforcement: ASTM A951/A951M.

1. Type: Truss or ladder.
2. Material: ASTM A1064/A1064M steel wire, mill galvanized to ASTM A641/A641M, Class 3.

PART 3 EXECUTION

3.01 COURSING

A. Establish lines, levels, and coursing indicated. Protect from displacement.

B. Maintain masonry courses to uniform dimension. Form vertical and horizontal joints of uniform thickness.

C. Concrete Masonry & Clay Masonry Units:
   1. Bond: Match existing.
   2. Coursing: One unit and one mortar joint to match existing.
   3. Mortar Joints: Match existing.

3.02 PLACING AND BONDING

A. Lay solid masonry units in full bed of mortar, with full head joints, uniformly jointed with other work.

3.03 REINFORCEMENT AND ANCHORAGE - GENERAL, SINGLE WYTHE MASONY.

A. Unless otherwise indicated on drawings or specified under specific wall type, install horizontal joint reinforcement 16 inches (400 mm) on center.

B. Lap joint reinforcement ends minimum 6 inches (150 mm).

3.04 CLEANING

A. Remove excess mortar and mortar droppings.

B. Clean soiled surfaces with cleaning solution.

END OF SECTION

SECTION 06 00 00

CARPENTRY

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Miscellaneous wood framing, incidental rough carpentry required for support or attachment of other construction, pressure preservative treated and fire retardant treated wood including:
   1. Wood blocking inside stud walls for attachment of specialties and other components.
   2. Wood furring.
   3. Misc. wood blocking and related components and attachments indicated and required for the work whether or not specifically referred to herein.

B. Wall sheathing including sheathing joint and penetration treatment and flexible flashing at openings in sheathing.
   1. Glass-Mat gypsum wall sheathing
   2. Sheathing work and related materials and attachments indicated and required for the work whether or not specifically referred to herein.

C. Finish Carpentry including:
   1. Interior ornamental woodwork.
      a. Shop and field finished interior woodwork including wood architectural trim.
      b. Wood support board for grab bars, towel dispensers and soap dispensers.
      c. Filling of all holes and surface prep required for finishing by others.
   2. Interior manufactured work.
   3. All finish carpentry work, related materials and attachment/anchorage accessories not specified under another section but required for the work whether or not specifically referred to herein.

D. Installation of the following:
   1. Door Hardware (supplied in Section 08 71 00).

E. Temporary carpentry work
   1. Temporary barricades, shoring etc. as required for the work.

F. Related Documents: The provisions of the General Conditions and the Sections included under Division 00 & 01 are included as a part of this Section as though bound herein.

G. Related Work in Other Sections:

   1. Casework: Section 12 30 00.

1.02 QUALITY ASSURANCE

A. Perform Work in accordance with the following agencies:
   1. Lumber Grading Agency: Certified by ALSC.
   2. Plywood Grading Agency: Certified by APA.

1.03 SUBMITTALS

A. Submittal shall specifically include:

   1. Certified test reports and/or product data showing compliance with specified performance characteristics.
   2. Shop drawings on all items of architectural woodwork. Indicate materials, component profiles,

fastening methods, jointing details, finishes, and accessories.
3. Samples: Submit two reasonable size samples illustrating wood grain and specified finish for each type of wood trim and millwork.
4. Product Data for Construction Adhesive.

PART 2 PRODUCTS

2.1 WOOD PRODUCTS, GENERAL

A. Lumber/Boards:
1. Maximum moisture content: 19 percent.
2. Factory mark each piece of lumber with grade stamp.

B. Plywood: Either DOC PS 1 or DOC PS 2, unless otherwise indicated.

C. Oriented Strand Board: DOC PS 2.

D. Low Emitting: All interior rough carpentry composite wood (except wood for temporary construction) must contain no added urea-formaldehyde resins.

E. Accessories
1. Fasteners:
a. Exterior or in wall cavity: Hot-dip galvanized or stainless steel.
b. Treated wood locations: Hot-dip galvanized or stainless steel.
c. High Humidity Areas: Hot-dip galvanized or stainless steel.
d. Other Areas: Plain steel.
2. Die Stamped Connectors: galvanized steel as shown.
3. Joist Hangers: Galvanized steel, sized to suit framing conditions.
4. Anchors: Hollow block epoxy anchors for anchorage to hollow masonry. Expansion (wedge) bolt type for anchorage to solid masonry or concrete. Bolt or ballistic fastener for anchorages to steel.

2.2 PRESERVATIVE TREATED (PT) WOOD MATERIALS

A. Preservative Treatment by Pressure Process: AWPA U1. Use Category UC2 for interior construction not in contact with the ground. Use Category UC3b for exterior construction not in contact with the ground. Use Category UC4a for items in contact with the ground.
1. Preservative Chemicals: Micronized Copper Azole (MCA).
2. Product specifically approved by manufacturer for use in direct contact with aluminum.
3. Application: Wood blocking at perimeter of windows, roof/parapet blocking, gutter and aluminum-wrapped trim boards, any wood blocking below grade or in contact with masonry, and other locations specifically indicated to be pressure treated (PT).

2.3 FIRE RETARDANT TREATED (FRT) WOOD MATERIALS

A. Fire-Retardant-Treated Lumber and Plywood by Pressure Process: Products with a flame spread index of 25 or less when tested according to ASTM E 84, and with no evidence of significant progressive combustion when the test is extended an additional 20 minutes, and with the flame front not extending more than 10.5 feet beyond the centerline of the burners at any time during the test.
1. Use treatment that does not promote corrosion of metal fasteners.
2. Exterior Type: Treated materials shall comply with requirements specified above for fire-retardant-treated lumber and plywood by pressure process after being subjected to accelerated weathering according to ASTM D 2898. Use for exterior locations and where indicated.
3. Interior Type A: Treated materials shall have a moisture content of 28 percent or less when testing according to ASTM D 3201 at 92 percent relative humidity. Use where exterior type is not indicated.
4. The fire retardant chemical shall provide protection against termites and fungal decay.
5. A corrosion resistant fastener, such as hot-dipped galvanized nails, or better shall be used.
6. Application: All wood framing and blocking not otherwise indicated shall be fire retardant treated.

B. Wood Blocking

1. Stud Walls:
   a. Material: Plywood (FRT).
   b. Thickness: As indicated or necessary.
   c. Width: As indicated or as necessary.
   d. Length: As indicated or terminating at vertical stud on both ends.
   e. Attachment: Screw-attached to face of each stud with min. 2 fasteners per stud.
2. Stud Walls:
   a. Material: 2x6 min. Lumber (FRT)
   b. Length: As indicated or terminating at vertical stud on both ends.
   c. Attachment: Screw-attached to studs, notched as required to nest in stud lips. Face of blocking shall be flush with face of studs. Two fasteners min. required per stud.
3. Blocking Verification: The blocking description above should be considered minimum requirements. For blocking that will support significant weight (wall cabinets, etc.), verify blocking requirements with the manufacturer of the items being supported. Provide wider or thicker blocking and/or additional attachment as required to support attached items.

2.4 PLYWOOD BACKING PANELS

A. Telephone and Electrical Equipment Backing Panels: DOC PS 1, Exposure 1, C-D Plugged, fire-retardant treated, in thickness indicated or, if not indicated, not less than 3/4 inch nominal thickness. Painted gray by Contractor providing these panels. Provide as shown on the Electric and/or Technology Drawings. Exact locations of panels shall be coordinated with Technology Contractor and Architect.

2.5 INTERIOR WOODWORK MATERIALS

A. General: Provide materials that comply with requirements of the AWI Woodworking Standard for each type of woodwork and quality grade indicated and, where the following products are part of woodwork, with requirements of the referenced product standards, that apply to product characteristics indicated:
   1. Hardboard: ANSI/AHA A135.4.
   2. High Pressure Laminate: NEMA LD3.
   3. Medium Density Fiberboard: ANSI A208.2
   4. Particleboard: ANSI A208.1, Grade M-2
   5. Softwood Plywood: PS 1.
   6. Hardwood Plywood and Face Veneers: HPVA HP-12
   7. FSC: All Finish Carpentry lumber and plywood must be FSC certified. All Finish Carpentry composite wood must be FSC certified or 100% recycled content.
   8. Low Emitting: All interior Finish Carpentry composite wood must be free of added urea-formaldehyde resins.

B. Trim and Moldings
   1. Painted Wood Trim Boards: Pre-primed finger jointed redwood in 20 ft. lengths in dimensions shown on drawings, maximum moisture content of 6 percent.
   2. Painted Wood Moldings: Paint grade poplar. Longest lengths commercially available with joints mitered.
   3. Stained Wood Trim Boards: Wood species and grade to match existing.

C. Misc. Woodwork
   1. Misc. Support: Approx. 3/4" thick MDO plywood, eased edges. Fasteners countersunk and filled. Field painted by Painting Contractor.

2.6 FINISHING OF INTERIOR WOODWORK

A. Quality standard complies with AWI Section 1500. Comply with WIC Section 25, unless otherwise indicated.
   1. Grade: Provide finishes of same grades as items to be finished.

B. General:
   1. Field-finished Architectural Woodwork: Finished under Section 09 91 00.

C. Preparations for Finishing: Comply with referenced quality standard for sanding, filling countersunk fasteners, sealing concealed surfaces and similar preparations for finishing of architectural woodwork, as applicable to each unit of work.
   1. Back priming: Apply one coat of sealer or primer, compatible with finish coats, to concealed surfaces of woodwork. Apply two coats to back of paneling and to end-grain surfaces. Concealed surfaces of plastic-laminate-clad woodwork do not require back priming when surfaced with plastic laminate, backing paper, or thermoset decorative overlay.

PART 3 EXECUTION

3.1 FRAMING

A. Install blocking as required with appropriate fasteners.
   1. Where shown on drawings.
   2. Where required for attachment of specialties or other construction.

B. Erect barricades and temporary enclosures as required. See Division 00 & 01.

3.2 FINISH CARPENTRY INSTALLATION

A. Install work in accordance with AWI Custom Grade Quality Standard. Set and secure materials and components in place, plumb and level.

B. Install wood trim with finish nails or finish screws.

C. Install door hardware supplied by Section 08 71 00 in accordance with manufacturer's instructions.

E. Install bathroom accessories and miscellaneous Division 10 specialties in accordance with manufacturer's instructions.

D. Support Blocks: Provide support blocks at each accessory as recommended by manufacturer.
   1. CMU Locations: Secure support blocks to wall using masonry screws (countersunk and filled) and construction adhesive.
   2. Stud Wall Locations: Provide blocking in walls at all dispenser block locations. Secure support blocks to wall using wood screws (countersunk and filled) and construction adhesive.
   3. Perimeter: Seal perimeter with paintable sealant.
   4. Wall Tile Locations: Where support blocks occur at wall tile locations, install support blocks on top of wall tile. Drill pilot holes through tiles at attachment locations prior to attachment.

3.3 PREPARATION FOR FINISH

A. Sand work smooth and set exposed fasteners. Apply matching wood filler in exposed fastener indentations.

B. Site Finishing: Refer to Section 09 91 00 for site-applied stained and painted finishes.

END OF SECTION

SECTION 07 21 00

THERMAL AND ACOUSTIC INSULATION

PART 1 GENERAL

1.1 SECTION INCLUDES

A. This Section Includes:
   1. Organic and inorganic insulation applied for acoustical performance in walls and ceilings.
   2. All building insulation work and related materials not specified under another section but required for the work shall be provided under this section whether or not specifically referred to herein.

B. Related documents: The provisions of the General Conditions and the Sections included under Division 00 & 01 are included as a part of this Section as though bound herein.

1.2 SUBMITTALS

A. Submittal shall specifically include:
   1. Product Data for each product.
   2. Manufacturer's recommended adhesive data for rigid insulation board.

1.3 QUALITY ASSURANCE

A. Installer Qualifications: Installer experienced to perform work of this section who is specialized in the installation of work similar to that required for this project.

B. All insulation products shall be formaldehyde free.

C. Fire-Test-Response Characteristics: Provide insulation and related materials with the fire-test-response characteristics indicated, as determined by testing identical products per test method indicated below by UL or another testing and inspecting agency acceptable to authorities having jurisdiction. Identify materials with appropriate markings of applicable testing and inspecting agency.
   1. Surface-Burning Characteristics: ASTM E 84.
   2. Fire-Resistance Ratings: ASTM E 119.
   3. Combustion Characteristics: ASTM E 136.

1.4 DELIVERY, STORAGE AND HANDLING

A. Ordering: Comply with manufacturer's ordering instructions and lead time requirements to avoid construction delays.

B. Packing, Shipping, Handling and Unloading: Deliver materials in manufacturer's original, unopened, undamaged containers with identification labels intact.

C. Storage and Protection: Store materials protected from exposure to harmful weather to avoid damage.

PART 2 PRODUCTS

2.1 MINERAL FIBER BLANKET INSULATION

A. Acoustic Sound Batt Insulation: Acoustic/Thermal Batts fiberglass batts, complying with ASTM C665, Type I, maximum flame spread and smoke developed value of 25 and 50.
   1. Size: 24" x 48" x 3 1/2" (R-11)
   2. Application: Acoustical assemblies.
   3. Acceptable Products:
      a. Owens-Corning Sonobatts
      b. Knauf Insulation EcoBatt R-11QT
      c. Johns Manville Sound Control Batts

B. Fire Safing Insulation: Safing Insulation/Mineral Wool, unfaced, noncombustible, thickness and size as required, providing up to 3 hour fire resistance rating, complying with ASTM C612, Types I-IV and ASTM E136, flame spread value of 5 and developed smoke value of 0.
   1. Application: Locations indicated or required for sound or fire separation.

2.2 FOAMED-IN-PLACE INSULATION

A. Insulation Gaps: Closed-cell polyurethane foamed-in-place insulation
   1. General: Verify compatibility with substrates. Apply such that expansion of foam does not obstruct ventilation or drainage spaces. Multiple products may be required based on applications.
   2. Applications:
      a. Insulation gaps at cavity wall insulation and roof insulation.
      b. Insulation gaps at vented nailboard insulation (not obstructing ventilation space).
      c. Gaps between cavity wall insulation and roof deck at eaves.

B. Around Windows and Doors: Closed-cell polyurethane foamed-in-place insulation
   1. General: Verify compatibility with substrates. Use only products specifically recommended for use around window/door frames where expansion of material will not damage or warp frames. Multiple products may be required based on applications.
   2. Application: Foam insulation required between all window and door frames and rough opening construction at heads, jambs, and sills.

C. Acceptable Manufacturers:
   1. Hilti
   2. Owens Corning
   3. Dow
   4. CertainTeed
   5. Substitutions, see Division 1 specifications.

2.3 GLASS-FIBER BLANKET INSULATION

A. Unfaced Glass-Fiber Insulation: Complies with ASTM C665. Maximum flame spread and smoke developed value of 25 and 50. Passing ASTM E 136 for combustion characteristics.
   1. General: Verify compatibility with substrates.
      a. Insulation at exterior furred walls and other locations as indicated.

2.4 ACCESSORIES

A. Adhesive: Type recommended by insulation manufacturer for application. Compliant with the maximum VOC levels permissible by the South Coast Air Quality Management District Rule (SCAQMD) #1168: VOC limit of 50 g/L.

B. Mechanical Fasteners: As recommended by insulation manufacturer.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify that substrate, adjacent materials, and insulation boards are dry and ready to receive insulation and adhesive. Install insulation in accordance with manufacturer's recommendations and instructions.

3.2 INSTALLATION

A. Mineral Fiber Blanket Insulation
   1. Install insulation in accordance with insulation manufacturer's instructions.
   2. Install insulation in gap between top of masonry eave walls and roof insulation and where indicated without gaps or voids. Coordinate installation with other trades.
   3. Fit insulation tight in spaces. Leave no gaps or voids.
   4. Install batt insulation in frame walls where indicated full height of wall without gaps or voids and above ceilings as shown.
   5. Stud wall cavities larger than specified insulation thickness shall have impaling pins installed to keep insulation in place.
   6. Install acoustical batt insulation where indicated on drawings. Modify (cut) batts around penetrations

and other similar obstructions.

B. Foamed-in-place Insulation:
   1. Provide at all locations indicated and as required to achieve continuous insulation.
   2. Protect adjacent surfaces from staining. Mask/protect as required.
   3. Trim foamed-in-place insulation as required after material is fully cured.
   4. Coordinate size of gaps and substrate with appropriate foamed-in-place insulation products.

END OF SECTION

SECTION 07 84 13

PENETRATION FIRESTOPPING

PART 1 GENERAL

1.1 SECTION INCLUDES

A. This Section Includes materials installed in cavities, around penetrations, and openings in floors, walls, partitions, and other building components to prevent spread of fire and smoke including:
   1. Penetrations in fire-resistance-rated walls.
   2. Penetrations in horizontal assemblies.

B. Related Documents: The provisions of the General Conditions and the Sections included under Division 00 & 01 are included as a part of this Section as though bound herein.

C. Each Contractor making penetration requiring Penetrating Firestopping shall be responsible for firestopping his own material. Contractors shall choose Fire Rated Assemblies appropriate to the penetrating materials, the building materials, and the condition configurations. Fire Rated Assemblies shall be acceptable to Authorities Having Jurisdiction (AHJ). Contractor shall be responsible for verifying AHJ acceptability prior to installation.

1.2 SUBMITTALS

A. Submittal shall specifically include:
   1. Product Data: For each type of product used in assemblies.
   2. Product Schedule: For each penetration firestopping system. Include location and design designation of qualified testing and inspecting agency.
      a. Where Project conditions require modification to a qualified testing and inspecting agency's illustration for a particular penetration firestopping condition, submit illustration, with modifications marked, approved by penetration firestopping manufacturer's fire-protection engineer as an engineering judgment or equivalent fire-resistance-rated assembly.

1.3 QUALITY ASSURANCE

A. Fire-Test-Response Characteristics: Penetration firestopping shall comply with the following requirements:
   1. Penetration firestopping tests are performed by a qualified testing agency acceptable to authorities having jurisdiction.
   2. Penetration firestopping products bear classification marking of qualified testing and inspecting agency.
   3. Qualified Agencies may include: UL, Intertek ETL SEMKO, or FM Global.

1.4 PROJECT CONDITIONS

A. Environmental Limitations: Do not install penetration firestopping when ambient or substrate temperatures are outside limits permitted by penetration firestopping manufacturers or when substrates are wet because of rain, frost, condensation, or other causes.

B. Install and cure penetration firestopping per manufacturer's written instructions using natural means of ventilations or, where this is inadequate, forced-air circulation.

1.5 COORDINATION

A. Coordinate construction of openings and penetrating items to ensure that penetration firestopping is

installed according to specified requirements.

B. Coordinate sizing of sleeves, openings, core-drilled holes, or cut openings to accommodate penetration fill.

2.1 MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
1. Grace Construction Products.
2. Hilti, Inc.
3. 3M Fire Protection Products.
4. Tremco, Inc.; Tremco Fire Protection Systems Group.
5. USG Corporation.
6. Substitutions, See Division 1.

2.2 PENETRATION FIRESTOPPING

A. Provide penetration firestopping that is produced and installed to resist spread of fire according to requirements indicated, resist passage of smoke and other gases, and maintain original fire-resistance rating of construction penetrated. Penetration firestopping systems shall be compatible with one another, with the substrates forming openings, and with penetrating items if any.

B. Penetrations in Fire-Resistance-Rated Walls: Provide penetration firestopping with ratings determined per ASTM E 814 or UL 1479, based on testing at a positive pressure differential of 0.01-inch wg.
1. Fire-resistance-rated walls include fire walls, fire-barrier walls and fire partitions.
2. F-Rating: Not less than the fire-resistance rating of constructions penetrated.

C. Penetrations in Fire-Rated Vertical Assemblies: Provide penetration firestopping with ratings determined per ASTM E 814 or UL 1479, based on testing at a positive pressure differential of 0.01-inch wg.
1. Vertical assemblies including fire rated wall assemblies.
2. F-Rating: Not less than the fire-resistance rating of constructions penetrated.
3. T-Rating: Not less than the fire-resistance rating of constructions penetrated.

D. Penetrations in Non-Rated Horizontal Assemblies: Fill annular space around penetrating item with an approved noncombustible firestopping material to limit the free passage of smoke.

E. Penetrations in Smoke Partitions: Fill annular space around penetrating item with an approved noncombustible firestopping material to limit the free passage of smoke.

F. VOC Content: Provide penetration firestopping that complies with the following limits for VOC content when calculated according to 40 CFR 59, Subpart D (EPA Method 24):
1. Architectural Sealants: 250 g/L.
2. Sealant Primers for Nonporous Substrates: 250 g/L.
3. Sealant Primers for Porous Substrates: 775 g/L.

G. Accessories: Provide components for each penetration firestopping system that are needed to install fill materials and to maintain ratings required. Use only those components specified by penetration firestopping manufacturer and approved by qualified testing and inspecting agency for firestopping indicated.
1. Permanent forming/damming/backing materials, including the following:
a. Slag-wool-fiber or rock-wool-fiber insulation.
b. Sealants used in combination with other forming/damming/backing materials to prevent leakage of fill materials in liquid state.
c. Fire-rated form board.

d. Fillers for sealants.
2. Temporary forming materials.
3. Substrate primers.
4. Steel sleeves.

2.3 FILL MATERIALS

A. Latex Sealants: Single-component latex formulations that do not re-emulsify after cure during exposure to moisture.

B. Firestop Devices: Factory-assembled collars formed from galvanized steel and lined with intumescent material sized to fit specific diameter of penetrant.

C. Intumescent Composite Sheets: Rigid panels consisting of aluminum-foil-faced elastomeric sheet bonded to galvanized-steel sheet.

D. Intumescent Putties: Nonhardening dielectric, water-resistant putties containing no solvents, inorganic fibers, or silicone compounds.

E. Intumescent Wrap Strips: Single-component intumescent elastomeric sheets with aluminum foil on one side.

F. Mortars: Prepackaged dry mixes consisting of a blend of inorganic binders, hydraulic cement, fillers, and lightweight aggregate formulated for mixing with water at Project site to form a non-shrinking, homogeneous mortar.

G. Pillows/Bags: Reusable heat-expanding pillows/bags consisting of glass-fiber cloth cases filled with a combination of mineral-fiber, water-insoluble expansion agents, and fire-retardant additives. Where exposed, cover openings with steel-reinforcing wire mesh to protect pillows/bags from being easily removed.

H. Silicone Foams: Multicomponent, silicone-based liquid elastomers that, when mixed, expand and cure in place to produce a flexible, non-shrinking foam.

I. Silicone Sealants: Single-component, silicone-based, neutral-curing elastomeric sealants of the following grade: Pourable (self-leveling) formulation for openings in floors and other horizontal surfaces, and non-sag formulation for openings in vertical and sloped surfaces, unless indicated firestopping limits use of non-sag grade for both opening conditions.

2.4 MIXING

A. For those products requiring mixing before application, comply with penetration firestopping manufacturer's written instructions for accurate proportioning of materials, water (if required), type of mixing equipment, selection of mixer speeds, mixing containers, mixing time, and other items or procedures needed to produce products of uniform quality with optimum performance characteristics for application indicated.

PART 3 EXECUTION

3.1 EXAMINATION AND PREPARATION

A. Examine substrates and conditions, with Installer present, for compliance with requirements for opening configurations, penetrating items, substrates, and other conditions affecting performance of the Work. Proceed with installation only after unsatisfactory conditions have been corrected.

B. Surface Cleaning: Clean out openings immediately before installing penetration firestopping to comply

with manufacturer's written instructions and with the following requirements:

1. Remove from surfaces of opening substrates and from penetrating items foreign materials that could interfere with adhesion of penetration firestopping.
2. Clean opening substrates and penetrating items to produce clean, sound surfaces capable of developing optimum bond with penetration firestopping. Remove loose particles remaining from cleaning operation.
3. Remove laitance and form-release agents from concrete.

C. Priming: Prime substrates where recommended in writing by manufacturer using that manufacturer's recommended products and methods. Confine primers to areas of bond; do not allow spillage and migration onto exposed surfaces.

D. Masking Tape: Use masking tape to prevent penetration firestopping from contacting adjoining surfaces that will remain exposed on completion of the Work and that would otherwise be permanently stained or

damaged by such contact or by cleaning methods used to remove stains. Remove tape as soon as possible without disturbing firestopping's seal with substrates.

3.2 INSTALLATION

A. General: Install penetration firestopping to comply with manufacturer's written installation instructions and published drawings for products and applications indicated.

B. Install forming materials and other accessories of types required to support fill materials during their application and in the position needed to produce cross-sectional shapes and depths required to achieve fire ratings indicated. After installing fill materials and allowing them to fully cure, remove combustible forming materials and other accessories not indicated as permanent components of firestopping.

C. Install fill materials for firestopping by proven techniques to produce the following results:

1. Fill voids and cavities formed by openings, forming materials, accessories, and penetrating items as required to achieve fire-resistance ratings indicated.
2. Apply materials so they contact and adhere to substrates formed by openings and penetrating items.
3. For fill materials that will remain exposed after completing the Work, finish to produce smooth, uniform surfaces that are flush with adjoining finishes. Materials subject to damage (below 8'-0" AFF) shall be covered with sheet metal or other approved material to permanently protect from damage.

3.4 IDENTIFICATION

A. Identify penetration firestopping with preprinted metal or plastic labels. Attach labels permanently to surfaces adjacent to and within 6 inches of firestopping edge so labels will be visible to anyone seeking to remove penetrating items or firestopping. Use mechanical fasteners or self-adhering-type labels with adhesives capable of permanently bonding labels to surfaces on which labels are placed. Include the following information on labels:

1. The words "Warning - Penetration Firestopping - Do Not Disturb. Notify Building Management of Any Damage."
2. Contractor's name, address, and phone number.
3. Designation of applicable testing and inspecting agency.

3.5 CLEANING AND PROTECTION

A. Clean off excess fill materials adjacent to openings as the Work progresses by methods and with cleaning materials that are approved in writing by penetration firestopping manufacturers and that do not damage materials in which openings occur.

B. Provide final protection and maintain conditions during and after installation that ensure that penetration firestopping is without damage or deterioration at time of Substantial Completion. If, despite such protection, damage or deterioration occurs, immediately cut out and remove damaged or deteriorated penetration firestopping and install new materials to produce systems complying with specified requirements.

END OF SECTION

SECTION 07 92 00

JOINT SEALERS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Elastomeric and rigid joint sealants, caulking compounds, and related accessories.

B. Related Documents: The provisions of the General Conditions and the Sections included under Division 00 & 01 are included as a part of this Section as though bound herein.

D. Provide joint sealants as a minimum in the following locations. Project specific materials and building systems may require additional joint sealants to be provided beyond the locations listed below.

1. Exterior joints in horizontal traffic surfaces:
   a. Cast-in-place concrete slabs. (sidewalks, patios, etc.)
   b. Exterior joints between slabs-on-grade and masonry walls
   c. Exterior joints between dissimilar materials where the joining of the 2 surfaces leaves a gap between the meeting materials or components as may be dictated by the various methods of construction to form a barrier against the passage of liquids, solids, or gases.
2. Interior joints in vertical surfaces and horizontal non-traffic surfaces:
   a. Interior surfaces of exterior walls full height of joint.
   b. Perimeter joints of exterior openings.
   c. Between tops of masonry walls and underside of concrete slabs and beams.
   d. Vertical control joints on exposed surfaces of unit masonry and concrete walls.
   e. Perimeter joints between interior wall surfaces and frames of interior doors, windows, and elevator entrances.
   f. Perimeter joints of toilet fixtures (Covered under Division 22).
   g. Interior joints between slabs-on-grade and masonry walls
   h. Interior joints between dissimilar materials where the joining of the 2 surfaces leaves a gap between the meeting materials or components as may be dictated by the various methods of construction to form a barrier against the passage of liquids, solids, or gases.
3. Interior control and expansion joints in horizontal traffic surfaces:
   a. Interior joints between dissimilar materials where the joining of the 2 surfaces leaves a gap between the meeting materials or components as may be dictated by the various methods of construction to form a barrier against the passage of liquids, solids, or gases.

E. All caulking and sealing work indicated on drawings and/or specified herein and not specified in another section but required for the work shall be provided under this section whether or not specifically referred to herein.

F. Related Work in Other Sections:

1. Penetration Firestopping	Section 07 84 13
2. Caulking of Plumbing Fixtures	Division 22

1.2 DEFINITIONS

A. Caulking: To install or apply a sealant across or into a joint, crack, or crevice.

B. Sealant: A material that has adhesive or cohesive properties to form a barrier against the passage of liquids, solids, or gases.

1.3 PERFORMANCE REQUIREMENTS

A. Provide joint sealants that establish and maintain watertight and airtight continuous joint seals at

exterior and interior without staining or deteriorating joint substrates.

B. Compatibility and Adhesion Test Report: Sealant manufacturer shall select sealant systems for various surfaces based on the requirements of these Specifications and the actual characteristics of the materials used for construction. Manufacturer shall test samples of building materials as required to determine which sealant systems are appropriate for various applications. The result of this analysis shall be submitted to the Architect for review. All cost associated with this analysis and testing shall be done by sealant manufacturer without additional cost to the Owner. Recommended sealant systems shall be provided by the sealant contractor for locations indicated at no additional cost to the Owner. Where sealant work is the responsibility of more than one Contractor/ Subcontractor, each Contractor/Subcontractor shall perform this testing/analysis for his portion of the work. Analysis shall include interpretation of test results and written recommendations indicating the following:
   1. Recommended method of joint cleaning/preparation.
   2. Recommended type of primer.
   3. Recommended type of backing material. Materials forming joint substrates and joint-sealant backings must be tested for compatibility and adhesion with joint sealants.
   4. Recommended sealant material and installation method.

C. Environmental Requirements: All interior sealants must meet the requirements of the South Coast Air Quality Management District (SCAQMD) Rule #1168 VOC limits.
   1. Interior Sealants: 250 g/L (Architectural Sealants)
   2. Sealant Primers for Non-Porous Surfaces: 250 g/L (Architectural, Non-porous Sealant Primers)
   3. Sealant Primers for Porous Surfaces: 775 g/L (Architectural, Porous Sealant Primers)

1.4 SUBMITTALS

A. Submittal shall specifically include:
   1. Product Data: Including colors available
   2. Compatibility and Adhesion Test Report from Sealant Manufacturer.

1.5 QUALITY ASSURANCE

A. Installer Qualifications: An experienced installer who has specialized in installing joint sealants similar in material, design, and extent to those indicated for this Project and whose work has resulted in joint-sealant installations with a record of successful in-service performance.

B. Elastomeric Sealant Standard: Comply with ASTM C 920 classifications for type, grade, class, and uses.

C. Environmental Limitations: Install sealants only when ambient temperature, humidity and moisture levels are within acceptable limits of the manufacturer.

1.6 DELIVERY & STORAGE

A. Material shall be delivered to site in legibly identifiable, undamaged, unopened containers clearly stating type product and manufacturer.

B. Store materials in upright position within a cool and dry area not subject to freezing temperatures. Prevent damage to containers and/or cartridges during storage.

1.7 WARRANTY

A. Special Manufacturer's Warranty: Written warranty, signed by elastomeric sealant manufacturer agreeing to provide exterior elastomeric joint sealants to repair or replace those that do not comply with performance and other requirements specified in this Section within specified warranty period. (Applies to the building exterior envelope (wall, glazing, sealants only).
   1. Warranty Period: 20 years from date of Substantial Completion.
   2. Sealant Manufacturer shall do all testing, analysis and product selection/recommendation required to achieve this warranty.

PART 2 PRODUCTS

2.1 MATERIALS, GENERAL

A. Suitability for Contact with Food: Where elastomeric sealants are indicated for joints that will come in repeated contact with food, provide products that comply with 21 CFR 177.260 PRODUCTS AND MANUFACTURERS.

B. Compatibility: Provide joint sealants, backings, and other related materials that are compatible with one another and with joint substrates under conditions of service and application, as demonstrated by sealant manufacturer based on testing and field experience.

C. Colors of Exposed Joint Sealants: As selected by Architect from manufacturer's full range of standard and special colors for this characteristic. Multiple colors will be required to match various adjacent surfaces.

D. Products:
1. All sealant products comprising part of the weather-proof building envelope shall be provided by one manufacturer.
2. Products must be capable of achieving specified warranty. Sealant manufacturer and contractor are required to verify the appropriateness of products for each application.

E. Acceptable Manufacturers:
1. BASF/Sonneborn
2. Dow Corning
3. Pecora
4. GE
5. Substitutions, see Division 1.

2.2 ELASTOMERIC JOINT SEALANTS

A. Interior Joints
1. Interior control joints at acrylic plaster, masonry or concrete and interior perimeter of aluminum storefront/window framing.
   a. One-component elastomeric polyurethane sealant, paintable.
   b. Fully cured 24 hours (max.) after application.
   c. Color to match adjacent surface. Typically installed before painting, but installation after painting may be acceptable if color match is close enough to adjacent surface color. Coordinate with Architect.
   d. Product described represents a product with minimum performance characteristics. If sealant manufacturer (through testing and analysis) requires a superior product to achieve specified warranty, then such product upgrade should be considered part of the Work at no additional cost to the Owner.
2. Interior joints around hollow metal door frames, at gypsum board control joints, at wood trim and between all other dissimilar materials, unless other type of sealant is specifically indicated.
   a. Latex (siliconized), white, paintable.
   b. Sealant to be installed before painting.
3. Acoustic Sealant. For each location indicated, provide manufacturer's standard nonsag, paintable, nonstaining latex sealant complying with ASTM C 834 and the following: Product effectively reduces airborne sound transmission through perimeter joints and openings in building construction as demonstrated by testing representative assemblies according to ASTM E90.
4. Elastomeric Firestop Sealant
   a. Product manufacturer as a firestop sealant to be used at fire rated penetrations. Exact product(s) used shall be part of an approved, tested, fire-rated assembly acceptable to the authority having jurisdiction.
   b. Refer to Section 07 84 13.
5. Clear Silicone Sealant
   a. One-part commercial grade clear silicone sealant. Use at locations indicated.

B. Exterior Joints
   1. Exterior horizontal concrete expansion joints (concrete patios, sidewalks, architectural concrete and curbs)
      a. Self-leveling and slope grade elastomeric polyurethane sealant for horizontal exterior joints.
      b. Provide at all expansion joints in exterior concrete surfaces. Control joint material should be held down for installation of sealant.

2.3 MISCELLANEOUS MATERIALS

A. Primer: Material recommended by joint sealant mfr. where required for adhesion of sealant to joint substrates indicated, as determined from preconstruction joint-sealant-substrate tests and field tests.

B. Cleaners for Nonporous Surfaces: Chemical cleansers acceptable to manufacturers of sealants and sealant backing materials, free of oily residues or other substances capable of staining or harming joint substrates and adjacent nonporous surfaces in any way and formulated to promote optimum adhesion of sealants with joint substrates.

C. Masking Tape: Nonstaining, nonabsorbent material compatible with joint sealants and surfaces adjacent to joints.

D. Joint Sealant Backing
   1. Cylindrical Sealant Backings: ASTM C 1330, of type indicated below and of size and density to control sealant depth and otherwise contribute to producing optimum sealant performance. Type O: Open-cell material.
   2. Elastomeric Tubing Sealant Backings: Neoprene, butyl, EPDM, or silicone tubing complying with ASTM D 1056, nonabsorbent to water and gas, and capable of remaining resilient at temperatures down to minus 26 deg F. Provide products with low compression set and of size and shape to provide a secondary seal, to control sealant depth, and otherwise contribute to optimum sealant performance.
   3. Bond-Breaker Tape: Polyethylene tape or other plastic tape recommended by sealant manufacturer for preventing sealant from adhering to rigid, inflexible joint-filler materials or joint surfaces at back of joint where such adhesion would result in sealant failure. Provide self-adhesive tape where applicable.

PART 3 EXECUTION

3.1 EXAMINATION AND PREPARATION

A. Verify that substrate surfaces and joint openings are ready to receive work. Remove loose materials and foreign matter which might impair adhesion of sealant.

B. Verify that joint backing and release tapes are compatible with sealant.

C. Joint-Width Conditions: Do not proceed with installation of joint sealants where joint widths are less than those allowed by joint sealant manufacturer for applications indicated.

D. Joint-Substrate Conditions: Do not proceed with installation of joint sealants until contaminants capable of interfering with adhesion are removed from joint substrates.

E. Perform preparation in accordance with ASTM C804 for solvent release; ASTM C790 for latex base sealants.

F. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants to comply with joint sealant manufacturer's written instructions.

G. Joint Priming: Prime joint substrates where recommended in writing by joint sealant manufacturer,

based on preconstruction joint-sealant-substrate tests or prior experience. Apply primer to comply with joint sealant manufacturer's written instructions. Confine primers to areas of joint-sealant bond; do not allow spillage or migration onto adjoining surfaces.

H. Masking Tape: Use masking tape where required to prevent contact of sealant with adjoining surfaces that otherwise would be permanently stained or damaged by such contact or by cleaning methods required to remove sealant smears. Remove tape immediately after tooling without disturbing joint seal.

3.2 INSTALLATION OF JOINT SEALANTS

A. Sealant Installation Standard: Comply with recommendations of ASTM C 1193 for use of joint sealants as applicable to materials, applications, and conditions indicated.

C. Install sealant in accordance with mfr.'s instructions. Materials shall be applied by skilled workmen with proper hand or air-powered guns using correct nozzle size and type to suit each need. Tool joints concave. Apply caulking and sealants under pressure to expel air and provide solid filling. Surfaces shall be uniformly smooth, free of wrinkles.

D. Measure joint dimensions and size materials to achieve required width/depth ratios. Install joint backing to achieve a neck dimension no greater than 1/3 the joint width.

E. Install bond breaker where joint backing is not used.

F. All control joints shall be caulked full height of wall.

G. After caulking is finished, clean off all spots from other work and leave all caulking in a satisfactory condition.

END OF SECTION

SECTION 08 11 50

STANDARD STEEL FRAMES

PART 1 GENERAL

1.1 SUMMARY

A. Section includes fire rated, non-rated and thermally insulated steel frames.

B. Related Sections:
1. Section 08 11 50 – Flush Wood Doors.
2. Section 08 71 00 - Door Hardware: Hardware and weather-stripping.
3. Section 08 80 00 - Glazing.

1.2 REFERENCES

A. ASTM A653/A653M - Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated by the Hot-Dip Process.

B. ASTM A591/A591M - Steel Sheet, Electrolytic Zinc-Coated, For Light Coating Class Applications.

C. DHI (Door Hardware Institute) - The Installation of Commercial Steel Doors and Steel Frames, Insulated Steel Doors in Wood Frames and Builder's Hardware.

D. NFPA 80 (National Fire Protection Association) - Fire Doors and Windows.

E. NFPA 252 (National Fire Protection Association) - Fire Tests for Door Assemblies.

F. SDI-100 (Steel Doors Institute) - Standard Steel Doors and Frames.

G. UL 10B (Underwriters Laboratories, Inc.) - Fire Tests of Door Assemblies.

1.3 SUBMITTALS

A. Section 01 33 00 - Submittal Procedures: Submittal procedures.

B. Shop Drawings: Indicate frame elevations, reinforcement, anchor types and spacing, location of cut-outs for hardware, and finish.

C. Product Data: Submit frame configuration and finishes.

D. Manufacturer's Installation Instructions: Submit special installation instructions.

E. Manufacturer's Certificate: Certify products meet or exceed specified requirements.

1.4 QUALITY ASSURANCE

A. Conform to requirements of ANSI/SDI A250.8-2017 and SDI-100.

B. Fire Rated Frame Construction: Conform to NFPA 252 UL 10B.

C. Installed Frame Assembly: Conform to NFPA 80 for fire rated class same as fire door.

1.5 QUALIFICATIONS

A. Manufacturer: Company specializing in manufacturing products specified in this section with minimum three years experience.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Section 01 60 00 - Product Requirements: Product storage and handling requirements.

B. Accept frames on site in manufacturer's packaging. Inspect for damage.

C. Break seal on-site to permit ventilation.

1.7 COORDINATION

A. Section 01 30 00 - Administrative Requirements: Coordination and project conditions.

B. Coordinate Work with frame opening construction, door, and hardware installation.

C. Sequence installation to accommodate required door hardware electric wire connections.

PART 2 PRODUCTS

2.1 STANDARD STEEL FRAMES

A. Manufacturers:
1. Ceco Door Products.
2. Republic Builders Products.
3. Steelcraft.
4. Substitutions: Section 01 60 00 - Product Requirements.

B. Product Description: Standard shop fabricated, steel frames, fire rated and non-rated types.
1. Frames: To suit SDI-100 Grade and Model of door specified in Section 08 21 20.

2.2 ACCESSORIES

A. Bituminous Coating: Non-asbestos fibered asphalt emulsion.

B. Primer: Factory applied zinc chromate type meeting ANSI A250.10-2011.

C. Silencers: Resilient rubber fitted into drilled hole.

D. Weatherstripping: Specified in Section 08 71 00.

2.3 FABRICATION

A. Fabricate frames as knock down.

B. Mullions for Double Doors: Fixed type, of same profiles as jambs.

C. Transom Bars for Glazed Lights: Fixed type, of same profiles as jamb and head.

D. Fabricate frames with hardware reinforcement plates welded in place. Provide mortar guard boxes.

E. Reinforce frames wider than 48 inches with roll formed steel channels fitted tightly into frame head, flush with top.

F. Prepare frames for silencers. Provide three single silencers for single doors and mullions of double doors on strike side. Provide two single silencers on frame head at double doors without mullions.

G. Configure exterior frames with special profile to receive recessed weatherstripping.

H. Attach fire rated label to each fire rated frame.

I. Fabricate frames to suit masonry wall coursing with 4 and 2 inch head member.

2.4 SHOP FINISHING

A. Steel Sheet: Galvannealed to ASTM A653/A653M.

A. Primer: Factory applied zinc chromate type meeting ANSI A250.10-2011.

B. Field finish coat, see Section 09 90 00.

C. Coat inside of frame profile with bituminous coating to minimum thickness of 1/16 inch.

PART 3 EXECUTION

3.1 EXAMINATION

A. Section 01 30 00 - Administrative Requirements: Coordination and project conditions.

B. Verify opening sizes and tolerances are acceptable.

3.2 INSTALLATION

A. Install frames in accordance with SDI-100 and DHI.

B. Coordinate with masonry and gypsum board wall construction for anchor placement.

C. Coordinate installation of glass and glazing specified in Section 08 80 00.

D. Coordinate installation of frames with installation of hardware specified in Section 08 71 00 and doors in Section 08 21 20.

E. Install roll formed steel reinforcement channels between two abutting frames. Anchor to structure and floor.

3.3 ERECTION TOLERANCES

A. Section 01 40 00 - Quality Requirements: Tolerances.

B. Maximum Diagonal Distortion: 1/16 inch measured with straight edges, crossed corner to corner.

3.4 SCHEDULE

A. Refer to Door and Frame Schedule on Drawings.

END OF SECTION

SECTION 08 21 20

FLUSH WOOD DOORS

PART 1 GENERAL

1.1 SUMMARY

A. Section includes flush wood doors.

B. Related Sections:
1. Section 08 71 00 - Door Hardware.
2. Section 08 80 00 - Glazing.
3. Section 09 90 00 - Paints and Coatings: Shop finishing of wood doors.

1.2 REFERENCES

A. ANSI A208.1 – Particleboard.

B. ASTM E 90 – Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements.

C. ASTM E 413 – Classification for Rating Sound Insulation.

D. AWI/AWMAC/WI Architectural Woodwork Standards, Edition 1, Section 9 – Doors.

E. NFPA 80 – Standard for Fire Doors and Other Opening Protectives.

F. UL 10C – Positive Pressure Fire Tests of Door Assemblies.

G. WDMA Finish System TR-6, Catalyzed Polyurethane.

H. WDMA I.S. 1A-11 – Architectural Wood Flush Doors.

I. HPVA HP (Hardwood Plywood and Veneer Association formerly HPMA) - Hardwood and Decorative Plywood.

J. NFPA 80 (National Fire Protection Association) - Fire Doors and Windows.

K. NFPA 252 (National Fire Protection Association) - Standard Method of Fire Tests for Door Assemblies.

L. UL (Underwriters Laboratories Inc.) - Building Materials Directory.

M. UL 10B (Underwriters Laboratories, Inc.) - Fire Tests of Door Assemblies.

1.3 SUBMITTALS

A. Section 01 33 00 - Submittal Procedures: Submittal procedures.

B. Shop Drawings: Illustrate door opening criteria, elevations, sizes, types, swings, hardware, factory machining criteria, and identify cutouts for glazing.

C. Product Data: Submit information on door core materials and construction, and on

veneer species, type and characteristics. Include door construction description and WDMA I.S.1-A and AWS classifications.

D. Manufacturer's Installation Instructions: Submit special installation instructions.

E. Warranty: Submit manufacturer's standard warranty.

1.4 QUALITY ASSURANCE

A. Tolerances for Warp, Telegraphing, Squareness, and Prefitting Dimensions: WDMA I.S.1-A.

B. Identifying Label: Each door shall bear identifying label indicating:
1. Door manufacturer.
2. Order number.
3. Door number.
4. Fire rating, if applicable.

C. Fire-Rated Doors: Labeled by Intertek/Warnock Hersey
1. Construction Details and Hardware Application: Approved by labeling agency.

1.5 QUALIFICATIONS

A. Manufacturer: Company specializing in manufacturing products specified in this section with minimum three years experience.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Do not subject doors to extreme conditions or changes in temperature or relative humidity in accordance with WDMA I.S.1-A.

B. Protect doors with resilient packaging sealed with heat shrunk plastic. Do not store in damp or wet areas; or in areas where sunlight might bleach veneer. Seal top and bottom edges with tinted sealer when stored more than one week.
1. Break seal on site to permit ventilation.

1.7 COORDINATION

A. Section 01 30 00 - Administrative Requirements: Coordination and project conditions.

B. Coordinate Work with door opening construction, door frame and door hardware installation.

1.8 WARRANTY

A. Section 01 70 00 - Execution Requirements: Product warranties and product bonds.

B. Include coverage for delamination of veneer, warping beyond specified installation tolerances, defective materials, and telegraphing core construction.

C. Furnish manufacturer's "Life of Installation" warranty for interior doors.

PART 2 PRODUCTS

2.1 FLUSH WOOD DOORS

A. Manufacturers:
   1. Algoma Hardwoods Inc.
   2. Eggers Industries.
   3. Weyerhaeuser.
   4. Substitutions: Section 01 60 00 - Product Requirements.

B. Product Description: Hollow core flush wood doors; wood veneer facing material; non-rated types; flush glazed design; with louvers; factory pre-fit; site finished; wood doors.
   1. Flush Interior Doors: 1-3/4 thick; solid core, five ply construction.

2.2 COMPONENTS

A. Solid Core, Non-Rated: ANSI A208.1 , Type PC-5 – Particleboard core.

B. Performance Duty Level: Heavy Duty per ANSI/WDMA I.S.1A.

C. Interior Veneer Facing: AWI Custom quality wood, for stained finish to match new Valley View K-12 School in adjacent building. Submittal samples will need to be provided to allow architect to field match stain color. White Oak.

D. Wood: Mill Option, Grade A. Plain Sliced Flat Cut, book matched.

E. Facing Adhesive: II - water resistant.

F. Glass Mouldings:
   1. Non-rated Flush Doors: Wood bead stained to match door.
   2. Fire-rated Doors: Steel vison frame stop, primed finish.

2.3 FABRICATION

A. Furnish lock blocks at lock edge and top of door for closer for hardware reinforcement.

B. Vertical Exposed Edge of Stiles: Of same species as veneer facing for transparent finish.

C. Fit door edge trim to edge of stiles after applying veneer facing.

D. Bond edge banding to cores.

E. Veneer: Apply to core using Type I, exterior, water-resistant adhesive.

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

G. Factory fit doors for frame opening dimensions identified on shop drawings.

H. Prefit and bevel doors at factory to fit openings. Prefit tolerances to meet WDMA I.S.1-A and AWS Section 9.

I. Seal door top edge with clear sealer to match door facing.

J. Factory Finish to meet WDMA System TR-8, UV cured urethane, premium grade.

PART 3 EXECUTION

3.1 EXAMINATION

A. Section 01 30 00 - Administrative Requirements: Coordination and project conditions.

B. Verify opening sizes and tolerances are acceptable.

C. Do not install doors in frame openings that are not plumb or are out-of-tolerance for size or alignment.

3.2 INSTALLATION

A. Allow doors to become acclimated to building temperature and relative humidity for a minimum of 24 hours before installation.

B. Install doors in accordance with manufacturer's instructions. Install doors plumb, level and square.

C. Trim non-rated door width by cutting equally on both jamb edges.

D. Trim door height by cutting bottom edges to maximum of 3/4 inch.

E. Coordinate installation of doors with installation of hardware specified in Section 08 71 00.

3.3 INSTALLATION TOLERANCES

A. Section 01 40 00 - Quality Requirements: Tolerances.

B. Conform to WDMA requirements for fit and clearance tolerances.

C. Conform to WDMA requirements for maximum diagonal distortion.

3.4 ADJUSTING

A. Section 01 70 00 - Execution Requirements: Testing, adjusting, and balancing.

B. Adjust door for smooth and balanced door movement.

C. Adjust closer for full closure.

3.5 SCHEDULE

A. Refer to Door and Frame Schedule on Drawings.

END OF SECTION

SECTION 087100

DOOR HARDWARE

PART 1 - GENERAL

1.01 SUMMARY

A. Section includes:

1. Mechanical and electrified door hardware
2. Electronic access control system components

B. Section excludes:

1. Windows
2. Cabinets (casework), including locks in cabinets
3. Signage
4. Toilet accessories
5. Overhead doors

C. Related Sections:

1. Division 01 "General Requirements" sections for Allowances, Alternates, Owner Furnished Contractor Installed, Project Management and Coordination.
2. Division 06 Section "Rough Carpentry"
3. Division 06 Section "Finish Carpentry"
4. Division 07 Section "Joint Sealants" for sealant requirements applicable to threshold installation specified in this section.
5. Division 08 Sections:
   a. "Metal Doors and Frames"
   b. "Flush Wood Doors"
6. Division 26 "Electrical" sections for connections to electrical power system and for low-voltage wiring.
7. Division 28 "Electronic Safety and Security" sections for coordination with other components of electronic access control system and fire alarm system.

1.02 REFERENCES

A. UL LLC

1. UL 10B - Fire Test of Door Assemblies
2. UL 10C - Positive Pressure Test of Fire Door Assemblies
3. UL 1784 - Air Leakage Tests of Door Assemblies
4. UL 305 - Panic Hardware

B. DHI - Door and Hardware Institute

1. Sequence and Format for the Hardware Schedule
2. Recommended Locations for Builders Hardware
3. Keying Systems and Nomenclature
4. Installation Guide for Doors and Hardware

C. NFPA – National Fire Protection Association

1. NFPA 70 – National Electric Code
2. NFPA 80 – 2016 Edition – Standard for Fire Doors and Other Opening Protectives
3. NFPA 101 – Life Safety Code
4. NFPA 105 – Smoke and Draft Control Door Assemblies
5. NFPA 252 – Fire Tests of Door Assemblies

D. ANSI - American National Standards Institute

1. ANSI A117.1 – 2017 Edition – Accessible and Usable Buildings and Facilities
2. ANSI/BHMA A156.1 - A156.29, and ANSI/BHMA A156.31 - Standards for Hardware and Specialties
3. ANSI/BHMA A156.28 - Recommended Practices for Keying Systems
4. ANSI/WDMA I.S. 1A - Interior Architectural Wood Flush Doors
5. ANSI/SDI A250.8 - Standard Steel Doors and Frames

1.03 SUBMITTALS

A. General:

1. Submit in accordance with Conditions of Contract and Division 01 Submittal Procedures.
2. Prior to forwarding submittal:
   a. Review drawings and Sections from related trades to verify compatibility with specified hardware.
   b. Highlight, encircle, or otherwise specifically identify on submittals: deviations from Contract Documents, issues of incompatibility or other issues which may detrimentally affect the Work.

B. Action Submittals:

1. Product Data: Submit technical product data for each item of door hardware, installation instructions, maintenance of operating parts and finish, and other information necessary to show compliance with requirements.
2. Riser and Wiring Diagrams: After final approval of hardware schedule, submit details of electrified door hardware, indicating:
   a. Wiring Diagrams: For power, signal, and control wiring and including:
      1) Details of interface of electrified door hardware and building safety and security systems.
      2) Schematic diagram of systems that interface with electrified door hardware.
      3) Point-to-point wiring.
      4) Risers.

3. Samples for Verification: If requested by Architect, submit production sample of requested door hardware unit in finish indicated and tagged with full description for coordination with schedule.
   a. Samples will be returned to supplier. Units that are acceptable to Architect may, after final check of operations, be incorporated into Work, within limitations of key coordination requirements.

4. Door Hardware Schedule:
   a. Submit concurrent with submissions of Product Data, Samples, and Shop Drawings. Coordinate submission of door hardware schedule with scheduling requirements of other work to facilitate fabrication of other work critical in Project construction schedule.

b. Submit under direct supervision of a Door Hardware Institute (DHI) certified Architectural Hardware Consultant (AHC) or Door Hardware Consultant (DHC) with hardware sets in vertical format as illustrated by Sequence of Format for the Hardware Schedule published by DHI.
c. Indicate complete designations of each item required for each opening, include:
   1) Door Index: door number, heading number, and Architect's hardware set number.
   2) Quantity, type, style, function, size, and finish of each hardware item.
   3) Name and manufacturer of each item.
   4) Fastenings and other pertinent information.
   5) Location of each hardware set cross-referenced to indications on Drawings.
   6) Explanation of all abbreviations, symbols, and codes contained in schedule.
   7) Mounting locations for hardware.
   8) Door and frame sizes and materials.
   9) Degree of door swing and handing.
   10) Operational Description of openings with electrified hardware covering egress, ingress (access), and fire/smoke alarm connections.

5. Key Schedule:
   a. After Keying Conference, provide keying schedule that includes levels of keying, explanations of key system's function, key symbols used, and door numbers controlled.
   b. Use ANSI/BHMA A156.28 "Recommended Practices for Keying Systems" as guideline for nomenclature, definitions, and approach for selecting optimal keying system.
   c. Provide 3 copies of keying schedule for review prepared and detailed in accordance with referenced DHI publication. Include schematic keying diagram and index each key to unique door designations.
   d. Index keying schedule by door number, keyset, hardware heading number, cross keying instructions, and special key stamping instructions.
   e. Provide one complete bitting list of key cuts and one key system schematic illustrating system usage and expansion. Forward bitting list, key cuts and key system schematic directly to Owner, by means as directed by Owner.
   f. Prepare key schedule by or under supervision of supplier, detailing Owner's final keying instructions for locks.

C. Informational Submittals:

1. Provide Qualification Data for Supplier, Installer and Architectural Hardware Consultant.
2. Provide Product Data:
   a. Certify that door hardware approved for use on types and sizes of labeled fire-rated doors complies with listed fire-rated door assemblies.
   b. Include warranties for specified door hardware.

D. Closeout Submittals:

1. Operations and Maintenance Data: Provide in accordance with Division 01 and include:
   a. Complete information on care, maintenance, and adjustment; data on repair and replacement parts, and information on preservation of finishes.
   b. Catalog pages for each product.
   c. Final approved hardware schedule edited to reflect conditions as installed.
   d. Final keying schedule
   e. Copy of warranties including appropriate reference numbers for manufacturers to identify project.
   f. As-installed wiring diagrams for each opening connected to power, both low voltage and 110 volts.

E. Inspection and Testing:

1. Submit written reports to the Owner and Authority Having Jurisdiction (AHJ) of the results of functional testing and inspection for:
   a. Fire door assemblies, in compliance with NFPA 80.
   b. Required egress door assemblies, in compliance with NFPA 101.

1.04 QUALITY ASSURANCE

A. Qualifications and Responsibilities:

1. Supplier: Recognized architectural hardware supplier with a minimum of 5 years documented experience supplying both mechanical and electromechanical door hardware similar in quantity, type, and quality to that indicated for this Project. Supplier to be recognized as a factory direct distributor by the manufacturer of the primary materials with a warehousing facility in the Project's vicinity. Supplier to have on staff, a certified Architectural Hardware Consultant (AHC) or Door Hardware Consultant (DHC) available to Owner, Architect, and Contractor, at reasonable times during the Work for consultation.
2. Installer: Qualified tradesperson skilled in the application of commercial grade hardware with experience installing door hardware similar in quantity, type, and quality as indicated for this Project.
3. Architectural Hardware Consultant: Person who is experienced in providing consulting services for door hardware installations that are comparable in material, design, and extent to that indicated for this Project and meets these requirements:
   a. For door hardware: DHI certified AHC or DHC.
   b. Can provide installation and technical data to Architect and other related subcontractors.
   c. Can inspect and verify components are in working order upon completion of installation.
   d. Capable of producing wiring diagram and coordinating installation of electrified hardware with Architect and electrical engineers.

4. Single Source Responsibility: Obtain each type of door hardware from single manufacturer.

B. Certifications:

1. Fire-Rated Door Openings:
   a. Provide door hardware for fire-rated openings that complies with NFPA 80 and requirements of authorities having jurisdiction.
   b. Provide only items of door hardware that are listed products tested by UL LLC, Intertek Testing Services, or other testing and inspecting organizations acceptable to authorities having jurisdiction for use on types and sizes of doors indicated, based on testing at positive pressure and according to NFPA 252 or UL 10C and in compliance with requirements of fire-rated door and door frame labels.

2. Smoke and Draft Control Door Assemblies:
   a. Provide door hardware that meets requirements of assemblies tested according to UL 1784 and installed in compliance with NFPA 105
   b. Comply with the maximum air leakage of 0.3 cfm/sq. ft. (3 cu. m per minute/sq. m) at tested pressure differential of 0.3-inch wg (75 Pa) of water.

3. Electrified Door Hardware
   a. Listed and labeled as defined in NFPA 70, Article 100, by testing agency acceptable to authorities having jurisdiction.

4. Accessibility Requirements:

a. Comply with governing accessibility regulations cited in "REFERENCES" article 08 71 00, 1.02.D3 herein for door hardware on doors in an accessible route. This project must comply with all Federal Americans with Disability Act regulations and all Local Accessibility Regulations.

C. Pre-Installation Meetings

1. Keying Conference
   a. Incorporate keying conference decisions into final keying schedule after reviewing door hardware keying system including:
      1) Function of building, flow of traffic, purpose of each area, degree of security required, and plans for future expansion.
      2) Preliminary key system schematic diagram.
      3) Requirements for key control system.
      4) Requirements for access control.
      5) Address for delivery of keys.

2. Pre-installation Conference
   a. Review and finalize construction schedule and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
   b. Inspect and discuss preparatory work performed by other trades.
   c. Inspect and discuss electrical roughing-in for electrified door hardware.
   d. Review sequence of operation for each type of electrified door hardware.
   e. Review required testing, inspecting, and certifying procedures.
   f. Review questions or concerns related to proper installation and adjustment of door hardware.

3. Electrified Hardware Coordination Conference:
   a. Prior to ordering electrified hardware, schedule and hold meeting to coordinate door hardware with security, electrical, doors and frames, and other related suppliers.

1.05 DELIVERY, STORAGE, AND HANDLING

A. Inventory door hardware on receipt and provide secure lock-up for hardware delivered to Project site. Promptly replace products damaged during shipping

B. Tag each item or package separately with identification coordinated with final door hardware schedule, and include installation instructions, templates, and necessary fasteners with each item or package. Deliver each article of hardware in manufacturer's original packaging.

C. Maintain manufacturer-recommended environmental conditions throughout storage and installation periods.

D. Provide secure lock-up for door hardware delivered to Project. Control handling and installation of hardware items so that completion of Work will not be delayed by hardware losses both before and after installation.

E. Handle hardware in manner to avoid damage, marring, or scratching. Correct, replace or repair products damaged during Work. Protect products against malfunction due to paint, solvent, cleanser, or any chemical agent.

F. Deliver keys to manufacturer of key control system for subsequent delivery to Owner.

1.06 COORDINATION

A. Coordinate layout and installation of floor-recessed door hardware with floor construction. Cast anchoring inserts into concrete.

B. Installation Templates: Distribute for doors, frames, and other work specified to be factory or shop prepared. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing door hardware to comply with indicated requirements.

C. Security: Coordinate installation of door hardware, keying, and access control with Owner's security consultant.

D. Electrical System Roughing-In: Coordinate layout and installation of electrified door hardware with connections to power supplies and building safety and security systems.

1.07 WARRANTY

A. Manufacturer's standard form in which manufacturer agrees to repair or replace components of door hardware that fail in materials or workmanship within published warranty period.

1. Warranty does not cover damage or faulty operation due to improper installation, improper use or abuse.
2. Warranty Period: Beginning from date of Substantial Completion, for durations indicated in manufacturer's published listings.
   a. Mechanical Warranty
      1) Locks
         a) 5 years
      2) Closers
         a) 25 years

1.08 MAINTENANCE

A. Furnish complete set of special tools required for maintenance and adjustment of hardware, including changing of cylinders.

B. Turn over unused materials to Owner for maintenance purposes.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

A. The Owner requires use of certain products for their unique characteristics and project suitability to ensure continuity of existing and future performance and maintenance standards. After investigating available product offerings, the Awarding Authority has elected to prepare proprietary specifications. These products are specified with the notation: "No Substitute."

1. Where "No Substitute" is noted, submittals and substitution requests for other products will not be considered.

B. Approval of alternate manufacturers and/or products other than those listed as "Scheduled Manufacturer" or "Acceptable Manufacturers" in the individual article for the product category are only to be considered by official substitution request in accordance with section 01 25 00.

C. Approval of products from manufacturers indicated in "Acceptable Manufacturers" is contingent upon those products providing all functions and features and meeting all requirements of scheduled manufacturer's product.

D. Where specified hardware is not adaptable to finished shape or size of members requiring hardware, furnish suitable types having same operation and quality as type specified, subject to Architect's approval.

2.02 MATERIALS

A. Fabrication

1. Provide door hardware manufactured to comply with published templates generally prepared for machine, wood, and sheet metal screws. provide screws according to manufacturer's recognized installation standards for application intended.
2. Finish exposed screws to match hardware finish, or, if exposed in surfaces of other work, to match finish of this other work including prepared for paint surfaces to receive painted finish.
3. Provide concealed fasteners wherever possible for hardware units exposed when door is closed. Coordinate with "Metal Doors and Frames", "Flush Wood Doors", "Stile and Rail Wood Doors" to ensure proper reinforcements. Advise the Architect where visible fasteners, such as thru bolts, are required.

B. Provide screws, bolts, expansion shields, drop plates and other devices necessary for hardware installation.

1. Where fasteners are exposed to view: Finish to match adjacent door hardware material.

C. Cable and Connectors:

1. Where scheduled in the hardware sets, provide each item of electrified hardware and wire harnesses with number and gage of wires enough to accommodate electric function of specified hardware.
2. Provide Molex connectors that plug directly into connectors from harnesses, electric locking and power transfer devices.
3. Provide through-door wire harness for each electrified locking device installed in a door and wire harness for each electrified hinge, electrified continuous hinge, electrified pivot, and electric power transfer for connection to power supplies.

2.03 HINGES

A. Manufacturers and Products:

1. Scheduled Manufacturer and Product:
   a. Ives 5BB series

2. Acceptable Manufacturers and Products:
   a. Hager BB1191/1279 series
   b. McKinney TB series

B. Requirements:

1. Provide hinges conforming to ANSI/BHMA A156.1.
2. Provide five knuckle, ball bearing hinges.
3. 1-3/4 inch (44 mm) thick doors, up to and including 36 inches (914 mm) wide:

a. Exterior: Standard weight, bronze or stainless steel, 4-1/2 inches (114 mm) high
b. Interior: Standard weight, steel, 4-1/2 inches (114 mm) high

4. 1-3/4 inch (44 mm) thick doors over 36 inches (914 mm) wide:
   a. Exterior: Heavy weight, bronze/stainless steel, 5 inches (127 mm) high
   b. Interior: Heavy weight, steel, 5 inches (127 mm) high

5. 2 inches or thicker doors:
   a. Exterior: Heavy weight, bronze or stainless steel, 5 inches (127 mm) high
   b. Interior: Heavy weight, steel, 5 inches (127 mm) high

6. Adjust hinge width for door, frame, and wall conditions to allow proper degree of opening.
7. Provide three hinges per door leaf for doors 90 inches (2286 mm) or less in height, and one additional hinge for each 30 inches (762 mm) of additional door height.
8. Hinge Pins: Except as otherwise indicated, provide hinge pins as follows:
   a. Steel Hinges: Steel pins
   b. Non-Ferrous Hinges: Stainless steel pins
   c. Out-Swinging Exterior Doors: Non-removable pins
   d. Out-Swinging Interior Lockable Doors: Non-removable pins
   e. Interior Non-lockable Doors: Non-rising pins

9. Provide hinges with electrified options as scheduled in the hardware sets. Provide with number and gage of wires enough to accommodate electric function of specified hardware. Locate electric hinge at second hinge from bottom or nearest to electrified locking component. Provide mortar guard for each electrified hinge specified.

2.04 MORTISE LOCKS

A. Manufacturer and Product:

1. Scheduled Manufacturer:
   a. Schlage PM Series

B. Acceptable Manufacturers and Products:

1. Accurate 9000/9111 series
2. Best 45H series

C. Requirements:

1. Provide mortise locks conforming to ANSI/BHMA A156.13 Series 1000, Grade 1, and UL Listed for 3-hour fire doors.
2. Indicators: Where specified, provide indicator window measuring a minimum 2-3/5-inch x 3/5 inch with 180-degree visibility. Provide messages color-coded using ANSI Z535 Safety Red with full text and/or symbols, as scheduled, for easy visibility. When applicable allows for lock status indication on both sides of the door.
3. Provide locks manufactured from heavy gauge steel, containing components of steel with a zinc dichromate plating for corrosion resistance.
4. Provide lock case that is multi-function and field reversible for handing without opening case. Cylinders: Refer to "KEYING" article, herein.
5. Provide locks with standard 2-3/4 inches (70 mm) backset with full 3/4 inch (19 mm) throw stainless steel mechanical anti-friction latchbolt. Provide deadbolt with full 1-inch (25 mm) throw, constructed of stainless steel.
6. Provide standard ASA strikes unless extended lip strikes are necessary to protect trim. Provide electrified options as scheduled in the hardware sets. Where scheduled, provide switches and sensors integrated into the locks and latches.

7. Provide electrified options as scheduled in the hardware sets. Where scheduled, provide switches and sensors integrated into the locks and latches.
   a. Universal input voltage – single chassis accepts 12 or 24VDC to allow for changes in the field without changing lock chassis.
   b. Fail Safe/Fail Secure – changing mode between electrically locked (fail safe) and electrically unlocked (fail secure) is field selectable without opening the lock case.
   c. Low maximum current draw – maximum 0.4 amps (lever control)to allow for multiple locks on a single power supply.
   d. Low holding current – (lever control or latch retraction) maximum 1.0 amps to produce minimal heat, eliminate "hot levers" in electrically locked applications and motorized latch retraction applications and to provide reliable operation in wood doors that provide minimal ventilation and air flow.
   e. Connections – provide quick-connect Molex system standard.

8. Lever Trim: Pressure cast zinc, plated to match product finish specification, with wrought roses and external lever spring cages. Provide thru-bolted levers with 2-piece spindles.
   a. Provide levers that return to within 1/2 inch (13 mm) of door face.
   b. Lever Design: as specified in hardware sets

2.05 CYLINDRICAL LOCKS – GRADE 1

A. Manufacturers and Products

1. Scheduled Manufacturer:
   a. Schlage PC series

2. Acceptable Manufacturers and Products:
   a. Dorma C100 series
   b. Best 9K series Sargent 11-Line

B. Requirements:

1. Provide cylindrical locks conforming to ANSI/BHMA A156.2 Series 4000, Grade 1, and UL Listed for 3-hour fire doors.
2. Cylinders: Refer to "KEYING" article, herein.
3. Provide locks with standard 2-3/4 inches (70 mm) backset, unless noted otherwise, with 1/2-inch latch throw. Provide proper latch throw for UL listing at pairs.
4. Provide locksets with separate anti-rotation thru-bolts, and no exposed screws.
5. Provide independently operating levers with two external return spring cassettes mounted under roses to prevent lever sag.
6. Provide standard ASA strikes unless extended lip strikes are necessary to protect trim.
7. Lever Trim: Pressure case zinc levers and wrought brass or zinc roses, plated to match product finish specification.
   a. Provide levers that return to within 1/2 inch (13 mm) of door face where required by code.
   b. Lever Design: as specified in hardware set

8. To order configured with Request to Exit(RX), specify RX under special options. Available only PC10, PC80

2.06 ELECTRONIC ACCESS CONTROL LOCKSETS AND EXIT DEVICE TRIM

A. Manufacturers:

1. Scheduled Manufacturer and Product:

a. Schlage CO Series

2. Acceptable Manufacturers and Products:
   a. No Substitute

B. Requirements:

1. Provide offline electronic access control products that comply with the following requirements:
   a. Listed, UL 294 - The Standard of Safety for Access Control System Units.
   b. Compliant with ANSI/BHMA A156.25 Grade 1 Operation and Security.
   c. Certified to UL10C, FCC Part15, Florida Building Code Standards TAS 201 large missile impact, TAS 202 and TAS 203.
   d. Compliant with ASTM E330 for door assemblies.
   e. Compliant with ICC / ANSI A117.1, NFPA 101, NFPA 80, and Industry Canada RSS-210.

2. Functions: Provide functions as scheduled that are field configurable without taking the offline electronic product off the door.
3. Emergency Override: Provide mechanical key override; cylinders: Refer to "KEYING" article, herein.
4. Levers:
   a. Vandal Resistance: Exterior (secure side) lever rotates freely while door remains locked, preventing damage to internal lock components from vandalism by excessive force.
   b. Provide pressure cast zinc plated, non-handed lever trim that operates independently of non-locking levers.
   c. Style: RHO

5. Power Supply: 4 AA batteries
   a. Provide electronic access control locks and/or exit device trim with the ability to communicate battery status.

6. Features:
   a. Visual tri-colored LED indicators that indicate activation, operational systems status, system error conditions and low power conditions.
   b. Visual bi-colored LED indicator on interior that can indicate secured/unsecured status of device to occupants on interior.
   c. Audible feedback that can be enabled or disabled.
   d. Onboard processor with memory capacity of 2,000 event audit history, up to 16 time zones and up to 32 calendar events.
   e. Central verification time of less than 1 second
   f. Tamper-Resistant Screws: Tamper torx screws on inside escutcheon for increased security.

7. Access:
   a. Programmable Keypad
      1) 3-6-digit PIN code and 12 backlit buttons in a 3 x 4 matrix.
   b. Proximity
      1) 125kHz frequency with a read range up to 1.25 inches.
      2) Compatible credentials: 125kHz clamshell/fob, ISO card, key fob, PVC disk
      3) Compatible manufacturers: Schlage, ISONAS, HID, GE/CASI, AWID

8. Operation:
   a. Provide electronic access control locks and/or exit device trim with the ability to be configured at door by handheld programming device the length of time device is unlocked upon access grant.
   b. Provide electronic access control locks and/or exit device trim with the ability to communicate identifying information such as firmware versions, hardware versions, serial numbers, and manufacturing dates by handheld programming device.

2.07 CYLINDERS

A. Manufacturers:

1. Scheduled Manufacturer and Product:
   a. Best

2. Acceptable Manufacturers and Products:
   a. No Substitute

B. Requirements:

1. Provide cylinders/cores to match Owner's existing key system, compliant with ANSI/BHMA A156.5; latest revision; cylinder face finished to match lockset, manufacturer's series as indicated. Refer to "KEYING" article, herein.

2.08 KEYING

A. Scheduled System:

1. Existing factory registered system:
   a. Provide cylinders/cores keyed into Owner's existing factory registered keying system. Comply with guidelines in ANSI/BHMA A156.28, incorporating decisions made at keying conference.

B. Requirements:

1. Construction Keying:
   a. Replaceable Construction Cores.
      1) Provide temporary construction cores replaceable by permanent cores, furnished in accordance with the following requirements.
         a) 3 construction control keys
         b) 12 construction change (day) keys.
      2) Owner or Owner's Representative will replace temporary construction cores with permanent cores.

2. Permanent Keying:
   a. Provide permanent cylinders/cores keyed by the manufacturer according to the following key system.
      1) Master Keying system as directed by the Owner.
   b. Forward bitting list and keys separately from cylinders, by means as directed by Owner. Failure to comply with forwarding requirements will be cause for replacement of cylinders/cores involved at no additional cost to Owner.
   c. Provide keys with the following features:
      1) Material: Nickel silver; minimum thickness of .107-inch (2.3mm)
      2) Patent Protection: Keys and blanks protected by one or more utility patent(s).
   d. Identification:
      1) Mark permanent cylinders/cores and keys with applicable blind code for identification. Do not provide blind code marks with actual key cuts.
      2) Identification stamping provisions must be approved by the Architect and Owner.
      3) Stamp cylinders/cores and keys with Owner's unique key system facility code as established by the manufacturer; key symbol and embossed or stamped with "DO NOT DUPLICATE" along with the "PATENTED" or patent number to enforce the patent protection.

4) Failure to comply with stamping requirements will be cause for replacement of keys involved at no additional cost to Owner.
5) Forward permanent cylinders/cores to Owner, separately from keys, by means as directed by Owner.

e. Quantity: Furnish in the following quantities.
1) Permanent Control Keys: 3.
2) Master Keys: 6.
3) Change (Day) Keys: 3 per cylinder/core that is keyed differently
4) Key Blanks: Quantity as determined in the keying meeting.

2.09 DOOR CLOSERS

A. Manufacturers and Products:

1. Scheduled Manufacturer and Product:
   a. LCN 4050A series

2. Acceptable Manufacturers and Products:
   a. Norton 7500 series
   b. Sargent 351 series

B. Requirements:

1. Provide door closers conforming to ANSI/BHMA A156.4 Grade 1 requirements by BHMA certified independent testing laboratory. ISO 9000 certify closers. Stamp units with date of manufacture code.
2. Provide door closers with fully hydraulic, full rack and pinion action with cast aluminum cylinder.
3. Closer Body: 1-1/2-inch (38 mm) diameter with 11/16-inch (17 mm) diameter heat-treated pinion journal and full complement bearings.
4. Hydraulic Fluid: Fireproof, passing requirements of UL10C, and all weather requiring no seasonal closer adjustment for temperatures ranging from 120 degrees F to -30 degrees F.
5. Spring Power: Continuously adjustable over full range of closer sizes, and providing reduced opening force as required by accessibility codes and standards.
6. Hydraulic Regulation: By tamper-proof, non-critical valves, with separate adjustment for latch speed, general speed, and back check.
7. Pressure Relief Valve (PRV) Technology: Not permitted.
8. Provide stick on templates, special templates, drop plates, mounting brackets, or adapters for arms as required for details, overhead stops, and other door hardware items interfering with closer mounting.

2.10 PROTECTION PLATES

A. Manufacturers:

1. Scheduled Manufacturer:
   a. Ives

2. Acceptable Manufacturers:
   a. Burns
   b. Trimco

B. Requirements:

1. Provide protection plates with a minimum of 0.050 inch (1 mm) thick, beveled four edges as scheduled. Furnish with sheet metal or wood screws, finished to match plates.
2. Sizes plates 2 inches (51 mm) less width of door on single doors, pairs of doors with a mullion, and doors with edge guards. Size plates 1 inch (25 mm) less width of door on pairs without a mullion or edge guards.
3. At fire rated doors, provide protection plates over 16 inches high with UL label.

2.11 OVERHEAD STOPS AND OVERHEAD STOP/HOLDERS

A. Manufacturers:

1. Scheduled Manufacturers:
   a. Glynn-Johnson

2. Acceptable Manufacturers:
   a. Rixson
   b. Sargent

B. Requirements:

1. Provide overhead stop at any door where conditions do not allow for a wall stop or floor stop presents tripping hazard.

2.12 DOOR STOPS AND HOLDERS

A. Manufacturers:

1. Scheduled Manufacturer:
   a. Ives

2. Acceptable Manufacturers:
   a. Burns
   b. Trimco

B. Provide door stops at each door leaf:

1. Provide wall stops wherever possible. Provide concave type where lockset has a push button of thumbturn.
2. Where a wall stop cannot be used, provide universal floor stops.
3. Where wall or floor stop cannot be used, provide overhead stop.
4. Provide roller bumper where doors open into each other and overhead stop cannot be used.

2.13 SILENCERS

A. Manufacturers:

1. Scheduled Manufacturer:
   a. Ives

2. Acceptable Manufacturers:
   a. Burns
   b. Trimco

B. Requirements:

1. Provide "push-in" type silencers for hollow metal or wood frames.
2. Provide one silencer per 30 inches (762 mm) of height on each single frame, and two for each pair frame.
3. Omit where gasketing is specified.

2.14 THRESHOLDS, SEALS, DOOR SWEEPS, AUTOMATIC DOOR BOTTOMS, AND GASKETING

A. Manufacturers:

B. Scheduled Manufacturer:

1. Zero International

C. Acceptable Manufacturers:

1. National Guard
2. Reese

D. Seals and Gasketing: Provide continuous gasketing on exterior openings, to the head and jambs, forming a continuous seal between the door and the frame. Provide smoke, light, or sound gasketing on interior doors where indicated.

1. Provide self-tapping fasteners for aluminum extruded gasketing being applied to hollow metal frames.
   a. Provide non-corrosive fasteners for all exterior applications.
   b. Provide security fasteners where indicated.

2. Provide neoprene, EPDM, silicone, or nylon brush inserts as specified in hardware sets. Provide non brush inserts of solid or sponge cell, as specified in hardware sets. Vinyl inserts are not allowed except where specified in hardware sets.

E. Smoke Labeled Gasketing: At all smoke labeled openings, provide smoke listed perimeter gasketing assemblies complying with NFPA 105 listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction for smoke control ratings indicated based on testing according to UL 1784.

F. Fire Listed Gasketing: Assemblies complying with NFPA 80 that are listed by a testing and inspecting agency acceptable to authorities having jurisdiction for fire ratings indicated based on testing according to UL-10C.

1. Where frame-applied intumescent seals are required by the manufacturer, provide gaskets that comply with UL10C Standard for Positive Pressure Fire Tests of Door Assemblies and UBC 7-2, Fire Tests of Door Assemblies.

G. Sound-Rated Gasketing: Provide acoustic gasketing to meet Sound Transmission Class (STC) rating required.

H. Meeting-Stile Gasketing: Provide meeting-stile gasketing that fastens to the meeting stiles forming a continuous seal when doors are closed.

I. Door Sweeps or Shoes: Apply to the bottom of the door to close the gap between the door bottom and finished floor or saddle threshold.

1. Provide solid neoprene, EPDM, silicone, or nylon brush type of seal as specified in hardware sets. Vinyl inserts are not allowed except where specified in hardware sets.

J. Automatic Door Bottoms:

1. Provide closed cell sponge, bulb neoprene. or EPDM type of seal as specified in hardware sets.
2. Door bottom to be mortised, semi mortised, or surface mount as with a minimum thickness as specified in hardware sets.

K. Rain Drips:

1. Provide overhead rain drips for out-swinging hollow metal doors that are not covered against 45 degree blowing rain. Aluminum extrusion to be a minimum of .088 inches thick and extend 2.50 inches from the face of the frame, in anodized finish to match door.
2. Door sweeps or shoes with integral rain drip must meet ADA requirements

L. Thresholds: Provide threshold units not less than 4 inches wide, formed to accommodate change in floor elevation where indicated, and fabricated to accommodate door hardware and fit door frames.

1. Threshold extrusion to be a minimum thickness as specified in hardware sets.

PART 3 - EXECUTION

3.01 EXAMINATION

A. Prior to installation of hardware, examine doors and frames, with Installer present, for compliance with requirements for installation tolerances, labeled fire-rated door assembly construction, wall and floor construction, and other conditions affecting performance. Verify doors, frames, and walls have been properly reinforced for hardware installation.

B. Examine roughing-in for electrical power systems to verify actual locations of wiring connections before electrified door hardware installation.

C. Submit a list of deficiencies in writing and proceed with installation only after unsatisfactory conditions have been corrected.

3.02 INSTALLATION

A. Mount door hardware units at heights to comply with the following, unless otherwise indicated or required to comply with governing regulations.

1. Standard Steel Doors and Frames: ANSI/SDI A250.8.
2. Custom Steel Doors and Frames: HMMA 831.
3. Interior Architectural Wood Flush Doors: ANSI/WDMA I.S. 1A
4. Installation Guide for Doors and Hardware: DHI TDH-007-20

B. Install door hardware in accordance with NFPA 80, NFPA 101 and provide post-install inspection, testing as specified in section 1.03.E unless otherwise required to comply with governing regulations.

C. Install each hardware item in compliance with manufacturer's instructions and recommendations, using only fasteners provided by manufacturer.

D. Do not install surface mounted items until finishes have been completed on substrate. Protect all installed hardware during painting.

E. Set units level, plumb and true to line and location. Adjust and reinforce attachment substrate as necessary for proper installation and operation.

F. Drill and countersink units that are not factory prepared for anchorage fasteners. Space fasteners and anchors according to industry standards.

G. Install operating parts so they move freely and smoothly without binding, sticking, or excessive clearance.

H. Hinges: Install types and in quantities indicated in door hardware schedule but not fewer than quantity recommended by manufacturer for application indicated.

I. Lock Cylinders:

1. Install construction cores to secure building and areas during construction period.
2. Replace construction cores with permanent cores as indicated in keying section.
3. Furnish permanent cores to Owner for installation.

J. Wiring: Coordinate with Division 26, ELECTRICAL and Division 28 ELECTRONIC SAFETY AND SECURITY sections for:

1. Conduit, junction boxes and wire pulls.
2. Connections to and from power supplies to electrified hardware.
3. Connections to fire/smoke alarm system and smoke evacuation system.
4. Connection of wire to door position switches and wire runs to central room or area, as directed by Architect.
5. Connections to panel interface modules, controllers, and gateways.
6. Testing and labeling wires with Architect's opening number.

K. Continuous Hinges: Re-locate the door and frame fire rating labels where they will remain visible so that the hinge does not cover the label once installed.

L. Door Closers & Auto Operators: Mount closers/operators on room side of corridor doors, inside of exterior doors, and stair side of stairway doors from corridors. Mount closers/operators so they are not visible in corridors, lobbies and other public spaces unless approved by Architect.

M. Overhead Stops/Holders: Mount overhead stops/holders on room side of corridor doors, inside of exterior doors, and stair side of stairway doors.

N. Power Supplies: Locate power supplies as indicated or, if not indicated, above accessible ceilings or in equipment room, or alternate location as directed by Architect.

O. Thresholds:

1. Set thresholds in full bed of sealant complying with requirements specified in Division 07 Section "Joint Sealants."
2. Aluminum thresholds to be cut-in, and scribed around mullions, frame members, and stops. Do not butt to thresholds. Provide a continuous surface across full width of opening from jamb to jamb.
3. Where aluminum panic-type (rabbeted) thresholds with neoprene inserts are specified, undercut doors as required to properly mate with seal in threshold.

P. Stops: Provide floor stops for doors unless wall or other type stops are indicated in door hardware schedule. Do not mount floor stops where they may impede traffic or present tripping hazard.

Q. Perimeter Gasketing:

1. Apply to head and jamb, forming seal between door and frame.
2. Install gasketing in a manner eliminating need to cut any seal to install surface mounted hardware. Install compatible mounting bracket for surface mounted hardware unless minimum 1/4 inch thick solid aluminum seals are provided for mounting of surface applied hardware.

R. Meeting Stile Gasketing: Fasten to meeting stiles, forming seal when doors are closed.

S. Door Bottoms and Sweeps: Apply to bottom of door, forming seal with threshold when door is closed.

3.03 ADJUSTING

A. Initial Adjustment: Adjust and check each operating item of door hardware and each door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to operate as intended. Adjust door control devices to compensate for final operation of heating and ventilating equipment and to comply with referenced accessibility requirements.

1. Spring Hinges: Adjust to achieve positive latching when door can close freely from an open position of 30 degrees.
2. Electric Strikes: Adjust horizontal and vertical alignment of keeper to properly engage lock bolt.
3. Door Closers: Adjust sweep period to comply with accessibility requirements and requirements of authorities having jurisdiction.

B. Occupancy Adjustment: Approximately three to six months after date of Substantial Completion, examine and readjust each item of door hardware, including adjusting operating forces, as necessary to ensure function of doors and door hardware.

3.04 CLEANING AND PROTECTION

A. Clean adjacent surfaces soiled by door hardware installation.

B. Clean operating items per manufacturer's instructions to restore proper function and finish.

C. Provide final protection and maintain conditions that ensure door hardware is without damage or deterioration at time of Substantial Completion.

3.05 DOOR HARDWARE SCHEDULE

A. The intent of the hardware specification is to specify the hardware for interior and exterior doors, and to establish a type, continuity, and standard of quality. However, it is the door hardware supplier's responsibility to thoroughly review existing conditions, schedules, specifications, drawings, and other Contract Documents to verify the suitability of the hardware specified.

B. Discrepancies, conflicting hardware, and missing items are to be brought to the attention of the architect with corrections made prior to the bidding process. Omitted items not included in a hardware set should be scheduled with the appropriate additional hardware required for proper application.

C. Hardware items are referenced in the following hardware schedule. Refer to the above specifications for special features, options, cylinders/keying, and other requirements.

D. Hardware Sets:

145546 OPT0466410 Version 1

Hardware Group No. 01

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	PASSAGE LOCK	PC10S RHO	626	SCH
1	EA	WALL STOP	WS406/407CCV	630	IVE
3	EA	SILENCER	SR64	GRY	IVE

Hardware Group No. 02

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	PASSAGE LOCK	PC10S RHO	626	SCH
1	EA	OH STOP	100S	630	GLY
3	EA	SILENCER	SR64	GRY	IVE

Hardware Group No. 03

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HINGE	5BB1HW 4.5 X 4.5	652	IVE
1	EA	PASSAGE LOCK	PC10S RHO	626	SCH
1	EA	SURFACE CLOSER	4050A REG OR PA AS REQ	689	LCN
1	EA	KICK PLATE	8400 8" X 2" LDW B-CS	630	IVE
1	EA	WALL STOP	WS406/407CCV	630	IVE
3	EA	SILENCER	SR64	GRY	IVE

Hardware Group No. 04

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HINGE	5BB1HW 4.5 X 4.5	652	IVE
1	EA	BATH/BEDROOM PRIVACY LOCK W/ OUTSIDE INDICATOR	PM040 RHOA L583-363 OS-OCC	626	SCH
1	EA	SURFACE CLOSER	4050A REG OR PA AS REQ	689	LCN
1	EA	MOP PLATE	8400 4" X 1" LDW B-CS	630	IVE
1	EA	KICK PLATE	8400 8" X 2" LDW B-CS	630	IVE
1	EA	WALL STOP	WS406/407CCV	630	IVE
1	EA	GASKETING	488SBK PSA	BK	ZER

Hardware Group No. 05

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	STOREROOM	PC80BDC RHO	626	SCH
1	EA	PERMANENT CORE	1C7_2 (KEYED INTO OWNER'S EXISTING SYTEM)	626	BES
1	EA	SURFACE CLOSER	4050A REG OR PA AS REQ	689	LCN
1	EA	KICK PLATE	8400 8" X 2" LDW B-CS	630	IVE
1	EA	WALL STOP	WS406/407CCV	630	IVE
3	EA	SILENCER	SR64	GRY	IVE

Hardware Group No. 06

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	STOREROOM	PC80BDC RHO	626	SCH
1	EA	PERMANENT CORE	1C7_2 (KEYED INTO OWNER'S EXISTING SYTEM)	626	BES
1	EA	OH STOP	100S	630	GLY
1	EA	SURFACE CLOSER	4050A REG OR PA AS REQ	689	LCN
1	EA	KICK PLATE	8400 8" X 2" LDW B-CS	630	IVE
3	EA	SILENCER	SR64	GRY	IVE

Hardware Group No. 07

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	ELEC CLASSROOM LOCK	CO-200-CY-70-PRK-RHO-B 4B BATTERY OPERATED	626	SCE
1	EA	PERMANENT CORE	1C7_2 (KEYED INTO OWNER'S EXISTING SYTEM)	626	BES
1	EA	WALL STOP	WS406/407CCV	630	IVE
3	EA	SILENCER	SR64	GRY	IVE

Hardware Group No. 08

Provide each SGL door(s) with the following:

QTY	DESCRIPTION	CATALOG NUMBER	FINISH	MFR

EXISTING DOOR, FRAME & HARDWARE TO REMAIN

END OF SECTION

145546 OPT0466410 Version 1

Door#	HwSet#
D01	03
D02	07
D03	07
D04	07
D05	01
D06	07
D07	01
D08	07
D09	02
D10	06
D11	05
D12	03
D13	04
E01	08
E02	08
E03	08
E04	08
E05	08
E06	08
E07	08

SECTION 08 80 00

GLAZING

PART 1 GENERAL

1.1 SECTION INCLUDES

A. This Section includes:
   1. Glazing for interior doors and sidelites.
   2. Glazing for interior borrowed lites.

B. All transparent and translucent glass for general and special purpose applications and related materials required for the Work and not furnished under another section whether or not specifically referred to herein.

C. Related Documents: The provisions of the General Conditions and the Sections included under Division 00 & 01 are included as a part of this Section as though bound herein.

D. Related work in other Sections:
   1. Doors into which glass is to be installed: Hollow Metal: Section 08 11 13.
   2. Hollow metal storefront & borrowed lite framing into which glass is installed: Section 08 11 13.
   3. Aluminum storefront framing into which glass is installed: Section 08 40 00.

1.2 SUBMITTALS

A. Submittal shall specifically include:
   1. Certified test reports or Product Data showing compliance with specified performance characteristics.
   2. Sample units for each type of glazing.

1.3 WARRANTY

A. Provide 5-year warranty from date of delivery.

1.4 QUALITY ASSURANCE

A. Comply with applicable codes and regulations and with the Consumer Product Safety Commission CPSC 16 CFR 1201 and with applicable recommendations of Flat Glass Marketing Association (FGMA) "Glazing Manual".

B. Provide labels showing glass manufacturer's identity, type of glass, thickness, and quality.

C. Door Assemblies: Complying with NFPA 80 and listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for fire ratings indicated, based on testing per NFPA 252.

D. Safety Glass: Category II materials complying with testing requirements in 16 CFR 1201 and ANSI Z97.1.

PART 2 PRODUCTS

2.1 INTERIOR GLASS

A. Interior glass shall be as follows:
   1. Glass for Interior Non-Fire Rated Doors, Storefront Framing and Borrowed Lites:
      a. For locations indicated to have insulating glass units, provide 1/4" clear laminated safety glass for corridor pane and 1/4" clear tempered glass for room pane.
      b. For other locations (1/4" glazing), provide 1/4" clear laminated safety glass.
   2. Glass for Interior Fire Rated Doors: fire-rated glazing product.
      a. 1 Hr. Rating: 1/4" Specialty Tempered, Heat Reflective.

2.2 ACCEPTABLE MANUFACTURERS

A. Glass:
   1. Vitro Architectural Glass
   2. Oldcastle
   3. Pilkington

2.5 GLAZING ACCESSORIES

A. Glazing Sealants
   1. Provide materials as recommended by the manufacturer for the required application and condition of installation in each case. Provide only compounds which are proven to be fully compatible with surfaces contacted.
   2. Provide field-applied glazing sealants in compliance with the maximum VOC levels permissible by the South Coast Air Quality Management District Rule (SCAQMD) #1168: VOC limit of 100 g/L.

B. Other Glazing Materials
   1. Provide glazing gaskets, spacers, blocks and fillers as required and as appropriate to the various glazing applications.
   2. Provide cleaners, Primers, and Sealers as recommended by sealant or gasket manufacturer.

PART 3 EXECUTION

3.1 EXAMINATION AND PREPARATION

A. Verify that openings for glazing are correctly sized, within tolerance, and glazing channels or recesses are clean, free of obstructions, and ready to receive glazing.

B. Seal porous glazing channels or recesses with substrate compatible primer or sealer.

3.2 GLAZING

A. Glaze items in accordance with frame and glass manufacturer recommendations.

END OF SECTION

SECTION 09 21 16

GYPSUM BOARD ASSEMBLIES

PART 1 GENERAL

1.1 SECTION INCLUDES

A. This Section Includes
   1. Interior gypsum board and gypsum board assemblies for installation on metal framing and on solid substrates.
   2. Gypsum board systems accessories and trim.
   3. Joint taping and finishing materials.
   4. All gypsum board systems work and related materials not specified under another section but required for the work whether or not specifically referred to herein.

B. Related Documents: The provisions of the General Conditions and the Sections included under Division 00 & 01 are included as a part of this Section as though bound herein.

C. Related work in other Sections:

1. Thermal/Acoustic Insulation in/on Metal Framing	Section 07 21 00
2. Metal Furring, Framing and Accessories for steel stud	Section 09 22 16

1.2 QUALITY ASSURANCE

A. Installer Qualifications: Installer experienced to perform work of this section who has specialized in the installation of work similar to that required for this project.

B. Materials or operations specified by reference to the published specifications of a manufacturer or other published standards shall comply with the requirements of the standards listed.
   1. Standards include ASTM C840
   2. GA-201 - Gypsum Board for Walls and Ceilings
   3. GA-216 – Application and Finishing of Gypsum Panel Products
   4. GA-600 - Fire Resistance Design Manual
   5. Refer to "Recommended Specification on Levels of Gypsum Board Finish" as published by the Gypsum Association (and AWCI/CISCA/PDCA) for finish levels required.

C. Tolerance: Maximum Variation from True Flatness: 1/8 inch in 10 feet in any direction.

1.4 SUBMITTALS

A. Submittal shall specifically include:
   1. Samples of each board type used on project.
   2. Product data of each product proposed for use under this section.

PART 2 PRODUCTS

2.1 GYPSUM BOARD

A. Interior Gypsum Wallboard: 5/8 inch minimum thickness (except where thickness is specifically indicated otherwise as part of a rated assembly).
   1. Length: Longest possible length appropriate to application.
   2. Edges: Tapered
   3. Ends: Square cut

4. At fire rated assemblies, provide all required components to comply with the requirements of the assembly.

B. Standard Gypsum Wall Board
   1. 5/8 inch thickness.
   2. Regional Requirement: Material must be extracted/recovered and manufactured within 500 miles of the Project Site.
   3. Applications:
      a. All walls, ceilings and soffits except in restrooms, janitor and kitchen areas.
   4. Acceptable Manufacturers
      a. United States Gypsum Company
      b. Georgia-Pacific
      c. National Gypsum
      d. LaFarge
      e. Substitutions, see Division 1.

C. Moisture/Mold Resistant Gypsum Wallboard: Restrooms, Kitchens, Wet walls, and other locations indicated in Drawings.
   1. Minimum Physical Properties:
      a. Thickness: 5/8 inch, unless noted otherwise.
      b. Moisture-Resistive Ratings
         i: Water Absorption (ASTM C473): 5 max.
         ii: Mold Resistance (ASTM D3273): 10 min.
   2. Acceptable Products:
      a. USG Sheetrock Brand Mold Tough VHI.
      b. National Gypsum Hi-Impact XP Wallboard Interior Panels.
      c. Georgia-Pacific DensArmor Plus Impact Resistant Interior Panel

D. Cementitious Backer Units: ANSI A118.9, 1/2 inch minimum thickness.
   1. Application: Provide as tile backer at any steel stud framed walls to receive ceramic tile.

2.2 ACCESSORIES

A. Interior Trim:
   1. Comply with ASTM C 1047
      a. Material: Metal trim, steel sheet zinc coated by hot dip or electrolytic process, or steel sheet coated with aluminum or rolled zinc.
      b. Types: Cornerbead, edge trim, and control joints.
   2. Cornerbead: Provide one of the following at all outside corners:
      a. Standard galvanized metal cornerbead, 0.0125" min. thickness, screw-attached, bedded with setting-type joint compound.
         i. ClarkDietrich 103 Deluxe Corner Bead
         ii. USG Sheetrock Dura-A-Bead Corner Bead
      b. Pre-formed corner bead with polymer core and paper surfaces. Installed using joint compound (no mechanical fasteners) per manufacturer instructions.
         i. No-Coat Ultratrim
   3. Casing (Edge) L-C Bead: L-Shaped for use at exposed panel edges.
      a. Use metal casing bead at straight edges.
      b. Use flexible vinyl arched-type bead at curved edges.
   4. Expansion (Control) Joint: Metal control joint accessory piece. Spacing: As indicated and maximum 30 ft./o.c. Caulking of control joints at exposed locations is required and is covered under Section 079200.

B. Fasteners:
   1. Gypsum Board
      a. Steel Stud Framing: ASTM C1002 Type S12 hardened screws; GA 216.
      b. Laminated to CMU Walls: Adhesive with supplemental mechanical fasteners as required. Adhesive to be appropriate to the application, acceptable to the panel manufacturer and with a VOC limit of 50 g/L (Drywall and Panel Adhesives).

2.3 GYPSUM BOARD JOINT TREATMENT MATERIALS

A. General: Comply with ASTM C 475.

B. Joint Tape for Interior Gypsum Wallboard: Paper.

C. Setting Type Joint Compound: Factory packaged, job mixed, chemical hardening powder products.
   1. Acceptable Products:
      a. USG Sheetrock Setting Type Joint Compound
      b. National Gypsum ProForm Quick Set Setting Compound
      c. LaFarge Rapid Joint Setting Compound
      d. Substitutions, see Division 1.

   2. Application:
      a. Repair of damaged gypsum board surfaces prior to finishing.
      b. Prefilling of open joints
      c. Embedding and First Coat at all taped joints, fasteners, and accessory flanges

D. All-Purpose Joint Compound: Factory mixed gypsum board joint compound
   1. Acceptable Manufacturers:
      a. USG Sheetrock
      b. National Gypsum ProForm
      c. LaFarge
      d. Substitutions, see Division 1.

   2. Application:
      a. Fill Coat (second coat)
      d. Finish Coat (third coat)
      e. Skim Coat (final coat) of Level 4 finish

PART 3 EXECUTION

3.1 GYPSUM BOARD INSTALLATION

A. General: Erection of framing and furring systems and application of drywall boards shall be per drawings and applicable portions of USG "Gypsum Drywall Construction Handbook", latest edition, or National Gypsum Co., Technical Bulletins No. 2171, 3687, 3726, 4096T, 4161 and 4171.

B. Fastening Board to Framing
   1. Fasten gypsum board to furring or framing with screws, with board applied vertically in full height unbroken length where possible. Space screws a maximum of 12 inches o.c. for vertical applications.

C. Control Joints: Provide control joints in gypsum board partitions, bulkheads, ceilings, and soffits. Place control joints consistent with lines of building spaces as shown or as directed. Minimum spacing of control joints shall be in accordance with GA216. In general, any gypsum board partition 30'-0" or longer shall have a full-height control joint. Coordinate exact locations with Architect in field. If a door is located in a partition requiring a control joint, the door may be used as a control joint provided that joints from both jambs are extended full height of the partition.

D. Trim Accessories: For trim with back flanges intended for fasteners, attach to framing with same fasteners used for panels. Otherwise, attach trim according to manufacturer's written instructions. Place corner beads at external corners and edge trim where drywall terminates at windows and doors. Use longest practical length. Place edge trim where gypsum board abuts dissimilar materials.

E. Temperature & Humidity: Maintain temperature, humidity and ventilation levels per Manufacturer recommendations.

3.2 GYPSUM BOARD FINISHING

A. General: Treat gypsum board joints, interior angles, edge trim, control joints, penetrations, fastener heads, surface defects, and elsewhere as required to prepare gypsum board surfaces for decoration.
   1. Prefill open joints and damaged surface areas.
   2. Apply joint tape over gypsum board joints, except those with trim having flanges not intended for tape.
   3. Tape, fill, and sand exposed joints, edges, and corners to produce smooth surface ready to receive finishes.
   4. Feather coats onto adjoining surfaces so that camber is maximum 1/32 inch.

B. Gypsum Board Finish Levels: Finish panels to levels indicated below, according to ASTM C 840, for locations indicated:
   1. Level 1: Embed tape at joints only. Locations:
      a. In ceiling plenum areas
      b. In concealed areas
      c. Elsewhere specifically indicated, unless a higher level of finish is required for fire-resistance-rated assemblies and sound-rated assemblies.
   2. Level 4: Embed tape and apply separate first, fill, and finish coats of joint compound to tape, fasteners, and trim flanges, and apply skim coat of joint compound. Locations:
      a. All surfaces exposed to view

END OF SECTION

SECTION 09 22 16

NON-STRUCTURAL METAL
FRAMING

PART 1 GENERAL

1.1 SECTION INCLUDES

A. This Section includes
1. Non-load bearing cold formed metal interior framing including wall, furring, ceiling, bulkhead, soffit, and other misc. framing and furring shown on Drawings.
2. Bracing, fasteners, and related accessories for light gauge, non-load bearing metal elements.
3. All labor, materials, tools equipment, anchors, fasteners, bridging and components not covered under another Section but required for a complete cold formed metal framing installation, whether or not specifically referred to herein.

B. Related Work in Other Section:
1. Gypsum Board Systems Section 09 21 16

B. Related Documents: The provisions of the General Conditions and the Sections included under Division 00 & 01 are included as a part of this Section as though bound herein.

1.2 QUALITY ASSURANCE

A. Referenced Standards:

B. American Iron and Steel Institute:
1. AISI General - Standard for Cold-Formed Steel Framing - General Provisions.
2. AISI Header - Standard for Cold-Formed Steel Framing - Header Design.
3. AISI NAS - North American Specification for Design of Cold-Formed Steel Structural Members.
4. AISI PM - Standard for Cold-Formed Steel Framing - Prescriptive Method for One and Two Family Dwellings.

C. ASTM International:
1. ASTM A1003/A1003M - Standard Specification for Steel Sheet, Carbon, Metallic- and Nonmetallic-Coated for Cold-Formed Framing Members.
2. ASTM C955 - Standard Specification for Load-Bearing (Transverse and Axial) Steel Studs, Runners (Tracks), and Bracing or Bridging for Screw Application of Gypsum Panel Products and Metal Plaster Bases.
3. Steel framing materials shall comply with ASTM C955.

D. Furnish framing members in accordance with SSMA – Product Technical Information.

E. Tolerances:
1. Fabrication Tolerances: Fabricate assemblies level, plumb, and true to line to a maximum allowable tolerance variation of 1/8 inch in 10 feet and as follows:
a. Spacing: Space individual framing members no more than plus or minus 1/8 inch from plan location. Cumulative error shall not exceed minimum fastening requirements of sheathing or other finishing materials.
b. Squareness: Fabricate each cold-formed metal framing assembly to a maximum out-of-square tolerance of 1/8 inch.
2. Erection Tolerances: 1/16 inch.

F. Qualifications:

1. Installer Qualifications: An experienced installer who has completed cold-formed metal framing similar in material, design, and extent to that indicated for this Project and whose work has resulted in construction with a record of successful in-service performance.

G. Fire-Test-Response Characteristics: Where metal framing is part of a fire-resistance-rated assembly, provide framing identical to that of assemblies tested for fire resistance per ASTM E 119 by a testing and inspecting agency acceptable to authorities having jurisdiction.
   1. Fire-Resistance Ratings: Indicated by GA File Numbers in GA-600, "Fire Resistance Design Manual", or by design designations from UL's "Fire Resistance Directory" or from the listings of another testing and inspecting agency.

1.3 SYSTEM DESCRIPTION

A. Performance Requirements: Engineer, fabricate, and erect cold-formed metal framing to withstand design loads within limits and under conditions required.
   1. Design framing systems to provide for movement of framing members without damage or overstressing, sheathing failure, connection failure, undue strain on fasteners and anchors, or other detrimental effects when subject to a maximum ambient temperature change of 120 deg F.
   2. Design framing system to maintain clearances at openings, to allow for construction tolerances, and to accommodate live load deflection of primary building structure as follows:
      a. Upward and downward movement of 1/2 inch.
   3. Design system to accommodate construction tolerances, deflection of building structural members, and clearances of intended openings.
   4. Maximum Allowable Deflection: 1: 360 of span. Stud thickness to resist minimum 5 psf uniform load.

1.4 SUBMITTALS

A. Submittal shall specifically include:
   1. Product Data showing compliance with specified performance characteristics.

PART 2 PRODUCTS

2.1 LIGHT GAUGE STEEL FRAMING

A. General:
   1. Galvanized Steel Sheet: ASTM A 1003, Structural Grade, Type H, metallic coated of grade and coating, and as follows: Provide G40 (Z120) for interior soffit, ceiling and non-bearing wall framing
   2. Acceptable Manufacturers for items specified under this Section:
      a. MarinoWare
      b. Clark/Dietrich
      c. Scafco
      d. Substitutions, see Division 1.

B. Steel Stud/Rafter/Joist Framing:
   1. Non-bearing Interior Partitions:
      a. Steel Studs and Runners at walls: ASTM C 645.
         i. Width of studs shall be as indicated, 20-guage min.
         ii. Spacing of framing members shall be 16" o.c. unless noted otherwise.
      b. Provide double 16-gauge minimum steel studs at head, jamb, and sill of all openings.
      c. Provide Track of same gauge as typical wall studs, unless noted otherwise.
   2. Interior Soffit and Misc. Framing:
      a. Steel Studs and Runners at walls: ASTM C 645.

i. Width of studs shall be as indicated.
ii. Spacing of framing members shall be 16" o.c. unless noted otherwise.
b. Provide Track of same gauge as typical wall studs, unless noted otherwise.
c. Provide steel stud kicker braces as indicated and as required.
3. Steel Framing for Suspended, Furred and Framed Ceilings: ASTM C 955
a. Light gauge metal framing consisting of:
i. Perimeter track (16 ga. min.) attached to walls
ii. Un-punched light gauge ceiling joists (16 ga. min.) sized to carry dead load of system plus mechanical loads (no less than 6" in depth)
iii. Solid bridging members so that unbraced length of no joist exceeds 6'.

C. Furring Channels
1. General:
a. Depth: as indicated.
b. Where installed on steel studs, gauge and spacing to match steel stud gauge and spacing, unless noted otherwise.
c. Where installed on other substrate, provide 20 gauge furring channels at 16" o.c. unless noted otherwise.
2. Standard Furring Channels: "Hat" shaped (two leg), UNO.
3. Resilient Channels: "RC-1" Type (single-leg) resilient. UNO.

D. Framing Accessories
1. General:
a. Steel Shapes and Clips: ASTM A 36/A 36M, zinc coated by hot-dip process according to ASTM A 123.
b. Anchor Bolts: ASTM F 1554, Grade 36 or 55, threaded carbon-steel hex-headed bolts and carbon- steel nuts; and flat, hardened-steel washers; zinc coated by hot-dip process according to ASTM A 153/A 153M, Class C.
c. Expansion Anchors: Fabricated from corrosion-resistant materials, with capability to sustain, without failure, a load equal to 5 times design load, as determined by testing per ASTM E 488 conducted by a qualified independent testing agency.
d. Mechanical Fasteners: Corrosion-resistant-coated, self-drilling, self-threading steel drill screws.
i. Head Type: Low-profile head beneath sheathing, manufacturer's standard elsewhere.
2. Fabricate steel-framing accessories of the same material and finish used for framing members, with minimum yield strength of 33,000 psi.
3. Provide accessories of manufacturer's standard thickness and configuration, unless otherwise indicated, as follows: Supplementary framing; bracing; bridging and solid blocking; web stiffeners; end clips; foundation clips; gusset plates; stud kickers, knee braces, and girts; joist hangers and end closures; hole reinforcing plates; backer plates.
4. Deflection Track: Deep leg slotted top track configured to allow for vertical sliding due to structural deflection.
5. Horizontal Bridging: Cold-Rolled Channel, 1 1/2" width x 16 gauge (0.054") minimum (or as otherwise indicated), Cee shaped, 50 ksi cold-formed structural steel per ASTM C955-00 and G-60 hot dip galvanized protective coating per ASTM A653.
6. Clip Angles: 3 3/8" width x 16 gauge (0.054") minimum x 1 1/2" flange (or as otherwise indicated) with pre-drilled pilot holes, 50 ksi cold-formed structural steel per ASTM C955-00 and G-60 hot dip galvanized protective coating per ASTM A653. Installed at each stud location for horizontal bridging attachment.
8. TEK screws, self-drilling, self-tapping, #12 minimum size, hot dip galvanized complying with ASTM A90. Type, size and spacing of fasteners shall be per manufacturer's recommendations and as indicated.
9. Kickers: Where required to brace stud walls above ceilings. 3 5/8" studs minimum.

PART 3 EXECUTION

3.1 PREPARATION.

A. Verify that substrate surfaces and building framing components are ready to receive work. Prepare attachment surfaces so that they are plumb, level, and in proper alignment for accepting the cold-formed structural framing.

3.2 LIGHT GAUGE FRAMING INSTALLATION

A. General
1. Cold-formed metal framing to be shop or field fabricated for installation, and field installed.
2. Install cold-formed metal framing according to ASTM C 754 and/or C 1007 (as appropriate), unless more stringent requirements are indicated.
3. Do not bridge building expansion and control joints with cold-formed metal framing. Independently frame both sides of joints.
4. Fasten hole reinforcing plate over web penetrations that exceed size of manufacturer's standard punched openings.
5. Align bottom and ceiling tracks; locate to wall layout. Secure in place with fasteners at 16" o.c. max.
6. Erect framing and panels plumb, level and square in strict accordance with the approved shop drawings. Use one-piece full length studs spaced at 16" o.c. (unless noted otherwise), spliced studs are not acceptable. Attach studs to track using two screws per each side of stud so that each connection location has at least four screws.
7. All track butt joints, abutting pieces of track shall be securely anchored to a common structural element, or they shall be butt-welded or spliced together.
8. The framing shall have ends squarely cut by shearing or sawing, be installed plumb, square, true to line and securely fastened per the contract documents or approved connection details. Torch cutting is not permitted.
9. Construct corners using minimum three studs.
10. Provide slide clips as specified above at connection of studs to the top track where track is mounted to beam, truss, joist, precast plank or other structure subject to deflection. Install in accordance with manufacturer's recommendations so as to achieve required vertical deflection capability.
11. Members and bracing shall be attached with screws wherever possible. Welding will only be permitted with expressed permission of Architect/Engineer.

B. Non-Bearing Framing Installation
1. General: Comply with ASTM C754, and ASTM C 840 requirements that apply to framing installation.
2. Extended partition framing full height to structural supports or substrates above suspended ceilings unless noted or detailed otherwise.
3. Frame door openings to comply with GA-600 and with gypsum board manufacturer's applicable written recommendations, unless otherwise indicated. Screw vertical studs at jambs to jamb anchor clips on door frames; install runner track section (for cripple studs) at head and secure to jamb studs. Install two studs at each jamb, unless otherwise indicated.
4. Frame openings other than door openings the same as required for door openings, unless otherwise indicated. Install framing below sills of openings to match framing required above door heads.
5. Frame bulkheads and soffits as required to achieve shape and dimensions indicated. Brace as required to structure to achieve stable, secure installation.

C. Suspended Ceiling System:
1. Space and position framing members in accordance with manufacturer's recommendation. Wire tie steel studs or furring channels to structural framing as shown in manufacturer's installation guide.

2. Provide additional framing required to support lighting or mechanical diffusers. Do not use gypsum wall board to support said fixtures. Coordinate framing requirements and locations with Electrical and HVAC Contractor.
3. Install additional framing required for ceiling control joints as described in manufacturer's installation guidelines.

END OF SECTION

SECTION 09 51 13

ACOUSTIC PANEL CEILINGS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Suspended (lay-in) ceiling assemblies
   1. Acoustical ceiling panels.
   2. Ceiling suspension assemblies

B. Related Documents: The provisions of the General Conditions and the Sections included under Division 00 & 01 are included as a part of this Section as though bound herein.

1.2 QUALITY ASSURANCE

A. Panels shall meet the minimum performance criteria
   1. ASTM E 1264 or UL 732 for Class A materials.
   2. Moisture Resistant: No visible sag under these conditions: 90% relative humidity and 104 degrees F.

B. Seismic Standard: Seismic Design Category B.

C. Qualifications:
   1. Installer Qualifications: Installer experienced to perform work of this section who has specialized in the installation of work similar to that required for this project.

C. References:
   1. ASTM C423 "Sound Absorption & Sound Absorption Coefficients by the Reverb. Room Method".
   2. ASTM E84 "Standard Test Method for Surface Burning Characteristics of Building Materials".
   3. ASTM C636

D. Tolerance: Variation from Flat Surface: 1/8 inch in 10 feet.

1.3 WARRANTY

A. Terms: 15 year warranty provided by one source and covering both panels and grid up to 104 degree temperature and 90% relative humidity. Components will be repaired or replaced if manufacturing defect is discovered or unacceptable deterioration occurs as defined below:
   1. Panels: Visible sagging or warping.
   2. Grid: Surface deterioration including rusting and paint failure.

1.4 SUBMITTALS

A. Submittal shall specifically include:
   1. Product Data showing compliance with specified performance characteristics.
   2. Samples: minimum 6" x 6" samples of specified products; minimum 4" long samples of attachment method including trim.

1.5 ENVIRONMENTAL REQUIREMENTS

A. Environmental Limitations: Do not install acoustical panel ceilings until spaces are enclosed and waterproof, wet work in spaces is complete and dry, work above ceilings is complete, and ambient temperature and humidity conditions are maintained at levels for intended use.

B. Pressurized Plenums (to comply with CISCA's recommendations for cleaning duct system and protecting ceiling units in pressurized plenums from damage and soiling caused by blowing dirt and dust that may be present when duct system is first operated): Operate ventilation system for not less than 48 hours before beginning acoustical panel ceiling installation.

1.6 DELIVERY, STORAGE AND HANDLING

A. Comply with manufacturer's ordering instructions and lead time requirements to avoid construction delays.

B. Prior to their installation, allow acoustic panels to reach room temperature and have a stabilized moisture content within the acoustical panel unit manufacturer's recommended limitations.

C. Deliver materials in unopened packages; suitably store to protect against exposure to moisture, sunlight, surface contamination, etc. Handle components to prevent panel edge damage or any other damage.

PART 2 PRODUCTS

2.1 CEILING TILE - ACOUSTIC CEILING PANELS

A. Fine textured panels; NRC=0.55 min.; CAC=33 min. 2'x2' size as indicated. White in color. Panel shall be the following products:
   1. Armstrong: Fine Fissured, Square edge.
   2. USG Interiors.
   3. Substitutions: See Division 1 specifications.

2.2 CEILING TILE - ACOUSTIC CEILING PANELS – RESTROOMS & MOIST AREAS

A. Fine textured panels; NRC=0.55 min.; CAC=38 min. 2'x2' size as indicated. White in color. Panel shall be the following products:
   1. Armstrong: Ceramaguard Fine Fissured, Square edge.
   2. USG Interiors.
   3. Substitutions: See Division 1 specifications.

2.3 ACCESSORIES

A. Perimeter trim and transitions: Axiom Perimeter Trim as necessary at window and floor openings, and exposed edges of ceiling systems.
   1. Description:
      a. Extruded perimeter trim system. Factory pre-finished aluminum trim pieces from same manufacturer as suspended ceiling system. Color 'White'. Depth to be field coordinated with architect for each particular application.

2.4 SUSPENSION SYSTEMS

A. Suspension systems for lay-in ceilings shall be as follows (unless indicated otherwise):
   1. Description:
      a. 15/16" Double web grid system meeting ASTM C635 Intermediate Duty or Heavy Duty as determined by suspension system manufacturer based on loading. Provide additional hanger wires at light fixtures, diffusers and related penetrations.
      b. Hanger wire: #12 gage or heavier galvanized soft-annealed steel.
      c. Tie wire: #18 gage galvanized annealed steel.
      d. Perimeter angles: finish to match exposed grid.
         i. Provide deep leg angle at locations where grid passes in front of windows and is shown to be lower than window head height.
         ii. Provide manufacturer's standard 1" x 1" angle at other locations.
      e. Typically white in color, unless indicated otherwise.
   2. Manufacturer's standard metal T bar runners and cross tees, electrogalvanized or ASTM A123 G30 hot dipped galvanized, with double web design, exposed flanges. Ensure that T bar runners and cross tees comply with ASTM C635 for type of loading. Standard suspension system in all rooms except as indicated below.
   3. Acceptable Manufacturers:
      a. USG Interiors.
      b. Armstrong Ceilings
      c. Substitutions: See Division 1 specifications.

PART 3 EXECUTION

3.1 INSTALLATION - CEILING SUSPENSION SYSTEM

A. Install system in accordance with the manufacturer's instructions and with ASTM C636 for an intermediate

duty system. Install suspended systems where indicated capable of supporting imposed loads to a deflection of 1/360 max.

B. Coordinate the location of hangers with other work. Where components prevent the regular spacing of hangers, reinforce the system to span the extra distance. Provide hangers at all four corners of each light fixture. Coordinate acoustical ceiling work with installers of related work including, (but not limited to) masonry work, gypsum board, finish carpentry, mechanical systems, and electrical systems.

C. Hang system independent of ducts, pipes and conduit from structural system above.
   1. Below bar joist/steel deck roof system, attach hanger wires to bar joists at panel points. Provide supplemental structure between bar joists where hanger wires are required to be installed between joists.
   2. Below light gauge metal truss/steel deck locations, attach hanger wires to bottom chords of trusses in a manner acceptable to truss manufacturer. Provide supplemental structure between trusses where wires are required to be located between trusses.
   3. Attachment to metal deck is prohibited except where no other method is feasible and then only with prior approval of Architect/Structural Engineer and only using fasteners specifically designed for metal deck/ceiling wire attachment.

D. Center system on room axis leaving equal border units according to reflected plan. Consult architect concerning all tile layout before installation. Cooperate with mechanical contractors in coordinating work so that all fixtures, diffusers, and grills are centered in rooms and tile to present a finished appearance.

E. Suspend main beams from overhead construction with hanger wires spaced 4'-0" on center along the length of the main runner. Install hanger wires plumb and straight.

F. Install edge channel at intersection of ceiling and vertical surfaces, fastened to said vertical surfaces, and using longest practical lengths of material. Pop rivet edge channel to each perpendicular ceiling grid member abutting same. Miter corners where wall moldings intersect or install corner caps.

3.2 INSTALLATION - ACOUSTICAL CEILING UNITS

A. Install acoustical units level, free from damage, twist, warp, dents and smudges in areas free of excessive humidity as required to comply with manufacturer's warranty requirements.

B. Install acoustical panels in coordination with suspension system, with edges resting on flanges of main runner and cross tees. Cut and fit panels neatly against abutting surfaces. Support edges by wall moldings.

C. Install 5-sided, trapezoidal enclosures constructed from fire rated acoustic tile ceiling material on top of all light fixtures in ceilings designated to be Fire Rated Lay-In Acoustic. Enclosure shall comply with construction as described in UL assembly P 254.

3.3 FINAL WALK THROUGH AND CLEAN-UP

A. Near the end of the job the ceiling contractor shall walk thru every room and replace any pads or grid that have been damaged or are stained or dirty.

B. At completion, remove excess materials, trash and debris from site.

END OF SECTION

SECTION 09 67 00

FLUID APPLIED FLOORING

KEY CHIP 100
30-40 Mil Decorative Epoxy Resinous Flooring
With UV Light Resistant Epoxy Grout and Aliphatic Urethane Sealer

PART 1 GENERAL

1.01 SUMMARY

A. Section Includes:

1. Fluid applied seamless flooring with integral cove base.
2. Joint, edge, and termination strips.
3. Locate all flexible joints required. See submittals below.
4. Accessories necessary for complete installation.

B. Related Sections:

1. Sealants: Section 07920.
2. Gypsum Drywall: Section 09250.
3. Adjacent floor finishes: Division 9.
4. Hazardous Materials Inspection Report by Dayton Environmental Testing. Note existing hazardous materials in existing flooring systems.

1.02 REFERENCE STANDARDS

The publications listed below from a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only.

A. American Society for Testing and Materials (ASTM) Publications:

C-307 Test Method for Tensile Strength of Chemical-Resistant Mortars.

C-531 Test Method for Linear Shrinkage and Coefficient of Thermal Expansion of Chemical-Resistant Mortars, Grouts, and Monolithic Surfacing.

C-579 Test Methods for Compressive Strength of Chemical-Resistant Mortars and Monolithic Surfaces.

C-580 Test Method for Flexural Strength and Modulus of Elasticity of Chemical-Resistant Mortars, Grouts, and Monolithic Surfacing.

C-884 Test Method for Thermal Compatibility Between Concrete and an Epoxy Resin Overlay.

D-570 Water Absorption of Plastics.

D-695 Compression Properties of Rigid Plastic.

B. ACI 301 Specifications for Structural Concrete for Buildings (most recent edition). Committee in Concrete 403 bulletin 59-43, Bond Strength to Concrete.

1.04 SYSTEM DESCRIPTION

A. System shall be 30-40 mil epoxy coating with broadcast colored chips (flakes) to form a decorative surface. Grout coat shall be a clear two component UV light resistant epoxy and topcoated with an aliphatic urethane with non-slip aggregate added.

1.05 SUBMITTALS

A. Samples: Submit 6 by 6 inch cured samples of flooring system indicating color combination and non-skid properties. Approved samples will be used during installation for product match.

B. Certified Test: Submit two copies of suppliers/ manufacturers written certification that flooring system meets or exceeds required properties.

C. Manufacturers Application Instructions: Submit descriptive data and specific recommendations for mixing, application, curing including any precautions of special handling instructions required to comply with the Occupational Safety and Health Act.

D. Shop Drawings: Shop Drawings shall be furnished showing installation of cove base and termination details, and details at floor material transitions and where adjoining equipment.
1. Locate and provide detailing for flexible joints required for flooring in area of installation.

E. Maintenance Instructions: Submit current copies of the flooring manufacturer's printed recommendations on maintenance methods and products. Submit in accordance with Section 01 78 39 – Project Record and Closeout Documents .

1.06 QUALITY ASSURANCE

A. Materials used in the floor surfacing shall be the products of a single manufacturer.

B. Installation shall be performed by an applicator with minimum 3 years experience in work of similar nature and scope. Installer must be approved by the manufacturer of the floor surfacing materials. The contractor shall furnish a written statement from the manufacturer that the installer is acceptable.

C. Installer to verify locations of all flexible joints required by the provisions of this Section and by the recommendations of the related material manufacturers.
1. Joint locations may or may not be shown in drawings.
2. Refer to drawings required under SUBMITTALS above.

D. Installer to keep daily log of the date of installation, room number, type, color, and method of application of product being installed. Log must be available for inspection by the Architect upon request.

E. Contractor to have proven experience with specified system.

F. Portable mock-up: Prior to starting application of flooring, provide full scale portable mock-up to establish acceptable quality, durability, and appearance. Mock-up size must not be less than 1 square foot.
1. Acceptable mock-up to be standard of quality for installed work.

2. Unacceptable installed work to be removed and replaced until acceptable. Aesthetically unacceptable but well bonded work may be overlaid or recoated per Manufacturer's instructions if thickness clearances permit.

G. Qualifications:
1. Installer: Must be acceptable to Architect, and Manufacturer.

1.07 PROJECT CONDITIONS

A. Maintain the ambient room and the floor temperatures at 60°F, or above, for a period extending from 72 hours before, during and after floor installation. Concrete to receive surfacing shall have cured for at least 5 days.

B. Dew Point: Substrate temperature must be minimum of 5 degrees above dew point prior to, during or up to 24 hours after application of flooring system.

C. Illumination: Apply flooring system only where a minimum of 30 footcandles exist when measured 3 feet from surface.

D. Advise other trades of fixtures and fittings not to be installed until flooring is cured and protected.

1.08 PROTECTION

A. Protect adjacent surfaces not scheduled to receive the flooring by masking, or by other means, to maintain these surfaces free of the flooring material.

B. Provide adequate ventilation and fire protection at all mixing and placing operations. Prohibit smoking or use of spark or flame producing devices within 50 feet of any mixing or placing operation.

C. Provide polyethylene or rubber gloves or protective creams for all workmen engaged in applying products containing epoxy.

1.09 PRODUCT DELIVERY, STORAGE, AND HANDLING

A. All materials shall be delivered to project site in original manufacturer's sealed containers including type of material, batch numbers, date of manufacture, and pertinent labels intact and legible.

B. Store materials in dry protected area at a temperature between 60°F to 80°F.

C. Follow all manufacturer's specific instructions and prudent safety practices for storage and handling.

1.10 WARRANTY

A. Contractor to guarantee work under this Section to be free from defects of material and installation for the duration of the warranty period. Defects occurring during warranty period shall be repaired, in a manner satisfactory to the Owner and the Architect, at no additional cost to the Owner.
1. Warranty Period: One (1) Year.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Specifications and quality of design standard (basis of design) based on Key Resin Company: Key Chip 100. Key Resin Company: 888-943-4532, www.keyresin.com

B. System description: Two-component epoxy resin coating broadcast with colored chips (flakes), grouted with two-component clear UV light resistant epoxy and sealed with aliphatic polyaspartic.

C. Alternative manufacturers must have as a minimum the standards set forth in this specification and must be preapproved in accordance with project requirements.

2.02 MATERIALS

A. Cementitious Tile Backboard: As acceptable by resin flooring manufacturer.

B. Prime Coat: Two component penetrating epoxy. Silica filler to be added for overlaying ceramic tile, quarry tile or very rough or uneven concrete.

C. Matrix: Two component pigmented epoxy resin binder.

D. Grout coat: Two component low viscosity UV light resistant epoxy sealer.

E. Topcoat: Two component aliphatic polyaspartic

2.04 MIXING

A. Apply flooring to specified physical properties.

B. Provide decorative finish matching approved sample. Sample to be approved by Owner and Architect.

2.05 FINISHES

A. Color as selected by Architect or Owner from the manufacturer's standard or custom colors.

PART 3 EXECUTION

3.01 PREPARATION

A. Obtain Architect's approval of mock-up before installing flooring.

B. Preparation of Surface:
1. Inspect surfaces to receive flooring and verify that condition is smooth and free from conditions that will adversely affect execution, permanence, or quality of work.
   a. Remove all projections, all debris detrimental to flooring system, and dirt, oil contaminates, grease, and surface coatings affecting bond.
2. Notify Architect or Owner in writing prior to commencing work of any conditions deemed unsatisfactory for the installation; installation of flooring materials is understood as acceptance of the substrate as satisfactory.
3. Concrete: The General Contractor shall be responsible for hiring an independent testing service to test for moisture content and moisture vapor emission rate; install no flooring over concrete until the concrete has been cured and is sufficiently dry to achieve permanence with flooring as determined by material manufacturer's recommended bond and moisture tests.

   a. Effectively remove concrete laitance by steel shot blasting or other method approved by flooring manufacturer.

   b. Concrete slab shall have an efficient puncture-resistant moisture vapor barrier under the concrete slab (for slab on grade). Testing must be done to verify that the moisture vapor emission rate of the slab does not exceed that as recommended by the manufacturer at time of installation of the flooring or at any future date. Moisture vapor emission and moisture content testing must conform with the requirements of ASTM F1869-11 (Calcium Chloride Test) and ASTM F2170-11 (Relative Humidity Probe Test). If any single test result shows excessive levels of moisture content or vapor emission rate, apply manufacturer's recommended moisture vapor emission control material based upon the highest reading.

c. Treat cracks in concrete using manufacturer's recommended practice. Rout out crack and fill with rigid epoxy. Refer to section 3.02.B.

3.02 INSTALLATION

A. Install all floor materials in strict conformance with manufacturer's instructions.

B. Route out all cracks (larger than hairline width) and fill with Key #502, Key #715 Crack Filler or other material approved by Manufacturer of floor materials.

C. Prime entire surface with recommended epoxy primer. Allow to cure. For properly prepared tile substrates, add filler powder to epoxy primer to create a slurry consistency. Flat trowel tight against tile to fill grout joints flush. Allow to cure. If grout joints are not completely flush, repeat procedure until joints are filled flush with tile surface.

D. Apply Key Pigmented Epoxy Coating at 10-12 mils thickness (135-160ft^2 per gallon) broadcast colored chips (flakes) to rejection. Allow to cure. Scrape chips, sand lightly with buffer if necessary, sweep and vacuum loose chips.

E. Apply UV light resistant epoxy grout coat at 16-20 mils thickness (80-100ft^2/gallon) or as needed to match approved sample finish and allow to cure. Apply a second topcoat if needed to match approved sample finish and allow to cure. Grout coat(s) shall provide a uniform, dense surface.

F. Apply 1 coat aliphatic polyaspartic to match approved sample.

G. Match finished work to approved sample, uniform in thickness, sheen, color, pattern and texture, and reasonably free from defects detrimental to appearance.

H. Integral Cove Base: Where scheduled, provide integral cove base formed from flooring over tile backerboard. Provide cove cap strip at top of base as recommended by flooring manufacturer and trowel material up wall to form smooth, integral transition and base 4-6 inches high unless otherwise indicated or scheduled.

I. Apply temporary protection until floor is fully cured. The General Contractor shall protect the finished floor from the time that the sub-contractor completes the work.

END OF SECTION

SECTION 09 68 00

TILE CARPETING

PART 1 GENERAL

1.01 THIS SECTION INCLUDES

A. Carpet flooring tile as shown on the drawings and schedules and as indicated by the requirements of this section.

1.02 RELATED DOCUMENTS

A. Drawings and General Provisions of the Contract (including General and Supplementary Conditions and Division 1 sections) apply to the work in this section only.

B. Hazardous Materials Inspection Report by Dayton Environmental Testing. Note existing hazardous materials in existing flooring systems.

C. Section 02 82 13 - Lead and Asbestos Containing Materials.

1.03 RELATED SECTIONS

A. Other Division 9 sections for floor finishes related to this section but not the work of this section.

1.04 QUALITY ASSURANCE AND REGULATORY REQUIREMENTS

A. Qualifications of Installers: All work shall be done by installation firms specializing in commercial carpet installation. It is required, that the firm or individual shall be a member of the Floor Covering Installation Contractors Association (FCICA) and/or certified by the Certified Floorcovering Installers Association (CFI). Flooring contractor to be specialty contractor normally engaged in this type of work and shall have three (3) years minimum documented experience in commercial installation of these materials and participation in manufacturer's environmental program including responsible carpet removal, recycling, and installation.

B. Flooring contractor will be responsible for the proper product installation, including floor preparation in all the areas indicated in the drawings to receive carpet. The carpet installation standard will be as listed in The Carpet and Rug Institute's Standard for Installation of Commercial Carpet CRI-104, the standard that establishes the minimum installation procedures.

C. Flooring contractor to provide owner a written warranty that guarantees the completed installation to be free from defects in materials and workmanship for a period of no less than two (2) years after job completion.

D. All warranties must be issued by the manufacturer as standard published warranties on all types of carpet within this document. Second source warranties that involve parties other than the carpet manufacturer are unacceptable. If the product fails to perform as warranted when installed according to manufacturer's carpet installation handbook and maintained according to manufacturer's maintenance instructions, the affected area will be repaired or replaced at the expense of the manufacturer. The carpet manufacturer will provide standard published written performance warranties for the following:

1. Lifetime warranty against excessive surface wear. Excessive wear means no more than 15% loss of pile fiber weight measured before and after use as tested under ASTM D-3936.
2. Lifetime static protection, meaning built-in protection below 3.0 kv as tested under AATCC-134.

3. Tuft Bind (edge ravel, yarn pulls, zippering)
4. Delamination
5. Lifetime Moisture Barrier
6. Lifetime Dimensional Stability (for modular products only)

E. Carpet manufacturer to provide field service experts to assist in project start-up as required by the job. Manufacturer will notify owner, architect, general contractor, or another designated contact if any installation instructions are not followed.

F. Provide flooring material to meet the following test performance criteria as tested by a recognized independent testing laboratory. Certified test reports shall be submitted by the carpet manufacturer for each test method. Requirements listed below must be met by all products being submitted for approval:

1. Flooring Radiant Panel / ASTM E-648 - Requirement: Class I (Above .45 w/cm)
2. CRI VOC Chamber Test/Indoor Air Quality test (CRI-IAQ) Green Label Plus Test.
3. Lightfastness: Rating of not less than 5 on International Grey Scale after 40 SFU's when tested in accordance with AATCC Test Method 16E.
4. Crockfastness: Minimum stain rating on International Grey Scale of not less than 5 wet or dry when tested in accordance with AATCC Test Method 165.
5. Atmospheric Fading: Burned Gas shall not be less than 5 on International Grey Scale after two cycles on each test as per AATCC Test Method 129 Ozone and AATCC Test Method 23.

G. Waste Reduction: If applicable, all polyethylene roll wrap shall be collected and recycled and all cardboard be collected and recycled.

1.05 SUBMITTALS

A. Submit to architect and/or owner ten (10) days prior to bid, two (2) 18" x 36" finished samples of the exact type of carpet proposed, including quality, pattern, color, and backing.

B. Submit to architect and/or owner ten (10) days before bid, any proposed substitutions for consideration. Submit at least three (3) references of installations, that have been in use for two (2) years or more using the same backing technology of all carpets, as described within this text. Include contact names and telephone numbers.

C. Submit manufacturer's warranties, installation instructions, and maintenance instructions before bid date.

D. Submit the manufacturer's certification that the flooring has been tested by an independent laboratory and complies with the required fire tests as well as the test listed under 1.04 F.

E. Submit to architect and/or owner ten (10) days prior to bid, the manufacturers plan for recycling the specified carpet and related items at the end of the useful life of the carpet.

1.06 ENVIRONMENTAL/FIELD CONDITIONS

A. Deliver all materials to the installation site in the manufacturer's original packaging and in good condition. Packaging to contain manufacturer's name and marks, identification number, shipping and handling instructions and related information.

B. Delivered and stored materials must be available for inspection as required by the owner, architect, general contractor, and/or the manufacturer.

C. Sub-floor preparation is to include all required work to prepare the existing floor for installation of the product as specified in this document. Sub-floor preparation shall meet all conditions as specified in manufacturer's carpet installation instructions.

D. Sub-floor preparation will include, as required, the removal and repair of the existing floor surface. It is required that the floor of a renovation project be inspected before the bid date.

E. All materials, including adhesives, are to be delivered to the site of installation at a minimum of 48 hours prior to the start of installation and stored in a clean and dry room that measures above 65°F and below 95°F and measures between 10% and 65% relative humidity (RH). To maintain temperature and relative humidity, permanent heating and air conditioning systems (HVAC) must be in operation. Stack rolls horizontally and no higher than two rolls high on a flat surface. After work is completed, the ambient room temperature should remain at 65°F and relative humidity between 10% and 65% for 48 hours. These materials and related adhesives shall be protected from the direct flow of heat from heating fixtures and appliances such as hot-air registers, radiators, or other. Site conditions shall include those specified in the carpet manufacturer' installation manual and shall also include sufficient heat, light, and power required for effective and efficient working condition.

F. Once the temperature and relative humidity in area for installation have been stabilized, loose lay the carpet within the installation area and allow it to precondition for 48 hours prior to installation. Carpet installation shall not commence until painting and finishing work is complete and ceiling and overhead work is tested, approved, and completed. Traffic shall be closed during the installation of the flooring products. Verify concrete slabs are dry per the standards for bond and moisture tests listed in the manufacturer's installation manual.

1.07 SUBSTITUTIONS

A. All Bid submittals must conform to the specifications in this document.

B. All test results to be in accordance with a certified independent testing laboratory.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Acceptable Manufacturer:
1. Lifetime warranty against excessive surface wear. Excessive wear means no more than 15% loss of pile fiber weight measured before and after use as tested under ASTM D-3936.
2. Tarkett Commercial. (800) 899-8916. COMMERCIAL.TARKETT.COM.
3. No Substitutions.

2.02 FLOORING MATERIALS

A. All Rooms indicated to receive Carpet Tile.
1. Product: Corollary, Blue Strategy 39404. Modular, manufactured by Tarkett Cmmercial.
2. Construction: Patterned Loop
3. Backing: Ethos Modular with Omnicoat Technology
4. Dye Method: Solution Dyed
5. Fiber Type: Dynex SD Nylon (with recycled content)
6. Weight: 20 oz./sy.
7. Gauge: 5/64
8. Soil Release: Yes
9. Standard Size: 18" x 36"
10. Testing Specifications - Flooring Radiant Panel: Class 1
11. Testing Specifications - Smoke Density: Less than 450 flaming (ASTM E 662)
12. Testing Specifications - Static Test: Less than 3.0kv (AATCC-134)

2.03 ADHESIVES

A. Basis of Design: Modular Adhesive as recommended by manufacturer. Premium modular flooring adhesive

specifically formulated for bonding Tarkett Commercial's Ethos Modular backed carpet to the floor. Comply with CRI Green Label Plus.

B. No Substitutions.

2.04 ACCESSORIES

A. Provide transition/reducing strips tapered to meet abutting materials as approved by architect.

B. Provide edge strips made of extruded aluminum with a mill finish, unless otherwise noted.

PART 3 EXECUTION

3.01 INSPECTION

A. Examine and verify that sub-floor surfaces are smooth and flat within tolerances specified for that type of work and are ready to receive carpet.

B. Verify that wall surfaces are smooth and flat within the tolerances specified for that type of work, are dust-free, and are ready to receive carpet.

C. Verify that sub-floor surfaces are dust-free and free of substances that could impair bonding of adhesive materials to sub-floor surfaces.

D. Verify that concrete sub-floor surfaces are dry enough and ready for flooring installation by testing for moisture emission rate and alkalinity in accordance with ASTM F 710; obtain instructions if test results are not within limits recommended by carpet manufacturer and adhesive materials manufacturer.

E. Verify that required floor-mounted utilities are in correct location.

F. Inspected prior to installation for proper style, color and potential defects.

3.02 PREPARATION

A. Starting installation constitutes acceptance of sub-floor conditions.

B. SURFACE PREPARATION- Dust, dirt, debris and noncompatible adhesive must be removed before the installation begins. Surfaces must be smooth and level with all holes and cracks filled with Portland cement-based patch reinforced with polymers or primed with manufacturer's approved sealer. Carpet manufacturer shall examine existing conditions and make recommendations for skim coat materials and primer materials.

C. LATEX OR OLD ADHESIVES - Must be covered with a skim coat of Portland cement-based patch reinforced with polymers. Any old adhesive residue must also be covered with manufacturer's approved sealer. Note: Failure to remove or seal old latex or cut back adhesive may cause installation failure, plasticizer migration, shifting, buckling or edge curling; these conditions will not be covered under warranty.

D. CONCRETE MOISTURE TESTING and pH Testing - Substrate surfaces must be tested for moisture emission. It is the responsibility of the owner or owner's representative to perform moisture testing prior to starting the installation. ASTM-F2170-2 relative humidity probe moisture testing or ASTM-F1869 calcium chloride testing can be performed on the concrete to determine the surface moisture emission rate. Acceptable relative humidity probe testing results are as determined by flooring manufacturer.

3.03 SUBFLOORS

A. New Concrete - New concrete must be fully cured and free of moisture. New concrete requires a curing period of approximately 90 days.

B. Old Concrete - Old concrete must be checked for moisture. Dry, dusty, porous floors must be primed; primers will not correct a moisture problem.

C. Wood - Wood floors must be smooth and level. If the floor is uneven, an approved underlayment will be required. Old finishes must be tested for compatibility with adhesives or removed and porous wood primed with manufacturer approved sealer.

D. Hard Surfaces - Tiles must be well secured to the floor or removed. Broken, damaged, or loose tiles must be replaced. Waxes and similar finishes must be removed from VCT before applying adhesive. Existing sheet vinyl is not a suitable substrate for modular installation and must be removed.

E. Old Carpet - Remove old carpet and check adhesives for compatibility. If unsure, remove or cover adhesive with a Portland based patching compound or encapsulated with manufacturer approved sealer.

3.04 INSTALLATION OF FLOORING

A. Install flooring in strict accordance with the finish drawings, manufacturer's instructions, and CRI Carpet Installation Standard. Install carpet tile in accordance with manufacturer's instructions and CRI 104.

B. ADHESIVE SYSTEM – Install adhesive system as recommended by carpet manufacturer.

C. TILE PLACEMENT – Lay tiles in monolithic pattern. To ensure proper alignment, check spacing every ten modules. Measure ten modules; proper spacing should be within ¼ inch. Continue to check spacing every ten modules throughout the entire installation.

D. PALLET AND BUNDLE SEQUENCING - Install carpet tile in the order they were manufactured; this is easily accomplished by selecting pallets in sequential order and following the numbers located on each bundle. For layout and installation instructions refer to manufacturer's instructions or CRI 104 Standards.

E. FLATWIRE CABLE / TRENCH HEADERS - Cable should be centered under modules and no adhesive used unless approved by the manufacturer. Trench headers require a control grid of adhesive on either side of header panels to prevent movement. It is highly recommended that these areas be installed ashlar.

G. FINISHED INSTALLATION- Roll entire job as recommended by manufacturer after completion of installation.

3.05 INSTALLATION OF ACCESSORIES

A. Install accessories as required by drawings and per manufacturer's specifications.

3.06 EXTRA MATERIALS

A. Provide twelve extra full carpet tiles of each specified product. Provide to Owner in original packing containers.

3.07 CLEANING AND PROTECTION

A. Remove excess adhesive without damage, from floor, base, and wall surfaces.

B. Clean and vacuum carpet surfaces.

END OF SECTION

SECTION 09 91 00

PAINTING

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Interior painting with opaque and transparent finishes including painted mechanical and electrical items, primers, sealers and finish paints. Painted exposed surfaces, except where these Specifications indicate that the surface or material is not to be painted or is to remain natural. If an item or a surface is not specifically mentioned, paint the item or surface the same as similar adjacent materials or surfaces. If a color of finish is not indicated, Architect will select from standard colors and finishes available.
   1. Includes surface preparation and field application of paints, transparent finishes and coatings.
   2. Includes all painting work and related materials not specified under another section but required for the work whether or not specifically referred to herein.
   3. All paintable surfaces to remain exposed in the finished work whether specifically indicated or not shall be finished under this section, except shop- and factory-finished items and those specially indicated not to be painted. No new surface shall have less than one prime coat and two finish coats except where noted otherwise. Painting Contractor shall study the plans for a full understanding of the scope of work (including studying the finish schedule and drawing details to determine where structural elements and paintable ductwork are exposed to view). Once materials are applied to an unfinished substrate, it is therefore implied that the surfaces have been accepted to receive finishes.

B. Related Documents: The provisions of the General Conditions and the Sections included under Division 00 & 01 are included as a part of this Section as though bound herein.

1.2 SUBMITTALS

A. Submittal shall specifically include:
   1. Product Data: Including material make-up and application instructions for each type of paint.
   2. Painting Schedule: Complete schedule listing manufacturer, proprietary names/number, surfaces to be painted, primers, finish coats and tinting.
   3. Samples:
      a. Complete paint deck from which to choose colors.
      b. Provide paint match samples for custom matches as required the Architect.

1.3 QUALITY ASSURANCE

A. Environmental Requirements: Painting manufacturer and Contractor shall conform to State and local V.O.C. (Volatile Organic Compound) Regulations in area where Project is located. In addition, all field-applied interior paint shall comply with the maximum VOC content as follows:
   1. Paint Prime Coats: 100 g/L (Primers, Sealers, Undercoaters)
   2. Paint Finish Coats (unless otherwise listed below) : 50 g/L (Flats or Nonflat Coatings)
   3. Anti-Corrosive/Anti-Rust Paint Coats: 250 g/L (Anti-Corrosive/Anti-Rust Paints)
   4. Dry-fall Paint Coats: 150 g/L (Dry-fog Coatings)
   5. Transparent Wood Finishes:
      a. Stains: 100 g/L (Stains, Interior)
      b. Varnish/Lacquer: 275 g/L (Clear Wood Finishes, Varnish or Sealers, Lacquer)

B. Applicator Qualifications: A firm or individual experienced in applying paints and coatings similar in material, design, and extent to those indicated for this Project, whose work has resulted in applications with a record of successful in-service performance.

C. Paint Coordination

1. Verify compatibility of finish coat with manufacturer's and fabricator's shop applied prime coats.
2. Provide barrier coats over incompatible primers, or remove and re-prime as required.
3. Notify architect in writing of any anticipated problems using finish paints specified with following:
   a. Primed surfaces
   b. Previously painted surfaces
   c. Proper coverage

D. Colors and Sample Rooms
1. Upon commencement of the work, a sample room shall be prepared with base and finish coats as specified. Sample room finishes when approved, shall be a standard for comparison for the remainder of the work. Work subsequently executed, which in the Architect's opinion, does not equal the sample finishes shall be corrected as may be necessary by the Contractor without additional charge.

1.4 ENVIRONMENTAL REQUIREMENTS

A. Store and apply materials in environmental conditions required by manufacturer's instructions.

B. Do not apply paints when temperature outside or in any interior area is less than recommended by manufacturer. Apply solvent-thinned paints only when temperatures of surfaces to be painted and surrounding air are between 45 and 95 deg F.

C. Do not apply finish material in areas where humidity is above acceptable limit recommended by manufacturer.

D. Do not apply paint to wet or damp surfaces, surfaces exposed to hot sun, or during cold or frosty weather when temperature is below freezing or predicted to fall below freezing.

1.5 SYSTEM DESCRIPTION

A. To establish a level of quality, the painting schedule below references the Master Painters Institutes (MPI) categories. The MPI categories listed are to assist in providing general guidelines for paint type selection.

PART 2 PRODUCTS

2.1 MATERIALS

A. Material Compatibility: Provide block fillers, primers, and finish-coat materials that are compatible with one another and with the substrates indicated under conditions of service and application, as demonstrated by manufacturer based on testing and field experience.

B. Material Quality: Provide manufacturer's best-quality paint material of the various coating types specified that are factory formulated and recommended by manufacturer for application indicated. Paint-material containers not displaying manufacturer's product identification will not be acceptable.

C. All paint shall be delivered to the site in manufacturer's sealed containers. Each container shall be labeled by the manufacturer. Label shall include type of paint, color of paint, and instructions for reducing. Thinning shall be done only in accordance with directions of manufacturer.

D. Accessory Materials: Linseed oil, shellac, turpentine, paint thinners and other materials required to achieve the finishes specified and as recommended by manufacturer whose products are used.

E. Approved Manufacturers:
1. Pittsburg Paints (P-P).
2. Sherwin-Williams
3. ICI
4. Minwax
5. Substitutions, see Division 1.

2.2 INTERIOR PAINTING SCHEDULE

A. Concrete Surfaces (Semi-Gloss): (Latex), similar to MPI INT 3.1M.
   1. Primer: P-P 17-921 Sealgrip Interior Latex Wall Primer, 1.0 – 1.2 mils DFT/coat.
   2. Finish Coats: P-P 6-500 Speedhide Latex Semi-Gloss Enamel (34-45 units at 60 deg. F.), 2.0 – 2.4 mils DFT/coat.

B. Concrete Masonry Surfaces (Semi-Gloss): (Vinyl Acrylic Latex System), similar to MPI INT 4.2A.
   1. Primer: Vinyl Acrylic Block Filler, min. of 1 coat but provide additional coat(s) as required to fill all block pores.
   2. Finish Coats: Vinyl Acrylic Semi-Gloss Enamel, 1.5 DFT/coat.
   3. Surfaces: New masonry walls (do not use in high humidity areas).

C. Concrete Masonry Surfaces (Gloss): (Water Based Epoxy – High Humidity), similar to MPI INT 4.2F.
   1. Primer: Two-three coats Acrylic Heavy Duty Block Filler Pigmented High Solids/High Build Epoxy Polyamide Filler/Sealer, 30 mils DFT/coat.
   2. Finish Coats: High Solids, Epoxy Polyamine Coating, Gloss 4.0-8.0 mils DFT/coat.
   3. Surfaces: Showers and high humidity areas including toilet rooms.

D. Primed Metal – Ferrous (Gloss): (Acrylic-Latex System), similar to MPI INT 5.1R.
   1. Primer: Touch up with DTM Primer.
   2. Finish Coats: 100 percent Acrylic, Waterborne, Gloss, 3.0 mils DFT/coat.
   3. Surfaces: Hollow metal doors, frames, door mullions, railings, ferrous metal surfaces.

E. Unprimed Metal – Ferrous (Gloss): (Acrylic-Latex System), similar to MPI INT 5.1R.
   1. Primer: 100 percent Acrylic, Waterborne, Corrosion Resistant Primer, 3 mils DFT/coat.
   2. Finish Coats: 100 percent Acrylic, Waterborne, Gloss, 3.0 mils DFT/coat.
   3. Surfaces: Unprimed ferrous metal surfaces.

F. Metal – Galvanized (Gloss): (Acrylic Latex System), similar to MPI INT 5.3A
   1. Clean galvanized surfaces with nonpetroleum-based solvents so surface is free of oil and surface contaminants. Remove pretreatment from galvanized sheet metal fabricated from coil stock by mechanical methods.
   2. Primer: DTM, 2.0-3.0 mils DFT/coat.
   3. Finish Coats: 100 percent Acrylic, Waterborne, Gloss (30-40 units at 60 degrees F.), 3.0 mils DFT/coat.
   4. Surfaces: Galvanized metal surfaces.

G. Wood – Stained.
   1. Pre-Stain Coat: Minwax Pre-Stain Wood Conditioner. One coat.
   2. Stain Coat: Minwax Gel Stain, similar to MPI INT 6.3EE.
   3. Finish Coats: Minwax Polyurethane Satin Finish, 3 coats.
   4. Surfaces: Wood trim indicated to be stained.

H. Wood – Painted (Semi-Gloss): (Latex System), similar to MPI INT 6.3U.
   1. Primer: Pigmented Interior Primer, 2 mils DFT/coat.
   2. Finish Coats: Semi-Gloss Acrylic Latex, 2.5 – 2.8 mils DFT/coat.
   3. Surfaces: Wood trim indicated to be painted.

I. Gypsum Board (Satin): (Acrylic Latex System), similar to MPI INT 9.2M.
   1. Primer: Interior Latex Primer/Sealer
   2. Finish Coats: Interior Satin Acrylic Latex
   3. Surfaces: Gypsum and plaster walls, ceiling, bulkheads, graphics (do not use in high humidity areas).

J. Gypsum Board (Semi-Gloss): (Acrylic Epoxy System), similar to MPI INT 9.2F.
   1. Primer: Interior Latex Primer/Sealer
   2. Finish Coats: Water Borne Acrylic Epoxy
   3. Surfaces: High humidity areas including toilet rooms.

K. Exposed Structure – Galvanized (Eg-Shel): (Waterborne), similar to MPI INT 5.3H.
   1. Clean galvanized surfaces with non-petroleum-based solvents so surface is free of oil and surface

contaminants. Remove pretreatment from galvanized sheet metal fabricated from coil stock by mechanical methods.

2. Finish Coats: Interior Dryfall Flat Acrylic Waterborne (white) flat, 2.0-2.5 mil DFT/coat.
3. Surfaces: Exposed metal decking, trusses, structural steel.

PART 3 EXECUTION

3.1 SEQUENCING AND SCHEDULING

A. Coordinate the sequencing and scheduling of the painting to ensure the optimal application of paint without damaging adjacent surfaces.
   1. Apply paint prior to installation of acoustical ceiling suspension systems and resilient base.
   2. Paint doors and frames prior to installation of door hardware.
   3. Do not paint overhead surfaces of items which will be exposed to view when project is finished such as ductwork piping etc., until overhead work is completed.

3.2 EXAMINATION AND PREPARATION

A. Remove hardware and hardware accessories, plates, machined surfaces, lighting fixtures, and similar items already installed that are not to be painted. If removal is impractical or impossible because of size or weight of the item, provide surface-applied protection before surface preparation and painting. After completing painting operations in each space or area, reinstall items removed using workers skilled in the trades involved.

B. Examine substrates, areas and conditions, with the applicator present, under which painting will be performed for compliance with paint application requirements. Document any unsatisfactory conditions encountered (specifically damages caused by others and latent damage as defined by PDCA P1-92. Make arrangements to have unsatisfactory conditions corrected prior to painting. Do not begin painting until unsatisfactory conditions have been corrected. Starting painting will be construed as Applicator's acceptance of surfaces and conditions within that specific area.
   1. Schedule examination of conditions in time to allow corrective work to be undertaken without affecting the overall project schedule.
   2. Correct minor defects and clean surfaces which affect work of this Section.

C. Measure moisture content of porous surfaces using an electronic moisture meter. Do not apply finishes unless moisture content is less than 12 percent.

D. Surface Preparation: Clean and prepare surfaces to be painted according to manufacturer's written instructions for each particular substrate condition and as specified.
   1. Provide barrier coats over incompatible primers or remove and re-prime.
   2. Cementitious Materials: Prepare concrete, concrete unit masonry, cement plaster, and mineral-fiber-reinforced cement panel surfaces to be painted. Remove efflorescence, chalk, dust, dirt, grease, oils, and release agents. Roughen as required to remove glaze. If hardeners or sealers have been used to improve curing, use mechanical methods of surface preparation.
   3. Wood: Clean surfaces of dirt, oil, and other foreign substances with scrapers, mineral spirits, and sandpaper, as required. Sand surfaces exposed to view smooth and dust off. Seal knots, pitch streaks, and sappy sections with sealer. Fill nail holes and cracks after primer has dried; sand between coats.
   4. Ferrous Metals: Clean ungalvanized ferrous-metal surfaces that have not been shop coated; remove oil, grease, dirt, loose mill scale, and other foreign substances. Use solvent or mechanical cleaning methods that comply with SSPC's recommendations. Shop Primed Steel Surfaces and Existing Steel to be painted: Sand and scrape to remove loose primer and rust, hand clean, clean surfaces with solvent. Prime bare steel surfaces.
   5. Galvanized Surfaces: Clean galvanized surfaces with nonpetroleum-based solvents so surface is free of oil and surface contaminants. Remove pretreatment from galvanized sheet metal fabricated from coil stock by mechanical methods. Apply coat of etching primer.
   6. Concrete and Unit Masonry Surfaces Scheduled to Receive Paint Finish: Remove foreign matter. Remove oil and grease with a solution of tri-sodium phosphate, rinse well and allow to dry. The Masonry Contractor is responsible for pointing, rubbing and patching of concrete block including after first coat of block filler/primer. Do not paint over block that has not been inspected by

Architect.

7. Plaster and Gypsum Board Surfaces: Carefully inspect finished gypsum board using acute angle temporary lighting to locate imperfections. Patch defects in finished gypsum board prior to application of paint of other finishes. Fill minor defects with latex compounds. Spot prime defects after repair. Do not finish coat surfaces until drywall touch-up has been completed.
8. Stained surfaces: Remove all previous coatings down to bare wood. Prep bare wood as recommended by finish manufacturer.

E. Material Preparation: Mix and prepare paint materials according to manufacturer's written instructions.

F. Tinting: Tint each undercoat a lighter shade to simplify identification of each coat when multiple coats of same material are applied. Tint undercoats to match the color of the finish coat, but provide sufficient differences in shade of undercoats to distinguish each separate coat.

G. Masking: All color changes shall be cleanly masked to achieve sharp transition of color. Verify exact location of color changes with Architect.

3.3 APPLICATION

A. General Application Procedures: Apply paints and coatings by brush, roller, spray, or other applicators according to manufacturer's written instructions. Apply materials under adequate illumination, evenly spread and smoothly flowed on without runs or sags. Apply materials at manufacturer's recommended wet film thicknesses to achieve manufacturer's recommended dry film thickness (DFT) or as otherwise specified. DFT's and number of coats indicated are minimums; provide additional thickness and/or additional coats where recommended by manufacturer. Thoroughly dry coats before applying succeeding coats; follow manufacturer's recommended drying times between coats as minimum.

B. Prime Coat Application:
1. General: Before applying finish coats, apply a prime coat, as recommended by manufacturer, to material that is required to be painted or finished and that has not been prime coated by others. Recoat primed and sealed surfaces where evidence of suction spots or unsealed areas in first coat appears, to ensure a finish coat with no burn-through or other defects due to insufficient sealing. Tint primers and under coats to approximate shade of final coat. Back prime new interior woodwork scheduled to receive paint finish with primer paint.
2. Block Filler: Apply masonry filler in heavy coat by brush or roller and then work into surface of masonry/concrete surface and mortar joints to completely fill and seal all pores. Apply block fillers to concrete masonry block at a rate to ensure complete coverage with pores filled. Pin holes of voids that appear after filler has cured shall require second coat of filler to obtain completely sealed surface.

C. Pigmented (Opaque) Finish Application: Completely cover surfaces as necessary to provide a smooth, opaque surface of uniform finish, color, appearance, and coverage. Cloudiness, spotting, holidays, laps, brush marks, runs, sags, ropiness, or other surface imperfections will not be acceptable. Generally, a minimum of two finish coats are required (unless indicated otherwise). If additional coats are required to achieve indicated DFT, then such additional coats shall be provided.

D. Field Painting Required: In addition to the painting scope described in Paragraph 1.01.A, the following is specifically included in the field-painting scope of this Section:
1. Doors: Paint tops, bottoms and both faces of all hollow metal doors and other doors unfinished doors.
2. Mechanical and Electrical Work and Misc. Equipment: Painting of mechanical and electrical work and misc. equipment is limited to items exposed in equipment rooms and occupied spaces where structure/ceiling is indicated to be painted. Mechanical/Electrical/Equipment items to be painted include, but are not limited to, the following:
   a. Uninsulated metal piping.
   b. Uninsulated plastic piping.
   c. Pipe hangers and supports.
   d. Tanks that do not have factory-applied final finishes.
   e. Visible portions of internal surfaces of metal ducts, without liner, behind air inlets and outlets.
   f. Duct, equipment, and pipe insulation having "all-service jacket" or other paintable jacket material.
   g. Mechanical/Electrical equipment that is indicated to have a factory-primed finish for field painting.

h. Conduit and electrical boxes.
i. Supports for electrical equipment.

E. Field Painting NOT required: In general, do not paint prefinished items, concealed surfaces, finished metal surfaces, operating parts and labels. Unless specifically indicated otherwise, the following items should NOT be field painted:
1. Prefinished items include the following factory-finished components.
a. Acoustical wall panels.
b. Metal toilet enclosures.
c. Elevator entrance doors and frames (except where indicated to be provided primed only).
d. Elevator equipment.
e. Finished mechanical and electrical equipment.
f. Light fixtures.
g. Fabric ductwork.
2. Concealed surfaces include walls or ceilings in the following generally inaccessible spaces:
a. Foundation spaces.
b. Furred areas.
c. Ceiling plenums.
d. Pipe spaces.
e. Duct shafts.
f. Elevator shafts (see Elevator spec section for elevator pit painting).
3. Finished metal surfaces include the following:
a. Anodized aluminum.
b. Stainless steel.
c. Chromium plate.
d. Copper and copper alloys.
e. Bronze and brass.
4. Operating parts include moving parts of operating equipment and the following:
a. Valve and damper operators.
b. Linkages.
c. Sensing devices.
d. Motor and fan shafts.
5. Labels: Do not paint over UL, FM, or other code-required labels or equipment name, identification, performance rating, or nomenclature plates.

3.4 CLEANING

A. As work proceeds, promptly remove finishes where spilled, splashed, or spattered.

B. Upon completion, paint spots shall be removed from glass, hardware and other surfaces.

C. Solvents or cleansing solutions, and method used to clean finish surfaces shall not cause damage thereto. When in doubt, verify proper method of removing paint spots from finish surfaces before attempting to remove them.

D. Rubbish and accumulated materials shall be removed from premises.

END OF SECTION

SECTION 10 00 00

SPECIALTIES

PART 1 GENERAL

1.1 SECTION INCLUDES

A. This Section Includes:
   1. Fire Extinguisher Cabinets & Fire Extinguisher
   2. Misc. Specialties
   3. All related materials and components for the above named specialty items not specified under another section but required for the work whether or not specifically referred to herein.

B. Related Documents: The provisions of the General Conditions and the Sections included under Division 00 & 01 are included as a part of this Section as though bound herein.

1.2 SUBMITTALS

A. Submittal shall specifically include:
   1. Product Data: Provide data on products, specified accessories.
   2. Samples: Provide curtain material and color samples.
   3. Manufacturer's installation instructions.

1.3 COORDINATION

A. Coordinate accessory locations with other work to prevent interference with clearances required for access by disabled persons, proper installation, adjustment, operation, cleaning, and servicing.

B. Deliver inserts & anchoring devices set into concrete or masonry as required to prevent delaying the Work.

C. Field Measurements: Where cubicles are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication and indicate measurements on Shop Drawings. Coordinate fabrication schedule with construction progress to avoid delaying the Work.

PART 2 PRODUCTS

2.1 FIRE EXTINGUISHERS & CABINETS

A. Fire Extinguishers & Cabinets
   1. Manufacturer: Larsen's Manufacturing.
   2. Series: Architectural Semi Recessed Series
   3. Model: 2409R7 Door and 1 ½" Frame. Tub Size – 9 ½"x24"x6".
   4. Finish: Steel with White Baked Acrylic Enamel Door & Frame
   5. Optional Recessed Handle.
   6. Provide 10 lb. ABC Extinguisher per cabinet.
   7. Non-fire rated cabinet.

PART 3 EXECUTION

3.1 EXAMINATION, PREPARATION & INSTALLATION

A. General:
   1. Verify that surfaces and internal wall blocking are ready to receive work and opening dimensions are as instructed by the manufacturer.
   2. Provide blocking as required for installation.

END OF SECTION

SECTION 10 14 00

SIGNAGE

PART 1 GENERAL

1.1 SECTION INCLUDES

A. This Section Includes:

1. Signage designed and configured for interior installation.
   a. Panel Room Signs.
   b. Vinyl lettering on building entry doors.
2. Providing all signage (materials, accessories, etc.) shown on drawings and required for a complete signage installation, whether or not specifically mentioned herein, except as specifically designated to be provided by another Contractor.

B. Related Documents: The provisions of the General Conditions and the Sections included under Division 00 & 01 are included as a part of this Section as though bound herein.

1.2 SUBMITTALS

A. Submittal shall specifically include:

1. Samples
   a. Full size sample of each interior plaque sign type with approved colors, lettering & Braille.
   b. Full size sample of vinyl storefront lettering with installation instructions.
2. Product Data
   b. Interior panel sign system.
3. Shop Drawings
   a. All interior signage and letters including complete signage schedule.

1.3 QUALITY ASSURANCE

A. Comply with signage requirements indicated in the Americans with Disabilities Act. Comply with all applicable provisions of the 2010 Standards for Accessible Design (the updated ADA Accessibility Guidelines, ADAAG - http://www.ada.gov/regs2010/2010ADAStandards/2010ADAstandards.htm), effective in March 2011. Requirements include, but are not limited to the following:

1. Tactile copy must be all upper case and raised at least 1/32". Tactile characters must be sans serif, not italic, not oblique, script or highly decorative.
2. The stroke width of the upper case "I" has to be 15% of the letter height or less. The character width of the uppercase "O" must be between 55% and 100% of the height of the corresponding uppercase "I".
3. The copy height for tactile information must be between 5/8" and 2". If separate visual characters are provided, raised characters can be ½" and need not contrast with the background.
4. The distance between characters on tactile copy must be a minimum of 1/8" and a maximum of 4 times the character stroke width. These distances are measured between the closest points of adjacent characters.
5. Spacing between lines of tactile copy needs to be a minimum of 135% and a maximum of 170% of the corresponding upper case "I" height (measured from baseline to baseline).
6. Braille must be Grade II and positioned directly below the corresponding raised characters. If text is multi-lined, Braille is placed below the entire body of text and separated 3/8" from any other tactile characters and 3/8" minimum from raised borders and decorative elements.
7. Visual characters and symbols, and their background, are to have a non-glare finish. The color of raised characters must contrast as much as possible with their background to make sure signs are more legible for persons with low vision.
8. Pictograms, selected from International Standards, are to be located within a 6" vertical void and accompanying text descriptions are to be located directly below the pictogram.

A. Qualifications:
   1. Installer Qualifications: Installer experienced to perform work of this section who has specialized in the installation of work similar to that required for this project and who is acceptable to product manufacturer.
   2. Manufacturer Qualifications: Manufacturer capable of providing field service representation during construction, approving acceptable installer and approving application method.

B. Appearance of Finished Work: Variations in appearance of abutting or adjacent pieces are acceptable if they are within one-half of range of approved Samples. Noticeable variations in same piece are not acceptable. Variations in appearance of other components are acceptable if they are within range of approved Samples and are assembled or installed to minimize contrast. Signs shall be installed level and plumb. Letters shall be correctly spaced per mfr. template.

C. Environmental Requirements: All interior sealants must meet the requirements of the South Coast Air Quality Management District (SCAQMD) Rule #1168 VOC limits.
   1. Sealants: 250 g/L
   2. Sealant Primers for Non-Porous Surfaces: 250 g/L
   3. Sealant Primers for Porous Surfaces: 775 g/L

PART 2 PRODUCTS

2.1 INTERIOR PANEL SIGNS

A. Room Signs
   1. Type: Custom designed sign, see Drawings.
   2. Manufacturer: Ellet Sign Company, 330-628-9907, hayley@elletneon.com, Basis of Design.
   3. Material: 3D printed acrylic signs.
   4. Copy: Raised text, Braille and pictograms meeting ANSI A117.1 minimum requirements.
   5. Materials
      a. Braille Rostors: Braille rostors to be applied to sign face by manufacturer's standard processes. Braille to be raised 1/32 inch min. from rostor's first surface. Precisely formed, uniformly opaque graphics to comply with relevant ADA regulations and the requirements indicated for size, style, spacing, content, position and colors. Computerized translation of sign copy to be the responsibility of the manufacturer.
      b. Fastener: .030 inch thick double-face tape, perimeter sealed with clear silicone.
      c. Colors: As selected by architect from the manufacturer's custom colors to match new K-12 School's new room signage.
   6. Sign Design: See Drawings for typical sign configurations.
   7. Required Signs at Exterior Entry Doors: See "Vinyl Storefront Lettering" this spec section. Locate per ADAAG and verify exact location with architect before installation.
   8. See Required Signs Schedule on the Drawings for signs.
   9. Approved interior plaque signage manufacturers:
      a. Ellet Sign Company.
      b. No Substitutions.

2.2 OFFICE SUITE DIMENSIONAL SIGN IN ENRTY VESTIBULE OUTSIDE RECEPTION ROOM #101

   1. Type: Custom designed sign, see Drawings.
   2. Manufacturer: Ellet Sign Company, 330-628-9907, hayley@elletneon.com, Basis of Design.
   3. Material: Flat cut acrylic.
   4. Materials
      a. Fastener: Blind studs into masonry for flush install.
      b. Colors: White.
   5. Sign Design: See Drawings for sign configuration.
   6. Approved signage manufacturers:
      a. Ellet Sign Company

b. No Substitutions.

PART 3 EXECUTION

3.1 INSTALLATION OF PANEL SIGNS

A. Panel Signs: Adhere to wall with double-stick tape and seal edges with clear silicone. Coordinate exact locations of signage with Architect prior to Installation. Where signs are shown (or are required to be) installed on glass sidelights, adhere signs to glass and provide black vinyl (same size as signs) adhered to opposite side of glass to conceal back side of signs.

B. Mock-up: Provide mock-up of each sign type for approval by architect.

END OF SECTION

SECTION 10 28 13

TOILET ACCESSORIES

PART 1 GENERAL

1.1 SECTION INCLUDES

A. This Section Includes:
1. Toilet room accessories including grab bars, mirrors, coat hooks, napkin disposals, pipe wrap and other accessories. Some items supplied by Owner's supplier but installed by contractor, see Drawings.
2. See ALTERNATE #2 for Restrooms #110 and #111.
3. All related materials and components for toilet accessory items not specified under another section but required for the work whether or not specifically referred to herein.

B. Related Documents: The provisions of the General Conditions and the Sections included under Division 00 & 01 are included as a part of this Section as though bound herein.

C. Related Work in Other Sections

1. Dispenser support blocks	Section 06 00 00
2. Plumbing Fixtures	Division 22

1.2 SUBMITTALS

A. Submittal shall specifically include:
1. Product Data: Provide data on products, specified accessories.

1.3 QUALITY ASSURANCE

A. Grab bars and toilet room accessories shall meet requirements of all applicable codes and ordinances including the Americans with Disabilities Act Accessibility Guidelines (ADAAG) and ANSI A117.1.

1.4 COORDINATION

A. Coordinate accessory locations with other work to prevent interference with clearances required for access by disabled persons, proper installation, adjustment, operation, cleaning, and servicing.

B. Deliver inserts & anchoring devices set into concrete or masonry as required to prevent delaying the Work.

PART 2 PRODUCTS

2.1 TOILET ROOM ACCESSORIES

A. Materials (General)
1. Stainless Steel: AISI Type 302/304, with polished No. 4 finish.
2. Sheet Steel: Cold rolled, commercial quality ASTM A336.
3. Keys: Provide universal keys for internal access to accessories for servicing and re-supplying. Provide minimum of six keys to Owner's representative.
4. Fasteners: Exposed fasteners shall be vandal resistant.

B. Grab Bars: Stainless Steel
1. Mounting: Concealed, manufacturer's standard flanges and anchorages.
2. Clearance: 1-1/2 inch clearance between wall surface and inside face of bar.
3. Gripping Surfaces: Manufacturer's standard nonslip texture.
4. Heavy Duty Size: Outside diameter of 1-1/2 inches minimum.
5. Lengths/configurations as indicated.

6. Acceptable Products:
   a. ASI 3800 Series with peened gripping surface.
   b. Bobrick.
   c. Substitutions see Division 1.

C. Mirror: Mirror shall have a metal frame. 1/4" tempered glass mirror.
   1. Provide one 25" W x 34.5" H mirror above each lavatory per drawings.
   2. Acceptable Products:
      a. Kate & Laurel Ivette Traditional Ornate Wall Mirror, Silver. Decorative Baroque Style Rectangular Mirror. Amazon – ASIN B09XFL7589.
      b. No Substitutions.

D. Robe Hooks: Stainless Steel, surface mounted robe hook, satin chrome finish. Stainless steel fasteners. Hook shall not protrude more than 3" from face of wall.
   1. Provide at the following locations:
      a. At single use toilet rooms, provide one hook as indicated.
      b. At other locations indicated.
   2. Acceptable Products:
      a. ASI Model #7308.

E. Sanitary Napkin Disposals: Surface Mounted sanitary napkin disposal shall be 22-gauge, Type 304 stainless steel. Exposed surfaces shall have satin finish. Door shall have 90 degree return and be equipped with a concealed, full length stainless steel piano hinge. Receptacle shall have a capacity of 1 gallon min.
   1. Provide one at each female toilet stall and at each unisex toilet room.
   2. Acceptable Products:
      a. ASI Model 20852
      b. Bobrick
      c. Substitutions see Division 1.

F. Pipe Wrap: Under lavatory Guard: Insulating pipe covering for supply and drain piping assemblies, that prevent direct contact with and burns from piping, and allow service access without removing coverings. Antimicrobial, molded-plastic, white, paintable.
   1. Provide at all exposed restroom lavatory drain traps.
   2. Basis of Design product: TrueBro Lav Guard 2.

PART 3 EXECUTION

3.1 EXAMINATION, PREPARATION & INSTALLATION

A. General:
   1. Installation shall be by the Finish Carpentry Contractor as specified in Section 06 00 00.
   2. Verify that surfaces and internal wall blocking are ready to receive work and opening dimensions are as instructed by the manufacturer.

B. Toilet Room Accessories:

   1. Install accessories according to manufacturer's written instructions, using fasteners appropriate to substrate indicated and recommended by unit manufacturer. Install units level, plumb, and firmly anchored in locations and at heights indicated and in coordination with other trades. Install accessories with vandal resistant fasteners.

END OF SECTION

SECTION 12 13 00

SOLAR SCREEN SHADES

PART 1 GENERAL

1.01 SECTION INCLUDED

Solar Screen Shades to be custom manufactured to conform with site requirements. Provide all accessories, attachment hardware, labor, and equipment necessary to complete installation of this section.

1.02 REFERENCES

A. Flame retardant materials used shall meet the requirements of the National Fire Protection Association (NFPA) 701 Flame Test and California U.S. Title 19.

1.03 SUBMITTALS

A. Submit manufacturers descriptive literature indicating materials, finishes, construction and installation instructions and data verifying that the product meets requirements specified.
B. Shop drawings to indicate all fasteners, installation methods and clearances at head, jamb and sill for each mounting condition.
C. Samples to be submitted in sizes no less than 12" in length for colored materials. Submit a sample of all exposed surfaces and accessories needed to complete the installation. Color samples to be submitted to the architect for selection.
D. Submit all quality assurance documents relative to the installation, including design data, test reports, certificates issued by Underwriters Laboratory, manufacturer's instructions, manufacturer's installation instructions and close-out submittal documents if available.

1.04 DELIVERY, STORAGE AND HANDLING

A. Deliver to project site in manufacturer's original packaging.
B. Handle and store to prevent damage to materials, finishes and operating mechanisms.
C. All materials delivered to the site shall remain the property of the manufacturer until installation is complete and final payment is received.

1.05 PROJECT CONDITIONS

A. Prior to any materials being installed, the building shall be enclosed.
B. All interior finishes are to be completed and dry prior to any material installation.

1.06 SEQUENCING

A. Installation of all materials included in this section to be coordinated and complete prior to furniture placement on floor surface.

1.07 WARRANTY

A. Provide manufacturer's standard one (1) year warranty against defects in materials and workmanship, beginning at date of substantial completion.

PART 2 PRODUCTS

2.01

A. Manufacturers: Hunter Douglas Window Shading Systems.

2.02 MANUAL OPERATING SYSTEM

A. Adjustment-free system shall be provided that is controlled by a nickel plated, steel ball chain or plastic bead chain on polyester cord. The clutch system shall be comprised of multi-banded steel springs that create the pressure necessary to keep the shade in the desired position. Provide appropriate clutch for operational flexibility. Clutches are asymmetrical for right or left hand installation.
B. Roller tube shall be roll formed steel or extruded aluminum. Roller tube to be sized appropriately to minimize deflection.
C. Fabric to be attached to roller tube using two sided adhesive tape that allows for easy adjustment of fabric for leveling and removal of fabric panel without removing brackets.
D. Bottom hem of shade to be RF heat sealed pocket with enclosed hem bar.

2.04 SHADE ACCESSORIES

A. Extruded aluminum 3"and 4" fascia snaps onto the mounting brackets. Fascia color by architect.
B. Extruded aluminum 4" top/back cover to match fascia.
C. Provide wood blocking as necessary to support fascias and blind assemblies.

2.05 SOLAR SCREEN FABRICS

A. Hunter Douglas – E Screen 7505. Color: White/Pearl.
B. Local Sales: Enhancing Windows 937-266-4121.
C. See Schedule at end of section.

PART 3 EXECUTION

A. Install one window opening sample for approval by Owner and Architect.
B. Site inspection and preparation shall be the responsibility of the shade installer. The approval of all mounting surfaces, installation positioning within and around all openings and measurements shall be approved by architect and the blind installer.
A. Install all blinds in windows level and plumb and in accordance with manufacturer's product data and approved shop drawings.
B. Occasional cleaning using a mild detergent, brushing and rinsing.
C. Any adjustments needed to units after the installation are the responsibility of the installer and will be performed free of charge for a period of one year.

3.01 SCHEDULE

A. All windows: Shade fabric to be Hunter Douglas E Screen 7505 with 5% open area.
B. All shades receive prefinished metal fascia to conceal rollers and hardware. Provide wood blocking as necessary to support fascia and blind assemblies.

END OF SECTION

SECTION 12 30 00

CASEWORK

PART 1 GENERAL

1.1 SECTION INCLUDES

A. This Section includes the following:
1. Custom Casework and Millwork.
2. Plastic Laminate countertops, backsplashes and side splashes.
3. All attachments, anchorage, ledgers and installation associated with the above.
4. All misc. components associated with casework/counter tops including filler panels, hardware, grommets, keyboard trays, pencil drawers, metal support brackets, etc.
5. All manufactured casework and countertop work including all installation and related components not specified in another Section but required for the work whether or not specifically referred to herein.

B. Related work in other Sections:
1. Sealants: Section 07 92 00 Joint Sealants.

C. Related Documents: The provisions of the General Conditions and the Sections included under Division 00 & 01 are included as a part of this Section as though bound herein.

1.2 QUALITY ASSURANCE

A. Qualifications:
1. Installer Qualifications: Installer experienced to perform work of this section who has specialized in the installation of work similar to that required for this project and who is acceptable to product manufacturer.
2. Manufacturer Qualifications: Manufacturer capable of providing field service representation during construction, approving acceptable installer and approving application method.

B. Custom casework shall meet or exceed the minimum requirements established by Architectural Woodwork Institute (AWI) Quality Standards, current edition for the following quality grade: Custom Grade. Specific requirements set forth within this specification shall take precedence over the AWI Standard.

C. Source Limitations for Cabinets: Obtain premanufactured cabinets through one source from a single manufacturer.

D. Product Designations: Drawings indicate sizes and configurations of casework using generic casework configuration number designations.

E. Coordination: Coordinate work with applicable mechanical, electrical, technology, etc. trades and rough-in.

1.3 SUBMITTALS

A. Submittal shall specifically include:
1. Shop Drawings showing:
a. Plan and elevation views of every casework location.
b. Dimensioned location for plumbing and electric rough-ins/cut-outs.
c. Typical sections and details including complete description of cabinet construction and hardware.
d. Installation details and instructions showing method of attachment of cabinets to walls, etc.
2. Samples:
a. Sample chain of all edge band colors for selection.
b. Samples of all stain colors for selection.
c. Samples of all plastic laminate colors for selection.
d. Samples of all finished custom millwork for approval. Minimum size 8"X10".

1.4 WARRANTY

A. Cabinet manufacturer shall warranty against structural failure of the cabinet body for a period of ten years from date of installation.

1.5 PROJECT CONDITIONS

A. Environmental Limitations: Do not deliver or install casework until building is enclosed, wet-work is complete, and HVAC system is operating and will maintain temperature and relative humidity at occupancy levels during the remainder of the construction period.

PART 2 PRODUCT

2.1 CUSTOM CASEWORK / COUNTERTOP MATERIALS

A. Environmental Requirements for Composite Wood Products in Casework/Counters:
   1. Low-Emitting Materials: Adhesives and composite wood products shall not contain urea formaldehyde.
   2. Certified/Recycled Wood: All composite wood products shall either be 100% recycled or certified wood.

B. Countertops
   1. Typical Plastic Laminate Countertops: Complying with NEMA LD 3.
      a. Material: Plastic Laminate: HGP post-formed.
      b. Front Edge: Rolled front and back edge profile.
      c. Backsplash: 4" high square backsplash with top lip capable of being scribed to wall. Provide this backsplash at all locations except where backsplash is specifically noted to be omitted or otherwise modified.
      d. Plastic Laminate Selection: Architect will make plastic laminate selections from one or more of the following manufacturers: Wilsonart, Nevamar, or Formica. Multiple plastic laminate color selections may be made. Not all selections will be from the same manufacturer. Maximum of two different plastic laminate colors will be made.

   2. Countertop ADA (Americans with Disabilities Act) Requirements: The following special requirements shall be met, except where indicated otherwise. Typical all countertop materials.
      a. Countertop height: With or without cabinet below, not to exceed a height of 34 inches A.F.F., (Above Finished Floor), at a surface depth of 24 inches.
      b. Knee space clearance: to be minimum 27" A.F.F., and 30" min. clear span width. See Drawings.

C. Cabinets:
   1. Custom Manufacturers shall be certified by the AWI Quality Certification Program to perform work in the Section of the AWI Grade of Work specified. Cabinets to be fabricated to meet AWI Architectural Woodwork Standard Grade of Custom.
   2. Medium Density Particleboard: ANSI A208.1, Grade M-2.
   3. Hardboard: AHA A135.4, Class 1 tempered. Cabinet backs only.
   4. Cabinets and doors to be solid wood construction.
   5. Plywood: Hardwood plywood of any species similar in color and grain to exposed wood. HPVA HP-1, Grade C faces and Grade J crossbands. Semi-exposed backs of plywood with exposed faces shall be the same species as faces.
   6. Beaded Inset Door and Drawer Face Design: Door/drawer to be standard beaded inset design.
   7. Provide full sub-top for all base cabinets as recommended by countertop manufacturer except sink cabinets. Sink cabinets shall have a vertical front panel in lieu of a full sub-top.
   8. See hardware and accessories listed below.

D. Hardware and Accessories
   1. Batt Hinges: BHMA A 156.9, Heavy duty five knuckle, 2 3/4" hinges, soft close. Finish as selected by Architect.
   2. Pulls: By Richelieu, Transitional Metal Pull #8695 design, 6 5/16 inch center to center, finish as selected by architect.

3. Drawer Slides: BHMA A 156.9.
4. Adjustable Shelf Supports: To be twin pin design with anti tip-up shelf restraints for both 3/4 inch and 1 inch shelves. Design to include keel to retard shelf slide-off, and slot for ability to mechanically attach shelf to clip. Load rating to be minimum 300 lbs. each support without failure. Cabinet interior sides shall be flush, without shelf system permanent projection.

E. Sealants and Adhesives: All field-applied sealants shall comply with the following VOC limits:
1. Sealant primers: 250 g/L (Sealant Primers, Architectural Nonporous).
2. Sealants: 250 g/L (Architectural Sealant)
3. Countertop Adhesive: 80 g/L (Contact Adhesive)

PART 3 EXECUTION

3.1 INSTALLATION

A. Field verify all measurements prior to fabrication of casework. Components not fitting existing conditions shall be replaced without additional cost to Owner. Verify that surfaces and internal wall blocking are ready to receive work.

B. Coordination:
1. Coordinate plumbing, power and communication wiring requirements and wiring locations with respective contractors for items requiring those connections.
2. Where sinks occur in counter tops, This Contractor shall provide those cutouts per templates provided by the Plumbing Contractor.
3. Where power/data receptacles occur in the back or side of cabinets (typically upright cabinets), Contractor shall provide factory-cut openings in cabinets for access to receptacles.

C. Install accessories with vandal resistant fasteners. Install miscellaneous accessories in accordance with manufacturer's instructions. Adjust for proper operation. Install plumb and level in accordance with manufacturer's instructions and in coordination with other trades.

D. Casework is to be installed plumb and true and is to be securely anchored in place. Scribe casework fillers as necessary for tight fit. Wall cabinets shall be securely fastened to solid supporting material; not to plaster, lath, or wallboard.

E. Make final adjustment to doors and drawers. Doors shall swing freely, catches shall hold securely, and all doors shall be aligned both vertically and horizontally. Drawers shall open and close smoothly, without binding and without excessive side play.

F. Cleanup: Empty drawers of dirt and dust. Wipe out cabinet interiors to remove dirt and dust. Remove pencil or other marks, excess adhesive, etc. from cabinets and countertops. Remove all packaging, scraps, and debris resulting from installation activities. Remove surplus materials, rubbish and debris resulting from installation as work progresses and upon completion of work.

END OF SECTION