## Request for Bids Lansing School District Purchasing Department 519 West Kalamazoo Lansing, MI 48933

## This is not an order

Sealed proposals for the furnishing of items and services listed on the sheets attached to the bid proposal documents that are available on our web-site will be received in the Lansing School District Purchasing Office, 519 W. Kalamazoo St., Lansing, Michigan 48933 until

## June 18, 2025, 2:00 PM local time.

At this time and place bids will be opened publicly and read aloud.

One (1) original and Two (2) copies of the bid are to be submitted on the forms furnished by the Lansing School District in a sealed envelope and clearly marked:

## Bid SO-1839 Sheridan Road Elementary Room Renovations BID DOCUMENTS WILL BE POSTED BY June 2, 2025

To obtain a copy of this request for bid please visit our web site at:

## www.lansingschools.net.

(Click on Quicklinks at the top and click on Vendors (Bid Info), scroll down to Current Requests for Bids or Proposals) or the bid documents are also posted on the State of Michigan's procurement system SIGMA. If you need assistance, please contact the Lansing School District Purchasing Department at 517-755-3030.

## No faxed, telephone or e-mailed bids will be accepted. Late submittals will not be considered.

All questions must be in writing and should be directed to Jon Laing, Director of Procurement at:

<u>Projects@lansingschools.net</u>, no later than 12:00 PM on Wednesday, June 11, 2025. Addendums will be posted on the Lansing School District's web-site and SIGMA as they are issued.

All bids/proposals must be accompanied by a 5% bid bond and a sworn and notarized statement disclosing any familial relationship with the Board of Education and selected staff. Bids must include the completed statement to be accepted or considered.

All bids shall be submitted in accordance with the attached instructions and shall remain firm for a period of ninety (90) days after the opening of bids.

A bid bond is required with this bid in the amount of 5% of the total bid amount. Certified payrolls are required with each invoice or pay application. A performance, labor and materials bond will be required to cover 100% of the project.

The Lansing School District reserves the right to reject any or all bids in whole or in part and to accept the proposal or portion of the proposal that, in their opinion, best serves the interests of the Lansing School District.

| Lansing School District |  |  |
|-------------------------|--|--|
| Jon Laing               |  |  |
| Director of Procurement |  |  |

## PRE-BID INFORMATION

There will be a Pre-Bid Meeting held Thursday, June 5, 2025 at 3:30 PM at Sheridan Road Elementary, 16900 N. Cedar St., Lansing, MI. Attendance is HIGHLY RECOMMENDED.



## Lansing School District 519 W. Kalamazoo St. Lansing, MI 48933

## PROJECT MANUAL Division 0 (Procurements & Contracting Requirements)

## <u>Sheridan Road STEM Magnet School – Classroom Renovations</u>

## **Sheridan Road Magnet School**

16900 N. Cedar Street Lansing, MI 48906

## Prepared for:

LANSING PUBLIC SCHOOLS 519 W. Kalamazoo St. Lansing, MI 48933

## ARCHITECT:

Colliers Engineering & Design 560 5<sup>TH</sup> St. NW, Suite 305 Grand Rapids, MI 49504

## PROJECT #:

25004227A - Sheridan Road STEM Magnet School - Classroom Renovations

May 30, 2025 - Issued for BIDS AND PERMITS

Lansing School District Sheridan Road STEM Magnet School – Classroom Renovations May 30, 2025



## **VOLUME 1**Division 0 Thru 1 – Applicable to All Contracts

## **DIVISION 0 - PROCUREMENT AND CONTRACTING REQUIREMENTS**

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- AFFIDAVIT OF BIDDER
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## **DIVISION 1 - GENERAL REQUIREMENTS**

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## DOCUMENT 000115 - LIST OF DRAWING SHEETS

## 1.1 LIST OF DRAWINGS

- A. Drawings: Drawings consist of the Contract Drawings and other drawings listed on the Drawing Index separately bound drawing set titled Lansing School District, Sheridan Road STEM Magnet School Classroom Renovations, dated May 30, 2025.
  - 1. The applicable drawings for each Contract are as noted on the Drawing Index.
- B. The drawings for related contracts are listed on the Title Sheet for reference. Examine the drawings for related contracts to ascertain the relationship of the Work to the related contracts.

**END OF DOCUMENT 000115** 

Lansing School District Sheridan Road STEM Magnet School – Classroom Renovations May 30, 2025



# INSTRUCTIONS TO BIDDERS



### **INSTRUCTIONS TO BIDDERS**

## **EXAMINATION OF DOCUMENTS**

Carefully examine and be familiar with the Contract Documents (as defined in Article 1.1 of the General Conditions).

Examine the information concerning subsurface or other latent physical conditions. It is presented in good faith but is not intended as a substitute for personal investigation, interpretations or judgment of the Contractor.

## **VISIT TO THE SITE**

Bidders will have an opportunity to visit the site of the work which will be coordinated through the design professional. Site address is as follows:

Sheridan Road STEM Magnet School 16900 N Cedar St Lansing, MI 48906

Attendance at the site visit is not mandatory but highly recommended in order to bid for the work. Contact one of the Designated Contacts listed on the Notice to Bidders at least 24 hours in advance of the site visit time to notify of your intent to attend.

Become familiar with restrictions and regulations relating to the work. Existing restrictions and regulations will not be considered as grounds for any additional cost over the Contract sum.

Contractor will be expected to assume the risk of encountering any subsurface or other latent physical condition which can be reasonably anticipated on the basis of documentary information provided by the Municipality and from inspection and examination of the site.

## **RESOLUTION OF DISCREPANCIES AND AMBIGUITIES**

Direct all questions regarding the intent or meaning of the drawings or specifications to the Design Professional as noted in the Notice to Bidders. Any reply to such an inquiry, including the initial questions, will be communicated by Addendum to all bidders who have obtained drawings and specifications. Inquiries that do not follow the above process will not be answered.

Interpretations of Contract Documents by Municipality personnel or the Design Professional are not binding.

## **PREPARATION OF BIDS**

Bidders shall submit bids on the bid form attached hereto, including the Non-Collusive/Procurement Lobbying Bidding Certification. Make no changes of any kind in the bid form phraseology, or anywhere on the bid form. Fill in all blank spaces legibly and in ink. All amounts shall be given in full in both writing and in figures. In case of a discrepancy between the amount written in words and that given in figures, the amount written in words is binding.

## Lansing School District Sheridan Road STEM Magnet School – Classroom Renovations May 30, 2025



When the Contract Documents require alternate price quotations, indicate the amounts to be added to or deducted from the base bid. If the work is to be performed at no change in cost, indicate the word "NONE". Any bid which fails to indicate a sum or the word "NONE", shall be considered informal and may be rejected.

Sign the bid form in the space provided. An officer or a principal of a corporation or a partnership signing for the bidder shall print or type the legal name of the person, partnership or corporation on the line provided and place his or her signature after "SIGN BID HERE". The same procedure shall apply to the bid of a joint venture by two or more firms, except that the signature and title of an officer or a principal of each member firm of the joint venture shall be required.

Note in the spaces provided on the bid form, the Addenda, by numbers and dates, which have been received. If no Addenda have been received, insert the word "NONE".

Use street address in addition to a Post Office Box address (if any).

## **BID SECURITY INFORMATION**

Bid Security, in the amount of five percent (5%) of the total amount of the Bid, is required to be submitted with the bid as a guarantee that the bidder will enter into the Contract if awarded, and that the bidder will furnish all required information to enter into Contract within ten (10) days after receipt of notice of award. Bid Security shall consist of a bid bond or a certified check or a bank check drawn upon a legally incorporated bank or trust company and payable to the Municipality. The bid bond must be from a Surety company approved by the State. The form of any bid bond and the surety issuing it shall be subject to the approval of the District. The Bid Security of the two lowest bidders will be returned upon the acceptance of Performance and Payment Bonds and the execution of the Contract by the lowest bidder. The Bid Security of all other bidders will be returned as soon as possible after the low bidder is determined.

## SUBMISSION OF BID

Submit Bid Form and Bid Security in a sealed envelope. All bids must be received at or before the time specified in the Notice to Bidders, at the place designated for bid opening.

A late bid will be considered if (1) its arrival at the place designated after the time specified can be shown by documentary or other proofs to be due to the mishandling by employees of the District and (2) that absent such mishandling, the bid would have arrived timely. Delays in the U.S. Mail or any other means of transmittal, including couriers or agents of the State, other than employees of the District will not suffice to excuse late arrival.

A late bid not eligible for consideration will be returned unopened with notification of the reason for its refusal.

## MODIFICATION OF BID

Bid modifications by amendment may be considered on condition that:

- 1. The amendment arrives before the time set for the bid opening.
- 2. The amendment is in writing and signed by the bidder.
- 3. The bid, as amended, conforms in all respects with the Contract Documents.



## **WITHDRAWAL OF BID**

A bid may be withdrawn at any time prior to the time specified for opening.

After the bid opening, a bid may not be withdrawn prior to the date that is forty-five (45) days after such bid opening. Withdrawal of bid prior to such date would be cause for forfeiture of the Security Bond.

Notwithstanding the foregoing, after the bid opening, a bidder may request the withdrawal of the bid on the ground of demonstrable mistake in accordance with Michigan General Municipal Law. Upon prompt written application, the District may conduct a hearing. Each element must be proven by clear and convincing evidence in order to justify withdrawal. The judgment of the District shall be final and conclusive. Should the judgment be against allowing withdrawal, then the failure of the Contractor to proceed would be cause for forfeiture of their Bid Security.

## **DISQUALIFICATION OF BIDDERS**

The District reserves the right to disqualify bids, before or after opening, upon evidence of collusion with intent to defraud or other illegal practices upon the part of the bidder.

## **OPENING OF BIDS**

Bids shall be opened as announced in the Notice to Bidders. Bidders or their authorized agents are invited to attend. The bids will be publicly opened.

## **AWARD OF CONTRACT**

The Contract shall be awarded to the lowest responsible and reliable bidder as will best promote public interest unless all bids are rejected by the District.

If alternates are included in the Bidder's bidding documents, the District reserves the right to accept or reject any or all alternates. The lowest bid will be determined by the sum of the base bid and the accepted alternates in the manner prescribed on the Bid Form.

If alternate base bids are indicated in the bidding documents, the low bid will be determined by the lowest amount bid for any of the alternate base bids.

The District reserves the right to reject any or all bids, and advertise for new bids, if in its opinion the best interest of the District will hereby be promoted. In the event that all bids are rejected, each bidder will be so notified.

No later than forty-five (45) days after the bid opening, the District shall accept a bid or reject all bids. Written notification of acceptance with the final Contract Documents shall be mailed or delivered to the selected bidder.

If the selected bidder fails to execute and return the Contract Documents without modification with the bidder's Performance and Payment Bonds and Certificate of Insurance, within ten (10) days of receipt of notification, the District shall have the right to reject the bid and select next lowest bidder. In this case, the

Lansing School District Sheridan Road STEM Magnet School – Classroom Renovations May 30, 2025



Bid Security of the first bidder shall be forfeited.

## **INFORMALITIES**

Any bid which fails to conform to the requirements of the Contract Documents may be rejected.

The District may waive any informality or afford the bidder an opportunity to remedy any deficiency resulting from a minor informality or irregularity.

## **DETERMINATION OF CONTRACTOR'S RESPONSIBILITY**

- 1. Contractor shall at all times during the contract term remain a responsible vendor. Contractor agrees, if requested by the District, to present evidence of its continuing legal authority to do business in the state of Michigan, its integrity, experience, ability, prior performance, and organizational and financial capacity to carry out the terms of this contract.
- 2. The District reserves the right to suspend any or all activities under this contract, at any time, when the District discovers information that calls into question the responsibility of Contractor. In the event of such suspension, Contractor will be given written notice outlining the particulars of such suspension. Upon issuance of such notice, Contractor must comply with the terms of the suspension order. Contractual activities may resume at such time as the District issues a written notice authorizing resumption of contractual activities.
- 3. Notwithstanding the provision of Article 15 of the General Conditions of the contract pertaining to Termination and Revocation, upon written notice to Contractor and a reasonable opportunity to be heard with appropriate District staff, this contract may be terminated by the District at Contractor's expense where Contractor is determined by the District to be non-responsible. In such event, the District may pursue available legal or equitable remedies for breach.

## LIQUIDATED DAMAGES

Liquidated damages do not apply to this project

## REFUND OF DEPOSIT FOR CONTRACT DOCUMENTS

Full refund of the deposit for one set of Contract Documents will be made to Bidders who return the Contract Documents in good condition within thirty (30) days following the award of the contract or rejection of the bids covered by such Contract Documents. Non-bidders who have placed deposits for any sets of Contract Documents will be refunded fifty percent (50%) of their deposit within thirty (30) days following the award of the contract or rejection of the bids covered by the Contract Documents.

## WORKERS' COMPENSATION INSURANCE AND DISABILITY BENEFITS REQUIREMENTS

A policy covering the obligations of the Contractor in accordance with the Workers' Compensation Law and the Disability Benefits Law covering all operations under the contract, whether performed by the contractor or the subcontractor is required for all contracts. See Article 21.4 and 21.5 of the General Conditions attached hereto. Special attention is called to the insurance requirements contained in the Supplementary Conditions for Contracts attached to the General Conditions as Appendix A.



# GENERAL CONDITIONS



### **GENERAL CONDITIONS**

## **Table of Articles**

- 1. The Contract Documents
- 2. Defined Terms
- 3. Interpretation of the Contract Documents
- 4. Shop Drawings and Other Submittals
- 5. Schedule
- 6. Materials
- 7. Contractor's Supervision
- 8. Use of Premises
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- 27. Miscellaneous Provisions

## Appendices:

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## ARTICLE 1 – THE CONTRACT DOCUMENTS

- 1.1 The "Contract Documents" are comprised of the following documents, in the following order of precedence all of which are hereby incorporated by reference and shall hereinafter be referenced as the "Contract."
  - General Conditions;
  - Agreement;
  - Technical Drawings;
  - Instructions to Bidders;
  - Notice to Bidders;
  - Performance Bond;
  - Payment Bond;
  - All Required Forms and Certificates of Insurance;
  - All Addenda issued prior to the receipt of bids.
- 1.2 The Contract Documents form the Contract. The Contract represents the entire and integrated agreement between the parties and supersedes all prior negotiations, representations, and agreements, either written or oral.
- 1.3 The Contract may <u>not</u> be modified except in accordance with the General Conditions.

## **ARTICLE 2 – DEFINED TERMS**

- 2.1 The following terms shall have the meanings ascribed to them in this Article, wherever they appear in the Contract Documents.
- 2.2 The term "Bid" means the approved prepared bid form on which the Bidder is to submit or has submitted a bid for the Project contemplated.
- 2.3 The term "Bidder" means any individual, firm or corporation submitting a Bid for the Project contemplated, acting directly or through a duly authorized representative.
- 2.4 The term "Bid Security" means the collateral in the form of a certified check, bank check or bid bond to be furnished by the Bidder as a guarantee of his or her ability to procure the minimum equipment and liquid assets specified and that Bidder shall enter a Contract with the District for the performance of the Work.
- 2.5 The term "Change Order" means a written order to the Contractor signed by the Contractor and the Municipality authorizing a Change in the Work or an adjustment in the Contract Sum or the Contract Time. The Contract Sum and the Contract Time may be changed only by Change Order.
- 2.6 The term "Comptroller" means the Comptroller of the State of Michigan.
- 2.7 The term "Contractor" means the person, firm, partnership or corporation executing the Contract or the successor or assignee of the Contractor approved in writing by the District's Representative.
- 2.8 The term "Days" shall mean calendar days.
- 2.9 The term "GOSR" shall mean the Governor's Office of Storm Recovery.



- 2.10 The term "Liquidated Damages" means the total amount of money to be assessed against the Contractor for delay in completion of the Contract. The total amount of such damages shall not exceed the amount per day stipulated in Article 14.10 times the numbers of Days completion is delayed, unless otherwise specified in the Notice to Bidders.
- 2.11 The term "Material" means any approved material acceptable to the Municipality and conforming to the requirements of the Technical Specifications and Drawings. All processes and materials shall at all times be open to inspection and testing by the District and its authorized representatives.
- 2.12 The term "District Representative" means the representative of the District who will have general direction and supervision of the work. The District may designate any person, persons, firm, partnership or corporation to act as District Representative.
- 2.13 The term "District" shall mean the Lansing School District.
- 2.14 The term "Offerer" shall mean the individual or entity, or any employee, agent of consultant or person acting on behalf of such individual or entity that contacts a governmental entity about a governmental procurement during the restricted period of such governmental procurement.
- 2.15 The term "Payment Bond" is a bond guaranteeing prompt payment of monies due to all persons furnishing labor or materials to the Contractor or any Subcontractor in the prosecution of the Work provided for as set forth in State Finance Law Section 137.
- 2.16 The term "Performance Bond" means a written guaranty from a third-party guarantor provided to the District by Contractor upon the award of the Contract to ensure the full performance of the Work and completion of the Project as set forth in the Contract Documents. The form of the Performance Bond is subject to the approval of the District.
- 2.17 The term "Physical Completion Date" means the date upon which the Contractor and the District Representative agree that all deficiencies noted on the final inspection report have been corrected as evidenced by the issuance of the Physical Completion Report.
- 2.18 The term "Physical Completion Report" means the report issued by the District Representative in which all the deficiencies in the Work are noted.
- 2.19 The term "Plan" or "Drawings" means an illustrated graphic that typically includes technical layout information, specification data, and details as required to facilitate the construction of an entire project or smaller unit of work.
- 2.20 The term "Premises" means all land, buildings, structures, or other items of any kind located around or adjacent to the Site and owned, occupied or otherwise used by the District.
- 2.21 The term "Project" means Work at the site carried out pursuant to one or more sets of Contract Documents.
- 2.22 The term "Project Manual" means the combined Notice to Bidders, Instructions to Bidders, Bid Forms, Agreement Form, General Conditions, Appendix A Supplementary Conditions for



Contracts, Appendix B – Supplemental Instructions to Bidders for Participation by MWBE, the Summary of and Implementation Guidelines for § 139-J of the State Finance Law, Other Sample Forms, Prevailing Wage Rates, the Technical Specifications and Drawings, and the Bid, issued prior to the receipt of bids.

- 2.23 The term "Provide" means to furnish and install, complete, in place and ready for operation and use
- 2.24 The term "Samples" are physical examples submitted by the Contractor of materials, equipment or workmanship to establish a standard, which the Contractor is required to meet.
- 2.25 The term "Schedule of Values" means a breakdown of the Contract Sum in tabular form that lists the dollar value of individual work items. Schedule to be provided in enough detail to facilitate evaluation of the Payment Application by the Municipality.
- 2.26 The term "Shop Drawings" are drawings, diagrams, illustrations, schedules, test data, performance charts, cuts, brochures and other data which are prepared by the Contractor or any Subcontractor, manufacturer, supplier or distributor, and submitted by the Contractor and which illustrate a portion of the Work.
- 2.27 The term "Site" means the area within the contract limit lines as identified in the drawings, or adjacent areas designated in writing by the District. Some contracts might involve separate and distinct sites.
- 2.28 The term "State" means the State of Michigan.
- 2.29 The term "Subcontractor" means a person, firm, partnership or corporation executing a portion of the Work for the "Contractor," who has the sole responsibility for his or her performance.
- 2.30 The term "Substantial Completion" means that the Work or major milestones thereof as contemplated by the terms of this Contract are sufficiently complete so that the Site can occupy or utilize the Work or designated portion thereof for the use for which it is intended.
- 2.31 The term "Surety" means the entity which is bound with and for the Contractor, and which is engaged to be responsible for the Contractor's acceptable performance of the Project for which he or she has contracted and for all Labor, Performance, and Material Bonds.
- 2.32 The term "Technical Specifications" means the body of directions and/or requirements contained in this document, together with all documents of any description, and agreements made (or to be made), pertaining to the methods (or manner), of performing the work and quality (as shown by test records) of accepted materials to be furnished under this Contract.
- 2.33 The term "Work" means the total sum of labor, supervision, materials and equipment necessary for the proper completion of the Contract as set forth in the Contract Documents.

## ARTICLE 3 – INTERPRETATION OF CONTRACT DOCUMENTS

3.1 The Technical Drawings are complementary, and what is called for by one shall be as binding as if called for by all. In all cases, labelled dimensions shall take precedence over scaled dimensions, and the larger scale details take precedence over smaller scale drawings. In the case of difference between Drawings and Technical Specifications, the Technical Specifications shall govern.



- 3.2 Upon his or her own initiative or the Contractor's written request, the District may issue written interpretation or drawings necessary for the proper execution or progress of the work which interpretation shall be consistent with and reasonably inferable from the Contract Documents.
- 3.3 The language of the Contract Documents is directed at the Contractor unless specifically stated otherwise.
- 3.4 The organization of the Technical Specifications into divisions, sections and articles, and the arrangement of Drawings shall not control the Contractor in dividing the Work among subcontractors or in establishing the extent of Work to be performed by any trade.
- In the event of conflicting provisions in the Contract Documents, the Technical Specifications shall take precedence over the Drawings.
- 3.6 If during the performance of the Work, the Contractor identifies a conflict in the Contract Documents, or a variation from any applicable statute, rule or regulation, the Contractor shall promptly notify the District in writing of the conflict. The District shall promptly acknowledge the notification in writing and advise the Contractor, pursuant to Paragraph 3.2 of these General Conditions, as to the interpretation to be followed in the performance of the Work.

## ARTICLE 4 – SHOP DRAWINGS AND OTHER SUBMITTALS

- 4.1 Shop Drawings (see Article 2.26)
- 4.2 Product data are manufacturer's catalog sheets, brochures, standard diagrams, illustrations, schedules, performance charts, test data, standard schematic drawings, specifications and installation instructions.
- 4.3 Samples are physical examples submitted by the Contractor of materials, equipment or workmanship to establish a standard that the Contractor is required to meet.
- The Contractor and the District shall adhere to the submittal and scheduling requirements for Shop Drawings, product data and Samples set out in the Technical Specifications and Drawings.
- 4.5 By approving and submitting Shop Drawings and samples, the Contractor represents that the Contractor has determined and verified all field measurements, field construction criteria, materials, catalog numbers and similar data and that he or she has checked and coordinated each Shop Drawing and Sample with the requirements of the Contract Documents.
- 4.6 The District's approval of Shop Drawings, product data and Samples shall not relieve the Contractor of responsibility for any deviation from the requirements of the Contract Documents unless the Contractor has previously informed the District of the deviation in a separate writing at the time of submission and received written approval for the specific deviations. The District's approval shall not relieve the Contractor from responsibility for errors or omissions in the shop drawings, product data or samples.
- 4.7 No portion of the Work requiring Shop Drawings, product data or Sample submission shall be commenced until the appropriate submission has been approved by the District.
- 4.8 Any portions of the Work requiring Shop Drawings, product data and Samples shall be installed in accordance with the approved Shop Drawings, product data and Samples.



## **ARTICLE 5 – SCHEDULE**

- 5.1 Each Contractor shall deliver to the District and receive approval prior to commencing work, a detailed schedule concerning his or her operations upon the Project on a form acceptable to the District, which shall indicate completion within the specified time frame, to the satisfaction of the District.
- 5.2 During the term of this Agreement, the District may require any Contractor to modify any schedules which he or she has submitted either before or after they are approved so that:
  - (a) The Work or the Project may be properly progressed.
  - (b) Changes in the Work or the Work of other Contractors are properly reflected in these schedules.

## **ARTICLE 6 - MATERIALS**

- All materials, equipment and articles used permanently in the Work that become the property of the District shall be new unless specifically stated otherwise in the Contract.
- 6.2 Except where specifically provided otherwise, whenever any product is specified by the name, trade name, make, model or catalog number of any manufacturer or supplier, the intent is not to limit competition, but to establish a standard of quality that the District has determined is necessary. The words "or equal" shall be deemed inserted in each instance. The Contractor may use any product equal to that named in the Contract Documents that is approved by the District and which meets the requirements of the Contract Documents provided the Contractor gives timely notice of his or her intent in accordance with the submittal and scheduling requirements.
- 6.3 The Contractor shall have the burden of proving at the Contractor's own cost and expense to the satisfaction of the District that the proposed product is equal to the named product. The District may establish criteria for product approval. The Municipal Representative shall determine in his or her absolute discretion whether a proposed product is to be approved.
- 6.4 If the Contractor fails to comply with the provisions of this Article, or if the District's Representative determines that the proposed product is not equal to that named, the Contractor shall supply the product named.
- 6.5 The Contractor shall have and make no claim for the extension of time or for damages because the District Representative requires a reasonable period of time to consider a product proposed by the Contractor or because the District Representative disapproves such a product.
- 6.6 Where optional materials or methods are specified, or where "or equal" submissions are approved, the Contractor shall make all adjustments to contingent work, whether the contingent work be the Work of its contract or the Work of another Contract, necessary to accommodate the option or "or equal" product it selects without extra or additional cost.
- 6.7 The Contractor shall within 48 hours remove from the Premises all materials rejected by the District as failing to conform to the Contract, whether incorporated in the Work or not, and the Contractor shall promptly substitute satisfactory materials in accordance with the Contract and



- without expense to the District. In addition, the Contractor shall bear the expense of making good all work of other contractors destroyed or damaged by such removal or replacement.
- Royalties and patents: The Contractor shall pay all royalties and license fees. The Contractor shall defend all suits or claims for infringement of any patent rights and shall defend, indemnify and save the District harmless from loss on account thereof, except that the Municipality shall be responsible for all such loss when a particular design, process or the product of a particular manufacturer or manufacturers is specified.
- Asbestos Free Materials: All materials used for construction shall be free of asbestos containing materials. If asbestos is found in installed products not previously approved by the District, then it will be the responsibility of the Contractor to abate the asbestos containing material and replace the work with new asbestos free materials at no cost to the District.
- 6.10 The Contractor agrees that if the value of this Contract exceeds \$100,000 all structural steel, reinforcing steel and other major steel items to be incorporate in the Work of this Contract shall be produced and made in whole or substantial part in the United States, its territories or possessions.

## ARTICLE 7 - CONTRACTOR'S SUPERVISION

- 7.1 The Contractor shall designate a competent supervisor for the Work to represent the Contractor at the site at all times with authority to act for the Contractor ("Contractor's Representative"). The Contractor shall notify the District in writing of the identity of the Contractor's Representative prior to the commencement of the Work. All directions given the Contractor's Representative shall be as binding as if given to the Contractor.
- 7.2 Should the District deem any employee of the Contractor incompetent or negligent or for any cause unfit for his or her duty, the Contractor shall dismiss such employee and he or she shall not again be employed on the Work.
- 7.3 The Contractor's use of any Subcontractor shall not diminish the Contractor's obligations to complete the Work in accordance with the Contract. The Contractor shall control and coordinate the Work of its Subcontractors.
- 7.4 The Contractor shall be responsible for informing its Subcontractors and suppliers of all the terms, conditions and requirements of the Contract Documents.

## **ARTICLE 8 – USE OF PREMISES**

- 8.1 If the Premises are occupied, the Contractor, the Contractor's Subcontractors and their employees shall comply with the regulations governing access to, operation of, and conduct while in or on the Premises and shall perform the Work in such a manner as not to unreasonably interrupt or interfere with the conduct of business.
- 8.2 The Contractor, the Contractor's Subcontractors and their employees shall not have access to or be admitted into any area of the Premises outside the Site except with the written permission of the District.



## ARTICLE 9 – PERMITS AND COMPLIANCE WITH APPLICABLE LAWS

- 9.1 The Contractor shall obtain, maintain and pay for all permits and licenses legally required and shall give all notices, pay all fees, and comply with all laws, rules and regulations applicable to the Work at no additional cost.
- 9.2 Contractor shall comply with all federal and state laws, codes and regulations applicable to the conduct of the activities authorized by this Contract.
- 9.3 If, in carrying out this Work, a harmful dust hazard is created for which appliances or methods for the elimination of harmful dust have been approved by the Industrial Board of Appeals, then the Contractor shall install, maintain and effectively operate such appliances and methods during the life of this Contract.
- 9.4 In accordance with Worker's Compensation Law (WCL) §141-b (Suspension and Debarment), any person subject to a final assessment of civil fines or penalties or a stop- work order, or that has been convicted of a misdemeanor for a violation of WCL §§ 26 (Enforcement of Payment in Default), 52 (Effect of Failure to Secure Compensation) or 131 (Payroll Records), and any substantially-owned affiliated entity of such person, shall be ineligible to submit a bid on or be awarded any such public work contract or subcontract with the State, any municipal corporation or public body for a period of one (1) year from the final determination or conviction. Any person convicted of a felony under Article 8 (Administration) of the WCL, or a misdemeanor under WCL §§125 (Job Description Prohibited Based on Prior Receipt of Benefits) and 125-a (Civil Enforcement) shall be ineligible to submit a bid or be awarded any public work contract or subcontract with the State, any municipal corporation or public body for a period of five (5) years from such conviction.
- 9.5 During the term of this Contract, the Contractor agrees to report any observed or suspected illegal activity of its employees, agents or other third parties, to the District, GOSR, the State Inspector General or other law enforcement agency. Failure to report criminal conduct associated with a contract awarded by the District, shall be considered a material breach of this Contract and may provide grounds for disqualification of the subject Contractor or Subcontractor for award of future contracts. The Contractor shall include the provisions of this section in every subcontract, in such a manner that the provisions will be binding upon each Subcontractor as to work performed in connection with this Contract.

## ARTICLE 10 - INSPECTION AND MATERIAL ACCEPTANCE

10.1 The District will inspect and test the Work at reasonable times at the Site, unless the District determines to make an inspection or test at the place of production, manufacture or shipment. Such inspection or test shall be conclusive as to whether the material and workmanship inspected or tested conforms to the requirements of the Contract. Such inspection or test shall not relieve the Contractor of responsibility for damage to or loss of the material prior to acceptance. Conducting inspections or tests shall not diminish the District the right to reject the completed Work. The Contractor shall, without charge, promptly correct any Work the District determines does not conform to the Contract Documents unless in the public interest the District consents to accept such Work with an appropriate adjustment in the Contract price. The Contractor shall promptly remove rejected material from the Premises.



- 10.2 If the Contractor does not promptly correct rejected Work including the Work of another contractor or Subcontractor destroyed or damaged by removal, replacement, or correction, the District Representative may (1) correct such Work and charge the cost thereof to the Contractor; or (2) terminate the Contract in accordance with Article 15 of General Conditions.
- 10.3 The Contractor shall furnish promptly, without additional charge, all facilities, labor, material and equipment reasonably needed to perform in a safe and convenient manner such inspections and tests, as the District Representative requires.
- 10.4 The Contractor shall keep the District Representative informed of the progress of the Work and particularly when the Contractor intends to cover Work not yet inspected or tested. All inspection and tests by the District Representative shall be performed in such manner as not to unreasonably delay the Work. The Contractor shall be charged with any additional cost of inspection when the Work is not ready at the time specified by the District Representative for inspection.
- 10.5 Should the District Representative determine at any time before acceptance of the entire Work to examine Work already completed by removing, uncovering or testing the same, the Contractor shall, on request, promptly furnish all necessary facilities, labor, materials and equipment to conduct such inspection, examination or test. If such Work is found to be defective or nonconforming in any material respect, the Contractor shall defray all the expenses of such examination and satisfactory reconstruction. If the Work is found to meet the requirements of the Contract Documents, the District Representative shall compensate the Contractor for additional services involved in such examination and reconstruction. If completion of the Work has been delayed, the contractor may request a suitable extension of time.
- 10.6 No previous inspection or certificates of payment shall relieve the Contractor from the obligation to perform the Work in accordance with the Contract Documents.
- 10.7 The Contractor shall remedy all defects, and pay for the cost of any damage to other Work resulting therefrom, notice of which shall have been provided within a period of one year from the Physical Completion Date in accordance with the General Conditions.

## **ARTICLE 11 – CHANGE ORDERS**

11.1 The District may make changes by altering, adding to or deducting from the Work, and adjusting the Contract price accordingly. All changes to the Work shall be executed in conformity with the terms and conditions of the Contract Documents unless otherwise provided in the Order on Contract. Any change in the Contract sum or time for completion shall be adjusted prior to issuing the Order on Contract.



- 11.2 No written or oral instructions shall be construed as directing a change in the Work unless in the form of an Order of Contract signed by the District and the Contractor. The Order of Contract shall describe or enumerate the Work to be performed and state the price to be added to or deducted from the Contract sum. If the extent or cost of the Work is not determinable until after the changed Work is performed, the Order on Contact shall specify the method for determining the cost and extent of the changed Work when completed. If the Contractor disagrees as to any element of the Order on Contract, the Contractor shall indicate the disagreement in writing on the face of the Order on Contract and promptly proceed in accordance with the Order on Contract.
- 11.3 If the Contractor is directed to perform Work for which the Contractor believes he or she is entitled to an Order of Contract, the Contractor shall give the District Representative prompt written notice and await instructions before proceeding to execute such Work. The District Representative may order the Contractor to execute the Work and proceed under the Disputes Clause.
- 11.4 The value of any Order of Contract shall be determined by one or more of the following methods:
  - (a) By acceptance of prices negotiated or established based on estimated cost plus overhead and profit as applicable.
  - (b) By Prices specifically named in the Technical Specifications or Bid Form.
  - (c) By acceptance of agreed unit prices based on estimated cost plus overhead and profit as applicable.
  - (d) By estimate of the actual cost of labor and materials plus overhead and profit, cost to be determined as the work progresses.
  - (e) By actual cost of labor and materials plus overhead and profit, cost to be determined as the work progresses.
  - (f) By estimate of the value as deducible from the approved detailed estimate.
- 11.5 Overhead shall be defined as an allowance to compensate for all costs, charges and expenses, direct or indirect, except for the actual cost of labor and materials as defined by paragraph 11.6. Overhead shall be considered to include, but not limited to insurance (other than as mentioned in paragraph 11.6) bond or bonds, field and office supervisors and assistants above the level of foreman, use of small tools and minor equipment, incidental job burdens, general office expenses, etc.
- 11.6 Actual cost of labor and material shall be defined as the amount paid for the following costs, to the extent determined reasonable and necessary:
  - (a) Cost of materials delivered to the job site for incorporation into the Contract Work. The value of any material removed and disposed of by the Contractor shall be a credit to the District.
  - (b) Wages paid to workers and foreman and wage supplements paid to labor organizations in accordance with current labor agreements.
  - (c) Premiums or taxes paid by the Contractor for Worker's compensation insurance, unemployment insurance, FICA tax and other payroll taxes as required by law, net of actual and anticipated refunds and rebates.



- (d) Sales taxes paid as required by law.
- (e) Allowance for use of construction equipment (exclusive of hand tools and minor equipment), as approved for use by the District Representative.
  - i. Rented equipment will be paid for at the actual rental cost.
  - ii. Gasoline, oil and grease required for operation and maintenance will be paid for at the actual cost.
  - iii. When, in the opinion of the Contractor, and as approved by the District Representative, suitable equipment is not available on the site, the moving of said equipment to and from the site will be paid for at actual cost.
  - iv. Self-owned equipment, including equipment rented from controlled or affiliated companies. The rate on self-owned equipment used for periods of under five (5) days will be an hourly rate established by taking any published rate which is mutually acceptable to the Contractor and the District Representative and determining an hourly rate on the basis of twenty-two (22) days per month and eight hours per day. Equipment used for periods of five (5) days or more will be billed at a rate equal to forty-five percent (45%) of the monthly rate. In the alternative, the District Representative may approve for reimbursement a rate representing the allocable costs of ownership.
- 11.7 Regardless of the method used to determine the value of any Order of Contract, the Contractor will be required to submit evidence satisfactory to the District Representative to substantiate each and every item that constitutes his or her proposal of the value of the change. The amounts allowed for overhead and profit shall not exceed the applicable percentages as established in the two following paragraphs.
- 11.8 If the work is done directly by the Contractor, overhead in an amount of ten percent (10%) may be added if method (a), (c), (d) or (e) is used, and to the cost of the labor and materials plus overhead there may be added ten percent (10%) for profit. The percentages for overhead and profit may vary accordingly to the nature, extent and complexity of the Work involved, but in no case shall exceed the percentages set forth in this paragraph and in paragraph 11.9. No percentages for overhead and profit will be allowed on payroll taxes or on the premium portion of overhead pay.
- 11.9 If the Work is done by a subcontractor, subcontractor's overhead in the amount of five percent (5%) may be added to the cost of labor and materials if method (a), (c), (d), and (e) is used and to the cost of labor and materials plus overhead there may be added ten percent (10%) for the subcontractor's profit. No percentage for overhead and profit will be allowed on payroll taxes or on the premium portion of overtime pay. However, to the extent that the aggregate dollar value of Orders on Contract exceeds \$75,000, the ten percent (10%) overhead applied to total costs of labor and materials incurred by the prime Contractor shall be reduced to five percent (5%). In addition, on all individual Orders of Contract in excess of \$75,000, the overhead shall be no more than five percent (5%) of the total actual cost of labor and materials incurred by the Contractor, and the combined Contractor's overhead and profit allowance applied to subcontract billings shall be no more than five percent (5%).
- 11.10 The District Representative shall determine by which of the foregoing methods of value of any changes shall be computed.
- 11.11 In computing the value of an Order on Contract which involved additions and deductions of Work



- and the added Work exceeds the omitted Work, overhead and profit shall be computed on the amount by which the cost of additional labor material exceeds the cost of the omitted labor and material, except no additional overhead and profit shall be allowed on value of work determined by method (b).
- 11.12 In computing the value of an Order of Contract which involves deductions and additions of Work and the omitted work exceeds the added Work, the Contractor will be allowed to retain the overhead and profit on the amount by which the omitted Work exceeds the added Work, except that no overhead and profit shall be retained on value of Work determined by method (b).
- 11.13 The Contractor may retain overhead and profit on an Order of Contract which involved deductions only, except that no overhead and profit shall be considered on value of Work determined by method (b).

## **ARTICLE 12 - SITE CONDITIONS**

- 12.1 If the Contractor encounters subsurface or other latent physical conditions at the Site which differ substantially from those shown, described or indicated in such information provided in the Contract Documents or from any information which is a public record and which subsurface or other latent physical condition could not have been reasonably anticipated from that information or from the Contractor's own inspection and examination of the Site, the Contractor shall give immediate written notice to the Municipal Representative before any such condition is disturbed. The Municipal Representative shall promptly investigate and, if it is determined that the conditions substantially differ from those that should have been reasonably anticipated, shall make such changes in the Contract Documents as may be required. If necessary, the Contract sum and completion date shall be adjusted by Change Order, to reflect any increase or decrease in the cost of, or time required for, performance of the Contract.
- 12.2 The Contractor shall protect trees, shrubbery and other natural features or structures within the Premises from being cut, trimmed, or injured, unless directed by the District Representative for preparing the Site for the Work. The Contractor shall prevent employees from tramping in the shrubbery and vehicles from being driven through wooded lands. When necessary, the Contractor shall protect trees adjacent to the premises in a matter satisfactory to the District Representative.
- 12.3 The Contractor shall provide and replant at its own expense trees, shrubbery, and other natural features destroyed or damaged. The Contractor shall conduct its operations within the Premises as directed by the District Representative.

## **ARTICLE 13 – SUSPENSION OF WORK**

- 13.1 Suspension of Work: The District Representative may order the Contractor in writing to suspend, delay, or interrupt performance of all or any part of the Work for a reasonable period of time as the District Representative, in his or her sole discretion, may determine ("Suspension Order"). The order shall contain the reason or reasons for issuance that may include but shall not be limited to the following: latent field conditions, substantial program revisions, civil unrest, and acts of God.
  - 13.1.1 Upon receipt of a Suspension Order, the Contractor shall, as soon as practicable, cease performance of the Work as ordered and take immediate affirmative measures to protect



- such Work from loss or damage.
- 13.1.2 The Contractor agrees that a suspension, interruption/delay of the performance of the Work pursuant to this Article shall not increase the cost of performance of the Work of this Contract.
- 13.1.3 A Suspension Order issued by the District Representative pursuant to this Article shall have duration not to exceed thirty (30) days. If the Contractor is not directed to resume performance of the Work affected by said Suspension Order prior to the expiration of thirty (30) days, the Contract may be terminated for the convenience of the District and the Contractor shall be reimbursed as provided by Article 15.
- 13.2 Stop Work Orders: If the Work is defective, or Contractor fails to supply sufficient skilled workers or suitable materials or equipment, or fails to furnish or perform the Work in such a way that the completed Work will conform to the Contract Documents, the District Representative may order Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of the District Representative to stop the Work shall not give rise to any duty on the part of the District Representative to exercise this right for the benefit of Contractor or any other party.
  - 13.2.1 Contractor shall bear all direct, indirect and consequential costs of such order to Contractor to stop Work including but not limited to fees and charges of engineers, architects, attorneys and other professionals, any additional expenses incurred by the District due to delays to others performing work under a separate contract with the Municipal Representative, and other contractual obligations, and Contractor shall further bear the responsibility for maintaining schedule and shall not be entitled to any extension of contract time or recovery of any delay damages due to the order to stop Work.
  - 13.2.2 In the event that Contractor fails to pay such costs within thirty (30) days after receipt of an invoice from the District, a Change Order or proposed Change Order may be issued incorporating the unpaid amount as an appropriate reduction in the Contract Price. If the parties are unable to agree as to the amount thereof, the Contractor may make a claim therefore as provided in Article 11 of the General Conditions.

## ARTICLE 14 – TIME OF COMPLETION AND TERMINATION FOR CAUSE

- 14.1 All time limits set forth in this Contract are of the essence. Failure by the Contractor to meet with the Contract deadlines shall be cause for the District to assess Liquidated Damages.
- 14.2 Termination for Cause. In addition to all other rights of termination provided by law and in this Contract, if any one or more of the following events shall occur, that is to say:
  - 14.2.1 If Contractor commences a voluntary case under any chapter of the Bankruptcy Code, as now or hereafter in effect, or if Contractor takes any equivalent or similar action by filing a petition or otherwise under any other federal or state law in effect at such time relating to the bankruptcy or insolvency;
  - 14.2.2 If a petition is filed against Contractor under any chapter of the Bankruptcy Code as now or hereafter in effect at the time of filing, or if a petition is filed seeking any such equivalent or similar relief against Contractor under any other federal or state law in



- effect at the time relating to bankruptcy or insolvency;
- 14.2.3 If Contractor makes a general assignment for the benefit of creditors;
- 14.2.4 If a trustee, receiver, custodian or agent of Contractor is appointed under applicable law or under contract, whose appointment or authority to take charge of property of Contractor is for the purpose of enforcing a lien against such property or for the purpose of general administration of such property for the benefit of Contractor's creditors;
- 14.2.5 If Contractor admits in writing an inability to pay its debts generally as they become due;
- 14.2.6 If Contractor fails to perform the Work in accordance with the Contract Documents, including, but not limited to, failure to supply sufficient skilled workers, or suitable materials or equipment, or failure to adhere to the progress schedule established under Article 5.1 as revised from time to time or failure to submit an updated schedule as required by Article 5.2;
- 14.2.7 If Contractor disregards the authority of the Municipal Representative; or
- 14.3 If in the judgment of the District Representative, the Contractor fails or refuses to prosecute the Work in accordance with the Contract, or fails to complete the Work within the time provided by the Contract, the Municipal Representative may terminate the Contract by written notice to the Contractor in the manner set forth in Article 28.2 herein and to the Surety in the manner set forth in the Performance Bond. In such event, the District Representative shall direct the Surety to complete the Work. If the Surety fails or refuses to complete the Work, the Municipal Representative may take over the Work and prosecute it to completion by contract publicly let or otherwise, and may take possession of and utilize in completing the Work, such of the Contractor's materials, equipment and plant as may be on the Site of the Work. Whether or not the right to terminate is exercised, the Contractor and the Surety shall be liable for any damage to the District resulting from the Contractor's failure or refusal to complete the Work in accordance with the Contract or his or her failure to complete the Work within the time provided by the Contract.
- 14.4 If the District Representative terminates the Contract for failure to prosecute the Work, in addition to any damages provided for by law, the delay shall occasion the payment of damages by Contractor which shall consist of Liquidated Damages until the Work is physically completed, plus any increased costs the District incurs in completing the Work.
- 14.5 The Contract shall not be so terminated nor the Contractor charged with resulting damage if:
  - (a) The delay in the completion of the Work arises from unforeseeable causes beyond the control and without the fault or negligence of the Contractor including, but not restricted to, acts of God, acts of the public enemy, acts of another Contractor in the performance of a contract with the District, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, unusually severe weather, or delays of subcontractors or suppliers arising from unforeseeable causes beyond the control and without the fault or negligence of both the Contractor and such subcontractors or suppliers; and
  - (b) The Contractor shall notify the Municipal Representative in writing of the causes of delay within ten (10) days from when the Contractor knew or ought to have known of any such delay.



- 14.6 The District Representative will ascertain the facts and the extent of the delay and extend the time for completing the Work when, in the Municipal Representative's judgment, the findings of fact justify such an extension, and his or her findings of fact shall be final and conclusive on the parties, subject only to appeal as provided in these General Conditions.
- 14.7 If after notice of termination of the Contract, it is determined for any reason that the Contractor was not in default or that the delay was excusable, the rights and obligations of the parties shall be the same as if the notice of termination had been issued pursuant to the termination for convenience clause.
- 14.8 The rights and remedies of the District provided in this clause are in addition to any other rights and remedies provided by law or under this Contract, provided that damages for delay incurred by the Contractor shall be as specified in Articles 14.3 and 14.4.
- 14.9 The District reserves the right to terminate this Contract in the event it is found that the certification filed by the Contractor was intentionally false or intentionally incomplete. Upon such finding, the District may exercise its termination right by providing written notification to the Contractor in accordance with the written notification terms of the Contract.
- 14.10 Liquidated Damages:

(NA\_Reserved)

| SCHEDUL                           | SCHEDULE OF LIQUIDATED DAMAGES |                        |  |  |  |
|-----------------------------------|--------------------------------|------------------------|--|--|--|
| Original Total Contract Bid Price |                                | Liquidated Damages per |  |  |  |
| From More Than                    | To and Including               | Calendar Day           |  |  |  |
|                                   |                                |                        |  |  |  |
|                                   |                                |                        |  |  |  |
|                                   |                                |                        |  |  |  |
|                                   |                                |                        |  |  |  |
|                                   |                                |                        |  |  |  |

## 14.11 Contractor Responsibility:

(a) Contractor shall at all times during the contract term remain a responsible vendor. Contractor agrees, if requested by the District, to present evidence of its continuing legal authority to do



- business in the State of Michigan, its integrity, experience, ability, prior performance and organizational and financial capacity to carry out the terms of this contract.
- (b) The District reserves the right to suspend any or all activities under this contract, at any time, when the District discovers information that calls into question the responsibility of Contractor. In the event of such suspension, Contractor will be given written notice outlining the particulars of such suspension. Upon issuance of such notice, Contractor must comply with the terms of the suspension order. Contractual activities may resume at such time as the Municipality issues a written notice authorizing resumption of contractual activities.
- (c) Notwithstanding the provision of Article 14 of the contract pertaining to Termination and Revocation, upon written notice to Contractor and a reasonable opportunity to be heard with appropriate Municipality staff, this contract may be terminated by the Municipality at Contractor's expense where Contractor is determined by the District to be non-responsible. In such event, the District may pursue available legal or equitable remedies for breach.

## ARTICLE 15 – TERMINATION OF CONTRACTOR'S EMPLOYMENT FOR THE CONVENIENCE OF THE DISTRICT

- 15.1 The District Representative may terminate this Contract whenever in the District Representative's judgment the public interest so requires by delivering to the Contractor a notice of termination specifying the extent to which performance of Work under the Contract is terminated and the date upon which such termination becomes effective. Upon receipt of the notice of termination, the Contractor shall act promptly to minimize the expenses resulting from such termination. The District shall pay the Contractor the sum of:
  - (a) The costs actually incurred up to the effective date of such termination,
  - (b) The cost of settling and paying claims arising out of the termination of Work under subcontracts or orders exclusive of the amounts paid or payable on account of supplies or materials delivered or services furnished by the subcontractor prior to the effective date of the Notice of Termination of Work under this Contract, which amounts shall be included in the cost on account of which payment is made under (a) above, and
  - (c) The rate of profit and overhead on (a) and (b). If the Contractor would have sustained a documentable loss on the entire Contract had it been completed, no profit shall be included or allowed under this subparagraph and an appropriate adjustment shall be made reducing the amount of the settlement to reflect the indicated rate of loss.
- 15.2 In no event shall the Contractor's compensation exceed the total Contract amount.
- 15.3 The amount of progress payments made to the Contractor prior to the date of termination was effective shall not be conclusive evidence of costs incurred, but progress payments shall be offset against any payment which the Municipality makes to the Contractor as a result of such termination.

## **ARTICLE 16 – DISPUTES**

16.1 The Contractor shall submit any dispute relating to the performance of this Contract to the District



Representative, who shall reduce his or her decision to writing and furnish a copy thereof to the Contractor. The Contractor shall submit the matter in dispute to the District Representative in writing no more than fifteen (15) days after he or she knew or should have known of the facts which are the basis of the dispute. The decision of the District Representative shall be final and conclusive unless within twenty (20) days from the date of receipt of the decision, the Contractor serves upon the District Representative a written appeal by certified mail.

Upon appeal, the decision of the District Representative shall be final and conclusive unless the decision is fraudulent, capricious, arbitrary or so grossly erroneous as necessarily to imply bad faith or is not supported by substantial evidence. In connection with any appeal proceeding held pursuant to this Article, the Contractor shall be afforded an opportunity to be heard and to offer evidence in support of his or her appeal. Pending final determination of a dispute hereunder, the Contractor shall proceed diligently with the performance of the Contract in accordance with the District Representative's decision. Nothing in this Contract shall be construed as making final the decision of any administrative official upon a question of law.

## ARTICLE 17 – STATUTORY REQUIREMENTS FOR THE UTILIZATIONS OF MINORITY AND WOMEN OWNED BUSINESS ENTERPRISES

17.1 The Contractor shall make a good faith effort to solicit active participation in statutory requirements for the utilization of minority and women owned business enterprises.

## **ARTICLE 18 – SUBCONTRACTS**

- 18.1 Before any part of the Contract shall be sublet, the Contractor shall submit to the District Representative in writing the name of each proposed Subcontractor and supplier and obtain the District Representative's written consent to such Subcontractor and supplier. The names shall be submitted in ample time to permit acceptance or rejection of each proposed Subcontractor by the Municipal Representative without causing delay in the work of the Project.
- 18.2 The Contractor's use of subcontractors shall not diminish the Contractor's obligations to complete the work in accordance with the Contract. Each Contractor shall control and coordinate the work of his or her Subcontractors.
- 18.3 The Contractor shall be responsible for informing the Subcontractors of all the terms, conditions and requirements of the Contract Documents including, but not limited to the General Conditions and the Technical Specifications.

## ARTICLE 19 - COORDINATION OF SEPARATE CONTRACTS (WICKS PROJECTS)

19.1 The District may award other contracts related to the Work. In that event, the Contractor shall coordinate his or her work with the Work of other contractors in such manner as the District may direct. All contractors shall exchange working drawings, examine them and report any interferences or objections to the District Representative, in order to avoid delays. Each contractor shall control and coordinate the work of his or her Subcontractors, if any. The District shall approve or require the



- modification of the work schedules of all contractors to the end that the Project may be progressed as expeditiously as the case permits.
- 19.2 If any part of the Work depends for proper execution or results upon the work of any other contractor, the Contractor shall inspect and promptly report in writing to the District Representative any defects in such work. The failure to inspect and report shall constitute an acceptance of the other contractor's work as fit and proper for the reception of the Contractor's Work.
- 19.3 The District Representative shall issue appropriate directions and take such other measure to coordinate and progress the Work as may be reserved to the District in the Contract, and which an ordinarily reasonable project owner in similar circumstances would be expected to take. However, the District shall not be liable for mere errors in judgment as to the best course of action to adopt among the alternatives available in any given instance.
- 19.4 The award of more than one contract for the Project requires sequential or otherwise interrelated contractor operations, and will involve inherent coordination in the progress of any individual contractor's work. Accordingly, the District cannot guarantee the unimpeded operations of any contractor. The Contractor acknowledges these conditions, and understands that he or she shall bear the risk of all ordinary delays caused by the presence or operations of other contractors engaged upon the project, and ordinary delays attendant upon any District approved construction schedule. Should a contractor sustain damage through any act or omission of any other contractor, the contractor shall have no claim against the District.
- 19.5 The District shall not be liable for ordinary delays in any case nor for extraordinary delays that occur due to any contractor's failure to comply with directions of the Municipality or because of the neglect, failure or inability of any contractor to perform his or her work efficiently.
- 19.6 Any claim for extraordinary delay caused by an allegedly unreasonable or arbitrary act, or failure to act, by the District Representative in the exercise of his or her responsibility for supervision and coordination of the Work, shall be waived, released and discharged unless the Contractor whose work is impeded or delayed thereby, shall give notice in writing to the District Representative as promptly as possible and in sufficient time to permit the District Representative to investigate appropriate instructions.
- 19.7 The neglect or refusal of a Contractor to comply with supervisory directions issued by the District Representative pursuant to his or her responsibility for supervision of the Work shall constitute a failure to progress the work diligently in accordance with the Contract requirements and shall justify withholding payments otherwise due, or termination of the Contract as detailed in Article 15.
- 19.8 The Contractor shall indemnify the District for damages recovered against the District by another contractor to the extent that any such claim or judgment is the proximate cause of the Contractor's failure to progress the work in accordance with Contract requirements.

## ARTICLE 20 - RESPONSIBILITY FOR DAMAGE AND INDEMNIFICATION

- 20.1 The Contractor shall faithfully perform and complete all of the work required by the Contract, and has full responsibility for the following risks:
  - (a) Loss or damage, direct or indirect; to the Work including the building or structure in which the Work is being performed, or any other construction in progress, whether being performed by



any other contractor or by the District, or to any plant, equipment, tools, materials or property furnished, used, installed, or received by the District Representative under this Contract or any other contract. The Contractor shall bear all such risk of loss or damage, until all of the Work covered by the Contract has been finally accepted. In the event of such loss or damage, the Contractor shall forthwith repair, replace, and make good any such loss or damage without additional costs.

- (b) Injury to persons (including death resulting therefrom), or damage to property caused by an occurrence arising out of the performance of this Contract for which the Contractor may be liable under any theory of law.
- 20.2 Contractor assumes all risks in the performance of all activities authorized by this Contract and agrees to defend, indemnify and hold harmless the State of Michigan, the District, their officers, employees, agents and assigns (hereinafter, collectively the "Indemnitees") from and against any and all claims, suits, losses, damage or injury to persons or property of whatsoever kind and nature, whether direct or indirect, caused or contributed to by Contractor and Contractor's sub-contractors, vendors, material suppliers, employees, agents, invitees and guests, and/or arising out of Contractor's conduct and/or Contractor's performance pursuant to this Contract, provided however that Contractor's indemnity shall not extend to any claims, liabilities, losses, damages, expenses, accidents or occurrences arising out of, relating to, or in connection with: (i) the negligence of any Indemnitee; or (ii) the Indemnitees' ordinary upkeep and maintenance of grounds and facilities outside of the Premises. Contractor shall defend at its sole cost and expense any action commenced for the purpose of asserting any claim of whatsoever character arising out of this Contract. Contractor's responsibility under this section shall not be limited to the required or available insurance coverage.
- 20.3 For all purposes hereunder, the District, and the State shall not be liable for any injury, loss or damage to Contractor, its agents, servants, sub-contractors, vendors, invitees and guests, or to any person happening on, in or about the Premises or its appurtenances, nor for any injury or damage to the Premises or to any property belonging to Contractor or to any other person, that may be caused by fire, theft, breakage, vandalism or any other use or misuse or abuse of any portion of the Premises, including but not limited to any common areas, sidewalks, roads, or water in or adjacent to the Premises, or that may arise from any other cause whatsoever, unless, and only to the extent of the proportion of which any such injury, loss or damage is determined to be caused by the negligence of the District or the State, respectively.
- 20.4 The District and the State shall not be liable to Contractor, its agents, contractors, vendors, invitees and guests, or any other person, for any failure of water supply, gas supply or electric current, nor for any injury or damage to any property of Contractor or any other person or to the Premises, caused by or resulting from spill or release of gasoline, oil, steam, gas, or electricity, or caused by leakage of any substance from pipes, appliances, sewers or plumbing works, or caused by hurricane, flood, tornado, wind or similar storm or disturbance, or caused by water, rain or snow that may leak or flow from the street, sewers or subsurface areas, or from any part of the Premises or any body of water within or adjacent to the Premises, or caused by any public or quasi-public work, unless, and only to the extent of the proportion by which any such injury, loss or damage is determined to be caused by the negligence of the District or the State, respectively.
- 20.5 The District or the State may retain such monies from the amount due the Contractor as may be necessary to satisfy any claim for damages recovered against the Municipality or the State,



respectively. The Contractor's obligations under this paragraph shall not be deemed waived by the failure of the District to retain the whole or any part of such monies due the Contractor, nor shall such obligation be deemed limited or discharged by the enumeration or procurement of any insurance for liability for damages imposed by law upon the Contractor, Subcontractor, the District or the State.

- 20.6 The Contractor agrees to make no claim for damages in the performance of the Contract occasioned by any act or omission to act of the District or its representatives, and agrees that any such claim shall be fully compensated for by an extension of time to complete performance of the Work as provided herein.
- 20.7 The Contractor shall not create or cause to be created any lien, encumbrance or charge upon the Premises, the District or any part thereof. If any mechanics, laborers or similar statutory or common law lien (including tax liens, provided that the underlying tax is an obligation of Contractor by law or by a provision of this Contract) caused or created by Contractor is filed against the Premises, or if any public improvement lien created or caused to be created by Contractor is filed against any assets of, or funds appropriated by the District, then Contractor shall, within forty-five (45) days after receipt of notice of the lien, cause it to be vacated or discharged of record by payment, deposit, bond, court order, or otherwise. However, Contractor shall not be required to discharge any such lien if Contractor shall have: (i) furnished the District with, at Contractor's option, a cash deposit, bond, letter of credit (from an institutional lender in a form satisfactory to the District), or other security reasonably satisfactory to the District in an amount sufficient to discharge the lien and all applicable interest, penalties and/or costs; and (ii) brought an appropriate legal proceeding to discharge the lien and is prosecuting such proceeding with diligence and continuity; except that if despite Contractor's efforts to discharge the lien the District reasonably believes the lien is about to be foreclosed and so notifies Contractor, Contractor shall immediately cause such lien to be discharged of record or the District may use the security furnished by Contractor in order to discharge the lien.

## **ARTICLE 21 - INSURANCE**

### 21.1 General Requirements

- (a) Insurance coverage shall be provided only by an insurance carrier rated A-, Class VII or better throughout the term of this Contract. Such carrier shall be duly licensed in the State of Michigan.
- (b) All insurance policies and certificates shall include the following provision: "Consistent with the requirements of Contract Documents, the State of Michigan is an additional insured". Simply designating the State or District as a "certificate holder" shall not constitute compliance with this section.
- (c) All insurance coverage shall be written such that the District Representative is afforded at least thirty (30) days prior notice of cancellation of any insurance. No policy shall be changed by endorsement without the knowledge and consent of the District I Representative, and, in particular, any notice of cancellation by the insurer shall not be effective until thirty (30) days after the said notice is actually received by the District Representative. Any notice shall be addressed to the District Representative and shall be mailed via certified or registered mail and



copied to the District as set forth in Article 28.2.

- (d) Before commencing the Work, the Contractor shall furnish to the District Representative a certificate or certificates of insurance showing that the Contractor has complied with this clause. In addition, for policies expiring on a fixed date before final acceptance, certificates of insurance showing their renewal must be filed not less than thirty (30) days before such expiration date.
- (e) Contractor shall notify the District of any accidents and/or claims, including without limitation accidents or claims involving bodily injury, death or property damage, arising on or within the Premises. Such notice shall be provided in writing as soon as practicable, however in any event within five (5) days of Contractor's receipt of notice of the accident or claim.

## 21.2 Liability Insurance

- (a) Contractor shall procure and maintain without interruption, at its sole cost and expense, during the term of this Contract (or any extensions thereof) and for a period of two years thereafter, insurance of the type, and with limits and deductibles, as follows:
  - i. <u>Commercial General Liability Insurance and Excess Liability Insurance</u>. Providing both bodily injury (including death) and property damage insurance with limits in the aggregate and per occurrence in accordance with the following table:

| Construction<br>Contract Value | Commercial General Liability in combination with Excess<br>(Umbrella) Liability |                   |
|--------------------------------|---|-------------------|
|                                | Each Occurrence   | General Aggregate |
| < \$10M                        | \$2,000,000   | \$2,000,000       |
| >\$10M - \$50M                 | \$5,000,000   | \$5,000,000       |
| >\$50M                         | \$10,000,000  | \$10,000,000      |
|                                |   |                   |

Such insurance is to be written on an occurrence basis with defense outside of limits. The District shall be named as an additional insured. The minimum required level of insurance may be provided through a combination of commercial general liability and umbrella and/or excess liability policies.

- ii. <u>Automobile Liability and Property Damage Insurance</u>. In an amount not less than One Million Dollars (\$1,000,000) combined single limit for both Bodily Injury and Property Damage.
- iii. <u>Professional Liability</u>. If the Contractor is engaged in providing professional services under this Contract, professional errors and omissions coverage with a limit not less than Two Million Dollars (\$2,000,000) in the aggregate and One Million Dollars (\$1,000,000) per occurrence. If the Contractor is not engaged in providing professional services under this Contract, this professional errors and omissions coverage is not required.
- (b) In addition to the foregoing, Contractor and any subcontractors shall procure and maintain any and all insurance which is required by any applicable current or future law, rule, regulation, ordinance, permit, license, order or other legal requirement.
- (c) All insurance shall be primary and non-contributory and shall waive subrogation against the District and all of either of their former, current, or future officers, directors, and employees.



No deductible of more than \$50,000 shall be permitted without advance written approval by the District, which the District may withhold, condition or deny in its sole and exclusive discretion.

- (d) The Contractor shall provide Certificates of Insurance to the District prior to the commencement of work and shall provide full and complete copies of the actual policies and all endorsements upon request. Subcontractors under this Contract shall be required to maintain insurance meeting all of the requirements set forth in Section (a) above for items (i)-(iii); however Contractor shall require subcontractors to maintain greater limits and/or other or additional insurance coverages if greater limits and/or other or additional insurance coverages are (A) generally imposed by the Contractor given its normal course of business for subcontracts for similar work or services to those being provided by the subcontractor at issue; or (B) reasonable and customary in the industry for similar work or services to those anticipated hereunder.
- 21.3 Builder's Risk Insurance.
  - (a) The Contractor shall maintain builder's risk insurance for the completed value of the Contract on the All Risk Form. Builder's Risk insurance applies only to contracts that involve buildings or structures being constructed, erected or fabricated.
  - (b) In case the District shall occupy all or any part of any building or buildings included in the Contract prior to the issuance of the final certificate of occupancy, the Contractor shall notify the fire insurance company or companies. Such occupancy by the Municipality shall not require consent of the insurer nor shall the insurer require any rate adjustment as a result of such occupancy.
- 21.4 Worker's Compensation.

Proof of Compliance with Workers' Compensation Coverage Requirements: An ACORD form is NOT acceptable proof of workers' compensation coverage. Contractor shall provide to the District one of the following forms for itself and any subcontractor prior to award:

**Form C-105.2 (9/07)** if coverage is provided by the contractor's insurance carrier, contractor must request its carrier to send this form to the District, or

**Form U-26.3** if coverage is provided by the State Insurance Fund, contractor must request this be sent to the District

Form SI-12 Certificate of Workers' Compensation Self-Insurance

Form GSI-105.2 Certificate of Participation in Workers' Compensation Group Self Insurance

In accordance with the State of Michigan this Contract shall be void and of no effect unless the Contractor secures compensation for the benefit of, and keeps insured during the life of the Contract, and employees engaged on the Project.

21.5 Disability Benefits. Proof of Compliance with Disability Benefits Coverage Requirements: An ACORD is NOT acceptable proof of disability benefits coverage. Contractor shall provide to the District one of the following forms for itself and any subcontractor prior to award:

Form DB-120.1, Certificate of Disability Benefits Insurance

Form DB-155, Certificate of Disability Benefits Self Insurance



## ARTICLE 22 - OCCUPANCY PRIOR TO COMPLETION AND ACCEPTANCE

22.1 The District shall have the right to take possession of or use any completed or partially completed portion of the Work. Written notice of such possession shall be given to the Contractor by the District Representative. The notice shall identify the date when such possession shall commence and the area, equipment or system involved. Written notice shall also be given to the Contractor for any cessation of such possession by the District. Such possession or use shall not be deemed an acceptance of any Work. While the District is in such possession, the Contractor, notwithstanding the provisions of Article 20 of the Contract, shall be relieved of the responsibility for the risk of loss or damage to the Work except for that resulting from the Contractor's fault or negligence. If such possession or use by the District delays the progress of the Work or causes additional expense to the Contractor, an adjustment in the Contract price and/or the time of completion shall be made and the Contract modified in writing accordingly. The provisions relating to an adjustment in the Contract price or the time of completion contained in this paragraph shall not apply to occupancy or possession after Substantial Completion.

## **ARTICLE 23 – PAYMENT**

- 23.1 The Contractor may submit monthly payment applications, or more frequently if permitted by making a request in writing to the District Representative, a requisition for a progress payment for Work performed and materials furnished to the date of the requisition, less any amount previously paid to the Contractor. Except as otherwise provided by this Contract, the District shall approve and pay the requisition for the progress payment less an amount necessary to satisfy any claims, liens or judgments against the Contractor which have not been suitably discharged and less any amount authorized by law or Contract to be retained. The requisition shall be in such form and supported by such evidence and backup documentation as the District Representative may require.
- 23.2 The Contractor agrees that, if the Contract Documents for this Contract includes Performance and Payment Bonds, the District shall retain five percent (5%) of the amount of each progress payment in accordance with Section 139-f of the State Finance Law. The Contractor further agrees that, if the Contract Documents for this Contract do not include Performance and Payment Bonds, the District shall retain ten percent (10%) of the amount of each progress payment in accordance with Section 139-f of the State Finance Law.
- 23.3 All requisitions for payments shall be submitted to the District Representative. The District Representative shall notify the Contractor of any defect in any requisition within twenty (20) days of the receipt of such requisition and shall complete the review and audit of each complete requisition within forty-five (45) days of receipt thereof.
- 23.4 The District may refuse to approve the requisition or a portion thereof if in the District Representative's or District's judgment the Contractor is failing or refusing to prosecute the Work in accordance with the Contract.
- 23.5 Payment may be made for approved materials not yet incorporated in the Work in accordance with the Schedule of Values and Section 139(f) of the State Finance Law. Requisitions, which require payment for materials, shall be accompanied by a notarized statement certifying that the materials for which payment is requisitioned are the Contractor's property and have been suitably stored and



insured. The Contractor shall provide such evidence of the value of the material stored as the District Representative may reasonably require. The Contractor shall have full continuing responsibility to insure and protect such materials and maintain them in proper condition to fulfill Contract requirements when installed.

- When the Work is substantially completed, the Contractor shall submit to the District Representative a requisition for payment of the remaining amount of the Contract balance. Upon receipt of such requisition the District shall, except as otherwise provided by this Contract, approve and pay the remaining amount of the Contract balance less two (2) times the value of any remaining items to be completed and an amount necessary to satisfy any claims, liens or judgments against the Contractor which have not been suitably discharged. As the remaining items of Work are satisfactorily completed or corrected, the Municipality shall approve, upon receipt of a requisition, for these remaining items less an amount necessary to satisfy any claims, liens or judgments against the Contractor, which have not been suitably discharged.
- 23.7 The final payment will not be issued until all the labor and material required by the Contract has been furnished and completed, all disputes relating to the performance of the Contract considered and disposed of and all accounts for extra work and materials and allowances for omissions have been rendered and considered.
- 23.8 The final payment will constitute the acceptance of the Work by the District except as to Work thereafter found to be defective. The date of such certificate shall be regarded as the date of acceptance of the Work.
- 23.9 No payment will be made to a foreign Contractor until the Contractor furnishes satisfactory proof that he or she has paid all taxes required of foreign Contractors under the provisions of the Tax Law. A foreign Contractor as used in this paragraph shall mean a Contractor denominated "foreign" by the Tax Law.
- 23.10 Acceptance by the Contractor, or by anyone claiming by or through him or her, of the final payment shall constitute and operate as a release to the District from any and all claims of any liability to the Contractor for anything theretofore done or furnished for or relating to or arising out of the work done thereunder, and for any prior act, neglect, or default on the part of the Municipality or any of its officers, agents, or employees unless the Contractor serves a detailed and verified statement of claim upon the District not later than forty (40) days after the mailing of such final payment. Such statement shall specify the items and details upon which the claim will be based and any such claim shall be limited to such items. Should the Contractor refuse to accept the final payment as tendered by the District, it shall constitute a waiver of any right to interest thereon.
- 23.11 The Contractor is advised that consistent with Subdivision 3-a, of Section 220 of the Labor Law, the filing of certified payroll records is a condition precedent to payment of any sums due and owing to any person performing work on this project. The failure to file pursuant to this section will result in a payment delay until the filing occurs.
- 23.12 The Contractor acknowledges that it shall not receive payment on any requests for payment unless the Contractor complies with the Municipality's electronic payment deposit procedures. Payments requested by the Contractor shall only be facilitated via electronic deposit, except where the District has expressly authorized payment by paper check.

## <u>ARTICLE 24 – AUDITS AND RECORDS</u>



- 24.1 The Contractor shall maintain on the Site the original certified payrolls or certified transcripts thereof, subscribed and affirmed by the Contractor and all Subcontractors as true under the penalties of perjury, showing the hours and days worked by each worker, laborer or mechanic, the occupation at which he or she worked, the hourly wage rate paid and the supplements paid or provided. The Contractor shall maintain with the payrolls or transcripts thereof, the statements signed by each worker pursuant to Article 25 of the General Conditions.
- 24.2 The District and their representatives who are employees of the State shall have the right to examine all books, records, documents, and other data of the Contractor, any Subcontractor, materialmen or suppliers relating to the bidding, pricing or performance of this Contract or any change or modification thereto for the purpose of evaluating the accuracy, completeness, and currency of the cost or pricing data submitted. This right of examination shall extend to all documents necessary to permit adequate evaluation of the cost or pricing data submitted along with the computations and projections used therein.
- 24.3 The above materials shall be made available at the office of the Contractor, Subcontractors, materialmen or suppliers at all reasonable times for inspection, audit or reproduction until the expiration of six (6) years from the date of the final certificate for the Contract.
- 24.4 If this Contract is completely or partially terminated, the records relating to the Work terminated shall be made available for a period of six (6) years from the date of any resulting final settlement.
- 24.5 Records that relate to the Disputes Clause of this Contract or litigation or the settlement of claims arising out of the performance of this Contract shall be made available until the disposal of such appeals, litigation or claims.
- 24.6 The Contractor shall insert a clause containing all of the provisions of Article 24 in all subcontracts or purchase orders issued hereunder.
- 24.7 The Contractor shall make available to the District, upon written request, all records required to be kept by Article 3-A of the Lien Law. The failure to provide said records upon the receipt of the written request shall bar any recovery for claimed extra or additional costs under this Contract.

ARTICLE 25 – (Not Applicable)
ARTICLE 26 – (Not Applicable)
ARTICLE 27 – (No Assignment)

27.1 In accordance with the provisions of Section 109 of the General Municipal Law, the Contractor is hereby prohibited from assigning, transferring, conveying, subletting or otherwise disposing of this Agreement, or of its right, title or interest in this Agreement, or its power to execute this Agreement, to any other person or corporation without the previous consent in writing of the Municipality.

## ARTICLE 28 - MISCELLANEOUS PROVISIONS

28.1 Commencement of Actions: The time, as prescribed by law, within which an action on the contract against the Contractor must be commenced shall be computed from the date of completion of



physical work. The Contractor shall notify the District in writing that the physical work of the contract has been completed by specifying a completion date, which date shall be no more than thirty (30) days prior to the date of such notice. The completion date set forth in such notice shall be deemed the date of completion of the physical work unless the District, within thirty (30) days of receipt of such notice, notifies the Contractor of a dispute in writing. Any notice pursuant to this paragraph shall be sent by the Contractor by Certified Mail and sent to the parties set forth in the Notice provision of this Article.

- 28.1.1 In the event that the Contractor fails to provide notice as set forth herein or the District disputes the completion date in the manner provided for herein, the date of completion of the physical work shall be determined in any other manner provided by law.
- 28.1.2 Choice of Law/Damages: This Contract shall be governed and interpreted in accordance with the laws of the State of Michigan. Any and all claims against the State, the District, the District Representative, employees, officers or agents arising out of this Contract shall be limited to money damages and commenced exclusively in, and subject to the jurisdiction of the Michigan State Court of Claims. Any such claim shall not be removed to federal court.

## 28.2 Notice

- (a) Unless otherwise indicated in these General Conditions, all notices permitted or required hereunder shall be in writing and shall be transmitted either:
  - i. via certified or registered United States mail, return receipt requested;
  - ii. by facsimile transmission;
  - iii. by personal delivery;
  - iv. by expedited delivery service; or
  - v. by e-mail.

Such notices shall be addressed as follows or to such different addresses as the parties may from time-to-time designate:

If to the District:

Lansing School District Sheridan Road STEM Magnet School 16900 N. Cedar St. Lansing, MI 48906 Phone 517.755.1000

- (b) Any such notice shall be deemed to have been given either at the time of personal delivery or, in the case of expedited delivery service or certified or registered United States mail, as of the date of first attempted delivery at the address and in the manner provided herein, or in the case of facsimile transmission or email, upon receipt.
- (c) The parties may, from time to time, specify any new or different address in the United States as their address for purpose of receiving notice under this Contract by giving fifteen (15) days written notice to the other party sent in accordance herewith. The parties agree to mutually designate individuals as their respective representatives for the purposes of



receiving notices under this Contract. Additional individuals may be designated in writing by the parties for purposes of implementation and administration/billing, resolving issues and problems and/or for dispute resolution.

- 28.3 Severability: If any provision, term or condition of this contract is held to be invalid, illegal, or unenforceable, such determination shall not affect the validity, legality or enforceability of any other part of this Contract and the remaining parts of this Contract shall be enforced as if the invalid, illegal or unenforceable provisions, terms or conditions are not contained herein.
- 28.4 Integration Clause: This Contract shall not be materially amended, changed or otherwise modified except in writing signed by both parties. Except to the extent that documents are incorporated herein by reference, this Contract constitutes the entire agreement between the parties concerning the subject matter hereof and supersedes all prior agreements and understandings of the parties in connection therewith. No covenant, representation or condition not expressed herein shall be effective to interpret, change or restrict the express provisions of this Contract.
- 28.5 Signage: All construction sites must include a sign including all of the items required by applicable law, rule or regulation. All construction signs must also include the name of the project, the name of the Municipality, and a phone number for the public to call to obtain information about the project. This phone number will be maintained by the Municipality.

#### **APPENDICES**

- 29. The following appendices are attached hereto and hereby made a part of this agreement as if set forth fully herein:
  - (a) NA



#### SECTION 012500 - SUBSTITUTION PROCEDURES

PART 1 - GENERAL

#### 1.1 SUMMARY

- A. Section includes administrative and procedural requirements for substitutions.
- B. Related Requirements:
  - 1. Document 002600 "Procurement Substitution Procedures" for requirements for substitution requests prior to award of Contract.
  - 2. Section 016000 "Product Requirements" for requirements for submitting comparable product submittals for products by listed manufacturers.

#### 1.2 DEFINITIONS

- A. Substitutions: Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by Contractor.
  - 1. Substitutions for Cause: Changes proposed by Contractor that are required due to changed Project conditions, such as unavailability of product, regulatory changes, or unavailability of required warranty terms.
  - 2. Substitutions for Convenience: Changes proposed by Contractor or Owner that are not required in order to meet other Project requirements but may offer advantage to Contractor or Owner.

#### 1.3 ACTION SUBMITTALS

- A. Substitution Requests: Submit three copies of each request for consideration. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.
  - 1. Substitution Request Form: Use form acceptable to Architect.
  - 2. Documentation: Show compliance with requirements for substitutions and the following, as applicable:
    - a. Statement indicating why specified product or fabrication, or installation method cannot be provided, if applicable.
    - b. Coordination of information, including a list of changes or revisions needed to other parts of the Work and to construction performed by Owner and separate contractors that will be necessary to accommodate proposed substitution.



- c. Detailed comparison of significant qualities of proposed substitutions with those of the Work specified. Include annotated copy of applicable Specification Section. Significant qualities may include attributes, such as performance, weight, size, durability, visual effect, sustainable design characteristics, warranties, and specific features and requirements indicated. Indicate deviations, if any, from the Work specified.
- d. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
- e. Samples, where applicable or requested.
- f. Certificates and qualification data, where applicable or requested.
- g. List of similar installations for completed projects, with project names and addresses as well as names and addresses of architects and owners.
- h. Material test reports from a qualified testing agency, indicating and interpreting test results for compliance with requirements indicated.
- i. Research reports evidencing compliance with building code in effect for Project.
- j. Detailed comparison of Contractor's construction schedule using proposed substitutions with products specified for the Work, including effect on the overall Contract Time. If specified product or method of construction cannot be provided within the Contract Time, include letter from manufacturer, on manufacturer's letterhead, stating date of receipt of purchase order, lack of availability, or delays in delivery.
- k. Cost information, including a proposal of change, if any, in the Contract Sum.
- I. Contractor's certification that proposed substitution complies with requirements in the Contract Documents, except as indicated in substitution request, is compatible with related materials and is appropriate for applications indicated.
- m. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.
- 3. Architect's Action: If necessary, Architect will request additional information or documentation for evaluation within seven days of receipt of a request for substitution. Architect will notify Contractor of acceptance or rejection of proposed substitution within fifteen (15) days of receipt of request, or seven days of receipt of additional information or documentation, whichever is later.
  - a. Forms of Acceptance: Change Order, Construction Change Directive, or Architect's Supplemental Instructions for minor changes in the Work.
  - b. Use product specified if Architect does not issue a decision on use of a proposed substitution within time allocated.

#### 1.4 QUALITY ASSURANCE

A. Compatibility of Substitutions: Investigate and document compatibility of proposed substitution with related products and materials. Engage a qualified testing agency to perform compatibility tests recommended by manufacturers.



#### 1.5 PROCEDURES

A. Coordination: Revise or adjust affected work as necessary to integrate work of the approved substitutions.

#### 1.6 SUBSTITUTIONS

- A. Substitutions for Cause: Submit requests for substitution immediately on discovery of need for change, but not later than fifteen (15) days prior to time required for preparation and review of related submittals.
  - 1. Conditions: Architect will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Architect will return requests without action, except to record noncompliance with these requirements:
    - a. Requested substitution is consistent with the Contract Documents and will produce indicated results.
    - b. Substitution request is fully documented and properly submitted.
    - c. Requested substitution will not adversely affect Contractor's construction schedule.
    - d. Requested substitution has received necessary approvals of authorities having jurisdiction.
    - e. Requested substitution is compatible with other portions of the Work.
    - f. Requested substitution has been coordinated with other portions of the Work.
    - g. Requested substitution provides specified warranty.
    - h. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.
- B. Substitutions for Convenience: Not allowed unless otherwise indicated.
- C. Substitutions for Convenience: Architect will consider requests for substitution if received within thirty (30) days after the Notice to Proceed. Requests received after that time may be considered or rejected at discretion of Architect.
  - 1. Conditions: Architect will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Architect will return requests without action, except to record noncompliance with these requirements:
    - a. Requested substitution offers Owner a substantial advantage in cost, time, energy conservation, or other considerations, after deducting additional responsibilities Owner must assume. Owner's additional responsibilities may include compensation to Architect for redesign and evaluation services, increased cost of other construction by Owner, and similar considerations.



- b. Requested substitution does not require extensive revisions to the Contract Documents.
- c. Requested substitution is consistent with the Contract Documents and will produce indicated results.
- d. Substitution request is fully documented and properly submitted.
- e. Requested substitution will not adversely affect Contractor's construction schedule.
- f. Requested substitution has received necessary approvals of authorities having jurisdiction.
- g. Requested substitution is compatible with other portions of the Work.
- h. Requested substitution has been coordinated with other portions of the Work.
- i. Requested substitution provides specified warranty.
- j. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 012500

## **AFFIDAVIT OF BIDDER**

| The undersigned, the owner or authorized office pursuant to the familial disclosure requirement preschool District") advertisement for construction bis provided below, that no familial relationships existand any member of the | ds, hereby represent and warrant, except as<br>between the owner(s) or any employee of |
|---|--|
| the Superintendent of the School District.  | Board of Education of the School District of   |
| List any Familial Relationships:  |  |
|   |  |
|   |  |
|   | BIDDER:  |
|   |  |
|   | By:  |
|   | Its:   |
| STATE OF MICHIGAN ) )ss. COUNTY OF )  |  |
| This instrument was acknowledged before me on the   | day of, 20, by   |
|   |  |
|   | , Notary Public  |
|   | County, Michigan   |
|   | My Commission Expires:   |
|   | Acting in the County of:   |

## NON-DISCRIMINATION IN EMPLOYMENT CERTIFICATION

## Certificate of Intent to Comply with "NON-DISCRIMINATION IN EMPLOYMENT" POLICY

hereby state my intent to comply with the terms and conditions contained therein. Further I agree to furnish the Michigan Civil Rights Commission with such data and records concerning employment as may be requested by that agency in determining compliance with the policy.

| Print or type nar | me of Contact Pers | son: |  |
|-------------------|--------------------|------|--|
| Signed:           |                    |      |  |
| _                 |                    |      |  |
| Title:            |                    |      |  |
| Company:          |                    |      |  |
| Date:             |                    |      |  |

## **AFFIDAVIT OF BIDDER - NON-COLLUSION**

#### AFFIDAVIT OF BIDDER SWORN STATEMENT "Non-Collusion"

| The Bidder, by its officers and agents or representatives, present at the time of filing this bid, being duly sworn, on their oaths, say that neither they nor any of them, have in any way, directly or indirectly, entered into any arrangement or agreement with any other Bidder, whereby such affiant or affiants or either of them has paid or is to pay to such other Bidder any sum of money, or has given, or is to give, to such other Bidder anything of value whatever, or such affiant or affiants or either of them has not, directly or indirectly, entered into any arrangement or agreement with any other Bidder or Bidders, which tends to or does lessen or destroy free competition in the letting of the Contract sought for by the attached bids; that no inducement of any form or character other than that which appears upon the face of the bid, will be suggested, offered, paid or delivered to any person whomsoever to influence the acceptance of the said bid or awarding of the Contract, nor has this Bidder any agreement or understanding of any kind whatsoever, with any person whomsoever to pay, deliver to, or share with any other person in any way or manner, any of the proceeds of the Contract sought by this bid. |
|---|
| IN TESTIMONY WHEREOF, the Bidder (an authorized individual) has agrees to the above:  |
| (Company Name)  |
| By:(Authorized Signer)  |
| Print or type Name and Title of Signer  |

Address:

Telephone number: \_\_\_\_\_

Notary Public:\_\_\_\_\_

Subscribed and sworn to before me on this \_\_\_\_\_\_ day of \_\_\_\_\_\_, 2016

County of: \_\_\_\_\_ My Commission expires: \_\_\_\_\_

**DATE:** 

### IRAN ECONOMIC SANCTIONS ACT CERTIFICATE

In accordance with the Iran Economic Sanctions Act, Michigan 2012 PA 517, effective April 1, 2013, (MCL 129.311, *et seq.*), (the "Act"), the undersigned certifies in support of its bid or proposal that it is not an Iran linked business as such is defined in the Act.

| Contractor | : | <br> |  |
|------------|---|------|--|
| Ву:        |   |      |  |
|            |   |      |  |
|            |   |      |  |
|            |   | <br> |  |
| Title:     |   |      |  |

Lansing School District Sheridan Road STEM Magnet School – Classroom Renovations May 30, 2025



## DOCUMENT 004113 - BID FORM - STIPULATED SUM (SINGLE-PRIME CONTRACT)

| 1.1 | В  | D INFORMATION   |                                       |
|-----|----|---|---------------------------------------|
|     | Α  | Bidder:   |                                       |
|     | В. | Project Name: Sheridan Road STEM Magnet School – Classroom Renovations  |                                       |
|     | C. | Project Location: 16900 N. Cedar Street, Lansing, MI 48906  |                                       |
|     | D  | Owner: Lansing School District  |                                       |
|     | E. | Architect: Colliers Engineering & Design  |                                       |
|     | F. | Architect Project Number: 25004227A   |                                       |
| 1.2 | C  | RTIFICATIONS AND BASE BID   |                                       |
|     | A  | Base Bid, Single-Prime (All Trades) Contract: The undersigned Bidder, having carefully amined the Procurement and Contracting Requirements, Conditions of the Contract, Draings, Specifications, and all subsequent Addenda, as prepared by Colliers Engineering & sign, having visited the site, and being familiar with all conditions and requirements of the Work, hereby agrees to furnish all material, labor, equipment and services, including all scheduled allowances (Note: contractor shall include a 10% Owner contingency against the base bid for Owner use only-base bid plus 10% Owner contingency), necessary to complet construction of the above-named project, according to the requirements of the Procurent and Contracting Documents, for the stipulated sum of:  1 | w-<br>De-<br>e<br><u>eir</u><br>e the |
|     |    | iDullats  |                                       |
| 1.3 | Р  | RFORMANCE LABOR & MATERIAL BOND (PLM)   |                                       |
|     | Α  | Bidder: Dollars   |                                       |
| 1.4 | В  | D GUARANTEE   |                                       |
|     | A  | The undersigned Bidder agrees to execute a contract for this Work in the above amount to furnish surety as specified within 10 days after a written Notice of Award, if offered wit 60 days after receipt of bids, and on failure to do so agrees to forfeit to Owner the attach cash, cashier's check, certified check, U.S. money order, or bid bond, as liquidated damag for such failure, in the following amount constituting five percent (5%) of the Base Bid amount above:  | thin<br>ned                           |
|     |    | 1Dollars  |                                       |
| E   | 3. | In the event Owner does not offer Notice of Award within the time limits stated above,<br>Owner will return to the undersigned the cash, cashier's check, certified check, U.S. money<br>order, or bid bond.  | ,                                     |



| 1  | .5 | SUBCONTI | PACTORS  | VID ( | SLIDDI | IFRS |
|----|----|----------|----------|-------|--------|------|
| -1 |    | SOBCONT  | MC 101/3 | AIND. | JUFFL  | コレハン |

A. The bidder agrees to hold all subcontracts and manage those contracts under the prime contract.

#### 1.6 TIME OF COMPLETION

| A. | The undersigned Bidder proposes and agrees herel  | by to commence the Work of the Contract  |
|----|---|--|
|    | Documents on a date specified in a written Notice | to Proceed to be issued by Architect and |
|    | shall fully complete the Work within              | calendar days.                           |

#### 1.7 ACKNOWLEDGMENT OF ADDENDA

| A. | The undersigned Bidder   | acknowledges | receipt of a | and use of t | the following . | Addenda i | in the |
|----|--------------------------|--------------|--------------|--------------|-----------------|-----------|--------|
|    | preparation of this Bid: |              |              |              |                 |           |        |
|    | 1 Addandum Na            | datad        |              |              |                 |           |        |

| 1. | Addendum No | , dated _ |  |
|----|-------------|-----------|--|
| 2. | Addendum No | , dated   |  |

## 3. Addendum No.\_\_\_\_, dated

#### 1.8 BID SUPPLEMENTS

- A. The following supplements are a part of the prime bidder.
  - 1. Bid Form Supplement Alternates.
  - 2. Bid Form Supplement Unit Prices.
  - 3. Bid Form Supplement Allowances.
  - 4. Bid Form Supplement Bid Bond Form (AIA Document A310-2010).

#### 1.9 CONTRACTOR'S LICENSE

A. The undersigned further states that it is a duly licensed contractor, for the type of work proposed, in State of Michigan, and that all fees, permits, etc., pursuant to submitting this proposal have been paid in full.



| .10 | SU | BMISSION OF BID             |                                 |                           |
|-----|----|-----------------------------|---------------------------------|---------------------------|
|     | A. | Respectfully submitted this | day of, 2021.                   |                           |
|     | В. | Submitted By:               | (Name of bidding firm or corpor | ration).                  |
|     | C. | Authorized Signature:       | (H                              | landwritten signature).   |
|     | D. | Signed By:                  |                                 | _(Type or print name).    |
|     | E. | Title:dent).                | (Owner/Partr                    | ner/President/Vice Presi- |
|     | F. | Witnessed By:               |                                 | _(Handwritten signature)  |
|     | G. | Attest:                     |                                 | _(Handwritten signature)  |
|     | H. | Ву:                         |                                 | _(Type or print name).    |
|     | l. | Title:tary).                | (Corporate Secr                 | etary or Assistant Secre- |
|     | J. | Street Address:             |                                 | <u> </u>                  |
|     | K. | City, State, Zip:           |                                 | _                         |
|     | L. | Phone:                      |                                 | _                         |
|     | M. | License No.:                |                                 | _                         |
|     | N. | Federal ID No.:<br>Here).   |                                 | _(AffiX Corporate Seal    |

END OF DOCUMENT 004113

Lansing School District Sheridan Road STEM Magnet School – Classroom Renovations May 30, 2025



#### DOCUMENT 004313 - BID SECURITY FORMS

#### 1.1 BID FORM SUPPLEMENT

A. A completed bid bond form is required to be attached to the Bid Form.

#### 1.2 BID BOND FORM

- A. AIA Document A312-2010 "Bid Bond" is the recommended form for a bid bond. A bid bond acceptable to Owner, or other bid security as described in the Instructions to Bidders, is required to be attached to the Bid Form as a supplement.
- B. Copies of AIA standard forms may be obtained from The American Institute of Architects; <a href="https://www.aiacontracts.org/">https://www.aiacontracts.org/</a>; email: <a href="https://www.aiacontracts.org/">docspurchasestOaia.org</a>; (800) 942-7732.

END OF DOCUMENT 004313



## Lansing School District 519 W. Kalamazoo St. Lansing, MI 48933

# PROJECT MANUAL Division 1 (General Requirements)

## <u>Sheridan Road STEM Magnet School – Classroom Renovations</u>

#### **Sheridan Road Magnet School**

16900 N. Cedar Street Lansing, MI 48906

#### Prepared for:

LANSING PUBLIC SCHOOLS 519 W. Kalamazoo St. Lansing, MI 48933

#### ARCHITECT:

Colliers Engineering & Design 560 5<sup>TH</sup> St. NW, Suite 305 Grand Rapids, MI 49504

#### PROJECT #:

25004227A - Sheridan Road STEM Magnet School - Classroom Renovations

May 30, 2025 - Issued for BIDS AND PERMITS



#### SECTION 011000 - SUMMARY

#### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. Section Includes:
  - 1. Project information.
  - 2. Work covered by Contract Documents.
  - 3. Work performed by Owner.
  - 4. Multiple Work Packages.
  - 5. Work under Owner's separate contracts.
  - 6. Future work not part of this Project.
  - 7. Owner's product purchase contracts.
  - 8. Owner-furnished/Contractor-installed (OFCI) products.
  - 9. Owner-furnished/Owner-installed (OFOI) products.
  - 10. Contractor-furnished/Owner-installed (CFOI) products.
  - 11. Contractor's use of site and premises.
  - 12. Work restrictions.
  - 13. Specification and Drawing conventions.

#### B. Related Requirements:

- 1. Section 011000 "Summary" for the Work covered by the Contract Documents, restrictions on use of Project site, and work restrictions.
- 2. Section 013100 "Project Management and Coordination" for general coordination requirements.
- 3. Section 015000 "Temporary Facilities and Controls" for limitations and procedures governing temporary use of Owner's facilities.
- 4. Section 017300 "Execution" for coordination of Owner-installed products.

#### 1.3 PROJECT INFORMATION

- A. Project Coordinator for Multiple Contracts: General Contractor to serve as Project coordinator.
- B. Web-Based Project Software: Project software will be used for purposes of managing communication and documents during the construction stage.
  - 1. See Section 013100 "Project Management and Coordination." for requirements for using web-based Project software.

#### 1.4 WORK COVERED BY CONTRACT DOCUMENTS

- A. Type of Contract:
  - 1. Project will be constructed under coordinated GC contract.

#### 1.5 WORK UNDER OWNER'S SEPARATE CONTRACTS

A. Work with Separate Contractors: Cooperate fully with Owner's separate contractors, so work on those contracts may be carried out smoothly, without interfering with or delaying Work

SUMMARY 011000 - 1



under this Contract or other contracts. Coordinate the Work of this Contract with work performed under Owner's separate contracts.

#### 1.6 OWNER-FURNISHED/CONTRACTOR-INSTALLED (OFCI) PRODUCTS

- A. Owner's Responsibilities: Owner will furnish products indicated and perform the following, as applicable:
  - 1. NA

#### 1.7 OWNER-FURNISHED/OWNER-INSTALLED (OFOI) PRODUCTS

- A. The Owner will furnish and install products indicated.
- B. Owner-Furnished/Owner-Installed (OFOI) Products:
  - 1. NA

#### 1.8 CONTRACTOR'S USE OF SITE AND PREMISES

- A. Unrestricted Use of Site: Each Contractor shall have full use of Project site for construction operations during construction period. Contractor's use of Project site is limited only by Owner's right to perform work or to retain other contractors on portions of Project.
- B. Limits on Use of Site: Limit use of Project site to Work in areas indicated. Do not disturb portions of Project site beyond areas in which the Work is indicated.
  - 1. Driveways, Walkways and Entrances: Keep driveways and entrances serving premises clear and available to Owner, Owner's employees, and emergency vehicles at all times. Do not use these areas for parking or for storage of materials.
    - a. Schedule deliveries to minimize use of driveways and entrances by construction operations.
    - b. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.
- C. Condition of Existing Grounds: Maintain portions of existing grounds, landscaping, and hardscaping affected by construction operations throughout construction period. Repair damage caused by construction operations.

#### 1.9 COORDINATION WITH OCCUPANTS

- A. Owner Limited Occupancy of Completed Areas of Construction: Owner reserves the right to occupy and to place and install equipment in completed portions of the Work, prior to Substantial Completion of the Work, provided such occupancy does not interfere with completion of the Work. Such placement of equipment and limited occupancy shall not constitute acceptance of the total Work.
  - 1. Architect will prepare a Certificate of Substantial Completion for each specific portion of the Work to be occupied prior to Owner acceptance of the completed Work.
  - 2. Obtain a Certificate of Occupancy from authorities having jurisdiction before limited Owner occupancy.
  - 3. Before limited Owner occupancy, mechanical and electrical systems shall be fully operational, and required tests and inspections shall be successfully completed. On occupancy, Owner will operate and maintain mechanical and electrical systems serving occupied portions of Work.
  - 4. On occupancy, Owner will assume responsibility for maintenance and custodial service for occupied portions of Work.

SUMMARY 011000 - 2



#### 1.10 WORK RESTRICTIONS

- A. Comply with restrictions on construction operations.
  - 1. Comply with limitations on use of public streets, work on public streets, rights of way, and other requirements of authorities having jurisdiction.
- B. Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging for temporary utility services according to requirements indicated:
  - 1. Notify Owner not less than two days in advance of proposed utility interruptions.
  - 2. Obtain Owner's written permission before proceeding with utility interruptions.
- C. Smoking and Controlled Substance Restrictions: Use of tobacco products, alcoholic beverages, and other controlled substances on Project site is not permitted.

#### 1.11 SPECIFICATION AND DRAWING CONVENTIONS

- A. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:
  - 1. Imperative mood and streamlined language are generally used in the Specifications. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase.
  - 2. Text Color: Text used in the Specifications, including units of measure, manufacturer and product names, and other text may appear in multiple colors or underlined as part of a hyperlink; no emphasis is implied by text with these characteristics.
  - 3. Hypertext: Text used in the Specifications may contain hyperlinks. Hyperlinks may allow for access to linked information that is not residing in the Specifications. Unless otherwise indicated, linked information is not part of the Contract Documents.
  - 4. Specification requirements are to be performed by Contractor unless specifically stated otherwise.
- B. Division 00 Contracting Requirements: General provisions of the Contract, including General and Supplementary Conditions, apply to all Sections of the Specifications.
- C. Division 01 General Requirements: Requirements of Sections in Division 01 apply to the Work of all Sections in the Specifications.
- D. Drawing Coordination: Requirements for materials and products identified on Drawings are described in detail in the Specifications. One or more of the following are used on Drawings to identify materials and products:
  - 1. Terminology: Materials and products are identified by the typical generic terms used in the individual Specifications Sections.
  - 2. Abbreviations: Materials and products are identified by abbreviations scheduled on Drawings and published as part of the U.S. National CAD Standard.

PART 2 - PRODUCTS (Not Used)
PART 3 - EXECUTION (Not Used)
END OF SECTION 011000

SUMMARY 011000 - 3



#### SECTION 012500 - SUBSTITUTION PROCEDURES

#### PART 1 - GENERAL

#### 1.1 SUMMARY

- A. Section includes administrative and procedural requirements for substitutions.
- B. Related Requirements:
  - 1. Document 002600 "Procurement Substitution Procedures" for requirements for substitution requests prior to award of Contract.
  - 2. Section 016000 "Product Requirements" for requirements for submitting comparable product submittals for products by listed manufacturers.

#### 1.2 DEFINITIONS

- A. Substitutions: Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by Contractor.
  - 1. Substitutions for Cause: Changes proposed by Contractor that are required due to changed Project conditions, such as unavailability of product, regulatory changes, or unavailability of required warranty terms.
  - 2. Substitutions for Convenience: Changes proposed by Contractor or Owner that are not required in order to meet other Project requirements but may offer advantages to Contractor or Owner.

#### 1.3 ACTION SUBMITTALS

- A. Substitution Requests: Submit three (3) copies of each request for consideration. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.
  - 1. Substitution Request Form: Use form acceptable to Architect.
  - 2. Documentation: Show compliance with requirements for substitutions and the following, as applicable:
    - a. Statement indicating why specified product or fabrication, or installation method cannot be provided, if applicable.
    - b. Coordination of information, including a list of changes or revisions needed to other parts of the Work and to construction performed by Owner and separate contractors that will be necessary to accommodate proposed substitution.
    - c. Detailed comparison of significant qualities of proposed substitutions with those of the Work specified. Include annotated copy of applicable Specification Section. Significant qualities may include attributes, such as performance, weight, size, durability, visual effect, sustainable design characteristics, warranties, and specific features and requirements indicated. Indicate deviations, if any, from the Work specified.
    - d. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
    - e. Samples, where applicable or requested.
    - f. Certificates and qualification data, where applicable or requested.



- g. List of similar installations for completed projects, with project names and addresses as well as names and addresses of architects and owners.
- h. Material test reports from a qualified testing agency, indicating and interpreting test results for compliance with requirements indicated.
- i. Research reports evidencing compliance with building code in effect for Project.
- j. Detailed comparison of Contractor's construction schedule using proposed substitutions with products specified for the Work, including effect on the overall Contract Time. If specified product or method of construction cannot be provided within the Contract Time, include letter from manufacturer, on manufacturer's letterhead, stating date of receipt of purchase order, lack of availability, or delays in delivery.
- k. Cost information, including a proposal of change, if any, in the Contract Sum.
- Contractor's certification that proposed substitution complies with requirements in the Contract Documents, except as indicated in substitution request, is compatible with related materials and is appropriate for applications indicated.
- m. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.
- Architect's Action: If necessary, Architect will request additional information or documentation for evaluation within seven days of receipt of a request for substitution. Architect will notify Contractor of acceptance or rejection of proposed substitution within fifteen (15) days of receipt of request, or seven (7) days of receipt of additional information or documentation, whichever is later.
  - a. Forms of Acceptance: Change Order, Construction Change Directive, or Architect's Supplemental Instructions for minor changes in the Work.
  - b. Use product specified if Architect does not issue a decision on use of a proposed substitution within time allocated.

#### 1.4 QUALITY ASSURANCE

A. Compatibility of Substitutions: Investigate and document compatibility of proposed substitution with related products and materials. Engage a qualified testing agency to perform compatibility tests recommended by manufacturers.

#### 1.5 PROCEDURES

A. Coordination: Revise or adjust affected work as necessary to integrate work of the approved substitutions.

#### 1.6 SUBSTITUTIONS

- A. Substitutions for Cause: Submit requests for substitution immediately on discovery of need for change, but not later than fifteen (15) days prior to time required for preparation and review of related submittals.
  - 1. Conditions: Architect will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Architect will return requests without action, except to record noncompliance with these requirements:



- a. Requested substitution is consistent with the Contract Documents and will produce indicated results.
- b. Substitution request is fully documented and properly submitted.
- c. Requested substitution will not adversely affect Contractor's construction schedule.
- d. Requested substitution has received necessary approvals of authorities having jurisdiction.
- e. Requested substitution is compatible with other portions of the Work.
- f. Requested substitution has been coordinated with other portions of the Work.
- g. Requested substitution provides specified warranty.
- h. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.
- B. Substitutions for Convenience: Not allowed unless otherwise indicated.
- C. Substitutions for Convenience: Architect will consider requests for substitution if received within thirty (30) days after the Notice to Proceed. Requests received after that time may be considered or rejected at discretion of Architect.
  - 1. Conditions: Architect will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Architect will return requests without action, except to record noncompliance with these requirements:
    - a. Requested substitution offers Owner a substantial advantage in cost, time, energy conservation, or other considerations, after deducting additional responsibilities Owner must assume. Owner's additional responsibilities may include compensation to Architect for redesign and evaluation services, increased cost of other construction by Owner, and similar considerations.
    - b. Requested substitution does not require extensive revisions to the Contract Documents.
    - c. Requested substitution is consistent with the Contract Documents and will produce indicated results.
    - d. Substitution request is fully documented and properly submitted.
    - e. Requested substitution will not adversely affect Contractor's construction schedule.
    - f. Requested substitution has received necessary approvals of authorities having jurisdiction.
    - g. Requested substitution is compatible with other portions of the Work.
    - h. Requested substitution has been coordinated with other portions of the Work.
    - i. Requested substitution provides specified warranty.
    - j. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.

PART 2 - PRODUCTS (Not Used) PART 3 - EXECUTION (Not Used) END OF SECTION 012500



#### SECTION 012900 - PAYMENT PROCEDURES

#### PART 1 - GENERAL

#### 1.1 SUMMARY

A. Section includes administrative and procedural requirements necessary to prepare and process Applications for Payment.

#### 1.2 SCHEDULE OF VALUES

- A. Coordination: Coordinate preparation of the schedule of values with preparation of Contractor's construction schedule.
  - 1. Coordinate line items in the schedule of values with items required to be indicated as separate activities in Contractor's construction schedule.
  - 2. Submit the schedule of values to Architect at earliest possible date, but no later than seven (7) days before the date scheduled for submittal of initial Applications for Payment.
- B. Format and Content: Use Project Manual table of contents as a guide to establish line items for the schedule of values. Provide at least one (1) line item for each Specification Section.
  - 1. Arrange schedule of values consistent with format of AIA Document G703.
  - 2. Provide a breakdown of the Contract Sum in enough detail to facilitate continued evaluation of Applications for Payment and progress reports. Provide multiple line items for principal subcontract amounts in excess of five (5) percent of the Contract Sum.
  - 3. Provide a separate line item in the schedule of values for each part of the Work where Applications for Payment may include materials or equipment purchased or fabricated and stored, but not yet installed.
    - a. Differentiate between items stored on-site and items stored off-site.
  - 4. Overhead Costs: Include total cost and proportionate share of general overhead and profit for each line item.
  - 5. Closeout Costs. Include separate line items under Contractor and principal subcontracts for Project closeout requirements in an amount totaling five percent of the Contract Sum and subcontract amount.
  - 6. Schedule of Values Revisions: Revise the schedule of values when Change Orders or Construction Change Directives result in a change in the Contract Sum. Include at least one separate line item for each Change Order and Construction Change Directive.

#### 1.3 APPLICATIONS FOR PAYMENT

- A. Each Application for Payment following the initial Application for Payment shall be consistent with previous applications and payments as certified by Architect and paid for by Owner.
- B. Payment Application Times: The date for each progress payment is indicated in the Agreement between Owner and Contractor. The period of construction work covered by each Application for Payment is the period indicated in the Agreement.
  - 1. Submit draft copy of Application for Payment seven (7) days prior to due date for review by Architect.
- C. Application for Payment Forms: Use AIA Document G702 and AIA Document G703 as form for Applications for Payment.



- D. Application Preparation: Complete every entry on form. Notarize and execute by a person authorized to sign legal documents on behalf of Contractor. Architect will return incomplete applications without action.
  - 1. Entries shall match data on the schedule of values and Contractor's construction schedule. Use updated schedules if revisions were made.
  - 2. Include amounts for work completed following previous Application for Payment, whether or not payment has been received. Include only amounts for work completed at time of Application for Payment.
  - 3. Include amounts of Change Orders and Construction Change Directives issued before last day of construction period covered by application.
- E. Transmittal: Submit three signed and notarized original copies of each Application for Payment to Architect by a method ensuring receipt within twenty-four (24) hours. One (1) copy shall include waivers of lien and similar attachments if required.
  - 1. Transmit each copy with a transmittal form listing attachments and recording appropriate information about application.
- F. Waivers of Mechanic's Lien: With each Application for Payment, submit waivers of mechanic's lien from subcontractors, sub-subcontractors, and suppliers for construction period covered by the previous application.
  - 1. Submit partial waivers on each item for amount requested in previous application, after deduction for retainage, on each item.
  - 2. When an application shows completion of an item, submit conditional final or full waivers.
  - 3. Owner reserves the right to designate which entities involved in the Work must submit waivers.
  - 4. Submit final Application for Payment with or preceded by conditional final waivers from every entity involved with performance of the Work covered by the application who is lawfully entitled to a lien.
  - 5. Waiver Forms: Submit executed waivers of lien on forms acceptable to Owner.
- G. Initial Application for Payment: Administrative actions and submittals that must precede or coincide with submittal of first Application for Payment include the following:
  - 1. List of subcontractors.
  - 2. Schedule of values.
  - 3. Contractor's construction schedule (preliminary if not final).
  - 4. Products list (preliminary if not final).
  - 5. Sustainable design action plans, including preliminary project materials cost data.
  - 6. Schedule of unit prices.
  - 7. Submittal schedule (preliminary if not final).
  - 8. List of Contractor's staff assignments.
  - 9. List of Contractor's principal consultants.
  - 10. Copies of building permits.
  - 11. Copies of authorizations and licenses from authorities having jurisdiction for performance of the Work.
  - 12. Initial progress report.
  - 13. Report of preconstruction conference.
  - 14. Certificates of insurance and insurance policies.
  - 15. Performance and payment bonds.
  - 16. Data needed to acquire Owner's insurance.



- H. Application for Payment at Substantial Completion: After Architect issues the Certificate of Substantial Completion, submit an Application for Payment showing 100 percent completion for portion of the Work claimed as substantially complete.
  - 1. Include documentation supporting claim that the Work is substantially complete and a statement showing an accounting of changes to the Contract Sum.
  - 2. This application shall reflect Certificate(s) of Substantial Completion issued previously for Owner occupancy of designated portions of the Work.
- I. Final Payment Application: After completing Project closeout requirements, submit final Application for Payment with releases and supporting documentation not previously submitted and accepted, including, but not limited, to the following:
  - 1. Evidence of completion of Project closeout requirements.
  - 2. Insurance certificates for products and completed operations where required and proof that taxes, fees, and similar obligations were paid.
  - 3. Updated final statement, accounting for final changes to the Contract Sum.
  - 4. AIA Document G706.
  - 5. AIA Document G706A.
  - 6. AIA Document G707.
  - 7. Evidence that claims have been settled.
  - 8. Final meter readings for utilities, a measured record of stored fuel, and similar data as of date of Substantial Completion or when Owner took possession of and assumed responsibility for corresponding elements of the Work.
  - 9. Final liquidated damages settlement statement.

PART 2 - PRODUCTS (Not Used) PART 3 - EXECUTION (Not Used) END OF SECTION 012900



#### SECTION 013100 - PROJECT MANAGEMENT AND COORDINATION

#### PART 1 - GENERAL

#### 1.1 SUMMARY

- A. Section includes administrative provisions for coordinating construction options on Project including, but not limited to, the following:
  - 1. General coordination procedures.
  - 2. Coordination drawings.
  - 3. RFIs.
  - 4. Digital project management procedures.
  - 5. Project meetings.
- B. Related Requirements:
  - 1. Section 017300 "Execution" for procedures for coordinating general installation and field-engineering services, including establishment of benchmarks and control points.
  - 2. Section 019113 "General Commissioning Requirements" for coordinating the Work with Owner's Commissioning Authority as required.

#### 1.2 INFORMATIONAL SUBMITTALS

- A. 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. Include the following information in tabular form:
  - 1. Name, address, telephone number, and email address of entity performing subcontract or supplying products.
  - 2. Number and title of related Specification Section(s) covered by subcontract.
  - 3. Drawing number and detail references, as appropriate, covered by subcontract.

#### 1.3 GENERAL COORDINATION PROCEDURES

- A. Coordination: General Construction Prime Contractor shall be responsible to coordinate all construction operations included in different Sections of the Specifications as well as other Prime Contracts to ensure efficient and orderly installation of each part of the Work. Coordinate construction operations included in different Sections that depend on each other for proper installation, connection, and operation.
  - 1. Schedule construction operations in sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
  - 2. Coordinate installation of different components to ensure maximum performance and accessibility for required maintenance, service, and repair.
  - 3. Make adequate provisions to accommodate items scheduled for later installation.
- B. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities to avoid conflicts and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:
  - 1. Preparation of Contractor's construction schedule.
  - 2. Preparation of the schedule of values.
  - 3. Installation and removal of temporary facilities and controls.



- 4. Delivery and processing of submittals.
- 5. Progress meetings.
- 6. Preinstallation conferences.
- 7. Project closeout activities.
- 8. Startup and adjustment of systems.

#### 1.4 COORDINATION DRAWINGS

- A. Coordination Drawings, General: Prepare coordination drawings according to requirements in individual Sections, and additionally where installation is not completely indicated on Shop Drawings, where limited space availability necessitates coordination, or if coordination is required to facilitate integration of products and materials fabricated or installed by more than one entity.
  - 1. Content: Project-specific information, drawn accurately to a scale large enough to indicate and resolve conflicts. Do not base coordination drawings on standard printed data. Include the following information, as applicable:
    - a. Indicate functional and spatial relationships of components of architectural, structural, civil, mechanical, and electrical systems.
    - Indicate dimensions shown on Drawings. Specifically note dimensions that appear to be in conflict with submitted equipment and minimum clearance requirements.
       Provide alternative sketches to Architect indicating proposed resolution of such conflicts. Minor dimension changes and difficult installations will not be considered changes to the Contract.
- B. Coordination Drawing Organization: Organize (if applicable) coordination drawings as follows:
  - 1. Floor Plans and Reflected Ceiling Plans: Show architectural and structural elements, and mechanical, plumbing, fire-protection, fire-alarm, and electrical Work. Show locations of visible ceiling-mounted devices relative to acoustical ceiling grid. Supplement plan drawings with section drawings where required to adequately represent the Work.
  - Plenum Space: Indicate subframing for support of ceiling and wall systems, mechanical
    and electrical equipment, and related Work. Locate components within plenums to
    accommodate layout of light fixtures and other components indicated on Drawings.
    Indicate areas of conflict between light fixtures and other components.
  - 3. Mechanical Rooms: Provide coordination drawings for mechanical rooms showing plans and elevations of mechanical, plumbing, fire-protection, fire-alarm, and electrical equipment.
  - 4. Structural Penetrations: Indicate penetrations and openings required for all disciplines.
  - 5. Slab Edge and Embedded Items: Indicate slab edge locations and sizes and locations of embedded items for metal fabrications, sleeves, anchor bolts, bearing plates, angles, door floor closers, slab depressions for floor finishes, curbs and housekeeping pads, and similar items.
  - 6. Review: Architect will review coordination drawings to confirm that, in general, the Work is being coordinated, but not for the details of the coordination, which are Contractor's responsibility. If Architect determines that coordination drawings are not being prepared in sufficient scope or detail, or are otherwise deficient, Architect will so inform Contractor, who shall make suitable modifications and resubmit.
- C. Coordination Digital Data Files: Prepare coordination digital data files according to the following requirements:



- 1. File Preparation Format:
  - a. DWG Version, operating in Microsoft Windows operating system.
- 2. File Submittal Format: Submit or post coordination drawing files using PDF format.
- 3. Architect will furnish Contractor one (1) set of digital data files of Drawings for use in preparing coordination digital data files.
  - a. Architect makes no representations as to the accuracy or completeness of digital data files as they relate to Drawings.
  - b. Digital Data Software Program: Drawings are available in AutoCAD dwg format.
  - c. Contractor shall execute a data licensing agreement in the form of Agreement form acceptable to Owner and Architect.

#### 1.5 REQUEST FOR INFORMATION (RFI)

- A. General: Immediately on discovery of the need for additional information, clarification, or interpretation of the Contract Documents, Contractor shall prepare and submit an RFI in the form specified.
  - 1. Architect will return without response those RFIs submitted to Architect by other entities controlled by Contractor.
  - 2. Coordinate and submit RFIs in a prompt manner so as to avoid delays in Contractor's work or work of subcontractors.
- B. Content of the RFI: Include a detailed, legible description of item needing information or interpretation and the following:
  - 1. Owner name.
  - 2. Owner's Project number.
  - 3. Name of Architect.
  - 4. Architect's Project number.
  - 5. Date.
  - 6. Name of Contractor.
  - 7. RFI number, numbered sequentially.
  - 8. RFI subject.
  - 9. Specification Section number and title and related paragraphs, as appropriate.
  - 10. Drawing number and detail references, as appropriate.
  - 11. Field dimensions and conditions, as appropriate.
  - 12. Contractor's suggested resolution. If Contractor's suggested resolution impacts the Contract Time or the Contract Sum, Contractor shall state impact in the RFI.
  - 13. Contractor's signature.
  - 14. Attachments: Include sketches, descriptions, measurements, photos, Product Data, Shop Drawings, coordination drawings, and other information necessary to fully describe items needing interpretation.
- C. RFI Forms Software-generated form with substantially the same content as indicated above, acceptable to Architect.
- D. Architect's Action: Architect will review each RFI, determine action required, and respond. Allow seven (7) days for Architect's response for each RFI. RFIs received by Architect after 1:00 p.m. will be considered as received the following working day.
  - 1. The following Contractor-generated RFIs will be returned without action:
    - a. Requests for approval of submittals.
    - b. Requests for approval of substitutions.



- c. Requests for approval of Contractor's means and methods.
- d. Requests for coordination information already indicated in the Contract Documents.
- e. Requests for adjustments in the Contract Time or the Contract Sum.
- f. Requests for interpretation of Architect's actions on submittals.
- g. Incomplete RFIs or inaccurately prepared RFIs.
- 2. Architect's action may include a request for additional information, in which case Architect's time for response will date from time of receipt by Architect of additional information.
- Architect's action on RFIs that may result in a change to the Contract Time or the Contract Sum may be eligible for Contractor to submit Change Proposal according to Section 012600 "Contract Modification Procedures."
  - a. If Contractor believes the RFI response warrants change in the Contract Time or the Contract Sum, notify Architect in writing within five (5) days of receipt of the RFI response.
- E. RFI Log: Prepare, maintain, and submit a tabular log of RFIs organized by the RFI number. Submit log weekly. Use software log that is part of web-based Project management software. Include the following:
  - 1. Project name.
  - 2. Name and address of Contractor.
  - 3. Name and address of Architect.
  - 4. RFI number including RFIs that were returned without action or withdrawn.
  - 5. RFI description.
  - 6. Date the RFI was submitted.
  - 7. Date Architect's response was received.
- F. On receipt of Architect's action, update the RFI log and immediately distribute the RFI response to affected parties. Review response and notify Architect within three (3) days if Contractor disagrees with response.

#### 1.6 DIGITAL PROJECT MANAGEMENT PROCEDURES

- A. Web-Based Project Management Software Package: Provide, administer, and use web-based Project management software package for purposes of hosting and managing Project communication and documentation until Final Completion.
  - 1. Web-based Project management software includes, at a minimum, the following features:
    - a. Compilation of Project data, including Contractor, other Prime Contractor's, subcontractors, Architect, architect's consultants, Owner, and other entities involved in Project. Include names of individuals and contact information.
    - b. Access control for each entity for each workflow process, to determine entity's digital rights to create, modify, view, and print documents.
    - c. Document workflow planning, allowing customization of workflow between project entities.
    - d. Creation, logging, tracking, and notification for Project communications required in other Specification Sections, including, but not limited to, RFIs, submittals, Minor Changes in the Work, Construction Change Directives, and Change Orders.
    - e. Track status of each Project communication in real time, and log time and date when responses are provided.



- f. Procedures for handling PDFs or similar file formats, allowing markups by each entity. Provide security features to lock markups against changes once submitted.
- g. Processing and tracking of payment applications.
- h. Processing and tracking of contract modifications.
- i. Creating and distributing meeting minutes.
- j. Document management for Drawings, Specifications, and coordination drawings, including revision control.
- k. Management of construction progress photographs.
- I. Mobile device compatibility, including smartphones and tablets.
- 2. Provide up to seven (7) web-based Project management software user licenses for use of Owner, Architect, and Architect's consultants.
- 3. At completion of Project, provide digital archive in format that is readable by common desktop software applications in format acceptable to Architect. Provide data in locked format to prevent further changes.
- B. PDF Document Preparation: Where PDFs are required to be submitted to Architect, prepare as follows:
  - 1. Assemble complete submittal package into a single indexed file incorporating submittal requirements of a single Specification Section and transmittal form with links enabling navigation to each item.
  - 2. Name file with submittal number or other unique identifier, including revision identifier.
  - 3. Certifications: Where digitally submitted certificates and certifications are required, provide a digital signature with digital certificate on where indicated.

#### 1.7 PROJECT MEETINGS

- A. General: Schedule and conduct meetings and conferences at Project site unless otherwise indicated
- B. Preconstruction Conference: Schedule and conduct a preconstruction conference before starting construction, at a time convenient to other Prime Contractor's, Owner, and Architect, but no later than fifteen (15) days after execution of the Agreement.
  - 1. Attendees: Authorized representatives of Owner, Architect, Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the conference. Participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
  - 2. Agenda: Discuss items of significance that could affect progress, including the following:
    - a. Responsibilities and personnel assignments.
    - b. Tentative construction schedule.
    - c. Phasing.
    - d. Critical work sequencing and long lead items.
    - e. Designation of key personnel and their duties.
    - f. Lines of communications.
    - g. Use of web-based Project software.
    - h. Procedures for processing field decisions and Change Orders.
    - i. Procedures for RFIs.
    - j. Procedures for testing and inspecting.
    - k. Procedures for processing Applications for Payment.
    - I. Distribution of the Contract Documents.



- m. Submittal procedures.
- n. Preparation of Record Documents.
- o. Use of the premises.
- p. Work restrictions.
- q. Working hours.
- r. Responsibility for temporary facilities and controls.
- s. Procedures for moisture and mold control.
- t. Procedures for disruptions and shutdowns.
- u. Construction waste management and recycling.
- v. Parking availability.
- w. Office, work, and storage areas.
- x. Equipment deliveries and priorities.
- y. First aid.
- z. Security.
- aa. Progress cleaning.
- 3. Minutes: Entity responsible for conducting meeting will record and distribute meeting minutes.
- 4. Attendees: Authorized representatives of Owner, Architect, and their consultants when appropriate; Contractor and its superintendent and sustainable design coordinator; major subcontractors; suppliers; and other concerned parties shall attend the conference. Participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
- 5. Agenda: Discuss items of significance that could affect meeting sustainable design requirements, including the following:
- 6. Minutes: Entity responsible for conducting meeting will record and distribute meeting minutes
- C. Preinstallation Conferences: Conduct a preinstallation conference at Project site before each construction activity when required by other sections and when required for coordination with other construction.
  - 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 Architect 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. Contract Documents.
    - b. Options.
    - c. Related RFIs.
    - d. Related Change Orders.
    - e. Purchases.
    - f. Deliveries.
    - g. Submittals.
    - h. Possible conflicts.
    - i. Compatibility requirements.
    - j. Time schedules.
    - k. Weather limitations.



- I. Manufacturer's written instructions.
- m. Warranty requirements.
- n. Compatibility of materials.
- o. Acceptability of substrates.
- p. Temporary facilities and controls.
- q. Space and access limitations.
- r. Regulations of authorities having jurisdiction.
- s. Testing and inspecting requirements.
- t. Installation procedures.
- u. Coordination with other work.
- v. Required performance results.
- w. Protection of adjacent work.
- x. 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 other parties requiring information.
- 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 biweekly intervals.
  - 1. Coordinate dates of meetings with preparation of payment requests.
  - Attendees: In addition to representatives of Owner, and Architect, each contractor, subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the meeting shall be familiar with Project and authorized to conclude matters relating to the Work.
  - 3. 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 use.
      - 8) Temporary facilities and controls.



- 9) Progress cleaning.
- 10) Quality and work standards.
- 11) Status of correction of deficient items.
- 12) Field observations.
- 13) Status of RFIs.
- 14) Status of Proposal Requests.
- 15) Pending changes.
- 16) Status of Change Orders.
- 17) Pending claims and disputes.
- 18) Documentation of information for payment requests.
- 4. Minutes: Entity responsible for conducting the meeting will record and distribute the meeting minutes to each party present and to parties requiring information.
  - a. Schedule Updating: Revise Contractor's construction schedule after each progress meeting where revisions to the schedule have been made or recognized. Issue revised schedule concurrently with the report of each meeting.

PART 2 - PRODUCTS (Not Used)
PART 3 - EXECUTION (Not Used)
END OF SECTION 013100



#### SECTION 013300 - SUBMITTAL PROCEDURES

#### PART 1 - GENERAL

#### 1.1 SUMMARY

- A. Section Includes:
  - 1. Submittal schedule requirements.
  - 2. Administrative and procedural requirements for submittals.

#### 1.2 DEFINITIONS

- A. Action Submittals: Written and graphic information and physical samples that require Architect's responsive action. Action submittals are those submittals indicated in individual Specification Sections as "action submittals."
- B. Informational Submittals: Written and graphic information and physical samples that do not require Architect's responsive action. Submittals may be rejected for not complying with requirements. Informational submittals are those submittals indicated in individual Specification Sections as "informational submittals."

#### 1.3 SUBMITTAL SCHEDULE

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

#### 1.4 SUBMITTAL FORMATS

- A. Submittal Information: Include the following information in each submittal:
  - 1. Project name.
  - 2. Date.
  - 3. Name of Architect.
  - 4. Name of Contractor.
  - 5. Name of firm or entity that prepared submittal.
  - 6. Names of subcontractor, manufacturer, and supplier.
  - 7. Unique submittal number, including revision identifier. Include Specification Section number with sequential alphanumeric identifier; and alphanumeric suffix for resubmittals.
  - 8. Category and type of submittal.
  - 9. Submittal purpose and description.
  - 10. Number and title of Specification Section, with paragraph number and generic name for each of multiple items.
  - 11. Drawing number and detail references, as appropriate.
  - 12. Indication of full or partial submittal.
  - 13. Location(s) where product is to be installed, as appropriate.
  - 14. Other necessary identification.
  - 15. Remarks.
  - 16. Signature of transmitter.



- B. Options: Identify options requiring selection by Architect.
- C. Deviations and Additional Information: On each submittal, clearly indicate deviations from requirements in the Contract Documents, including minor variations and limitations; include relevant additional information and revisions, other than those requested by Architect on previous submittals. Indicate by highlighting on each submittal or noting on attached separate sheet.
  - 1. Transmittal for Submittals: Assemble each submittal individually and appropriately for transmittal and handling. Transmit each submittal using transmittal form agreed to by Architect.
- D. Submittals for Utilizing Web-Based Project Management Software: Prepare submittals as PDF files, or other format indicated by Project management software.

#### 1.5 SUBMITTAL PROCEDURES

- A. Prepare and submit submittals required by individual Specification Sections. Types of submittals are indicated in individual Specification Sections.
  - 1. Web-Based Project Management Software: Prepare submittals in PDF form, and upload to web-based Project management software website. Enter required data in web-based software site to fully identify submittal.
- B. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.
  - 1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
  - 2. Submit all submittal items required for each Specification Section concurrently unless partial submittals for portions of the Work are indicated on approved submittal schedule.
  - 3. Submit action submittals and informational submittals required by the same Specification Section as separate packages under separate transmittals.
- C. Processing Time: Allow time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Architect's receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.
  - 1. Initial Review: Allow ten (10) days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Architect will advise Contractor when a submittal being processed must be delayed for coordination.
  - 2. Resubmittal Review: Allow ten (10) days for review of each resubmittal.
- D. Resubmittals: Make resubmittals in same form and number of copies as initial submittal.
- E. 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.
- F. Use for Construction: Retain complete copies of submittals on Project site. Use only final action submittals that are marked with approval notation from Architect's action stamp.

#### 1.6 SUBMITTAL REQUIREMENTS

- A. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.
  - 1. If information must be specially prepared for submittal because standard published data are unsuitable for use, submit as Shop Drawings, not as Product Data.



- 2. Mark each copy of each submittal to show which products and options are applicable.
- 3. Include the following information, as applicable:
  - a. Manufacturer's catalog cuts.
  - b. Manufacturer's product specifications.
  - c. Standard color charts.
  - d. Statement of compliance with specified referenced standards.
  - e. Testing by recognized testing agency.
  - f. Application of testing agency labels and seals.
  - g. Notation of coordination requirements.
  - h. Availability and delivery time information.
- 4. For equipment, include the following in addition to the above, as applicable:
  - a. Wiring diagrams that show factory-installed wiring.
  - b. Printed performance curves.
  - c. Operational range diagrams.
  - d. Clearances required to other construction, if not indicated on accompanying Shop Drawings.
- 5. Submit Product Data before Shop Drawings, and before or concurrent with Samples.
- 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:
    - a. Identification of products.
    - b. Schedules.
    - c. Compliance with specified standards.
    - d. Notation of coordination requirements.
    - e. Notation of dimensions established by field measurement.
    - f. Relationship and attachment to adjoining construction clearly indicated.
    - g. Seal and signature of professional engineer if specified.
- C. Samples: Submit Samples for review of kind, color, pattern, and texture for a check of these characteristics with other materials.
  - 1. Transmit Samples that contain multiple, related components such as accessories together in one (1) submittal package.
  - 2. Identification: Permanently attach label on unexposed side of Samples that includes the following:
    - a. Project name and submittal number.
    - b. Generic description of Sample.
    - c. Product name and name of manufacturer.
    - d. Sample source.
    - e. Number and title of applicable Specification Section.
    - f. Specification paragraph number and generic name of each item.
  - 3. Web-Based Project Management Software: Prepare submittals in PDF form, and upload to web-based Project software website. Enter required data in web-based software site to fully identify submittal.
  - 4. 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.



- Samples that may be incorporated into the Work are indicated in individual Specification Sections. Such Samples must be in an undamaged condition at the time of use.
- b. Samples not incorporated into the Work, or otherwise designated as Owner's property, are the property of Contractor.
- 5. Samples for Initial Selection: Submit manufacturer's color charts consisting of units or sections of units showing the full range of colors, textures, and patterns available.
  - a. Number of Samples: Submit two (2) full sets of available choices where color, pattern, texture, or similar characteristics are required to be selected from manufacturer's product line. Architect will return submittal with options selected.
- 6. Samples for Verification: Submit full-size units or Samples of size indicated, prepared from same material to be used for the Work, cured and finished in manner specified, and physically identical with material or product proposed for use, and that show full range of color and texture variations expected. Samples include, but are not limited to, the following: partial sections of manufactured or fabricated components; small cuts or containers of materials; complete units of repetitively used materials; swatches showing color, texture, and pattern; color range sets; and components used for independent testing and inspection.
  - a. Number of Samples: Submit three (3) sets of Samples. Architect will retain two (2) Sample sets; remainder will be returned.
    - 1) Submit a single Sample where assembly details, workmanship, fabrication techniques, connections, operation, and other similar characteristics are to be demonstrated.
    - 2) If variation in color, pattern, texture, or other characteristic is inherent in material or product represented by a Sample, submit at least three (3) sets of paired units that show approximate limits of variations.
- D. Product Schedule: As required in individual Specification Sections, prepare a written summary indicating types of products required for the Work and their intended location. Include the following information in tabular form:
- E. Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, contact information of architects and owners, and other information specified.
- F. Design Data: Prepare and submit written and graphic information indicating compliance with indicated performance and design criteria in individual Specification Sections. Include list of assumptions and summary of loads. Include load diagrams if applicable. Provide name and version of software, if any, used for calculations. Number each page of submittal.
- G. Certificates:
  - Certificates and Certifications Submittals: Submit a statement that includes signature of
    entity responsible for preparing certification. Certificates and certifications shall be signed
    by an officer or other individual authorized to sign documents on behalf of that entity.
    Provide a notarized signature where indicated.
  - 2. Installer Certificates: Submit written statements on manufacturer's letterhead certifying that Installer complies with requirements in the Contract Documents and, where required, is authorized by manufacturer for this specific Project.



- 3. Manufacturer Certificates: Submit written statements on manufacturer's letterhead certifying that manufacturer complies with requirements in the Contract Documents. Include evidence of manufacturing experience where required.
- 4. Material Certificates: Submit written statements on manufacturer's letterhead certifying that material complies with requirements in the Contract Documents.
- 5. Product Certificates: Submit written statements on manufacturer's letterhead certifying that product complies with requirements in the Contract Documents.
- 6. Welding Certificates: Prepare written certification that welding procedures and personnel comply with requirements in the Contract Documents. Submit record of Welding Procedure Specification and Procedure Qualification Record on AWS forms. Include names of firms and personnel certified.

#### H. Test and Research Reports:

- 1. Compatibility Test Reports: Submit 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 substrate preparation and primers required.
- 2. Field Test Reports: Submit written reports indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with requirements in the Contract Documents.
- 3. Material Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements in the Contract Documents.
- 4. Preconstruction Test Reports: Submit 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.
- 5. Product Test Reports: Submit written reports indicating that 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.
- 6. Research Reports: Submit written evidence, from a model code organization acceptable to authorities having jurisdiction, that product complies with building code in effect for Project. Include the following information:
  - a. Name of evaluation organization.
  - b. Date of evaluation.
  - c. Time period when report is in effect.
  - d. Product and manufacturers' names.
  - e. Description of product.
  - f. Test procedures and results.
  - g. Limitations of use.

#### 1.7 DELEGATED-DESIGN SERVICES

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



- 1. If criteria indicated are insufficient to perform services or certification required, submit a written request for additional information to Architect.
- B. Delegated-Design Services Certification: In addition to Shop Drawings, Product Data, and other required submittals, submit digitally signed PDF file paper copies of certificate, signed and sealed by the responsible design professional, for each product and system specifically assigned to Contractor to be designed or certified by a design professional.
  - 1. Indicate that products and systems comply with performance and design criteria in the Contract Documents. Include list of codes, loads, and other factors used in performing these services.

### 1.8 CONTRACTOR'S REVIEW

- A. Action Submittals and Informational Submittals: Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to Architect.
- B. Contractor's Approval: Indicate Contractor's approval for each submittal with uniform approval stamp. Include name of reviewer, date of Contractor's approval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents.
  - 1. Architect will not review submittals received from Contractor that do not have Contractor's review and approval.

## 1.9 ARCHITECT'S REVIEW

- A. Action Submittals: Architect will review each submittal, indicate corrections or revisions required, and return it.
  - 1. PDF Submittals: Architect will indicate, via markup on each submittal, the appropriate
  - 2. Submittals by Web-Based Project Management Software: Architect will indicate, on Project management software website, the appropriate action.
- B. Informational Submittals: Architect will review each submittal and either will not return it or will return it if it does not comply with requirements. Architect will forward each submittal to the appropriate party.
- C. Partial submittals prepared for a portion of the Work will be reviewed when use of partial submittals has received prior approval from Architect.
- D. Incomplete submittals are unacceptable, will be considered nonresponsive, and will be returned for resubmittal without review.
- E. Architect will return without review submittals received from sources other than Contractor.
- F. Submittals not required by the Contract Documents will be returned by Architect without action.

PART 2 - PRODUCTS (Not Used)
PART 3 - EXECUTION (Not Used)
END OF SECTION 013300



## SECTION 014000 - QUALITY REQUIREMENTS

#### PART 1 - GENERAL

### 1.1 SUMMARY

- A. Section includes administrative and procedural requirements for quality assurance and quality control.
- B. Testing and inspection services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.
  - Specified tests, inspections, and related actions do not limit Contractor's other qualityassurance and quality-control procedures that facilitate compliance with the Contract Document requirements.
  - 2. Requirements for Contractor to provide quality-assurance and quality-control services required by Architect, Owner, or authorities having jurisdiction are not limited by provisions of this Section.

### 1.2 DEFINITIONS

- A. Experienced: When used with an entity or individual, "experienced" unless otherwise further described means having successfully completed a minimum of five (5) previous projects similar in nature, size, and extent to this Project; being familiar with special requirements indicated; and having complied with requirements of authorities having jurisdiction.
- B. Field Quality-Control Tests and Inspections: Tests and inspections that are performed on-site for installation of the Work and for completed Work.
- C. Installer/Applicator/Erector: Contractor or another entity engaged by Contractor as an employee, Subcontractor, or Sub-subcontractor, to perform a particular construction operation, including installation, erection, application, assembly, and similar operations.
  - 1. Use of trade-specific terminology in referring to a Work result does not require that certain construction activities specified apply exclusively to specific trade(s).
- D. Preconstruction Testing: Tests and inspections performed specifically for Project before products and materials are incorporated into the Work, to verify performance or compliance with specified criteria. Unless otherwise indicated, copies of reports of tests or inspections performed for other than the Project do not meet this definition.
- E. Product Tests: Tests and inspections that are performed by a nationally recognized testing laboratory (NRTL) according to 29 CFR 1910.7, by a testing agency accredited according to NIST's National Voluntary Laboratory Accreditation Program (NVLAP), or by a testing agency qualified to conduct product testing and acceptable to authorities having jurisdiction, to establish product performance and compliance with specified requirements.
- F. Source Quality-Control Tests and Inspections: Tests and inspections that are performed at the source; for example, plant, mill, factory, or shop.
- G. Testing Agency: An entity engaged to perform specific tests, inspections, or both. The term "testing laboratory" has the same meaning as the term "testing agency."
- H. Quality-Assurance Services: Activities, actions, and procedures performed before and during execution of the Work to guard against defects and deficiencies and substantiate that proposed construction will comply with requirements.



 Quality-Control Services: Tests, inspections, procedures, and related actions during and after execution of the Work to evaluate that actual products incorporated into the Work and completed construction comply with requirements. Contractor's quality-control services do not include contract administration activities performed by Architect.

## 1.3 DELEGATED DESIGN SERVICES

- A. Performance and Design Criteria: Where professional design services or certifications by a design professional are specifically required of Contractor by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated.
  - 1. If criteria indicated are not sufficient to perform services or certification required, submit a written request for additional information to Architect.
- B. Delegated Design Services Statement: Submit 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, indicating that the products and systems are in compliance with performance and design criteria indicated. Include list of codes, loads, and other factors used in performing these services.

### 1.4 CONFLICTING REQUIREMENTS

- A. Conflicting Standards and Other Requirements: If compliance with two (2) or more standards or requirements is specified and the standards or requirements establish different or conflicting requirements for minimum quantities or quality levels, inform the Architect regarding the conflict and obtain clarification prior to proceeding with the Work. Refer conflicting requirements that are different, but apparently equal, to Architect for clarification before proceeding.
- B. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified is the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to Architect for a decision before proceeding.

# 1.5 INFORMATIONAL SUBMITTALS

- A. Contractor's Statement of Responsibility: When required by authorities having jurisdiction, submit copy of written statement of responsibility submitted to authorities having jurisdiction before starting work on the following systems:
  - 1. Seismic-force-resisting system, designated seismic system, or component listed in the Statement of Special Inspections.
  - 2. Main wind-force-resisting system or a wind-resisting component listed in the Statement of Special Inspections.
- B. Testing Agency Qualifications: For testing agencies specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include proof of qualifications in the form of a recent report on the inspection of the testing agency by a recognized authority.
- C. Permits, Licenses, and Certificates: For Owner's record, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee



payments, judgments, correspondence, records, and similar documents established for compliance with standards and regulations bearing on performance of the Work.

### 1.6 REPORTS AND DOCUMENTS

- A. Test and Inspection Reports: Prepare and submit certified written reports specified in other Sections. Include the following:
  - 1. Date of issue.
  - 2. Project title and number.
  - 3. Name, address, telephone number, and email address of testing agency.
  - 4. Dates and locations of samples and tests or inspections.
  - 5. Names of individuals making tests and inspections.
  - 6. Description of the Work and test and inspection method.
  - 7. Identification of product and Specification Section.
  - 8. Complete test or inspection data.
  - 9. Test and inspection results and an interpretation of test results.
  - 10. Record of temperature and weather conditions at time of sample taking and testing and inspection.
  - 11. Comments or professional opinion on whether tested or inspected Work complies with the Contract Document requirements.
  - 12. Name and signature of laboratory inspector.
  - 13. Recommendations on retesting and reinspecting.
- B. Manufacturer's Technical Representative's Field Reports: Prepare written information documenting manufacturer's technical representative's tests and inspections specified in other Sections. Include the following:
  - 1. Statement on condition of substrates and their acceptability for installation of product.
  - 2. Statement that products at Project site comply with requirements.
  - 3. Summary of installation procedures being followed, whether they comply with requirements and, if not, what corrective action was taken.
  - 4. Results of operational and other tests and a statement of whether observed performance complies with requirements.
  - 5. Other required items indicated in individual Specification Sections.
- C. Factory-Authorized Service Representative's Reports: Prepare written information documenting manufacturer's factory-authorized service representative's tests and inspections specified in other Sections. Include the following:
  - 1. Statement that equipment complies with requirements.
  - 2. Results of operational and other tests and a statement of whether observed performance complies with requirements.
  - 3. Other required items indicated in individual Specification Sections.

## 1.7 QUALITY ASSURANCE

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



- products from manufacturers able to meet qualification requirements, warranty requirements, and technical or factory-authorized service representative requirements.
- C. Fabricator Qualifications: A firm experienced in producing products similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.
- D. Installer Qualifications: A firm or individual experienced in installing, erecting, applying, or assembling work similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in-service performance.
- E. Professional Engineer Qualifications: A professional engineer who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing engineering services of the kind indicated. Engineering services are defined as those performed for installations of the system, assembly, or product that are similar in material, design, and extent to those indicated for this Project.
- F. Specialists: Certain Specification Sections require that specific construction activities be performed by entities who are recognized experts in those operations. Specialists will satisfy qualification requirements indicated and engage in the activities indicated.
  - 1. Requirements of authorities having jurisdiction supersede requirements for specialists.
- G. Testing and Inspecting Agency Qualifications: An NRTL, an NVLAP, or an independent agency with the experience and capability to conduct testing and inspection indicated, as documented according to ASTM E329; and with additional qualifications specified in individual Sections; and, where required by authorities having jurisdiction, that is acceptable to authorities.
- H. Manufacturer's Technical Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to observe and inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.
- I. Factory-Authorized Service Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to inspect, demonstrate, repair, and perform service on installations of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.
- J. Preconstruction Testing: Where testing agency is indicated to perform preconstruction testing for compliance with specified requirements for performance and test methods, comply with the following:
  - 1. Contractor responsibilities include the following:
    - a. Provide test specimens representative of proposed products and construction.
    - b. Submit specimens in a timely manner with sufficient time for testing and analyzing results to prevent delaying the Work.
    - c. When testing is complete, remove test specimens and test assemblies; do not reuse products on Project.
  - 2. Testing Agency Responsibilities: Submit a certified written report of each test, inspection, and similar quality-assurance service to Architect and Commissioning Authority, with copy to Contractor. Interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from the Contract Documents.



## 1.8 QUALITY CONTROL

- A. Owner Responsibilities: Where quality-control services are indicated as Owner's responsibility, Owner will engage a qualified testing agency to perform these services.
  - 1. Owner will furnish Contractor with names, addresses, and telephone numbers of testing agencies engaged and a description of types of testing and inspection they are engaged to perform.
  - 2. Costs for retesting and reinspecting construction that replaces or is necessitated by Work that failed to comply with the Contract Documents will be charged to Contractor, and the Contract Sum will be adjusted by Change Order.
- B. Contractor Responsibilities: Tests and inspections not explicitly assigned to Owner are Contractor's responsibility. Perform additional quality-control activities, whether specified or not, to verify and document that the Work complies with requirements.
  - 1. Engage a qualified testing agency to perform quality-control services.
    - a. Contractor will not employ same entity engaged by Owner, unless agreed to in writing by Owner.
  - 2. Notify testing agencies at least twenty-four (24) hours in advance of time when Work that requires testing or inspection will be performed.
  - 3. Where quality-control services are indicated as Contractor's responsibility, submit a certified written report, in duplicate, of each quality-control service.
  - 4. Testing and inspection requested by Contractor and not required by the Contract Documents are Contractor's responsibility.
  - 5. Submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.
- C. Retesting/Reinspecting: Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and reinspecting, for construction that replaced Work that failed to comply with the Contract Documents.
- D. Testing Agency Responsibilities: Cooperate with Architect and Contractor in performance of duties. Provide qualified personnel to perform required tests and inspections.
  - 1. Notify Architect and Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.
  - 2. Determine the locations from which test samples will be taken and in which in-situ tests are conducted.
  - 3. Conduct and interpret tests and inspections and state in each report whether tested and inspected Work complies with or deviates from requirements.
  - 4. Submit a certified written report, in duplicate, of each test, inspection, and similar quality-control service through Contractor.
  - 5. Do not release, revoke, alter, or increase the Contract Document requirements or approve or accept any portion of the Work.
  - 6. Do not perform duties of Contractor.
- E. Manufacturer's Field Services: Where indicated, engage a factory-authorized service representative to inspect field-assembled components and equipment installation, including service connections. Report results in writing as specified in Section 013300 "Submittal Procedures."
- F. Manufacturer's Technical Services: Where indicated, engage a manufacturer's technical representative to observe and inspect the Work. Manufacturer's technical representative's services include participation in preinstallation conferences, examination of substrates and



- conditions, verification of materials, observation of Installer activities, inspection of completed portions of the Work, and submittal of written reports.
- G. Contractor's Associated Requirements and Services: Cooperate with agencies and representatives performing required tests, inspections, and similar quality-control services, and provide reasonable auxiliary services as requested. Notify agency sufficiently in advance of operations to permit assignment of personnel. Provide the following:
  - 1. Access to the Work.
  - 2. Incidental labor and facilities necessary to facilitate tests and inspections.
  - 3. Adequate quantities of representative samples of materials that require testing and inspection. Assist agency in obtaining samples.
  - 4. Facilities for storage and field curing of test samples.
  - 5. Preliminary design mix proposed for use for material mixes that require control by testing agency.
  - 6. Security and protection for samples and for testing and inspection equipment at Project site.
- H. Coordination: Coordinate sequence of activities to accommodate required quality-assurance and quality-control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspection.
  - 1. Schedule times for tests, inspections, obtaining samples, and similar activities.

### 1.9 SPECIAL TESTS AND INSPECTIONS

- A. Special Tests and Inspections: Owner will engage a qualified testing agency to conduct special tests and inspections required by authorities having jurisdiction as the responsibility of Owner, as indicated in the Statement of Special Inspections in Section 014533, and as follows:
  - 1. Verifying that manufacturer maintains detailed fabrication and quality-control procedures and reviewing the completeness and adequacy of those procedures to perform the Work.
  - 2. Notifying Architect, Commissioning Authority, and Contractor promptly of irregularities and deficiencies observed in the Work during performance of its services.
  - 3. Submitting a certified written report of each test, inspection, and similar quality-control service to Architect and Commissioning Authority, with copy to Contractor and to authorities having jurisdiction.
  - 4. Submitting a final report of special tests and inspections at Substantial Completion, which includes a list of unresolved deficiencies.
  - 5. Interpreting tests and inspections and stating in each report whether tested and inspected work complies with or deviates from the Contract Documents.
  - 6. Retesting and reinspecting corrected Work.

#### PART 2 - PRODUCTS (Not Used)

## PART 3 - EXECUTION

### 3.1 TEST AND INSPECTION LOG

- A. Test and Inspection Log: Prepare a record of tests and inspections. Include the following:
  - 1. Date test or inspection was conducted.
  - 2. Description of the Work tested or inspected.
  - 3. Date test or inspection results were transmitted to Architect.



- 4. Identification of testing agency or special inspector conducting test or inspection.
- B. Maintain log at Project site. Post changes and revisions as they occur. Provide access to test and inspection log for Architect's and authorities' having jurisdiction reference during normal working hours.
  - 1. Submit log at Project closeout as part of Project Record Documents.

### 3.2 REPAIR AND PROTECTION

- A. General: On completion of testing, inspection, sample taking, and similar services, repair damaged construction and restore substrates and finishes.
  - Provide materials and comply with installation requirements specified in other Specification Sections or matching existing substrates and finishes. Restore patched areas and extend restoration into adjoining areas with durable seams that are as invisible as possible. Comply with the Contract Document requirements for cutting and patching in Section 017300 "Execution."
- B. Protect construction exposed by or for quality-control service activities.
- C. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

END OF SECTION 014000

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### SECTION 014200 - REFERENCES

#### PART 1 - GENERAL

### 1.1 DEFINITIONS

- A. General: Basic Contract definitions are included in the Conditions of the Contract.
- B. "Approved": When used to convey Architect's action on Contractor's submittals, applications, and requests, "approved" is limited to Architect's duties and responsibilities as stated in the Conditions of the Contract.
- C. "Directed": A command or instruction by Architect. Other terms including "requested," "authorized," "selected," "required," and "permitted" have the same meaning as "directed."
- D. "Indicated": Requirements expressed by graphic representations or in written form on Drawings, in Specifications, and in other Contract Documents. Other terms including "shown," "noted," "scheduled," and "specified" have the same meaning as "indicated."
- E. "Regulations": Laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, and rules, conventions, and agreements within the construction industry that control performance of the Work.
- F. "Furnish": Supply and deliver to Project site, ready for unloading, unpacking, assembly, installation, and similar operations.
- G. "Install": Unload, temporarily store, unpack, assemble, erect, place, anchor, apply, work to dimension, finish, cure, protect, clean, and similar operations at Project site.
- H. "Provide": Furnish and install, complete and ready for the intended use.
- I. "Project Site": Space available for performing construction activities. The extent of Project site is shown on Drawings and may or may not be identical with the description of the land on which Project is to be built.

#### 1.2 INDUSTRY STANDARDS

- A. Applicability of Standards: Unless the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents to the extent referenced. Such standards are made a part of the Contract Documents by reference.
- B. Publication Dates: Comply with standards in effect as of date of the Contract Documents unless otherwise indicated.
  - 1. For standards referenced by applicable building codes, comply with dates of standards as listed in building codes.
- C. Copies of Standards: Each entity engaged in construction on Project should be familiar with industry standards applicable to its construction activity. Copies of applicable standards are not bound with the Contract Documents.
  - 1. Where copies of standards are needed to perform a required construction activity, obtain copies directly from publication source.

PART 2 - PRODUCTS (Not Used)
PART 3 - EXECUTION (Not Used)
END OF SECTION 014200

REFERENCES 014200 - 1



## SECTION 016000 - PRODUCT REQUIREMENTS

#### PART 1 - GENERAL

### 1.1 SUMMARY

- A. Section includes administrative and procedural requirements for selection of products for use in Project; product delivery, storage, and handling; manufacturers' standard warranties on products; special warranties; and comparable products.
- B. Related Requirements:
  - 1. Section 012500 "Substitution Procedures" for requests for substitutions.

### 1.2 DEFINITIONS

- A. Products: Items obtained for incorporating into the Work, whether purchased for Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.
  - 1. Named Products: Items identified by manufacturer's product name, including make or model number or other designation shown or listed in manufacturer's published product literature that is current as of date of the Contract Documents.
  - 2. New Products: Items that have not previously been incorporated into another project or facility. Salvaged items or items reused from other projects are not considered new products. Items that are manufactured or fabricated to include recycled content materials are considered new products, unless indicated otherwise.
  - 3. Comparable Product: Product by named manufacturer that is demonstrated and approved through the comparable product submittal process described in Part 2 "Comparable Products" Article, to have the indicated qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics that equal or exceed those of specified product.
- B. Basis-of-Design Product Specification: A specification in which a single manufacturer's product is named and accompanied by the words "basis-of-design product," including make or model number or other designation. Published attributes and characteristics of basis-of-design product establish salient characteristics of products.
  - Evaluation of Comparable Products: In addition to the basis-of-design product description, product attributes and characteristics may be listed to establish the significant qualities related to type, function, in-service performance and physical properties, weight, dimension, durability, visual characteristics, and other special features and requirements for purposes of evaluating comparable products of additional manufacturers named in the specification.
- C. Subject to Compliance with Requirements: Where the phrase "Subject to compliance with requirements" introduces a product selection procedure in an individual Specification Section, provide products qualified under the specified product procedure. In the event that a named product or product by a named manufacturer does not meet the other requirements of the specifications, select another named product or product from another named manufacturer that does meet the requirements of the specifications; submit a comparable product request or substitution request, if applicable.
- D. Comparable Product Request Submittal: An action submittal requesting consideration of a comparable product, including the following information:



- Identification of basis-of-design product or fabrication or installation method to be replaced, including Specification Section number and title and Drawing numbers and titles.
- 2. Data indicating compliance with the requirements specified in Part 2 "Comparable Products" Article.
- E. Basis-of-Design Product Specification Submittal: An action submittal complying with requirements in Section 013300 "Submittal Procedures."
- F. Substitution: Refer to Section 012500 "Substitution Procedures" for definition and limitations on substitutions.

## 1.3 QUALITY ASSURANCE

A. Compatibility of Options: If Contractor is given option of selecting between two (2) or more products for use on Project, select product compatible with products previously selected, even if previously selected products were also options.

# 1.4 PRODUCT DELIVERY, STORAGE, AND HANDLING

A. Deliver, store, and handle products, using means and methods that will prevent damage, deterioration, and loss, including theft and vandalism. Comply with manufacturer's written instructions.

### 1.5 PRODUCT WARRANTIES

- A. Warranties specified in other Sections shall be in addition to, and run concurrent with, other warranties required by the Contract Documents. Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of obligations under requirements of the Contract Documents.
  - 1. Manufacturer's Warranty: Written standard warranty form furnished by individual manufacturer for a particular product and issued in the name of the Owner or endorsed by manufacturer to Owner.
  - 2. Special Warranty: Written warranty required by the Contract Documents to provide specific rights for Owner and issued in the name of the Owner or endorsed by manufacturer to Owner.
- B. Special Warranties: Prepare a written document that contains appropriate terms and identification, ready for execution.
  - 1. Manufacturer's Standard Form: Modified to include Project-specific information and properly executed.
  - 2. Specified Form: When specified forms are included in the Project Manual, prepare a written document, using indicated form properly executed.
  - 3. See other Sections for specific content requirements and particular requirements for submitting special warranties.

## PART 2 - PRODUCTS

### 2.1 PRODUCT SELECTION PROCEDURES

A. General Product Requirements: Provide products that comply with the Contract Documents, are undamaged and, unless otherwise indicated, are new at time of installation.



- 1. Provide products complete with accessories, trim, finish, fasteners, and other items needed for a complete installation and indicated use and effect.
- 2. Standard Products: If available, and unless custom products or nonstandard options are specified, provide standard products of types that have been produced and used successfully in similar situations on other projects.
- 3. Owner reserves the right to limit selection to products with warranties meeting requirements of the Contract Documents.
- 4. Where products are accompanied by the term "as selected," Architect will make selection.
- 5. Descriptive, performance, and reference standard requirements in the Specifications establish salient characteristics of products.

## B. Product Selection Procedures:

- 1. Sole Product: Where Specifications name a single manufacturer and product, provide the named product that complies with requirements. Comparable products or substitutions for Contractor's convenience will not be considered.
  - a. Sole product may be indicated by the phrase "Subject to compliance with requirements, provide the following."
- 2. Sole Manufacturer/Source: Where Specifications name a single manufacturer or source, provide a product by the named manufacturer or source that complies with requirements. Comparable products or substitutions for Contractor's convenience will not be considered.
  - a. Sole manufacturer/source may be indicated by the phrase "Subject to compliance with requirements, provide products by the following."
- 3. Limited List of Products: Where Specifications include a list of names of both manufacturers and products, provide one of the products listed that complies with requirements. Comparable products or substitutions for Contractor's convenience will not be considered.
  - a. Limited list of products may be indicated by the phrase "Subject to compliance with requirements, provide one of the following."
- 4. Non-Limited List of Products: Where Specifications include a list of names of both available manufacturers and products, provide one of the products listed or an unnamed product that complies with requirements.
  - a. Non-limited list of products is indicated by the phrase "Subject to compliance with requirements, available products that may be incorporated in the Work include, but are not limited to, the following."
  - b. Provision of an unnamed product is not considered a substitution, if the product complies with requirements.
- 5. Limited List of Manufacturers: Where Specifications include a list of manufacturers' names, provide a product by one of the manufacturers listed that complies with requirements. Comparable products or substitutions for Contractor's convenience will not be considered.
  - a. Limited list of manufacturers is indicated by the phrase "Subject to compliance with requirements, provide products by one of the following."
- 6. Non-Limited List of Manufacturers: Where Specifications include a list of available manufacturers, provide a product by one of the manufacturers listed or a product by an unnamed manufacturer that complies with requirements.



- a. Non-limited list of manufacturers is indicated by the phrase "Subject to compliance with requirements, available manufacturers whose products may be incorporated in the Work include, but are not limited to, the following."
- b. Provision of products of an unnamed manufacturer is not considered a substitution, if the product complies with requirements.
- 7. Basis-of-Design Product: Where Specifications name a product, or refer to a product indicated on Drawings, and include a list of manufacturers, provide the specified or indicated product or a comparable product by one of the other named manufacturers. Drawings and Specifications may additionally indicate sizes, profiles, dimensions, and other characteristics that are based on the product named. Comply with requirements in "Comparable Products" Article for consideration of an unnamed product by one of the other named manufacturers.
  - a. For approval of products by unnamed manufacturers, comply with requirements in Section 012500 "Substitution Procedures" for substitutions for convenience.
- C. Visual Matching Specification: Where Specifications require the phrase "match Architect's sample," provide a product that complies with requirements and matches Architect's sample. Architect's decision will be final on whether a proposed product matches.
  - 1. If no product available within specified category matches and complies with other specified requirements, comply with requirements in Section 012500 "Substitution Procedures" for proposal of product.
- D. Visual Selection Specification: Where Specifications include the phrase "as selected by Architect from manufacturer's full range" or a similar phrase, select a product that complies with requirements. Architect will select color, gloss, pattern, density, or texture from manufacturer's product line that includes both standard and premium items.
- E. Sustainable Product Selection: Where Specifications require product to meet sustainable product characteristics, select products complying with indicated requirements. Comply with requirements in Division 01 sustainability requirements Section and individual Specification Sections.

# 2.2 COMPARABLE PRODUCTS

- A. Conditions for Consideration of Comparable Products: Architect will consider Contractor's request for comparable product when the following conditions are satisfied. If the following conditions are not satisfied, Architect may return requests without action, except to record noncompliance with the following requirements:
  - 1. Evidence that proposed product does not require revisions to the Contract Documents, is consistent with the Contract Documents, will produce the indicated results, and is compatible with other portions of the Work.
  - 2. Detailed comparison of significant qualities of proposed product with those of the named basis-of-design product. Significant product qualities include attributes, such as type, function, in-service performance and physical properties, weight, dimension, durability, visual characteristics, and other specific features and requirements.
  - 3. Evidence that proposed product provides specified warranty.
  - 4. List of similar installations for completed projects, with project names and addresses and names and addresses of architects and owners, if requested.
  - 5. Samples, if requested.

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- B. Architect's Action on Comparable Products Submittal: If necessary, Architect will request additional information or documentation for evaluation, as specified in Section 013300 "Submittal Procedures."
  - 1. Form of Approval of Submittal: As specified in Section 013300 "Submittal Procedures."
  - 2. Use product specified if Architect does not issue a decision on use of a comparable product request within time allocated.
- C. Submittal Requirements, Two-Step Process: Approval by the Architect of Contractor's request for use of comparable product is not intended to satisfy other submittal requirements. Comply with specified submittal requirements.
- D. Submittal Requirements, Single-Step Process: When acceptable to Architect, incorporate specified submittal requirements of individual Specification Section in combined submittal for comparable products. Approval by the Architect of Contractor's request for use of comparable product and of individual submittal requirements will also satisfy other submittal requirements.

PART 3 - EXECUTION (Not Used) END OF SECTION 016000 Lansing School District Sheridan Road STEM Magnet School – Classroom Renovations May 30, 2025



### SECTION 017300 - EXECUTION

#### PART 1 - GENERAL

### 1.1 SUMMARY

- A. Section includes general administrative and procedural requirements governing execution of the Work, including, but not limited to, the following:
  - 1. Construction layout.
  - 2. Field engineering and surveying.
  - 3. Installation of the Work.
  - 4. Cutting and patching.
  - 5. Coordination of Owner's portion of the Work.
  - 6. Coordination of Owner-installed products.
  - 7. Progress cleaning.
  - 8. Starting and adjusting.
  - 9. Protection of installed construction.
- B. Related Requirements:
  - 1. Section 017700 "Closeout Procedures" for submitting final property survey with Project Record Documents, recording of Owner-accepted deviations from indicated lines and levels, replacing defective work, and final cleaning.

# 1.2 DEFINITIONS

- A. Cutting: Removal of in-place construction necessary to permit installation or performance of subsequent work.
- B. Patching: Fitting and repair work required to restore construction to original conditions after installation of subsequent work.

## 1.3 INFORMATIONAL SUBMITTALS

- A. Certified Surveys: Submit two (2) copies signed by professional engineer.
- B. Certificates: Submit certificate signed by professional engineer, certifying that location and elevation of improvements comply with requirements.

#### 1.4 CLOSEOUT SUBMITTALS

A. Final Property Survey: Submit two (2) copies showing the Work performed and record survey data.

#### 1.5 OUALITY ASSURANCE

- A. Land Surveyor Qualifications: A professional land surveyor who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing land-surveying services of the kind indicated.
- B. Cutting and Patching: Comply with requirements for and limitations on cutting and patching of construction elements.
  - Structural Elements: When cutting and patching structural elements, or when
    encountering the need for cutting and patching of elements whose structural function is
    not known, notify Architect of locations and details of cutting and await directions from
    Architect before proceeding. Shore, brace, and support structural elements during cutting



- and patching. Do not cut and patch structural elements in a manner that could change their load-carrying capacity or increase deflection.
- 2. Operational Elements: Do not cut and patch operating elements and related components in a manner that results in reducing their capacity to perform as intended or that results in increased maintenance or decreased operational life or safety.
- 3. Other Construction Elements: Do not cut and patch other construction elements or components in a manner that could change their load-carrying capacity, that results in reducing their capacity to perform as intended, or that results in increased maintenance or decreased operational life or safety.
- 4. Visual Elements: Do not cut and patch construction in a manner that results in visual evidence of cutting and patching. Do not cut and patch exposed construction in a manner that would, in Architect's opinion, reduce the building's aesthetic qualities. Remove and replace construction that has been cut and patched in a visually unsatisfactory manner.
- C. Manufacturer's Installation Instructions: Obtain and maintain on-site manufacturer's written recommendations and instructions for installation of specified products and equipment.

#### PART 2 - PRODUCTS

#### 2.1 MATERIALS

- A. Comply with requirements specified in other Sections.
  - 1. For projects requiring compliance with sustainable design and construction practices and procedures, use products for patching that comply with sustainable design requirements.
- B. In-Place Materials: Use materials for patching identical to in-place materials. For exposed surfaces, use materials that visually match in-place adjacent surfaces to the fullest extent possible.
  - 1. If identical materials are unavailable or cannot be used, use materials that, when installed, will provide a match acceptable to Architect for the visual and functional performance of in-place materials. Use materials that are not considered hazardous.
- C. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.

### PART 3 - EXECUTION

## 3.1 EXAMINATION

- A. Existing Conditions: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning sitework, investigate and verify the existence and location of underground utilities affecting the Work.
  - 1. Before construction, verify the location and invert elevation at points of connection of sanitary sewer, storm sewer, gas service piping, and water-service piping; underground electrical services; and other utilities.
  - 2. Furnish location data for work related to Project that must be performed by public utilities serving Project site.
- B. Examination and Acceptance of Conditions: Before proceeding with each component of the Work, examine substrates, areas, and conditions, with Installer or Applicator present where



indicated, for compliance with requirements for installation tolerances and other conditions affecting performance. Record observations.

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

## 3.2 PREPARATION

- A. Existing Utility Information: Furnish information to local utility and Owner that is necessary to adjust, move, or relocate existing utility structures, utility poles, lines, services, or other utility appurtenances located in or affected by construction. Coordinate with authorities having jurisdiction.
- B. Field Measurements: Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
- C. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.
- D. Review of Contract Documents and Field Conditions: Immediately on discovery of the need for clarification of the Contract Documents, submit a request for information to Architect in accordance with requirements in Section 013100 "Project Management and Coordination."

## 3.3 CONSTRUCTION LAYOUT

- A. Verification: Before proceeding to lay out the Work, verify layout information shown on Drawings, in relation to the property survey and existing benchmarks and existing conditions. If discrepancies are discovered, notify Architect promptly.
- B. Engage a professional engineer experienced in laying out the Work, using the following accepted surveying practices:
  - 1. Establish benchmarks and control points to set lines and levels at each story of construction and elsewhere as needed to locate each element of Project.
  - 2. Establish limits on use of Project site.
  - 3. Establish dimensions within tolerances indicated. Do not scale Drawings to obtain required dimensions.
  - 4. Inform installers of lines and levels to which they must comply.



- 5. Check the location, level and plumb, of every major element as the Work progresses.
- 6. Notify Architect when deviations from required lines and levels exceed allowable tolerances.
- 7. Close site surveys with an error of closure equal to or less than the standard established by authorities having jurisdiction.
- C. Site Improvements: Locate and lay out site improvements, including pavements, grading, fill and topsoil placement, utility slopes, and rim and invert elevations.
- D. Building Lines and Levels: Locate and lay out control lines and levels for structures, building foundations, column grids, and floor levels, including those required for mechanical and electrical work. Transfer survey markings and elevations for use with control lines and levels. Level foundations and piers from two (2) or more locations.
- E. Record Log: Maintain a log of layout control work. Record deviations from required lines and levels. Include beginning and ending dates and times of surveys, weather conditions, name and duty of each survey party member, and types of instruments and tapes used. Make the log available for reference by Architect.

### 3.4 FIELD ENGINEERING

- A. Identification: Owner will identify existing benchmarks, control points, and property corners.
- B. Reference Points: Locate existing permanent benchmarks, control points, and similar reference points before beginning the Work. Preserve and protect permanent benchmarks and control points during construction operations.
  - Do not change or relocate existing benchmarks or control points without prior written approval of Architect. Report lost or destroyed permanent benchmarks or control points promptly. Report the need to relocate permanent benchmarks or control points to Architect before proceeding.
  - 2. Replace lost or destroyed permanent benchmarks and control points promptly. Base replacements on the original survey control points.
- C. Benchmarks: Establish and maintain a minimum of two (2) permanent benchmarks on Project site, referenced to data established by survey control points. Comply with authorities having jurisdiction for type and size of benchmark.
  - 1. Record benchmark locations, with horizontal and vertical data, on Project Record Documents.
  - 2. Where the actual location or elevation of layout points cannot be marked, provide temporary reference points sufficient to locate the Work.
  - 3. Remove temporary reference points when no longer needed. Restore marked construction to its original condition.

### 3.5 INSTALLATION

- A. Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.
  - 1. Make vertical work plumb and make horizontal work level.
  - 2. Where space is limited, install components to maximize space available for maintenance and ease of removal for replacement.
  - 3. Conceal pipes, ducts, and wiring in finished areas unless otherwise indicated.
- B. Comply with manufacturer's written instructions and recommendations for installing products in applications indicated.



- C. Install products at the time and under conditions that will ensure satisfactory results as judged by Architect. Maintain conditions required for product performance until Substantial Completion.
- D. Conduct construction operations, so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy of type expected for Project.
- E. Sequence the Work and allow adequate clearances to accommodate movement of construction items on-site and placement in permanent locations.
- F. Tools and Equipment: Select tools or equipment that minimize production of excessive noise levels
- G. Templates: Obtain and distribute to the parties' involved templates for Work specified to be factory prepared and field installed. Check Shop Drawings of other portions of the Work to confirm that adequate provisions are made for locating and installing products to comply with indicated requirements.
- H. Attachment: Provide blocking and attachment plates and anchors and fasteners of adequate size and number to securely anchor each component in place, accurately located and aligned with other portions of the Work. Where size and type of attachments are not indicated, verify size and type required for load conditions with manufacturer.
  - 1. Mounting Heights: Where mounting heights are not indicated, mount components at heights directed by Architect.
  - 2. Allow for building movement, including thermal expansion and contraction.
  - 3. Coordinate installation of anchorages. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.
- I. Joints: Make joints of uniform width. Where joint locations in exposed Work are not indicated, arrange joints for the best visual effect, as judged by Architect. Fit exposed connections together to form hairline joints.
- J. Repair or remove and replace damaged, defective, or nonconforming Work.
  - 1. Comply with Section 017700 "Closeout Procedures" for repairing or removing and replacing defective Work.

# 3.6 CUTTING AND PATCHING

- A. General: Employ skilled workers to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time, and complete without delay.
  - 1. Cut in-place construction to provide for installation of other components or performance of other construction and subsequently patch as required to restore surfaces to their original condition.
- B. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during installation or cutting and patching operations, by methods and with materials so as not to void existing warranties.
- C. Temporary Support: Provide temporary support of Work to be cut.
- D. Protection: Protect in-place construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of Project that might be exposed during cutting and patching operations.



- E. Cutting: Cut in-place construction by sawing, drilling, breaking, chipping, grinding, and similar operations, including excavation, using methods least likely to damage elements retained or adjoining construction. If possible, review proposed procedures with original Installer; comply with original Installer's written recommendations.
  - 1. In general, use hand or small power tools designed for sawing and grinding, not hammering, and chopping. Cut holes and slots neatly to minimum size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
  - 2. Finished Surfaces: Cut or drill from the exposed or finished side into concealed surfaces.
  - 3. Concrete and Masonry: Cut using a cutting machine, such as an abrasive saw or a diamond-core drill.
  - 4. Excavating and Backfilling: Comply with requirements in applicable Sections where required by cutting and patching operations.
  - 5. Proceed with patching after construction operations requiring cutting are complete.
- F. Patching: Patch construction by filling, repairing, refinishing, closing up, and similar operations following performance of other Work. Patch with durable seams that are as invisible as practicable, as judged by Architect. Provide materials and comply with installation requirements specified in other Sections, where applicable.
  - 1. Inspection: Where feasible, test and inspect patched areas after completion to demonstrate physical integrity of installation.
  - 2. Exposed Finishes: Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will eliminate evidence of patching and refinishing.
    - a. Clean piping, conduit, and similar features before applying paint or other finishing
    - b. Restore damaged pipe covering to its original condition.
  - 3. Floors and Walls: Where walls or partitions that are removed extend one finished area into another, patch and repair floor and wall surfaces in the new space. Provide an even surface of uniform finish, color, texture, and appearance. Remove in-place floor and wall coverings and replace with new materials, if necessary, to achieve uniform color and appearance.
    - a. Where patching occurs in a painted surface, prepare substrate, and apply primer and intermediate paint coats appropriate for substrate over the patch, and apply final paint coat over entire unbroken surface containing the patch, corner to corner of wall and edge to edge of ceiling. Provide additional coats until patch blends with adjacent surfaces.
  - 4. Ceilings: Patch, repair, or rehang in-place ceilings as necessary to provide an even-plane surface of uniform appearance.
  - 5. Exterior Building Enclosure: Patch components in a manner that restores enclosure to a weathertight condition and ensures thermal and moisture integrity of building enclosure.
- G. Cleaning: Clean areas and spaces where cutting and patching are performed. Remove paint, mortar, oils, putty, and similar materials from adjacent finished surfaces.

### 3.7 PROGRESS CLEANING

A. Clean Project site and work areas daily, including common areas. Enforce requirements strictly. Dispose of materials lawfully.



- 1. Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.
- 2. Do not hold waste materials more than seven (7) days during normal weather or three (3) days if the temperature is expected to rise above eighty (80) deg F.
- 3. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations.
  - a. Use containers intended for holding waste materials of type to be stored.
- 4. Coordinate progress cleaning for joint-use areas where Contractor and other contractors are working concurrently.
- B. Site: Maintain Project site free of waste materials and debris.
- C. Work Areas: Clean areas where Work is in progress to the level of cleanliness necessary for proper execution of the Work.
  - 1. Remove liquid spills promptly.
  - 2. Where dust would impair proper execution of the Work, broom-clean or vacuum the entire work area, as appropriate.
- D. Installed Work: Keep installed work clean. Clean installed surfaces according to written instructions of manufacturer or fabricator of product installed, using only cleaning materials specifically recommended. If specific cleaning materials are not recommended, use cleaning materials that are not hazardous to health or property and that will not damage exposed surfaces.
- E. Concealed Spaces: Remove debris from concealed spaces before enclosing the space.
- F. Exposed Surfaces: Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.
- G. Waste Disposal: Do not bury or burn waste materials on-site. Do not wash waste materials down sewers or into waterways. Comply with waste disposal requirements in Section 015000 "Temporary Facilities and Controls."
- H. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.
- I. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.
- J. Limiting Exposures: Supervise construction operations to ensure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.

### 3.8 STARTING AND ADJUSTING

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

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E. Manufacturer's Field Service: Comply with qualification requirements in Section 014000 "Quality Requirements."

# 3.9 PROTECTION AND REPAIR OF INSTALLED CONSTRUCTION

- A. Provide final protection and maintain conditions that ensure installed Work is without damage or deterioration at time of Substantial Completion.
- B. Repair Work previously completed and subsequently damaged during construction period. Repair to like-new condition.
- C. Comply with manufacturer's written instructions for temperature and relative humidity.

END OF SECTION 017300



### SECTION 017700 - CLOSEOUT PROCEDURES

#### PART 1 - GENERAL

#### 1.1 SUMMARY

- A. Section includes administrative and procedural requirements for Contract closeout, including, but not limited to, the following:
  - 1. Substantial Completion procedures.
  - 2. Final completion procedures.
  - 3. Warranties.
  - 4. Final cleaning.
- B. Related Requirements:
  - 1. Section 017823 "Operation and Maintenance Data" for additional operation and maintenance manual requirements.
  - 2. Section 017839 "Project Record Documents" for submitting Record Drawings, Record Specifications, and Record Product Data.
  - 3. Section 017900 "Demonstration and Training" for requirements to train the Owner's maintenance personnel to adjust, operate, and maintain products, equipment, and systems.

## 1.2 ACTION SUBMITTALS

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

## 1.3 CLOSEOUT SUBMITTALS

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

# 1.4 SUBSTANTIAL COMPLETION PROCEDURES

- A. Contractor's List of Incomplete Items: Prepare and submit a list of items to be completed and corrected (Contractor's "punch list"), indicating the value of each item on the list and reasons why the Work is incomplete.
- B. Submittals Prior to Substantial Completion: Complete the following a minimum of ten (10) days prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request.
  - 1. Certificates of Release: Obtain and submit releases from authorities having jurisdiction, permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
  - 2. Submit closeout submittals specified in other Division 01 Sections, including Project Record Documents, operation and maintenance manuals, damage or settlement surveys, property surveys, and similar final record information.
  - 3. Submit closeout submittals specified in individual Sections, including specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.



- 4. Submit maintenance material submittals specified in individual Sections, including tools, spare parts, extra materials, and similar items, and deliver to location designated by Architect. Label with Manufacturer's name and model number.
- 5. Submit testing, adjusting, and balancing records.
- 6. Submit changeover information related to Owner's occupancy, use, operation, and maintenance.
- C. Procedures Prior to Substantial Completion: Complete the following a minimum of ten (10) days prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request.
  - 1. Advise Owner of pending insurance changeover requirements.
    - 2. Make final changeover of permanent locks and deliver keys to Owner. Advise Owner's personnel of changeover in security provisions.
    - 3. Complete startup and testing of systems and equipment.
    - 4. Perform preventive maintenance on equipment used prior to Substantial Completion.
    - 5. Instruct Owner's personnel in operation, adjustment, and maintenance of products, equipment, and systems. Submit demonstration and training video recordings specified in Section 017900 "Demonstration and Training."
    - 6. Advise Owner of changeover in utility services.
    - 7. Participate with Owner in conducting inspection and walkthrough with local emergency responders.
    - 8. Terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.
    - 9. Complete final cleaning requirements.
    - 10. Touch up paint and otherwise repair and restore marred exposed finishes to eliminate visual defects.
- D. Inspection: Submit a written request for inspection to determine Substantial Completion a minimum of ten (10) days prior to date the Work will be completed and ready for final inspection and tests. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare the Certificate of Substantial Completion after inspection or will notify Contractor of items, either on Contractor's list or additional items identified by Architect, that must be completed or corrected before certificate will be issued.

## 1.5 FINAL COMPLETION PROCEDURES

- A. Submittals Prior to Final Completion: Before requesting final inspection for determining Final Completion, complete the following:
  - 1. Submit a final Application for Payment in accordance with Section 012900 "Payment Procedures."
  - 2. Certified List of Incomplete Items: Submit certified copy of Architect's Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by Architect. Certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.
  - 3. Certificate of Insurance: Submit evidence of final, continuing insurance coverage complying with insurance requirements.
  - 4. Submit pest-control final inspection report.



B. Inspection: Submit a written request for final inspection to determine acceptance a minimum of ten (10) days prior to date the Work will be completed and ready for final inspection and tests. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare a final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.

#### 1.6 LIST OF INCOMPLETE ITEMS

- A. Organization of List: Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction.
  - 1. Organize list of spaces in sequential order, starting with exterior areas first and proceeding from lowest floor to highest floor, listed by room or space number.
  - 2. Organize items applying to each space by major element, including categories for ceilings, individual walls, floors, equipment, and building systems.
  - 3. Include the following information at the top of each page:
    - a. Project name.
    - b. Date.
    - c. Name of Architect.
    - d. Name of Contractor.
    - e. Page number.
  - 4. Submit list of incomplete items in the following format:
    - a. PDF Electronic File.

#### 1.7 SUBMITTAL OF PROJECT WARRANTIES

- A. Time of Submittal: Submit written warranties on request of Architect for designated portions of the Work where warranties are indicated to commence on dates other than date of Substantial Completion, or when delay in submittal of warranties might limit Owner's rights under warranty.
- B. Organize warranty documents into an orderly sequence based on the table of contents of Project Manual.
- C. Warranty Electronic File: Provide warranties and bonds in PDF format. Assemble complete warranty and bond submittal package into a single electronic PDF file with bookmarks enabling navigation to each item. Provide bookmarked table of contents at beginning of document.
  - 1. Submit by uploading to web-based project software site.

### PART 2 - PRODUCTS

### 2.1 MATERIALS

- A. Cleaning Agents: Use cleaning materials and agents recommended by Manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.
  - 1. Use cleaning products that comply with Green Seal's GS-37, or if GS-37 is not applicable, use products that comply with the California Code of Regulations maximum allowable VOC levels.



#### PART 3 - EXECUTION

### 3.1 FINAL CLEANING

- A. Perform final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.
- B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with Manufacturer's written instructions.
  - 1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a designated portion of Project:
    - a. Clean Project site of rubbish, waste material, litter, and other foreign substances.
    - b. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
    - c. Remove debris and surface dust from limited-access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.
    - d. Clean flooring, removing debris, dirt, and staining; clean according to Manufacturer's recommendations.
    - e. Vacuum and mop concrete.
    - f. Vacuum carpet and similar soft surfaces, removing debris and excess nap; clean according to Manufacturer's recommendations if visible soil or stains remain.
    - g. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compounds and other noticeable, vision-obscuring materials. Polish mirrors and glass, taking care not to scratch surfaces.
    - h. Remove labels that are not permanent.
    - i. Wipe surfaces of mechanical and electrical equipment, and similar equipment. Remove excess lubrication, paint and mortar droppings, and other foreign substances.
    - j. Clean plumbing fixtures to a sanitary condition, free of stains, including stains resulting from water exposure.
    - k. Replace disposable air filters and clean permanent air filters. Clean exposed surfaces of diffusers, registers, and grills.
    - I. Clean ducts, blowers, and coils if units were operated without filters during construction or that display contamination with particulate matter on inspection].
      - 1) Clean HVAC system in compliance with NADCA ACR.
    - m. Clean luminaires, lamps, globes, and reflectors to function with full efficiency.
    - n. Clean strainers.
    - o. Leave Project clean and ready for occupancy.
- C. Pest Control: Comply with pest control requirements in Section 015000 "Temporary Facilities and Controls." Prepare written report.
- D. Construction Waste Disposal: Comply with waste-disposal requirements in Section 015000 "Temporary Facilities and Controls."

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## 3.2 REPAIR OF THE WORK

A. Complete repair and restoration operations required by Section 017300 "Execution" before requesting inspection for determination of Substantial Completion.

END OF SECTION 017700



### SECTION 017823 - OPERATION AND MAINTENANCE DATA

#### PART 1 - GENERAL

### 1.1 SUMMARY

- A. Section includes administrative and procedural requirements for preparing operation and maintenance manuals, including the following:
  - 1. Operation and maintenance documentation directory manuals.
  - 2. Emergency manuals.
  - 3. Systems and equipment operation manuals.
  - 4. Systems and equipment maintenance manuals.
  - 5. Product maintenance manuals.

### 1.2 CLOSEOUT SUBMITTALS

- A. Submit operation and maintenance manuals indicated. Provide content for each manual as specified in individual Specification Sections, and as reviewed and approved at the time of Section submittals. Submit reviewed manual content formatted and organized as required by this Section.
  - 1. Architect and Commissioning Authority will comment on whether content of operation and maintenance submittals is acceptable.
  - 2. Where applicable, clarify and update reviewed manual content to correspond to revisions and field conditions.
- B. Format: Submit operation and maintenance manuals in the following format:
  - 1. Submit by uploading to web-based project software site. Enable reviewer comments on draft submittals.
- C. Final Manual Submittal: Submit each manual in final form prior to requesting inspection for Substantial Completion and at least fifteen (15) days before commencing demonstration and training. Architect and Commissioning Authority will return copy with comments.
  - 1. Correct or revise each manual to comply with Architect's and Commissioning Authority's comments. Submit copies of each corrected manual within fifteen (15) days of receipt of Architect's and Commissioning Authority's comments and prior to commencing demonstration and training.
- D. Comply with Section 017700 "Closeout Procedures" for schedule for submitting operation and maintenance documentation.

### 1.3 FORMAT OF OPERATION AND MAINTENANCE MANUALS

- A. Manuals, Electronic Files: Submit manuals in the form of a multiple file composite electronic PDF file for each manual type required.
  - 1. Electronic Files: Use electronic files prepared by manufacturer where available. Where scanning of paper documents is required, configure scanned file for minimum readable file size.
  - 2. File Names and Bookmarks: Bookmark individual documents based on file names. Name document files to correspond to system, subsystem, and equipment names used in manual directory and table of contents. Group documents for each system and subsystem into individual composite bookmarked files, then create composite manual, so that resulting bookmarks reflect the system, subsystem, and equipment names in a readily



navigated file tree. Configure electronic manual to display bookmark panel on opening file.

# 1.4 REQUIREMENTS FOR EMERGENCY, OPERATION, AND MAINTENANCE MANUALS

- A. Organization of Manuals: Unless otherwise indicated, organize each manual into a separate section for each system and subsystem, and a separate section for each piece of equipment not part of a system. Each manual shall contain the following materials, in the order listed:
  - 1. Title page.
  - 2. Table of contents.
  - 3. Manual contents.
- B. Title Page: Include the following information:
  - 1. Subject matter included in manual.
  - 2. Name and address of Project.
  - 3. Name and address of Owner.
  - 4. Date of submittal.
  - 5. Name and contact information for Contractor.
  - 6. Name and contact information for Construction Manager.
  - 7. Name and contact information for Architect.
  - 8. Name and contact information for Commissioning Authority.
  - 9. Names and contact information for major consultants to the Architect that designed the systems contained in the manuals.
  - 10. Cross-reference to related systems in other operation and maintenance manuals.
- C. Table of Contents: List each product included in manual, identified by product name, indexed to the content of the volume, and cross-referenced to Specification Section number in Project Manual.
- D. Manual Contents: Organize into sets of manageable size. Arrange contents alphabetically by system, subsystem, and equipment. If possible, assemble instructions for subsystems, equipment, and components of one (1) system into a single binder.
- E. Identification: In the documentation directory and in each operation and maintenance manual, identify each system, subsystem, and piece of equipment with same designation used in the Contract Documents. If no designation exists, assign a designation according to ASHRAE Guideline 4, "Preparation of Operating and Maintenance Documentation for Building Systems."

### 1.5 EMERGENCY MANUALS

- A. Emergency Manual: Assemble a complete set of emergency information indicating procedures for use by emergency personnel and by Owner's operating personnel for types of emergencies indicated.
- B. Content: Organize manual into a separate section for each of the following:
  - 1. Type of emergency.
  - 2. Emergency instructions.
  - 3. Emergency procedures.
- C. Type of Emergency: Where applicable for each type of emergency indicated below, include instructions and procedures for each system, subsystem, piece of equipment, and component:
  - 1. Fire.
  - 2. Flood.



- 3. Gas leak.
- 4. Water leak.
- 5. Power failure.
- 6. Water outage.
- 7. System, subsystem, or equipment failure.
- 8. Chemical release or spill.
- D. Emergency Instructions: Describe and explain warnings, trouble indications, error messages, and similar codes and signals. Include responsibilities of Owner's operating personnel for notification of Installer, supplier, and manufacturer to maintain warranties.
- E. Emergency Procedures: Include the following, as applicable:
  - 1. Instructions on stopping.
  - 2. Shutdown instructions for each type of emergency.
  - 3. Operating instructions for conditions outside normal operating limits.
  - 4. Required sequences for electric or electronic systems.
  - 5. Special operating instructions and procedures.

# 1.6 SYSTEMS AND EQUIPMENT OPERATION MANUALS

- A. Systems and Equipment Operation Manual: Assemble a complete set of data indicating operation of each system, subsystem, and piece of equipment not part of a system. Include information required for daily operation and management, operating standards, and routine and special operating procedures.
- B. Content: In addition to requirements in this Section, include operation data required in individual Specification Sections and the following information:
  - 1. System, subsystem, and equipment descriptions. Use designations for systems and equipment indicated on Contract Documents.
  - 2. Performance and design criteria if Contractor has delegated design responsibility.
  - 3. Operating standards.
  - 4. Operating procedures.
  - 5. Operating logs.
  - 6. Wiring diagrams.
  - 7. Control diagrams.
  - 8. Piped system diagrams.
  - 9. Precautions against improper use.
  - 10. License requirements including inspection and renewal dates.
- C. Descriptions: Include the following:
  - 1. Product name and model number. Use designations for products indicated on Contract Documents.
  - 2. Manufacturer's name.
  - 3. Equipment identification with serial number of each component.
  - 4. Equipment function.
  - 5. Operating characteristics.
  - 6. Limiting conditions.
  - 7. Performance curves.
  - 8. Engineering data and tests.
  - 9. Complete nomenclature and number of replacement parts.
- D. Operating Procedures: Include the following, as applicable:



- 1. Startup procedures.
- 2. Equipment or system break-in procedures.
- 3. Routine and normal operating instructions.
- 4. Regulation and control procedures.
- 5. Instructions on stopping.
- 6. Normal shutdown instructions.
- 7. Seasonal and weekend operating instructions.
- 8. Required sequences for electric or electronic systems.
- 9. Special operating instructions and procedures.
- E. Systems and Equipment Controls: Describe the sequence of operation, and diagram controls as installed.
- F. Piped Systems: Diagram piping as installed and identify color coding where required for identification.

## 1.7 SYSTEMS AND EQUIPMENT MAINTENANCE MANUALS

- A. Systems and Equipment Maintenance Manuals: Assemble a complete set of data indicating maintenance of each system, subsystem, and piece of equipment not part of a system. Include manufacturers' maintenance documentation, preventive maintenance procedures and frequency, repair procedures, wiring and systems diagrams, lists of spare parts, and warranty information.
- B. Content: For each system, subsystem, and piece of equipment not part of a system, include source information, manufacturers' maintenance documentation, maintenance procedures, maintenance and service schedules, spare parts list and source information, maintenance service contracts, and warranties and bonds, as described below.
- C. Manufacturers' Maintenance Documentation: Include the following information for each component part or piece of equipment:
  - 1. Standard maintenance instructions and bulletins; include only sheets pertinent to product or component installed. Mark each sheet to identify each product or component incorporated into the Work. If data include more than one (1) item in a tabular format, identify each item using appropriate references from the Contract Documents. Identify data applicable to the Work and delete references to information not applicable.
    - a. Prepare supplementary text if manufacturers' standard printed data are not available and where the information is necessary for proper operation and maintenance of equipment or systems.
  - 2. Drawings, diagrams, and instructions required for maintenance, including disassembly and component removal, replacement, and assembly.
  - 3. Identification and nomenclature of parts and components.
  - 4. List of items recommended to be stocked as spare parts.
- D. Maintenance Procedures: Include the following information and items that detail essential maintenance procedures:
  - 1. Test and inspection instructions.
  - 2. Troubleshooting guide.
  - 3. Precautions against improper maintenance.
  - 4. Disassembly; component removal, repair, and replacement; and reassembly instructions.
  - 5. Aligning, adjusting, and checking instructions.
  - 6. Demonstration and training video recording, if available.



- E. Maintenance and Service Schedules: Include service and lubrication requirements, list of required lubricants for equipment, and separate schedules for preventive and routine maintenance and service with standard time allotment.
- F. Spare Parts List and Source Information: Include lists of replacement and repair parts, with parts identified and cross-referenced to manufacturers' maintenance documentation and local sources of maintenance materials and related services.
- G. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.
  - 1. Include procedures to follow and required notifications for warranty claims.
- H. Drawings: Prepare drawings supplementing manufacturers' printed data to illustrate the relationship of component parts of equipment and systems and to illustrate control sequence and flow diagrams. Coordinate these drawings with information contained in record Drawings to ensure correct illustration of completed installation.

### 1.8 PRODUCT MAINTENANCE MANUALS

- A. Product Maintenance Manual: Assemble a complete set of maintenance data indicating care and maintenance of each product, material, and finish incorporated into the Work.
- B. Content: Organize manual into a separate section for each product, material, and finish. Include source information, product information, maintenance procedures, repair materials and sources, and warranties and bonds, as described below.
- C. Product Information: Include the following, as applicable:
  - 1. Product name and model number.
  - 2. Manufacturer's name.
  - 3. Color, pattern, and texture.
  - 4. Material and chemical composition.
  - 5. Reordering information for specially manufactured products.
- D. Maintenance Procedures: Include manufacturer's written recommendations and the following:
  - 1. Inspection procedures.
  - 2. Types of cleaning agents to be used and methods of cleaning.
  - 3. List of cleaning agents and methods of cleaning detrimental to product.
  - 4. Schedule for routine cleaning and maintenance.
  - 5. Repair instructions.
- E. Repair Materials and Sources: Include lists of materials and local sources of materials and related services.
- F. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.
  - 1. Include procedures to follow and required notifications for warranty claims.

PART 2 - PRODUCTS (Not Used)
PART 3 - EXECUTION (Not Used)
END OF SECTION 017823



## SECTION 017839 - PROJECT RECORD DOCUMENTS

#### PART 1 - GENERAL

### 1.1 SUMMARY

- A. Section includes administrative and procedural requirements for Project Record Documents, including the following:
  - 1. Record Drawings.
  - 2. Record specifications.
  - 3. Record Product Data.
- B. Related Requirements:
  - 1. Section 017823 "Operation and Maintenance Data" for operation and maintenance manual requirements.

# 1.2 CLOSEOUT SUBMITTALS

- A. Record Drawings: Comply with the following:
  - 1. Number of Copies: Submit copies of Record Drawings as follows:
    - a. Initial Submittal:
      - 1) Submit PDF electronic files of scanned record prints and one (1) set of file prints.
      - 2) Architect will indicate whether general scope of changes, additional information recorded, and quality of drafting are acceptable.
    - b. Final Submittal:
      - 1) Submit PDF electronic files of scanned Record Prints and one (1) set of file prints.
      - 2) Print each drawing, whether or not changes and additional information were recorded.
- B. Record Specifications: Submit annotated PDF electronic files of Project's Specifications, including addenda and Contract modifications.
- C. Record Product Data: Submit annotated PDF electronic files and directories of each submittal.
  - 1. Where record Product Data is required as part of operation and maintenance manuals, submit duplicate marked-up Product Data as a component of manual.

## 1.3 RECORD DRAWINGS

- A. Record Prints: Maintain one (1) set of marked-up paper copies of the Contract Drawings and Shop Drawings, incorporating new and revised drawings as modifications are issued.
  - 1. Preparation: Mark record prints to show the actual installation, where installation varies from that shown originally. Require individual or entity who obtained record data, whether individual or entity is Installer, subcontractor, or similar entity, to provide information for preparation of corresponding marked-up record prints.
    - a. Give particular attention to information on concealed elements that would be difficult to identify or measure and record later.
    - b. Accurately record information in an acceptable drawing technique.
    - c. Record data as soon as possible after obtaining it.
    - d. Record and check the markup before enclosing concealed installations.
    - e. Cross-reference record prints to corresponding photographic documentation.
  - 2. Content: Types of items requiring marking include, but are not limited to, the following:
    - a. Dimensional changes to Drawings.



- b. Revisions to details shown on Drawings.
- c. Depths of foundations.
- d. Locations and depths of underground utilities.
- e. Revisions to routing of piping and conduits.
- f. Revisions to electrical circuitry.
- g. Actual equipment locations.
- h. Duct size and routing.
- i. Locations of concealed internal utilities.
- j. Changes made by Change Order or Construction Change Directive.
- k. Changes made following Architect's written orders.
- I. Details not on the original Contract Drawings.
- m. Field records for variable and concealed conditions.
- n. Record information on the Work that is shown only schematically.
- 3. Mark the Contract Drawings and Shop Drawings completely and accurately. Use personnel proficient at recording graphic information in production of marked-up record prints.
- 4. Mark record prints with erasable, red-colored pencil. Use other colors to distinguish between changes for different categories of the Work at same location.
- 5. Mark important additional information that was either shown schematically or omitted from original Drawings.
- 6. Note Construction Change Directive numbers, alternate numbers, Change Order numbers, and similar identification, where applicable.
- B. Record Digital Data Files: Immediately before inspection for Certificate of Substantial Completion, review marked-up record prints with Architect. When authorized, prepare a full set of corrected digital data files of the Contract Drawings, as follows:
  - 1. Format: Same digital data software program, version, and operating system as for the original Contract Drawings.
  - 2. Format: DWG, Microsoft Windows operating system.
  - 3. Format: Annotated PDF electronic file with comment function enabled.
  - 4. Incorporate changes and additional information previously marked on record prints. Delete, redraw, and add details and notations where applicable.
  - 5. Refer instances of uncertainty to Architect for resolution.
  - 6. Architect will furnish Contractor with one (1) set of digital data files of the Contract Drawings for use in recording information.
- C. Format: Identify and date each Record Drawing; include the designation "PROJECT RECORD DRAWING" in a prominent location.
  - 1. Record Prints: Organize record prints into manageable sets. Bind each set with durable paper cover sheets. Include identification on cover sheets.
  - 2. Format: Annotated PDF electronic file with comment function enabled.
  - 3. Record Digital Data Files: Organize digital data information into separate electronic files that correspond to each sheet of the Contract Drawings. Name each file with the sheet identification. Include identification in each digital data file.
  - 4. Identification: As follows:
    - a. Project name.
    - b. Date.
    - c. Designation "PROJECT RECORD DRAWINGS."



- d. Name of Architect.
- e. Name of Contractor.

### 1.4 RECORD SPECIFICATIONS

- A. Preparation: Mark Specifications to indicate the actual product installation, where installation varies from that indicated in Specifications, addenda, and Contract modifications.
  - 1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
  - 2. For each principal product, indicate whether Record Product Data has been submitted in operation and maintenance manuals instead of submitted as Record Product Data.
  - 3. Note related Change Orders, Record Product Data,] and Record Drawings where applicable.
- B. Format: Submit record specifications as annotated PDF electronic file.

### 1.5 RECORD PRODUCT DATA

- A. Recording: Maintain one (1) copy of each submittal during the construction period for Project Record Document purposes. Post changes and revisions to Project Record Documents as they occur; do not wait until end of Project.
- B. Preparation: Mark Product Data to indicate the actual product installation where installation varies substantially from that indicated in Product Data submittal.
  - 1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
  - 2. Include significant changes in the product delivered to Project site and changes in Manufacturer's written instructions for installation.
  - 3. Note related Change Orders and Record Drawings where applicable.
- C. Format: Submit Record Product Data as annotated PDF electronic file.
  - 1. Include Record Product Data directory organized by Specification Section number and title, electronically linked to each item of Record Product Data.

# 1.6 MAINTENANCE OF RECORD DOCUMENTS

A. Maintenance of Record Documents: Store Record Documents 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.

PART 2 - PRODUCTS (Not Used)
PART 3 - EXECUTION (Not Used)
END OF SECTION 017839



### SECTION 017900 - DEMONSTRATION AND TRAINING

#### PART 1 - GENERAL

### 1.1 SUMMARY

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

# 1.2 QUALITY ASSURANCE

A. Instructor Qualifications: A factory-authorized service representative, complying with requirements in Section 014000 "Quality Requirements," experienced in operation and maintenance procedures and training.

#### 1.3 COORDINATION

A. Coordinate instructors, including providing notification of dates, times, length of instruction time, and course content.

### 1.4 INSTRUCTION PROGRAM

- A. Program Structure: Develop an instruction program that includes individual training modules for each system and for equipment not part of a system, as required by individual Specification Sections.
- B. Training Modules: Develop a learning objective and teaching outline for each module. Include a description of specific skills and knowledge that participant is expected to master. For each module, include instruction for the following as applicable to the system, equipment, or component:
  - 1. Basis of System Design, Operational Requirements, and Criteria: Include the following:
    - a. System, subsystem, and equipment descriptions.
    - b. Performance and design criteria if Contractor is delegated design responsibility.
    - c. Operating standards.
    - d. Regulatory requirements.
    - e. Equipment function.
    - f. Operating characteristics.
    - g. Limiting conditions.
    - h. Performance curves.
  - 2. Documentation: Review the following items in detail:
    - a. Emergency manuals.
    - b. Systems and equipment operation manuals.
    - c. Systems and equipment maintenance manuals.
    - d. Product maintenance manuals.
    - e. Project Record Documents.
    - f. Identification systems.
    - g. Warranties and bonds.
    - h. Maintenance service agreements and similar continuing commitments.
  - 3. Emergencies: Include the following, as applicable:
    - a. Instructions on meaning of warnings, trouble indications, and error messages.



- b. Instructions on stopping.
- c. Shutdown instructions for each type of emergency.
- d. Operating instructions for conditions outside of normal operating limits.
- e. Sequences for electric or electronic systems.
- f. Special operating instructions and procedures.
- 4. Operations: Include the following, as applicable:
  - a. Startup procedures.
  - b. Equipment or system break-in procedures.
  - c. Routine and normal operating instructions.
  - d. Regulation and control procedures.
  - e. Control sequences.
  - f. Safety procedures.
  - g. Instructions on stopping.
  - h. Normal shutdown instructions.
  - i. Operating procedures for emergencies.
  - j. Operating procedures for system, subsystem, or equipment failure.
  - k. Seasonal and weekend operating instructions.
  - I. Required sequences for electric or electronic systems.
  - m. Special operating instructions and procedures.
- 5. Adjustments: Include the following:
  - a. Alignments.
  - b. Checking adjustments.
  - c. Noise and vibration adjustments.
  - d. Economy and efficiency adjustments.
- 6. Troubleshooting: Include the following:
  - a. Diagnostic instructions.
  - b. Test and inspection procedures.
- 7. Maintenance: Include the following:
  - a. Inspection procedures.
  - b. Types of cleaning agents to be used and methods of cleaning.
  - c. List of cleaning agents and methods of cleaning detrimental to product.
  - d. Procedures for routine cleaning.
  - e. Procedures for preventive maintenance.
  - f. Procedures for routine maintenance.
  - g. Instruction on use of special tools.
- 8. Repairs: Include the following:

  - a. Diagnosis instructions.
  - b. Repair instructions.
  - c. Disassembly; component removal, repair, and replacement; and reassembly instructions.
  - d. Instructions for identifying parts and components.
  - e. Review of spare parts needed for operation and maintenance.

#### 1.5 **INSTRUCTION**

A. Scheduling: Provide instruction at mutually agreed-on times. For equipment that requires seasonal operation, provide similar instruction at start of each season.

Lansing School District Sheridan Road STEM Magnet School – Classroom Renovations May 30, 2025



- 1. Schedule training with Owner directly with at least seven (7) days' advance notice.
- B. Training Location and Reference Material: Conduct training on-site in the completed and fully operational facility using the actual equipment in-place. Conduct training using final operation and maintenance data submittals.
- C. Evaluation: At conclusion of each training module, assess and document each participant's mastery of module by use of a demonstration performance-based test.
- D. Cleanup: Collect used and leftover educational materials and give to Owner. Remove instructional equipment. Restore systems and equipment to condition existing before initial training use.

PART 2 - PRODUCTS
PART 3 - EXECUTION
END OF SECTION 017900

Lansing School District Sheridan Road STEM Magnet School – Classroom Renovations May 30, 2025



#### SECTION 024116 - SELECTIVE DEMOLITION

#### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. Section Includes:
  - 1. The removal of selective demolition including but not limited to walls, mechanical, plumbing, ceilings, and lighting.
  - 2. Salvaging items for reuse by Owner.

#### 1.3 DEFINITIONS

- A. Remove: Detach items from existing construction and dispose of them off-site unless indicated to be salvaged.
- B. Remove and Salvage: Detach items from existing construction, in a manner to prevent damage, and store on site for reuse. Include fasteners or brackets needed for reattachment elsewhere.

#### 1.4 MATERIALS OWNERSHIP

- A. Unless otherwise indicated, demolition waste becomes property of Contractor.
- B. Historic items, relics, antiques, and similar objects including, but not limited to, cornerstones and their contents, commemorative plaques and tablets, and other items of interest or value to Owner that may be uncovered during demolition remain the property of Owner.
  - 1. Carefully salvage in a manner to prevent damage and promptly return to Owner.

#### 1.5 PREINSTALLATION MEETINGS

- A. Pre-demolition Conference: Conduct conference at Project site.
  - 1. Inspect and discuss condition of construction to be demolished.
  - 2. Review and finalize protection requirements.
  - 3. Review procedures for noise control and dust control.
  - 4. Review effect of lighting control removal in areas with owner prior to proceeding.

#### 1.6 FIELD CONDITIONS

- A. Conduct demolition so operations of occupied buildings will not be disrupted.
  - 1. Provide not less than seventy-two (72) hours' notice of activities that will affect operations of building.
- B. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.
- C. Hazardous Materials: It is not expected that hazardous materials will be encountered in the
  - 1. Hazardous materials will be removed by Owner before start of the Work.

SELECTIVE DEMOLITION 024116 - 1



- 2. If materials suspected of containing hazardous materials are encountered, do not disturb; immediately notify Engineer and Owner. Hazardous materials will be removed by Owner under a separate contract.
- D. On-site storage or sale of removed items or materials is not permitted.

#### 1.7 COORDINATION

A. Arrange demolition schedule so as not to interfere with Owner's on-site operations or operations of adjacent occupied buildings.

#### PART 2 - PRODUCTS

#### 2.1 PERFORMANCE REQUIREMENTS

- A. Regulatory Requirements: Comply with governing EPA notification regulations before beginning demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.
- B. Standards: Comply with ANSI/ASSE A10.6 and NFPA 241.

#### PART 3 - EXECUTION

#### 3.1 EXAMINATION

A. Review Project Record Documents of existing construction or other existing condition and hazardous material information provided by Owner. Owner does not guarantee that existing conditions are same as those indicated in Project Record Documents.

#### 3.2 PROTECTION

A. Existing Facilities: Protect ceilings, walls, light fixtures, and other building facilities during demolition operations. Maintain exits from existing buildings.

#### 3.3 DEMOLITION, GENERAL

- A. General: Demolish indicated lighting control system and devices. Use methods required to complete the Work within limitations of governing regulations and as follows:
  - 1. Do not use cutting torches until work area is cleared of flammable materials. Maintain portable fire-suppression devices during flame-cutting operations.
  - 2. Maintain fire watch during and for at least four (4) hours after flame-cutting operations.
  - 3. Maintain adequate ventilation when using cutting torches.
- B. Explosives: Use of explosives is not permitted.

#### 3.4 REPAIRS

A. Promptly repair damage to adjacent features caused by demolition operations.

#### 3.5 DISPOSAL OF DEMOLISHED MATERIALS

- A. Remove demolition materials from Project site and dispose of them in an EPA-approved construction and demolition waste landfill acceptable to authorities having jurisdiction
  - 1. Do not allow demolished materials to accumulate on-site.
  - 2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.

SELECTIVE DEMOLITION 024116 - 2

Lansing School District Sheridan Road STEM Magnet School – Classroom Renovations May 30, 2025



B. Do not burn demolished materials.

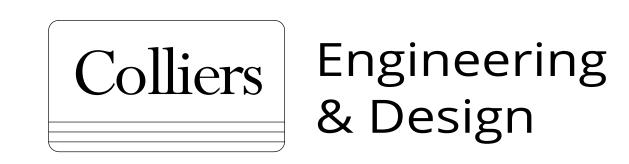
#### 3.6 CLEANING

- A. Clean adjacent structures and improvements of dust, dirt, and debris caused by demolition operations. Return adjacent areas to condition existing before demolition operations began.
  - 1. Clean roadways of dirt and/or debris caused by debris transport.

END OF SECTION 024116

SELECTIVE DEMOLITION 024116 - 3

# SHERIDAN ROAD STEM MAGNET SCHOOL (Classroom Renovations)



560 5th St. NW // Suite 305 // Grand Rapids, MI 49504 616.827.4270

www.colliersengineering.com

SHERIDAN ROAD STEM MAGNET SCHOOL SO-1839

DATE

05/30/2025

**DESCRIPTION** 

BIDS & PERMITS

16900 N. CEDAR STREET, LANSING, MI 48906

05/30/2025

# PROJECT CONTACT LIST



- LANSING SCHOOL DISTRICT

CONTACT: TODD COE

- PHONE: 517-755-3818

& Design

- COLLIERS ENGINEERING & DESIGN

A001 GENERAL NOTES AND LEGENDS A002 GENERAL REQUIREMENTS - PHONE: 616-848-6969 AD101 FIRST FLOOR DEMO AND REFLECTED CEILING PLAN A101 FIRST FLOOR PLAN A121 REFLECTED CEILING PLAN

A141 FIRST FLOOR FINISH PLAN

G000 COVER SHEET

G001 CODE REFERENCE

05 - MECHANICAL MD101 FIRST FLOOR PLAN - MECHANICAL DEMOLITION M101 FIRST FLOOR PLAN - MECHANICAL

**DRAWING INDEX** 

G002 CODE COMPLIANCE & LIFE SAFETY PLANS

08 - ELECTRICAL

ED101 FIRST FLOOR PLAN - LIGHTING/POWER DEMOLITION EL101 FIRST FLOOR PLAN - LIGHTING/PHOTOMETRICS

EP101 FIRST FLOOR PLAN - POWER E1.00 DETAILS, SYMBOL LEGENDS AND SPECIFICATIONS

# **CODE SUMMARY**

RENOVATIONS CONSIST OF REMODELING THE EXISTING INTERIOR LIBRARY SPACE INTO TWO CLASSROOMS IN THE SHERIDAN ROAD STEM MAGNET SCHOOL

# **APPLICABLE BUILDING CODES**

**BUILDING CODE:** 2015 MICHIGAN BUILDING CODE 2015 MICHIGAN REHABILITATION CODE

BUILDING CODE (MI FIRE NFPA 101-2012 SAFETY STATE RULES): MECHANICAL CODE:

2021 MICHIGAN MECHANICAL CODE PLUMBING CODE: 2021 MICHIGAN PLUMBING CODE **ELECTRICAL CODE:** 2023 NATIONAL ELECTRICAL CODE 2023 MICHIGAN PART 8, ELECTRICAL CODE RULES

# **BUILDING DATA**

TOTAL BUILDING AREA: 38,825 SQ FT **TOTAL RENOVATION AREA:** 3,141 **SQ FT** CONSTRUCTION TYPE = **II-B** NON-COMBUSTIBLE NON-SPRINKLERED LEVEL 2 - (CHAPTER 8) **ALTERATIONS:** 

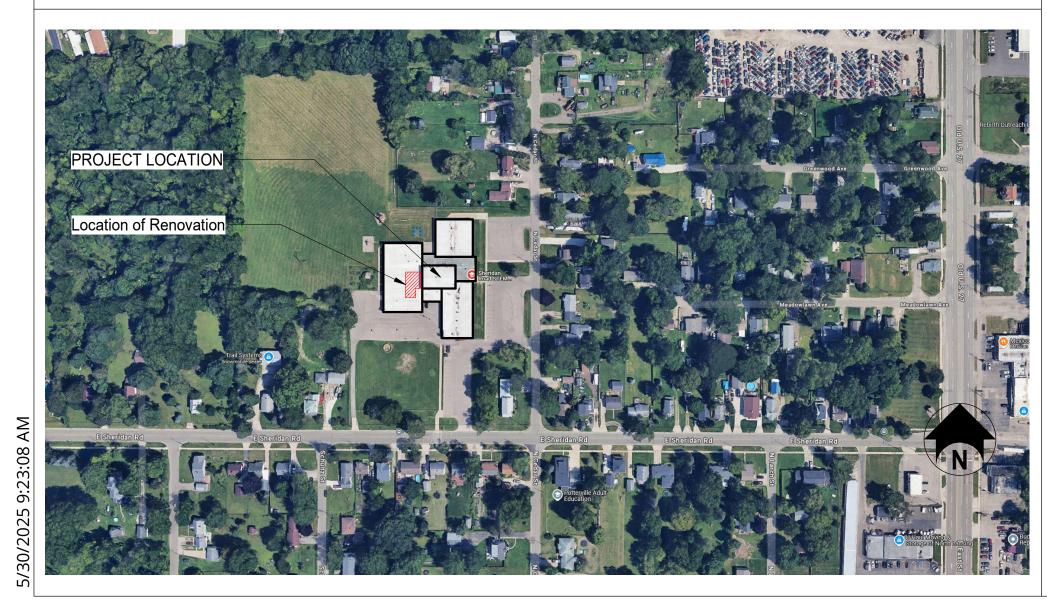
# **USE AND OCCUPANCY**

BUILDING IS CLASSIFIED AS "E" EDUCATIONAL

USES: "E" EDUCATIONAL - NEW CLASSROOMS



# PROJECT LOCATION MAP



DRAWING NUMBER

#### Chapter 7 - Means of Egress Definitions

Accessible Means of Egress (3.3.170.1) – A means of egress that provides an accessible route to an area of refuge, a horizontal exit, or public way.

7.1.3.1 - Exit Access Corridors - Corridors used as exit access and serving more than 30 occupants shall be separated by walls having a 1-hour rating

Exception – Existing buildings, provided the occupancy classification hasn't changed. (We will employ this exception for Building A – the walls were built as school 1-hour walls)

 Headroom shall not be less than 7ft 6in., with projections from the ceiling not less than 6ft 8in. above the floor. • Existing buildings, the ceiling height shall be not less than 7ft from the floor, with projections from the ceiling not less than 6ft 8in. nominal above the floor.

#### 7.2.1 – Door Openings 7.2.1.2.1 – Measurement of Clear Width.

• Projections not more than 4in. into the door opening with on the hinge side shall not be considered reductions in clear width, provided that such projections are for purposes of accommodating panic hardware or fire exit hardware and not less than 34in., and not more than 48in., above the floor.

### 7.2.1.2.2 – Measurement of Egress Capacity Width.

7.2.1.2.2.1 – Swinging Door Assemblies For new door assemblies, clear measurement shall be taken with the leaf open 90 degrees, existing door assemblies in full open position

Projections of not more than 3 ½ in. at each side of the door openings at a height of not more than 38in. shall not be considered reductions in egress capacity width. 7.2.1.2.3 – Minimum Door Leaf Width

### 7.2.1.2.3.2 – Door openings in a means of egress shall be not less than 32 inches in clear width.

• Where a pair of door leaves is provided, one door leaf shall provide not less than a 32 in. (810 mm) clear width

# In existing buildings, the existing door leaf width shall be not less than 28 in.

7.2.1.4 – Swing and Force to Open. 7.2.1.4.1 – Any door assembly in a means of egress shall be of the side-hinged or pivoted-swing type.

7.2.1.4.2 – Door Leaf Swing Direction – must swing in direction of egress where serving an occupant load of 50 or more. 7.2.1.4.3 – Door Leaf Encroachment

7.2.1.4.3.1 – During its swing, any door leaf in a means of egress shall not leave less than half of required width of aisle, corridor, passageway, landing unobstructed and shall not protrude more than 7 inches into required width when fully open. 7.2.1.4.5.1 – Forces required to fully open any door leaf manually in a means of egress shall not exceed 15 lbf to release the latch, 30 lbf to set the leaf in motion, and 15 lbf to open the leaf to the minimum required width.

The opening forces for interior side-hinged or pivoted-swinging door leaves without closers shall not exceed 5 lbf. The opening forces for existing door leaves in existing buildings shall not exceed 50 lbf applied to the latch stile. 7.2.4 – Horizontal Exits

#### 7.2.4.3 - **Fire Barriers** – 2 hour fire resistance rating.

7.3.1 – Occupant Load

7.3.1.1.2 - For other than existing means of egress, where more than one means of egress is required, the means of egress shall be of such width and capacity that the loss of any one means of egress leaves available not less than 50 percent of the required

7.3.3.1 – Capacity Factors (Table 7.3.3.1) Stairways; 0.3 inches per person

 Level Components and Ramps; 0.2 inches per person 7.4.1.2 – Minimum number of means of egress

• 500-1000 – not less than 3

Over 1000 – not less than 4

7.5.1.3.1 - Where more than one exit is required, they shall be located remotely from each other and shall be arranged to minimize the possibility that both could be blocked.

7.5.1.3.2 – Where two exits are required, they must be separated by one half of the diagonal of the room 7.5.1.6 – Exit access from rooms or spaces shall be permitted to be through adjoining or intervening rooms or areas, provided that

such rooms or areas are accessory to the area served. 7.7.1 - Exit Termination – All exits shall terminate directly at a public way or an exterior exit discharge.

7.12.1 – Mechanical equipment rooms, boiler rooms, furnace rooms shall be arranged to limit common path of travel to 50 feet.

### Chapter 8 – Features of Fire Protection

8.2 - Construction and Compartmentation 8.2.2.2 – Fire compartments shall be formed with fire barriers that comply with Section 8.3 – Fire Barriers.

8.3 – Fire Barriers

8.3.1.2 - Fire barriers shall comply with one of the following:

1) The fire barriers are continuous from outside wall to outside wall or from one fire barrier to another, or a combination thereof, including continuity through all concealed spaces, such as those found above a ceiling, including interstitial spaces.

The fire barriers are continuous from outside wall to out-side wall or from one fire barrier to another, and from the floor to the bottom of the interstitial space, provided that the construction assembly forming the bottom of the interstitial space has a fire resistance rating not less than that of the fire barrier.

8.3.1.3 - Walls used as fire barriers shall comply with Chapter 7of NFPA 221, Standard for High Challenge Fire Walls, Fire Walls, and Fire Barrier Walls. The NFPA 221 limitation on percentage width of openings shall not apply. 8.3.2.1.1 - Fire resistance-rated glazing tested in accordance with ASTM E 119, Standard Test Methods for Fire Tests of Building Construction and Materials, or ANSI/UL 263, Standard for Fire Tests of Building Construction and Materials, shall be permitted. 8.3.3.1 - Windows must be installed per NFPA 80

8.3.3.5 – Fire Protection-rated glazing shall be permitted in fire barriers having a rating of 1 hour or less. 8.3.3.11 - Windows shall not exceed 25 percent of the area of the fire barrier in which they are used.

8.3.4.2 - Opening Protectives (Table 8.3.4.2 - Minimum Fire Protection Ratings for Opening Protectives in Fire Resistance-Rated

2-hour fire barrier; 1.5 hour opening protection rating 1-hour fire barrier; 1-hour protection for vertical opening or exit enclosure; 3/4 hour for openings other than

vertical/exit enclosures 8.3.5.1 - Firestop Systems and Devices Required. Penetrations for cables, cable trays, conduits, pipes, tubes, combustion vents and exhaust vents, wires, and similar items to accommodate electrical, mechanical, plumbing, and communications systems that

pass through a wall, floor, or floor/ceiling assembly constructed as a fire barrier shall be protected by a firestop system or device. The firestop system or device shall be tested in accordance with ASTM E 814. 8.3.5.6.3 - Where walls or partitions are required to have a minimum 1-hour fire resistance rating, recessed fixtures shall be installed in the wall or partition in such a manner that the required fire resistance is not reduced, unless one of the following is met

1) Any steel electrical box not exceeding 0.1 sq ft shall be permitted where the aggregate area of the openings provided for the boxes does not exceed 0.7 sq ft in any 100 sq ft of wall area, and, where outlet boxes are installed on opposite sides of the wall, the boxes shall be separated by one of the following:

a) Horizontal distance of not less than 24 in. b) Horizontal distance of not less than the depth of the wall cavity, where the wall cavity is filled with cellulose loose-fill, rock wool, or slag wool insulation

c) Solid fire blocking

d) Other listed materials and methods 2) Membrane penetrations for any listed electrical outlet box made of any material shall be permitted, provided that such boxes have been tested for use in fire resistance-rated assemblies and are installed in accordance with

the instructions included in the listing. 3) The annular space created by the membrane penetration of a fire sprinkler shall be permitted, provided that the space is covered by a metal escutcheon plate.

8.3.6 - Joints.

8.3.6.1 - The provisions of 8.3.6 shall govern the materials and methods of construction used to protect joints in between and at the perimeter of fire barriers or, where fire barriers meet other fire barriers, the floor or roof deck above, or the outside walls.

# **Chapter 10 – Interior Finish, Contents, and Furnishings**

10.2.3.4 - Interior wall and ceiling products are required to be tested per NFPA 286: Class A; flame spread 0-25; smoke development 0-450

Class B; flame spread 26-75; smoke development 0-450 Class C; flame spread 76-200; smoke development 0-450

10.2.4.1 – Textile materials having a Class A rating shall be permitted on the walls or ceiling of rooms protected by a sprinkler

10.2.4.2 – Expanded vinyl wall coverings having a Class A rating shall be permitted on the walls or ceiling of rooms protected by a 10.2.7.3 - Interior floor finishes per NFPA 253 Class 1; critical radiant flux minimum of 0.45W/sq cm

• Class 2; critical radiant flux minimum of 0.22W/sq cm

10.3.1 – Draperies, curtains or other loosely hanging furnishings must be flame resistant per NFPA 701 10.3.2.1 – Upholstered furniture shall be resistant to a cigarette ignition per NFPA 260 & 261.

**Chapter 14 – New Educational Occupancies** (this will apply to the area of alterations)

system), 50 ft. (buildings fully protected)

14.1.6 – Minimum Construction Requirements – No requirements. 14.1.7.1 – Occupant Load (Table 7.3.1.2)

 Classrooms; 1 person per 20 nsf 14.2.2.2.2 – Door hardware – provide panic hardware for loads of 100 or more 14.2.3.2 – **Minimum Corridor Width**. Exit access corridors shall have not less than 6 ft of clear width.

14.2.5.1 – Arrangement of Means of Egress – per Section 7.5. No common path of travel to exceed 75 ft. (building not protected throughout with automatic sprinkler system), 100 ft. (buildings fully protected) No dead end corridors to exceed 20 ft. (building not protected throughout with automatic sprinkler

14.2.5.4 – Every room with more than 50 persons or space larger than 1,000 sq.ft. to have two exits. 14.2.6.2 – Travel distance – not to exceed 150 feet

14.3.1 – Protection of Vertical Openings – per Section 8.6

• Unprotected vertical openings in accordance with 8.6.9.1. 14.3.2.1 – Protection from Hazards 14.3.2.1 - Rooms or spaces for the storage, processing, or use of materials shall be protected in accordance with the following:

1) Such rooms or spaces shall be separated from the remainder of the building by fire barriers having a minimum 1-hour fire resistance rating in the following areas: a) Boiler and furnace rooms, unless such rooms enclose only air-handling equipment

> b) Rooms or spaces used for the storage of combustible supplies in quantities deemed hazardous by the authority having jurisdiction c) Rooms or spaces used for the storage of hazardous materials or flammable or combustible liquids in quantities deemed hazardous by recognized standards

d) Janitor closets 14.3.3.2 - Interior Wall and Ceiling Finish.

1) Exits — Class A 2) Other than exits — Class A or Class B

3) Low-height partitions not exceeding 60 in. and used in locations other than exits — Class A, Class B, or Class

14.3.3.3.2 - Interior floor finish in exit enclosures and exit access corridors and spaces not separated from them by walls complying with 14.3.6 shall be not less than Class II

14.3.6 – **Corridors** – 1-hour fire resistance rated

14.3.7 - Subdivision of Building Spaces. 14.3.7.1 - Educational occupancies shall be subdivided into compartments by smoke partitions having not less than a 1-hour fire resistance rating and complying with Section 8.4 where one or both of the following conditions exist: 1) The maximum floor area, including the aggregate area of all floors having a common atmosphere, exceeds

2) The length or width of the building exceeds 300 ft.

**Chapter 15 – Existing Educational Occupancies** 

15.1.6 - Minimum Construction Requirements - No requirements. 15.1.7 **– Occupant Load** (per Table 7.3.1.2)

Classrooms; 1 person per 20 nsf Shops, labs, vocational rooms: 50 nsf Assembly (Existing Media Center / Existing Multi-purpose Room); 15 nsf

15.2.2.2.2 – **Door hardware** – provide panic hardware for loads of 100 or more 15.2.3.2 - Minimum Corridor Width. Exit access corridors shall have not less than 6 ft of clear width. 15.2.5.1 – Arrangement of Means of Egress – per Section 7.5.

 No common path of travel to exceed 75 feet No dead end corridors to exceed 20 feet 15.2.5.4 – Every room with more than 50 persons or 1.000 sq.ft, to have two exits.

15.2.6.2 – Travel distance – not to exceed 150 feet

15.2.11.1 - **Windows for Rescue.** 15.2.11.1.1 - Every room or space greater than 250 sq. ft. and used for classroom or other educational purposes or normally

subject to student occupancy shall have not less than one outside window for emergency rescue that complies with all of the following, unless otherwise permitted by 15.2.11.1.2: 1) Such windows shall be openable from the inside without the use of tools and shall provide a clear opening of not less than 20 in. in width, 24 in. in height, and 5.7 sq. ft. in area.

2) The bottom of the opening shall be not more than 44 in. above the floor, and any latching device shall be capable of being operated from not more than 54 in. above the finished floor. 3) The clear opening shall allow a rectangular solid, with a width and height that provides not less than the required 5.7 sq. ft. opening and a depth of not less than 20 in., to pass fully through the opening. 15.2.11.1.2 - The requirements of 15.2.11.1.1 shall not apply to any of the following:

2) Where the room or space has a door leading directly to an exit or directly to the outside of the building 3) Where the room has a door, in addition to the door that leads to the exit access corridor as required by 15.2.5.5, and such door leads directly to another corridor located in a compartment separated from the compartment housing the corridor addressed in 15.2.5.5 by smoke partitions in accordance with Section 8.4.

15.3.3.2 - Interior Wall and Ceiling Finish. 1) Exits — Class A 2) Corridors and lobbies — Class A or Class B

3) Low-height partitions not exceeding 60 in. and used in locations other than exits — Class A, Class B, or Class

15.3.6 - Corridors - ½ hour fire resistant rated in accordance with Section 8.3 (Fire Barriers)

15.3.7 - Subdivision of Building Spaces. 15.3.7.1 - Educational occupancies shall be subdivided into compartments by smoke partitions having not less than a 1-hour fire resistance rating and complying with Section 8.4 where one or both of the following conditions exist:

1) The maximum area of a compartment, including the aggregate area of all floors having a common atmosphere, exceeds 30,000 sq.ft.

2) The length or width of the building exceeds 300 ft. 15.7.4 – Furnishings and Decorations. 15.7.4.1 - Draperies, curtains, and other similar furnishings and decorations in educational occupancies shall be in accordance

15.7.4.2 - Clothing and personal effects shall not be stored in corridors, unless otherwise permitted by one of the following: . This requirement shall not apply to corridor areas protected by a smoke detection system in accordance with

1) The artwork and teaching materials shall not exceed 20 percent of the wall area in a building that is not

3) This requirement shall not apply to storage in metal lockers, provided that the required egress width is maintained. 15.7.4.3 - Artwork and teaching materials shall be permitted to be attached directly to the walls in accordance with the following:

protected throughout by an approved automatic sprinkler system in accordance with Section 9.7.

# Chapter 43 - Building Rehabilitation

43.2.2 - Special Definitions.

43.2.2.1 - Categories of Rehabilitation Work. The nature and extent of rehabilitation work undertaken in an existing building. 43.2.2.1.1 - Repair. The patching, restoration, or painting of materials, elements, equipment, or fixtures for the purpose of maintaining such materials, elements, equipment, or fixtures in good or sound condition.

43.2.2.1.2 - Renovation. The replacement in kind, strengthening, or upgrading of building elements, materials, equipment, or fixtures, that does not result in a reconfiguration of the building spaces within.43.2.2.1.3 Modification. The reconfiguration of any space; the addition, relocation, or elimination of any door or window; the addition or elimination of load-bearing elements; the reconfiguration or extension of any system; or the installation of any additional equipment

43.2.2.1.4 - Reconstruction. The reconfiguration of a space that affects an exit or a corridor shared by more than one occupant space; or the reconfiguration of a space such that the rehabilitation work area is not permitted to be occupied because existing means of egress and fire protection systems, or their equivalent, are not in place or continuously maintained. 43.2.2.2 – **Equipment or Fixture.** Any plumbing, heating, electrical, ventilating, air-conditioning, refrigerating, and fire protection equipment; and elevators, dumbwaiters, escalators, boilers, pressure vessels, or other mechanical facilities or installations

related to building services. 43.2.2.3 - Load-Bearing Element. Any column, girder, beam, joist, truss, rafter, wall, floor, or roof sheathing that supports any vertical load in addition to its own weight, or any lateral load. 43.5 - Modifications.

43.5.1.3 - Newly constructed elements, components, and systems shall comply with the requirements of other sections of this Code applicable to new construction.

#### Department of Licensing and Regulatory Affairs State Fire Safety Board New and Existing School, College, and University Fire Safety - Michigan Amendments

14.2.11.1.1. The school or designated representative shall ensure every room or space which is more than 250 square feet and which is used for classroom or other educational purposes or is normally subject to student occupancy shall have not less than 1 outside window for emergency rescue or ventilation that complies with the following unless otherwise permitted by section

> 1) The windows shall be openable from the inside without the use of tools, only held closed by a single operation lock, and shall provide a clear opening of not less than 20 inches in width, 24 inches (61 centimeters) in height, and 5.7 square feet (0.5 square meters) in area. A screen on the window shall be readily removable without any special knowledge or tools.

> 2) The bottom of the opening shall be not more than 44 inches above the floor, and any latching device shall be capable of being operated from not more than 54 inches (1370 mm) above the finished floor. 3) The clear opening shall allow a rectangular solid, with a width and height that provides not less than the required 5.7 square feet (0.5 square meters) opening and a depth of not less than 20 inches (510 millimeters), to

4) The windows shall be accessible by the fire department and shall open into an area that has access to a public way. Windows opening onto an open court, as defined in the code, are acceptable. 5) The windows shall be identified by a permanent durable and legible sign having letters that are not less than 5/8 of an inch high and 1/8 of an inch wide. The sign shall read "rescue window."

14.2.11.1.3. Windowless student occupied rooms in additions to existing buildings or renovated buildings shall be permitted where it is impractical to comply with section 14.2.11.1.1 where all of the following: 1) A minimum of 50% of the required exits pass into a separate atmosphere created by a minimum 2-hour fire rated barrier with labeled 90-minute fire rated door assemblies in all openings. Glazing, other than permitted in the door by NFPA 80, shall be permitted only if the glazing has been tested for a 2-hour rating as well. The fire barrier shall completely separate the building from exterior wall to exterior wall.

3) A maximum of 25% of the total area of the student occupied rooms in the building shall be permitted to be

2) Each separate area shall have approved exiting pursuant to the code.

CODE REVIEW - 2015 MICHIGAN REHABILITATION FOR EXISTING BUILDINGS

# 2015 Michigan Rehabilitation Code for Existing Buildings

**Chapter 4 – Prescriptive Compliance Method** (referenced for compliance with chapters 5-8)

401.2 - Building materials and systems 401.2.1 - Existing Materials - already in use in compliance with requirements in effect at time of erection shall be permitted to remain unless determined by code official to be unsafe.

401.2.2 - New and replacement materials - materials permitted by the code for new construction shall be used. 403.1 - General - Except for 401.2 or this section, alterations to any building shall comply with the requirements of the IBC for

new construction. Alterations shall be such that the existing building is no less conforming to the provisions of the IBC than the existing building was prior to the alteration. 403.3 – Existing structural elements carrying gravity load – if load is increased by 5% then structural element is to be strengthened

404 - Repairs 404.1 - General - Buildings and structures, and parts thereof, shall be repaired in compliance with Sections HYPERLINK "https://up.codes/viewer/michigan/mi-rehabilitation-code-2015/chapter/4/prescriptive-compliance-method#401.2"401.2 and 404. Work on nondamaged components that is necessary for the required HYPERLINK "https://up.codes/viewer/michigan/mirehabilitation-code-2015/chapter/2/definitions#repair"repair of damaged components shall be considered part of the HYPERLINK "https://up.codes/viewer/michigan/mi-rehabilitation-code-2015/chapter/2/definitions#repair"repair and shall not be subject to the requirements for HYPERLINK "https://up.codes/viewer/michigan/mi-rehabilitation-

code-2015/chapter/2/definitions#alteration"alterations in this chapter. Routine maintenance required by HYPERLINK "https://up.codes/viewer/michigan/mi-rehabilitation-code-2015/chapter/4/prescriptive-compliance-method#401.2"Section 401.2, ordinary HYPERLINK "https://up.codes/viewer/michigan/mi-rehabilitation-code-2015/chapter/2/definitions#repair"repairs exempt from permit in accordance with HYPERLINK "https://up.codes/viewer/michigan/mi-rehabilitation-code-2015/chapter/1/scope-andadministration#105.2"Section 105.2, and abatement of wear due to normal service conditions shall not be subject to the requirements for HYPERLINK "https://up.codes/viewer/michigan/mi-rehabilitation-

code-2015/chapter/2/definitions#repair"repairs in this section. 410 - Accessibility for Existing Buildings 410.3 - Extent of application - an alteration shall not impose a requirement for greater accessibility than that which would be required for new construction. Alterations shall not reduce accessibility of a building.

410.6 - Alterations - A building that is altered shall comply with IBC chapter 11 and ICC/A117.1 unless technically infeasible. When compliance is technically infeasible, the alteration shall provide access to the maximum extent feasible. Exception 1 - the altered element or space is not required to be on an accessible route, unless required by section 410.7.

**Exception 2** – Accessible means of egress required by IBC chapter 10 are not required. **Exception 3** – Buildings, structures, or improved areas which exist on or before the effective date of these rules and are in compliance with the code at the time of issuance of the certificate of occupancy unless the alteration specifically modifies an area covered by sections 410.6 to 410.8.

410.7 – Alterations affecting an area containing a primary function – where an alteration affects the accessibility to a primary function, the route to the primary function shall be accessible. The route shall include toilet facilities and drinking fountains. 410.8 - Scoping for alterations 410.8.1 - Entrances - Accessible entrances shall be provided per IBC section 1105.

410.8.11 - Toilet rooms - Where it is technically infeasible to alter existing toilet facilities to be accessible, an accessible family toilet per IBC 1109.2 is permitted. The family facility shall be located on the same floor and in the same area as the existing

410.8.14 - Thresholds - maximum height at doorways shall be 3/4 inch and have beveled edges.

# Chapter 5 – Classification of Work

502.1 - Scope - HYPERLINK "https://up.codes/viewer/michigan/mi-rehabilitationcode-2015/chapter/2/definitions#repair"Repairs, as defined in HYPERLINK "https://up.codes/viewer/michigan/mi-rehabilitationcode-2015/chapter/2/definitions#2"Chapter 2, include the patching or restoration or replacement of damaged materials,

elements, HYPERLINK "https://up.codes/viewer/michigan/mi-rehabilitationcode-2015/chapter/2/definitions#equipment\_or\_fixture"equipment or fixtures for the purpose of maintaining such components in good or sound condition with respect to existing loads or performance requirements. **502.3 - Related Work** - Work on nondamaged components that is necessary for the required repair of damaged components shall be considered part of the repair and shall not be subject to the provisions of chapter 7 or 8.

503 - Alteration - Level 1 **503.1 - Scope** - Level 1 HYPERLINK "https://up.codes/viewer/michigan/mi-rehabilitationcode-2015/chapter/2/definitions#alteration"alterations include the removal and replacement or the covering of existing materials, elements, equipment, or fixtures using new materials, elements, equipment, or fixtures that serve the same purpose.

504 – Alteration – Level 2 504.1 - Scope - Level 2 HYPERLINK "https://up.codes/viewer/michigan/mi-rehabilitationcode-2015/chapter/2/definitions#alteration"alterations include the reconfiguration of space, the HYPERLINK "https://up.codes/viewer/michigan/mi-rehabilitation-code-2015/chapter/2/definitions#addition"addition or elimination of any door or window, the reconfiguration or extension of any system, or the installation of any additional equipment.

# Chapter 6 – Repairs

601.2 - Conformance - The work shall not make the building less conforming than it was before the HYPERLINK "https://up.codes/viewer/michigan/mi-rehabilitation-code-2015/chapter/2/definitions#repair"repair was undertaken.

602 - Building Elements and Materials 602.1 - Existing Building Materials - Materials already in use in a building in compliance with requirements or approvals in effect at the time of their erection or installation shall be permitted to remain in use unless determined by the HYPERLINK "https://up.codes/viewer/michigan/mi-rehabilitation-code-2015/chapter/2/definitions#code official"code official to render the building or structure HYPERLINK "https://up.codes/viewer/michigan/mi-rehabilitationcode-2015/chapter/2/definitions#unsafe"unsafe or HYPERLINK "https://up.codes/viewer/michigan/mi-rehabilitation-

code-2015/chapter/2/definitions#dangerous"dangerous as defined in HYPERLINK "https://up.codes/viewer/michigan/mirehabilitation-code-2015/chapter/2/definitions#2"Chapter 2. **602.2 - New and Replacement Materials -** Except as otherwise required or permitted by this code, materials permitted by the applicable code for new construction shall be used. Like materials shall be permitted for HYPERLINK "https://up.codes/viewer/michigan/mi-rehabilitation-code-2015/chapter/2/definitions#repair"repairs and HYPERLINK "https://up.codes/viewer/michigan/mi-rehabilitation-code-2015/chapter/2/definitions#alteration"alterations, provided

no HYPERLINK "https://up.codes/viewer/michigan/mi-rehabilitationcode-2015/chapter/2/definitions#dangerous"dangerous or HYPERLINK "https://up.codes/viewer/michigan/mi-rehabilitationcode-2015/chapter/2/definitions#unsafe"unsafe condition, as defined in Chapter HYPERLINK "https://up.codes/viewer/michigan/mi-rehabilitation-code-2015/chapter/2/definitions#2"2, is created. Hazardous materials, such as asbestos and lead-based paint, shall not be used where the code for new construction would not permit their use in buildings of similar occupancy, purpose and location.

requirements of the HYPERLINK "https://up.codes/viewer/michigan/mi-building-code-2015" International Building Code or HYPERLINK "https://up.codes/viewer/michigan/mi-residential-code-2015" International Residential Code as applicable. 603 - Fire Protection - HYPERLINK "https://up.codes/viewer/michigan/mi-rehabilitationcode-2015/chapter/2/definitions#repair"Repairs shall be done in a manner that maintains the level of fire protection provided. 604 - Means of Egress - HYPERLINK "https://up.codes/viewer/michigan/mi-rehabilitation-

602.3 - Glazing in Hazardous Locations - Replacement glazing in hazardous locations shall comply with the safety glazing

code-2015/chapter/2/definitions#repair"Repairs shall be done in a manner that maintains the level of protection provided for the means of egress. 605 - Accessibility - HYPERLINK "https://up.codes/viewer/michigan/mi-rehabilitationcode-2015/chapter/2/definitions#repair"Repairs shall be done in a manner that maintains the level of accessibility provided. 606 - Structural - Structural HYPERLINK "https://up.codes/viewer/michigan/mi-rehabilitation-

code-2015/chapter/2/definitions#repair"repairs shall be in compliance with this section and HYPERLINK "https://up.codes/viewer/michigan/mi-rehabilitation-code-2015/chapter/6/repairs#601.2"Section 601.2. Regardless of the extent of structural or nonstructural damage, HYPERLINK "https://up.codes/viewer/michigan/mi-rehabilitationcode-2015/chapter/2/definitions#dangerous dangerous conditions shall be eliminated. Regardless of the scope of HYPERLINK "https://up.codes/viewer/michigan/mi-rehabilitation-code-2015/chapter/2/definitions#repair"repair, new structural members and connections used for HYPERLINK "https://up.codes/viewer/michigan/mi-rehabilitationcode-2015/chapter/2/definitions#repair"repair or HYPERLINK "https://up.codes/viewer/michigan/mi-rehabilitationcode-2015/chapter/2/definitions#rehabilitation"rehabilitation shall comply with the detailing provisions of the HYPERLINK

purpose and location. 607 - Electrical 607.1 - Material - Existing electrical wiring and equipment undergoing HYPERLINK "https://up.codes/viewer/michigan/mirehabilitation-code-2015/chapter/2/definitions#repair"repair shall be allowed to be repaired or replaced with like material. 608 - Mechanical - Existing mechanical systems undergoing HYPERLINK "https://up.codes/viewer/michigan/mi-rehabilitationcode-2015/chapter/2/definitions#repair"repair shall not make the building less conforming than it was before the HYPERLINK "https://up.codes/viewer/michigan/mi-rehabilitation-code-2015/chapter/2/definitions#repair"repair was undertaken.

"https://up.codes/viewer/michigan/mi-building-code-2015" International Building Code for new buildings of similar structure,

609 - Plumbing 609.1 - Materials - Plumbing materials and supplies shall not be used for HYPERLINK "https://up.codes/viewer/michigan/mirehabilitation-code-2015/chapter/2/definitions#repair"repairs that are prohibited in the HYPERLINK "https://up.codes/viewer/michigan/mi-plumbing-code-2015" International Plumbing Code.

609.2 - Water Closet Replacement - The maximum water consumption flow rates and quantities for all replaced water closets shall be 1.6 gallons (6 L) per flushing cycle. **Exception:** Blowout-design water closets [3.5 gallons per flushing cycle].

**702.3 – Interior trim** – all new trim shall comply with IBC Section 806.

# Chapter 7 – Alterations – Level 1

702 – Building Elements and Materials 702.1 - Interior finishes - all newly installed interior wall and ceiling finishes shall comply with IBC Chapter 8 702.2 - Interior floor finish - new interior floor finish, including carpeting, shall comply with IBC Section 806. 702.6 - Materials and Methods - All new work shall comply with the materials and methods requirements in the HYPERLINK "https://up.codes/viewer/michigan/mi-building-code-2015" International Building Code, HYPERLINK "https://up.codes/viewer/michigan/iecc-2015" International Energy Conservation Code, International Mechanical Code, and HYPERLINK "https://up.codes/viewer/michigan/mi-plumbing-code-2015" International Plumbing Code, as applicable, that specify material standards, detail of installation and connection, joints, penetrations, and continuity of any element. component, or system in the building.

703 - Fire Protection - Alterations shall be done in a manner that maintains the level of fire protection provided. **704 – Means of Egress** – Alterations shall be done in a manner that maintains the level of protection provided. **705 – Accessibility** – A building or element that is accessible shall remain accessible.

707 – Structural 707.2 - Replacement of roofing or equipment - where replacement results in additional dead loads, structural component shall comply with the gravity load requirements of IBC Exception 1 – where dead load does not increase by more than 5 percent

708 - Energy Conservation **708.1 Minimum Requirements** – Level 1 alterations are permitted without requiring the entire building to comply with the energy requirements of the International Energy Conservation Code. The alterations shall conform to the requirements of the International Energy Conservation Code as they relate to new construction only.

#### Chapter 8 – Alterations – Level 2

**801.2 - Alteration Level 1 Compliance** - In addition to the requirements of this chapter, all work shall comply with the requirements of HYPERLINK "https://up.codes/viewer/michigan/mi-rehabilitation-code-2015/chapter/7/alterations-level-1#

801.3 - Compliance - All new construction elements, components, systems, and spaces shall comply with the requirements of the HYPERLINK "https://up.codes/viewer/michigan/mi-building-code-2015" International Building Code. **Exceptions:** 

Windows may be added without requiring compliance with the light and ventilation requirements of the HYPERLINK "https://up.codes/viewer/michigan/mi-building-code-2015" International Building Code.

Newly installed electrical equipment shall comply with the requirements of HYPERLINK "https://up.codes/viewer/michigan/mi-rehabilitation-code-2015/chapter/8/alterations-level-2#808"Section 808. The length of dead-end corridors in newly constructed spaces shall only be required to comply with the

provisions of HYPERLINK "https://up.codes/viewer/michigan/mi-rehabilitation-code-2015/chapter/8/alterationslevel-2#805.6"Section 805.6. The minimum ceiling height of the newly created habitable and occupiable spaces and corridors shall be 7 feet. 803 – Building Elements and Materials

803.4 - Interior Finish - The interior finish of walls and ceilings in exits and corridors in any HYPERLINK "https://up.codes/viewer/michigan/mi-rehabilitation-code-2015/chapter/2/definitions#work\_area"work area shall comply with the requirements of the HYPERLINK "https://up.codes/viewer/michigan/mi-building-code-2015" International Building Code. **Exception:** Existing interior finish materials that do not comply with the interior finish requirements of the HYPERLINK "https://up.codes/viewer/michigan/mi-building-code-2015" International Building Code shall be permitted to be treated with an HYPERLINK "https://up.codes/viewer/michigan/mi-rehabilitation-code-2015/chapter/2/definitions#approved"approved fire-

retardant coating in accordance with the manufacturer's instructions to achieve the required rating. 803.4.1 - Supplemental Interior Finish Requirements - Where the HYPERLINK "https://up.codes/viewer/michigan/mirehabilitation-code-2015/chapter/2/definitions#work\_area"work area on any floor exceeds 50 percent of the floor area, HYPERLINK "https://up.codes/viewer/michigan/mi-rehabilitation-code-2015/chapter/8/alterations-level-2#803.4"Section 803.4 shall also apply to the interior finish in exits and corridors serving the HYPERLINK "https://up.codes/viewer/michigan/mirehabilitation-code-2015/chapter/2/definitions#work area throughout the floor.

Exception: Interior finish within tenant spaces that are entirely outside the HYPERLINK "https://up.codes/viewer/michigan/mi-

rehabilitation-code-2015/chapter/2/definitions#work area"work area. 804 – Fire Protection 804.4 - Fire alarm and detection - An HYPERLINK "https://up.codes/viewer/michigan/mi-rehabilitationcode-2015/chapter/2/definitions#approved"approved fire alarm system shall be installed in accordance with Sections HYPERLINK "https://up.codes/viewer/michigan/mi-rehabilitation-code-2015/chapter/8/alterations-level-2# 804.4.1"804.4.1 through HYPERLINK "https://up.codes/viewer/michigan/mi-rehabilitation-code-2015/chapter/8/alterations-level-2 #804.4.3"804.4.3. Where automatic sprinkler protection is provided in accordance with HYPERLINK

"https://up.codes/viewer/michigan/mi-rehabilitation-code-2015/chapter/8/alterations-level-2#804.2"Section 804.2 and is connected

to the building fire alarm system, automatic heat detection shall not be required. An HYPERLINK "https://up.codes/viewer/michigan/mi-rehabilitationcode-2015/chapter/2/definitions#approved"approved automatic fire detection system shall be installed in accordance with the provisions of this code and NFPA 72. Devices, combinations of devices, appliances, and equipment shall be HYPERLINK "https://up.codes/viewer/michigan/mi-rehabilitation-code-2015/chapter/2/definitions#approved"approved. The automatic fire detectors shall be smoke detectors, except that an HYPERLINK "https://up.codes/viewer/michigan/mi-rehabilitationcode-2015/chapter/2/definitions#approved"approved alternative type of detector shall be installed in spaces such as boiler rooms. where products of combustion are present during normal operation in sufficient quantity to actuate a smoke detector.

**804.4.1.1 – Group E** – Install fire alarm system in work areas of Group E per IFC for existing Group E occupancies. 805 – Means of Egress

809 - Mechanical

805.3 - Number of exits **805.3.1 – Minimum number** – Every story shall be provided with number of exits per IBC.

805.4 – Egress doorways 805.4.1 - Two egress doorways required - HYPERLINK "https://up.codes/viewer/michigan/mi-rehabilitationcode-2015/chapter/2/definitions#work area"Work areas shall be provided with two egress doorways. 805.4.1.1 - Occupant load and travel distance - all rooms and spaces having an occupant load greater than 50 or which the travel distance to an exit exceeds 75 feet shall have a minimum of two egress doorways.

**Exception 1** – storage rooms having a maximum occupant load of 10. 805.4.2 - Door swing - all egress doors serving an occupant load greater than 50 shall swing in the direction of exit travel. 805.4.4 - Panic hardware - In buildings or portions thereof of Group A assembly with an occupant load greater than 100 to be

equipped with latching devices and panic hardware. 805.4.4.1 – where work area exceeds 50 percent of the floor, panic hardware shall comply with 805.4.4 throughout floor. **805.6 – Dead ends** – 35 feet (Also see NFPA 101 Section 10-2.5.1)

**805.8 – Exit signs** – provide exit signs per IBC. **806 – Accessibility** – A building, facility, or element that is altered shall comply with Section 410.

shall be provided per the IPC based on increased occupant load.

807 – Structural **807.2 – New structural elements** – per IBC 807.3 - Minimum design loads - minimum design loads on existing elements of a structure that do not support additional loads as a result of an alteration shall be the loads applicable at the time the building was constructed. 807.4 – Existing structural elements carrying gravity loads – Existing structural elements supporting any additional gravity

loads as a result of the alterations, including the effects of snow drift, shall comply with IBC. **Exception 1** – Structural elements whose stress is not increased by more than 5 percent. 807.5 – Existing structural elements resisting lateral loads – If more than 10 percent greater due to alteration, then bring into compliance.

808 - Electrical 808.1 - New installations - All newly installed electrical equipment and wiring relating to work done in any HYPERLINK "https://up.codes/viewer/michigan/mi-rehabilitation-code-2015/chapter/2/definitions#work area"work area shall comply with all applicable requirements of HYPERLINK "https://up.codes/viewer/michigan/nfpa-70-2017" NFPA 70. 808.2 - Existing installations - Existing wiring in Use Groups A1, A2, A5, H, and I shall be upgraded to meet requirements of

shall provide not less than 5 cfm per person of outdoor air and not less than 15 cfm of ventilation air per person; or not less than determined by Indoor Air Quality Procedure of ASHRAE 62. 809.3 Local Exhaust - All newly introduced devices, equipment, or operations that produce airborne particulate matter, odors, fumes, vapor, combustion products, gaseous contaminants, pathogenic and allergenic organisms, and microbial contaminants in such quantities as to affect adversely or impair health or cause discomfort to occupants shall be provided with local exhaust. **810 – Plumbing** – Where the occupant load of the story is increased by more than 20 percent, plumbing fixtures for the story

811 - Energy Conservation - Level 2 alterations are permitted without requiring the entire building to comply with the energy

requirements of the International Energy Conservation Code. Alterations are to comply with the IECC as they relate to new

**809.1 – Reconfigured or converted spaces** – provide with natural or mechanical ventilation in accordance with IMC. 809.2 - Altered existing systems - In mechanically ventilated spaces, existing mechanical ventilation systems that are altered FOR

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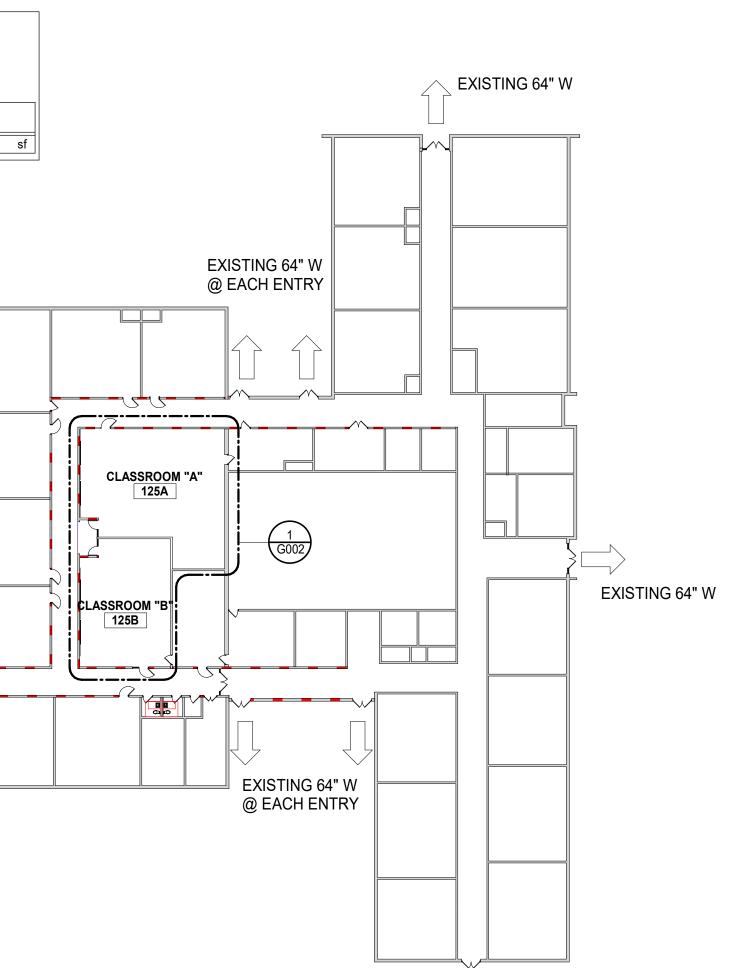
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NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

& Design

#### COMPLIANCE WITH THE: 2015 MICHIGAN BUILDING, REHABILITATION, AND ENERGY CONSERVATION CODES (BASED ON 2015 I-CODES), 2021 MICHIGAN MECHANICAL CODE, 2021 PLUMBING CODE (BASED ON 2015 I-CODES), 2021 MICHIGAN MECHANICAL CODE, 2021 PLUMBING CODE (BASED ON 2015 I-CODES), 2021 MICHIGAN MECHANICAL CODE, 2021 PLUMBING CODE (BASED ON 2015 I-CODES), 2021 MICHIGAN MECHANICAL CODE, 2021 PLUMBING CODE (BASED ON 2015 I-CODES), 2021 MICHIGAN MECHANICAL CODE, 2021 PLUMBING CODE (BASED ON 2015 I-CODES), 2021 MICHIGAN MECHANICAL CODE, 2021 PLUMBING CODE (BASED ON 2015 I-CODES), 2021 MICHIGAN MECHANICAL CODE, 2021 PLUMBING CODE (BASED ON 2015 I-CODES), 2021 MICHIGAN MECHANICAL CODE, 2021 PLUMBING CODE (BASED ON 2015 I-CODES), 2021 MICHIGAN MECHANICAL CODE, 2021 PLUMBING CODE (BASED ON 2015 I-CODES), 2021 MICHIGAN MECHANICAL CODE, 2021 PLUMBING CODE (BASED ON 2015 I-CODES), 2021 MICHIGAN MECHANICAL CODE, 2021 PLUMBING CODE (BASED ON 2015 I-CODES), 2021 MICHIGAN MECHANICAL CODE, 2021 PLUMBING CODE (BASED ON 2015 I-CODES), 2021 MICHIGAN MECHANICAL CODE, 2021 PLUMBING CODE (BASED ON 2015 I-CODES), 2021 MICHIGAN MECHANICAL CODE, 2021 PLUMBING CODE (BASED ON 2015 I-CODES), 2021 MICHIGAN MECHANICAL CODE, 2021 PLUMBING CODE (BASED ON 2015 I-CODES), 2021 MICHIGAN MECHANICAL CODE, 2021 PLUMBING CODE (BASED ON 2015 I-CODES), 2021 MICHIGAN MECHANICAL CODE, 2021 PLUMBING CODE (BASED ON 2015 I-CODES), 2021 MICHIGAN MECHANICAL CODE, 2021 PLUMBING CODE (BASED ON 2015 I-CODES), 2021 MICHIGAN MECHANICAL CODE, 2021 PLUMBING CODE (BASED ON 2015 I-CODES), 2021 MICHIGAN MECHANICAL CODE, 2021 PLUMBING CODE (BASED ON 2015 I-CODES), 2021 MICHIGAN MECHANICAL CODE, 2021 PLUMBING CODE (BASED ON 2015 I-CODES), 2021 MICHIGAN MECHANICAL CODE, 2021 PLUMBING CODE (BASED ON 2015 I-CODES), 2021 MICHIGAN MECHANICAL CODE, 2021 PLUMBING CODE (BASED ON 2015 I-CODES), 2021 MICHIGAN MECHANICAL CODE, 2021 MICHIGAN MECHA ON 2021 IPC) INCLUDING MICHIGAN ADDENDA AND ERRATA; 2023 MICHIGAN ELECTRICAL CODE, PART 8 RULÈS (BY REFERENCE, 2023 NEC); BOILER CODE (2019 ASME BOILER AND PRESSURE VESSEL CODES WITH ADDENDA); ELEVATOR CODE (2010 ASME 17.1, 2011 ASME A18.1 AND ELEVATOR SAFETY BOARD GENERAL RULES, ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES (ICC A117.1-09), AND OTHER LOCAL, STATE, AND FEDERAL CODES AND REGULATIONS APPLICABLE TO THIS PROJECT. BUILDING CODE SUMMARY PROJECT INFORMATION: INTERIOR FINISH: (CHAPTER 8) WALL AND CEILING SHERIDAN ROAD STEM MAGNET SCHOOL - CLASSROOM RENOVATIONS PROJECT NAME: OCCUPANCY: PROJECT NUMBER: 25004227A FINISH CLASS LOCATION PREPARED BY: S KHUMALO CHECKED BY: B HUYLER X A X EXITS ☐ CORRIDORS/ EXIT ACCESS ROOMS/ SPACES DATE: DATE: 3/12/25 X B X CORRIDORS/ EXIT ACCESS ROOMS/ SPACES \_\_ EXITS X C ☐ EXITS ☐ CORRIDORS/ EXIT ACCESS C ROOMS/ SPACES REHABILITATION OF EXISTING STRUCTURES: PER THE 2015 MICHIGAN RAHABILITATION CODE FOR EXISTING BUILDINGS (2015 EIBC) **FLOORING** FINISH CLASS OCCUPANCIES REPAIRS (CHAPTER 6) ALTERATIONS - LEVEL 1 (CHAPTER 7) ☐ GROUPS: X ALTERATIONS - LEVEL 2 (CHAPTER 8) XII X ALL X GROUPS: B ALTERATIONS - LEVEL 3 (CHAPTER 9) ☐ DOC FF-1 ☐ GROUPS: ☐ ALL CHANGE OF OCCUPANCY (CHAPTER 10) FORMER OCCUPANCY CLASSIFICATION(S): \_EDUCATION, BUSINESS NEW OCCUPANCY CLASSIFICATION(S): \_\_EDUCATION, BUSINESS PARTIAL CHANGE OF OCCUPANCY: YES IF YES: SEPARATED X NOT SEPARATED ADDITIONS (CHAPTER 11) LEGEND SEPARATED ADDITION: IF YES, FIRE RESISTENCE RATING: ☐ FIRE WALL - OCCUPANCY GROUP ☐ FIRE BARRIER HISTORIC BUILDING (CHAPTER 12) **→** S.F. RELOCATED BUILDING (CHAPTER 13) -# OCCUPANTS ACCESSIBILITY UPGRADES: COMPLY WITH SECTION 410 AND ADDENDA 1-HR. RATED FLOOR/BEAM/COLUMN TO SUPPORT RATED ELEVATOR OCCUPANCY CLASSIFICATION AND MIXED OCCUPANCIES: SHAFT & MACHINE ROOM ENCLOSURE SIGN DIRECTION -SINGLE ☐ ACCESSORY - GROUP ; % OF FLOOR AREA ☐ SEPARATED X NON-SEPARATED ☐ COMBINATION X MIXED OCCUPANCY FACE OF SIGN ——— IF SEPARATED, FIRE RESISTANCE RATING OF FIRE BARRIER: (TABLE 508.4) OCCUPANCY CLASSIFICATION(S): EDUCATION, BUSINESS (EXISTING OCCUPANCIES) USES: \_EDUCATION - NEW CLASSROOMS COMMON PATH OF EGRESS DISTANCE AUTOMATIC SPRINKLER SYSTEM PROVIDED THROUGHOUT BUILDING: EXIT ACCESS TRAVEL DISTANCE ☐ YES X NO (ALONG STAIRWAY NOSING AT OPEN PARTIAL/LIMITED-AREA SPRINKLER SYSTEM: STAIRWAYS) ☐ YES 💢 NO FIRE EXTINGUISHER ON WALL BRACKET NFPA STANDARD: 🔲 13 ☐ 13R ALT. FIRE PROTECTION SYSTEM: FIRE EXTINGUISHER CABINET DRINKING FOUNTAIN CONSTRUCTION TYPE: II (000) SECTION 601 FIRE RESISTANCE OF BUILDING ELEMENTS: SERVICE SINK BUILDING ELEMENTS REQUIRED PROVIDED SECTION STRUCTURAL FRAME (TABLE 601) 1-HR RATED WALL (TABLE 601) BEARING WALLS (EXTERIOR) BEARING WALLS (INTERIOR) (TABLE 601) (TABLE 602) NON-BEARING WALLS (EXTERIOR) NON-BEARING WALLS (INTERIOR) (TABLE 601) FLOOR CONSTRUCTION (TABLE 601) ROOF CONSTRUCTION (TABLE 601) (CHAPTER 5) **HEIGHT & AREA - ACTUAL:** HEIGHT IN FEET HEIGHT IN STORIES **BUILDING HEIGHT EXISTING** EXISTING 64" W **BUILDING AREA** ADDITION TOTAL EXISTING SUMMARY sf 3,141 sf 38,825

EXISTING 64" W

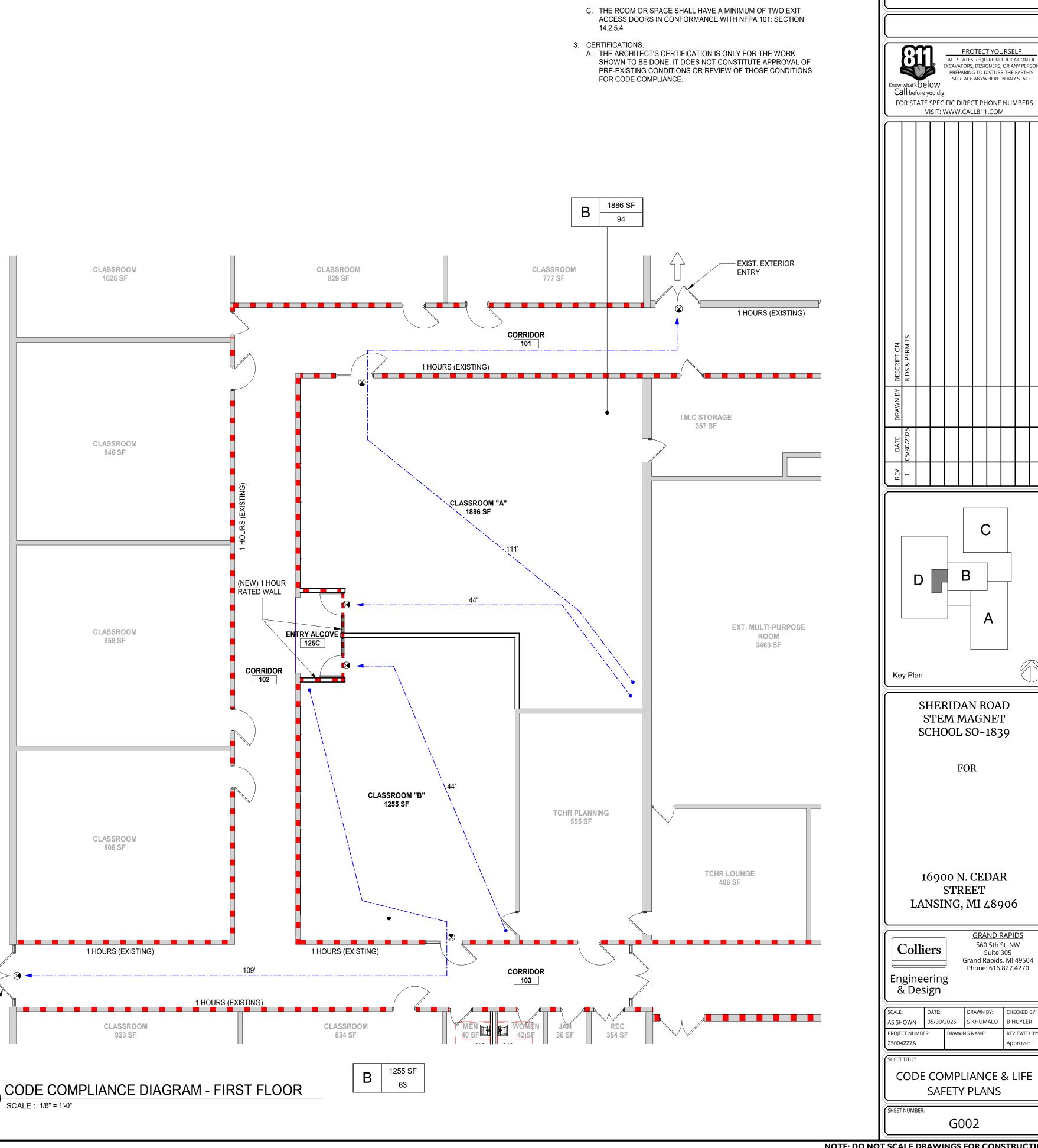


CODE COMPLIANCE DIAGRAM - OVERALL

SCALE: 1/32" = 1'-0"

EXIST. EXTERIOR -

**ENTRY** 



**GENERAL NOTES** 

A. WORK SHALL CONFORM TO FEDERAL, STATE AND LOCAL CODES

AS INTERPRETED BY THE AUTHORITY HAVING JURISDICTION.

A. PROVIDE FIRE EXTINGUISHERS IN CONFORMANCE WITH THE FIRE

PRIOR TO INSTALLATION. DO NOT INSTALL FIRE EXTINGUISHERS

UNTIL LOCATIONS HAVE BEEN REVIEWED AND APPROVED BY THE

CODE SECTION 906 AND COORDINATE WITH FIRE MARSHAL

B. OBTAIN ALL REQUIRED PERMITS AND PAYMENT OF PERMIT AND

AUTHORITY HAVING JURISDICTION.

APPLICATION FEES FOR THE WORK.

1. APPLICABLE CODES:

COMPLIANCE:

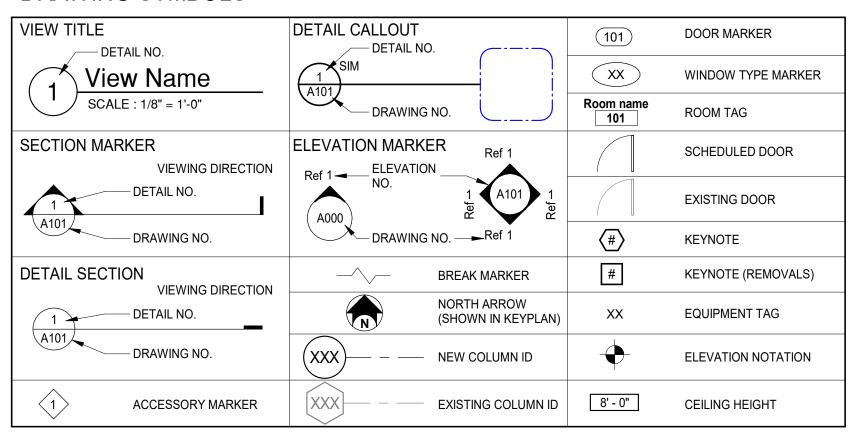
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# DRAWING SYMBOLS



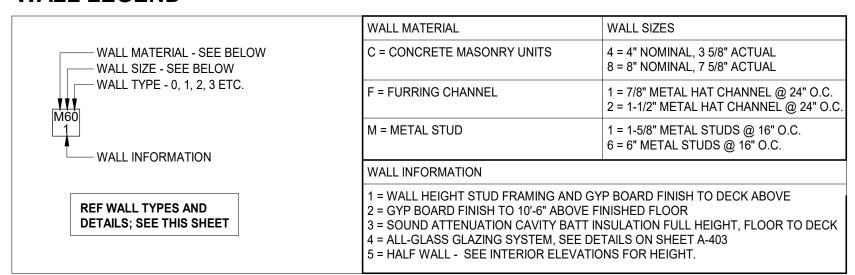
# MATERIAL INDICATORS

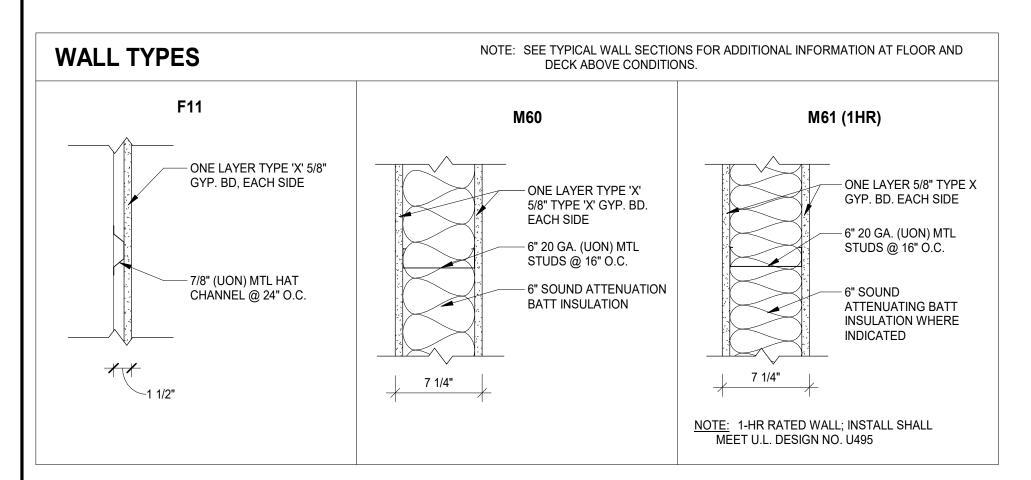
|             | UNDISTURBED EARTH       | STEEL                | FINISH WOOD                |
|-------------|-------------------------|----------------------|----------------------------|
|             | GRAVEL OR CRUSHED STONE | RIGID INSULATION     | BATT INSULATION            |
|             | CAST STONE              | BRICK                | WOOD FRAMING (CONTINUOUS)  |
| , A , A , A | CONCRETE                | PLYWOOD              | WOOD BLOCKING (DISCONTIN.) |
|             | CONCRETE MASONRY UNIT   | SAND OR GYPSUM BOARD | EXISTING                   |

# WALL STYLES

| EXISTING BRICK WALL | BRICK WALL | EXISTING WALL REMOVAL |
|---------------------|------------|-----------------------|
| EXISTING CMU WALL   | CMU WALL   |                       |
| EXISTING STUD WALL  | STUD WALL  |                       |

# WALL LEGEND





### ARREVIATIONS

| ABBREVIATIONS  |   |                  |   |  |  |  |  |
|----------------|---|------------------|---|--|--|--|--|
| "<br>#<br>&    | INCHES<br>NUMBER, POUNDS<br>AND                     | LF<br>LLH<br>LLV | LINEAR FEET<br>LONG LEG HORIZONTAL<br>LONG LEG VERTICAL |  |  |  |  |
| (E), EXST      | FEET EXISTING TO REMAIN                             | LMC<br>LT        | LINEAR METAL CEILING<br>LIGHT                           |  |  |  |  |
| (ER)<br>(N)    | EXISTING TO BE RELOCATED NEW WORK                   | LTL<br>LVR       | LINTEL<br>LOUVER  |  |  |  |  |
| (R)            | REMOVE  | LVT              | LUXURY VINYL TILE                                       |  |  |  |  |
| (RE)<br>@      | RELOCATED EXISTING<br>AT                            | M                |   |  |  |  |  |
| Ø, DIA         | DIAMETER  | MAX<br>MECH      | MAXIMUM<br>MECHANICAL                                   |  |  |  |  |
| A<br>A/O       | AID CONDITIONING                                    | MEZZ             | MEZZANINE   |  |  |  |  |
| A/C<br>ACP     | AIR CONDITIONING ACOUSTICAL CEILING PANELS          | MFR<br>MIN       | MANUFACTURER<br>MINIMUM                                 |  |  |  |  |
| AESS           | ARCHITECTURALLY EXPOSED STRUCTURAL STEEL            | MO<br>MTD        | MASONRY OPENING MOUNTED                                 |  |  |  |  |
| AFF<br>AHJ     | ABOVE FINISHED FLOOR AUTHORITY HAVING               | MTL              | METAL   |  |  |  |  |
| AHU            | JURISDICTION AIR HANDLING UNIT                      | N                |   |  |  |  |  |
| ALT            | ALTERNATE   | NIC<br>NTS       | NOT IN CONTRACT<br>NOT TO SCALE                         |  |  |  |  |
| ALUM<br>AOR    | ALUMINUM<br>ARCHITECT OF RECORD                     | 0                |   |  |  |  |  |
| APPROX<br>ARCH | APPROXIMATE, APPROXIMATELY ARCHITECT, ARCHITECTURAL | OC<br>OPP        | ON CENTER<br>OPPOSITE                                   |  |  |  |  |
| ATTN           | ATTENTION   | OSB              | ORIENTED STRAND BOARD                                   |  |  |  |  |
| B              | POTTOM OF   | Р                |   |  |  |  |  |
| B/, BO<br>BD   | BOTTOM OF<br>BOARD                                  | PCC<br>PCF       | PRECAST CONCRETE POUNDS PER CUBIC FOOT                  |  |  |  |  |
| BLDG<br>BLKG   | BUILDING<br>BLOCKING                                | PL<br>PLF        | PLATE POUNDS PER LINEAR FOOT                            |  |  |  |  |
| BTWN           | BETWEEN   | PLM              | PLASTIC LAMINATE  |  |  |  |  |
| C              |   | PLYWD<br>PMEJ    | PLYWOOD PRE MOLDED EXPANSION JOINT                      |  |  |  |  |
| CANT<br>CG     | CANTILEVER<br>CORNER GUARD                          | PMF<br>PP        | PRE MOLDED FILLER PLASTIC PANELING                      |  |  |  |  |
| CJ<br>CL       | CONTROL JOINT CENTERLINE                            | PSF<br>PSI       | POUNDS PER SQUARE FOOT POUNDS PER SQUARE INCH           |  |  |  |  |
| CLG<br>CLR     | CEILING<br>CLEAR                                    | PT               | PORCELAIN TILE  |  |  |  |  |
| CM             | CONSTRUCTION MANAGER                                | PTD<br>PTWD      | PAINTED (PRESSURE)                                      |  |  |  |  |
| CMT<br>CMU     | CERAMIC MOSAIC TILE CONCRETE MASONRY UNIT           |                  | PRESERVATIVE-TREATED WOOD                               |  |  |  |  |
| COL<br>CONC    | COLUMN<br>CONCRETE                                  | Q<br>QT          | QUARRY TILE   |  |  |  |  |
| CONT<br>CORR   | CONTINUOUS<br>CORRIDOR                              | QTY              | QUANTITY  |  |  |  |  |
| CT             | CERAMIC TILE  | R                |   |  |  |  |  |
| СТВ            | CERAMIC TILE BASE                                   | R<br>RB          | RISER<br>RUBBER BASE                                    |  |  |  |  |
| D<br>D         | DEEP  | RCP<br>RD        | REFLECTED CEILING PLAN<br>ROOF DRAIN                    |  |  |  |  |
| DF<br>DIA, Ø   | DRINKING FOUNTAIN DIAMETER                          | REBAR            | REINFORCING BAR   |  |  |  |  |
| DIM            | DIMENSION   | REINF            | REINFORCED, REINFORCING,<br>REINFORCEMENT               |  |  |  |  |
| DWG,<br>DWGS   | DRAWING, DRAWINGS                                   | REQD<br>REQMTS   | REQUIRED REQUIREMENTS                                   |  |  |  |  |
| E              | FACIL   | RESIL            | RESILIENT   |  |  |  |  |
| EA<br>EIFS     | EXTERIOR INSULATION FINISH                          | RF<br>RM         | RESILIENT FLOORING<br>ROOM                              |  |  |  |  |
| EL             | SYSTEM<br>ELEVATION                                 | RO<br>RTU        | ROUGH OPENING<br>ROOF TOP UNIT                          |  |  |  |  |
| ELEC<br>ELEV   | ELECTRIC, ELECTRICAL ELEVATOR                       | S                |   |  |  |  |  |
| EXF<br>EXP     | EPOXY FLOORING<br>EXPANSION                         | SC<br>SCHED      | SEALED CONCRETE<br>SCHEDULE                             |  |  |  |  |
| EXP BT<br>EXT  |   | SCL              | STRUCTURAL COMPOSITE LUMBER                             |  |  |  |  |
|                | EXTERIOR  |                  | SQUARE FEET   |  |  |  |  |
| F<br>FCO       | FLOOR CLEANOUT                                      | SIM<br>SMS       | SIMILAR<br>SHEET METAL SCREW                            |  |  |  |  |
| FD<br>FE       | FLOOR DRAIN<br>FIRE EXTINGUISHER                    | SOG<br>SPCS      | SLAB ON GRADE / GROUND<br>SPACES                        |  |  |  |  |
| FEC<br>FFE     | FIRE EXTINGUISHER CABINET FINISH FLOOR ELEVATION    | SPEC<br>SS       | SPECIFICATION<br>SOLID SURFACE                          |  |  |  |  |
| FLG            | FLOORING  | SSL              | SHORT SLOTTED   |  |  |  |  |
| FLR<br>FPR     | FLOOR<br>FIBER REINFORCED PLASTIC                   | SST<br>STC       | STAINLESS STEEL SOUND TRANSMISSION CLASS                |  |  |  |  |
| FR<br>FRT      | FIRE RATED FIRE RETARDANT TREATED                   | STD<br>STL       | STANDARD<br>STEEL                                       |  |  |  |  |
| FT<br>FT       | FLOOR TILE<br>FIRE TREATED                          | STRUCT<br>SYS    | STRUCTURAL, STRUCTURE<br>SYSTEM                         |  |  |  |  |
| FTG            | FOOTING   | Т                |   |  |  |  |  |
| G              | 041105  | T                | TREAD   |  |  |  |  |
| GA<br>GALV     | GAUGE<br>GALVANIZED                                 | T&G<br>TEMP      | TONGUE AND GROOVE<br>TEMPORARY                          |  |  |  |  |
| GC<br>GRC      | GENERAL CONTRACTOR GLASS-REINFORCED CONCRETE        | TH<br>TL         | THRESHOLD<br>TWIST LOCK                                 |  |  |  |  |
| GRG<br>GWB     | GLASS-REINFORCED GYPSUM<br>GYPSUM BOARD             | TR<br>TYP        | TRANSITION<br>TYPICAL                                   |  |  |  |  |
| Н              |   |                  | 111 10/1E   |  |  |  |  |
| НВ             | HOSE BIBB   | U<br>UNO         | UNLESS NOTED OTHERWISE                                  |  |  |  |  |
| HC<br>HDR      | HOLLOW CORE<br>HEADER                               | UPH<br>UR        | UPHOLSTERY<br>URINAL                                    |  |  |  |  |
| HM<br>HORIZ    | HOLLOW METAL<br>HORIZONTAL                          | V                |   |  |  |  |  |
| HPC<br>HW      | HIGH PERFORMANCE COATING<br>HOT WATER               | VAR<br>VB        | VARIES<br>VINYL BASE                                    |  |  |  |  |
| HWD            | HARDWARE  | VCT              | VINYL COMPOSITION TILE                                  |  |  |  |  |
| HWT            | HOT WATER TANK                                      | VERT<br>VEST     | VERTICAL<br>VESTIBULE                                   |  |  |  |  |
| I<br>ID        | INSIDE DIAMETER                                     | VIF<br>VWC       | VERIFY IN FIELD<br>VINYL WALL COVERING                  |  |  |  |  |
| IN WG<br>INSUL | INCH OF WATER GAUGE<br>INSULATION                   | W                |   |  |  |  |  |
| INT            | INTERIOR  | W                | WIDE, WIDTH   |  |  |  |  |
| INV            | INVERT  | W/<br>W/O        | WITH<br>WITHOUT   |  |  |  |  |
| J<br>JAN CL    | JANITORS CLOSET                                     | WB<br>WC         | WOOD BASE<br>WATER CLOSET                               |  |  |  |  |
| JT             | JOINT   | WCV<br>WD        | WALL COVERING<br>WOOD                                   |  |  |  |  |
| L              | LAMINATE  | WDT              | WINDOW TREATMENT  |  |  |  |  |
| LAM<br>LAV     | LAMINATE<br>LAVATORY                                | WF<br>WOM        | WOOD FLOORING<br>WALKOFF MAT                            |  |  |  |  |
| LBS            | POUNDS  | WP               | WATERPROOF  |  |  |  |  |

# **GENERAL NOTES:**

# ALL GENERAL NOTES PERTAIN TO ALL ARCHITECTURAL (A-SERIES) DRAWINGS IN THIS SET

DEFINITIONS: "PROVIDE" MEANS FURNISH AND INSTALL. SUPPLY LABOR AND MATERIALS TO RESULT IN A FINISHED AND/OR OPERABLE SYSTEM.

- CONTRACTOR RESPONSIBILITIES: A. MATERIALS, CONSTRUCTION METHODS INCLUDING BUT NOT LIMITED TO LAYOUT, COORDINATION, SCHEDULE AND CONSTRUCTION SITE ACCESS AND WORK.
  - B. DAILY CLEANING: KEEP SITE FREE FROM WASTE, RUBBISH, AND DEBRIS. REMOVE DAILY. WHEN WORK IS COMPLETE, LEAVE THE PREMISES BROOM CLEAN AND CLEAN FINISHED SURFACES, FIXTURES, GLASS, STOREFRONT, ETC.
- C. FINAL CLEANING, PRIOR TO PUNCHLIST INSPECTION BROOM CLEAN ALL HARD SURFACE FLOORS, VACUUM ALL CARPETING AND WIPE DOWN ALL HORIZONTAL AND GLASS SURFACES PROVIDING A DUST FREE SURFACE.
- D. TEMPORARY PROTECTION IS REQUIRED TO MAINTAIN ONGOING BUILDING OPERATIONS, EXITING PATHS, DUST CONTROL AND OCCUPANT SAFETY. IDENTIFY THE REQUIREMENTS FOR TEMPORARY PROTECTION AND PROJECT PHASING. COORDINATE WITH OWNER FOR OTHER REQUIREMENTS.
- E. COORDINATE STARTUP AND ADJUSTING OF EQUIPMENT AND OPERATING COMPONENTS. START EQUIPMENT AND OPERATING COMPONENTS AND TEST TO CONFIRM PROPER OPERATION AND CONTROL. REMOVE MALFUNCTIONING UNITS, REPLACE WITH NEW UNITS, AND RETEST.
- F. CLOSEOUT DOCUMENTS, CERTIFICATE OF RELEASE FROM THE AUTHORITY OF JURISDICTION AND INSURANCE FOR CONTINUING COVERAGE, WARRANTIES, TEST & INSPECTION RESULTS AND OPERATION, EMERGENCY & MAINTENANCE MANUALS. ALL METAL STUD CROSS BRACING IS CONSIDERED DELEGATED DESIGN AND IS THE RESPONSIBILITY OF THE TRADE CONTRACTOR TO PROVIDE SEALED ENGINEERING DRAWINGS.
- EXISTING CONDITIONS: REVIEW EXISTING CONDITIONS AND DIMENSIONS PRIOR TO COMMENCING WORK AND REPORT DISCREPANCIES TO THE ARCHITECT IMMEDIATELY.
- CONTRACT DOCUMENTS: A. PLANS, ELEVATIONS, SECTIONS, DETAILS AND SCHEDULES ARE COMPLEMENTARY. PLAN DRAWINGS WILL TAKE PRECEDENCE OVER ELEVATION, SECTION AND DETAILS DRAWINGS IN ANY CONFLICTS OF HORIZONTAL DIMENSIONS. DETAIL PLAN DRAWINGS WILL TAKE PRECEDENCE OVER LARGER SCALE PLANS IN ANY CONFLICTS WITH HORIZONTAL DIMENSIONS. WALL AND BUILDING SECTIONS WILL TAKE PRECEDENCE OVER PLAN DRAWING AND DETAILS IN ANY CONFLICTS WITH VERTICAL DIMENSIONS. DETAILS AND WALL SECTIONS WILL TAKE PRECEDENCE OVER ELEVATION AND PLAN DRAWINGS IN ANY CONFLICTS WITH MATERIAL DESCRIPTION. SCHEDULES WILL TAKE PRECEDENCE OVER OTHER ARCHITECTURAL DRAWINGS IN AND
- B. DRAWINGS PREPARED BY THE ARCHITECT ARE INSTRUMENTS OF THE ARCHITECT'S SERVICE FOR USE SOLELY WITH RESPECT TO THIS PROJECT AND, UNLESS OTHERWISE PROVIDED, BERGMANN SHALL BE DEEMED THE AUTHOR OF THESE DOCUMENTS AND RETAIN ALL COMMON LAW, STATUTORY AND OTHER RESERVED RIGHTS, INCLUDING THE COPYRIGHT.

CONFLICTS WITH WALL, FLOOR AND CEILING FINISHES AND DOOR, DOOR HARDWARE AND FENESTRATION

C. WHERE REFERENCE IS MADE TO VARIOUS TEST STANDARDS FOR MATERIALS, SUCH STANDARDS SHALL BE THE LATEST EDITION AND/OR ADDENDUM.

# FIELD CONDITIONS

- REPAIR: EXISTING SURFACES TO REMAIN IMPACTED BY DEMOLITION TO MATCH EXISTING ADJACENT SURFACES.
- DISCREPANCIES: NOTIFY ARCHITECT OF EXISTING DAMAGED OR DETERIORATED BUILDING ELEMENTS REVEALED
- DURING DEMOLITION OR CONSTRUCTION PRIOR TO PROCEEDING WITH ADDITIONAL WORK IN THE AREA. HAZARDOUS MATERIALS: A PRE-DEMOLITION ASBESTOS SURVEY IS REQUIRED PRIOR TO DEMOLITION OF SUSPECT BUILDING MATERIALS IN ACCORDANCE WITH OSHA 29 DFR 1926.1101, AND USEPA 40 CRF 61.145. A PRE-DEMOLITION ASBESTOS SURVEY IS NOT REQUIRED PER 12 NYCRR 56 FOR BUILDINGS OR STRUCTURES FOR WHICH THE ORIGINAL CONSTRUCTION COMMENCED ON OR AFTER JANUARY 1, 1974. THERMAL SYSTEM INSULATIONS AND SURFACING MATERIALS FOUND IN BUILDINGS CONSTRUCTED NO LATER THAN 1980 SHALL BE CONSIDERED PRESUMED ASBESTOS CONTAINING MATERIALS (PACM) UNLESS PROVEN OTHERWISE BY APPROPRIATE BULK SAMPLING AND LABORATORY ANALYSIS CONDUCTED BY APPROVED LICENSED PERSONNEL. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COMPLY WITH ALL REGULATIONS. THE LANDLORD SHALL PROVIDE COPIES OF ANY ASBESTOS SURVEYS THEY HAVE ON FILE AT THE REQUEST OF THE CONTRACTOR.
- SAFETY: FOLLOW THE OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION (OSHA) 29 CFR 1926.62, LEAD EXPOSURE IN CONSTRUCTION REGULATION. MATERIALS HAVING A CONCENTRATION EQUAL OR GREATER THAN 0.5% BY WEIGHT IN LEAD ARE CONSIDERED TO BE LEAD BASED. HOWEVER, OSHA CONSIDERS ANY AMOUNT OF LEAD ENCOUNTERED DURING CONSTRUCTION TO BE OF CONCERN. THE REGULATION STATES THAT THE EMPLOYER SHALL ASSURE THAT NO EMPLOYEE IS EXPOSED TO LEAD AT CONCENTRATIONS GREATER THAN FIFTY MICROGRAMS PER CUBIC METER OF AIR (50 MG/M<sup>3</sup>) AVERAGED OVER AN 8-HOUR PERIOD. CONTRACTORS SHALL DETERMINE AND TAKE APPROPRIATE MEASURES IF THEY SUSPECT THE PRESENCE OF LEAD.

. GENERAL: FINISHED FLOORS EXTEND INTO TOE SPACES, UNDER CASEWORK ON LAB PROJECTS, CLOSETS, DOOR

- A. INSTALL MATERIALS USING MANUFACTURER'S APPROVED ADHESIVES AND METHODS, U.N.O.

REVEALS AND SIMILAR OPENINGS.

- B. PAINT DESIGNATIONS INDICATE COLOR ONLY, REFER TO SPECIFICATION FOR FINISH TYPE.
- C. PROVIDE SELF LEVELING TROWELABLE UNDERLAYMENT WHERE REQUIRED TO OBTAIN FINISH MANUFACTURER'S REQUIRED SUBFLOOR CONDITION.
- D. PROVIDE THE REQUIRED TRANSITIONS BASED ON TYPES IDENTIFIED ON DRAWINGS AT EACH FINISH

- A. ADHERE TO MATERIAL OR SYSTEM MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS AND TOLERANCES. ANY VARIATIONS FROM WRITTEN INSTALLATION AND INSTRUCTIONS MUST RECEIVE WRITTEN APPROVAL FROM THE MANUFACTURER AND MAINTAIN MANUFACTURER'S WARRANTIES.
- B. PRIOR TO STARTING THE INSTALLATION OF A MATERIAL OR SYSTEM, VERIFY THE SUBSTRATE IS WITHIN THE MANUFACTURER'S REQUIRED TOLERANCES AND REQUIRED CLEARANCES ARE PROVIDED. NOTIFY THE CONSTRUCTION MANAGER OR GENERAL CONTRACTOR AND DEIGN PROFESSIONAL IN WRITING WHEN THE SUBSTRATE IS NOT WITHIN MANUFACTURER'S TOLERANCE OR REQUIRED CLEARANCES ARE NOT PROVIDED. PROCEEDING WITH INSTALLATION SIGNIFIES ACCEPTANCE OF THE SUBSTRATE AND CLEARANCES.
- C. PROVIDE MANUFACTURER'S REQUIRED ENVIRONMENTAL TESTS FOR MOISTURE, VAPOR DRIVE, RELATIVE HUMIDITY AND TEMPERATURE TO VERIFY THESE ARE WITHIN THE MATERIAL MANUFACTURER'S TOLERANCE PRIOR TO INSTALLING MATERIALS.
- D. MATERIAL AND INSTALLATION SHALL CONFORM WITH LOCAL, STATE AND NATIONAL BUILDING CODES AND CONSTRUCTION STANDARDS ENFORCED BY THE AUTHORITY HAVING JURISDICTION.
- E. REQUIRED DOCUMENTATION:
- 1. SAFETY DATA SHEETS. PROVIDE SAMPLES WHEN SPECIFICALLY REQUESTED IN THESE DOCUMENTS.
- PROVIDE SHOP DRAWINGS OF MATERIALS AND SYSTEMS, WHICH WILL BE BUILT INTO AND MUST BE COORDINATED WITH OTHER CONSTRUCTION. SHOP DRAWINGS SHALL CONSIST OF PLAN, ELEVATION, SECTION VIEWS AND DETAILS AS REQUIRED TO COMMUNICATE FINAL APPEARANCE AND CONNECTION TO ADJOINING CONSTRUCTION.
- F. PROTECT ADJACENT SURFACES DURING WORK.
- G. REMOVE ADHESIVE OR PAINT SPOTS FROM FINISHED FLOORS, WALLS, GLASS OR OTHER SURFACES. FINISHES TO MEET OR EXCEED CODE REQUIREMENTS.
- H. FILL MINOR DRYWALL IRREGULARITIES WITH SPACKLING COMPOUND AND SAND TO A SMOOTH LEVEL SURFACE. EXERCISE CARE TO AVOID RAISING THE NAP OF PAPER.
- I. DO NOT PERFORM PAINTING AND OTHER FINISHING WORK UNDER CONDITIONS UNSUITABLE FOR EXECUTION OF PAINTING WORK. AIR SHALL BE FREE FROM DUST AND DIRT TO PREVENT LODGING OF FOREIGN MATTER IN FRESH PAINT. FLOORS TO BE BROOM CLEAN BEFORE PAINTING IS STARTED.
- J. EDGES OF PAINT ADJOINING OTHER COLORS OR MATERIALS TO BE SHARP AND CLEAN WITHOUT OVERLAP.
- K. WHENEVER NECESSARY TO OBTAIN REQUIRED RESULTS, REFINISH AN ENTIRE WALL RATHER THAN SPOT FINISHING WHERE A PORTION OF THE FINISH HAS BEEN DAMAGED OR IS UNSATISFACTORY.
- L. WHEN INSTALLING CARPET FOLLOW THE CARPET AND RUG INSTITUTE METHODS OF INSTALLATION AND MANUFACTURERS WRITTEN INSTALLATION INSTRUCTIONS.
- M. WHEN INSTALLING TILE FOLLOW THE TILE COUNCIL OF NORTH AMERICA'S INSTALLATION SPECIFICATIONS AND MANUFACTURERS WRITTEN INSTALLATION INSTRUCTIONS.
- N. CENTER FLOOR MATERIAL TRANSITIONS ON DOOR ABOVE.
- O. FLOOR MATERIAL TRANSITIONS SHALL OCCUR BELOW THE DOOR.

#### <u>WALLS</u>

- A. DIMENSIONS a. STUD WALLS ARE TO FACE OF STUD, UNLESS OTHERWISE INDICATED IN A.c. OR A.d. BELOW.
  - b. MASONRY WALLS ARE TO FACE OF MASONRY.
- c. EXISTING CONSTRUCTION ARE TO FINISHED FACE OF CONSTRUCTION.
- d. WHERE NOTED AS "CLR" DIMENSIONS ARE TO FINISHED SURFACE AND ARE CRITICAL FOR ACCESSIBILITY REQUIREMENTS OR BUILT-IN FURNISHINGS.

# a. WALLS NOT INDICATED WITH A WALL TYPE SHALL BE TYPE M30.

- b. COLUMN ENCLOSURES, CHASES AND ENCLOSED UNINHABITABLE SPACES SHALL BE WALL TYPE M31, UNLESS NOTED
- c. BRACING: PROVIDE CHANNEL COLD ROLLED STEEL (CRSS) BRACING AT ALL METAL STUD WALLS. INSTALL TWO ROWS OF BRACING 4'-0" O.C. FOR WALLS UP TO 13'-0" HIGH.

d. PROVIDE (2) #10-7/16" HEX HEAD SHEET METAL SCREWS AT EACH STUD/TRACK CONNECTION AT ALL WALLS, BULK

- HEADS & SOFFITS NOT EXTENDING FLOOR TO DECK. e. PROVIDE DEFLECTION TRACK OR CLIP AT TOP OF METAL STUD WALLS THAT EXTEND TO THE UNDERSIDE OF
- STRUCTURAL MEMBERS OR FLOOR/ ROOF DECK. f. METAL STUD WALLS IN WHICH STUDS DO NOT EXTEND TO DECK ABOVE SHALL BE LATERALLY BRACED AT 45 DEGREES
- g. PROVIDE FULL HEIGHT DOUBLE STUDS AT DOOR AND WINDOW JAMBS.

INTERSECT OTHER WALLS.

h. FIRE-RESISTANT JOINT SYSTEMS: AT FIRE-RESISTANT RATED WALLS, FLOORS OR FLOOR/CEILING ASSEMBLIES, AND ROOFS OR ROOF/CEILING ASSEMBLIES, PROVIDE AN APPROVED TESTED JOINT ASSEMBLY PROVIDING THE MINIMUM TIME AND TEMPERATURE RISE AT THE WALL, FLOOR, OR ROOF SUITABLE FOR THE CONSTRUCTION WHERE THE SYSTEM IS TO BE INSTALLED.

TO THE STRUCTURE ABOVE WITH 3 5/8" x 20 GA. STUDS @ 48" O.C. MAX., AND AT ENDS OF SUCH WALLS WHICH DO NOT

i. THE BOTTOM EDGE OF GYPSUM WALL BOARD SHALL BE INSTALLED 3/8" ABOVE THE FLOOR AND SEALED AS NOTED IN

- SMOKE WALLS AND SMOKE BARRIERS: SMOKE WALLS AND SMOKE BARRIERS MUST FORM A COMPLETE BARRIER TO LIMIT THE TRANSFER OF SMOKE, INCLUDING PERIMETER DETAILS, PENETRATIONS, AND AS REQUIRED BETWEEN WALLS AND DOOR JAMBS, OR SIDELIGHT FRAMES. THE MEMBRANE IS TO BE CONTINUOUS THROUGH ALL CONCEALED
- 1. RECESSED CABINETS, OUTLET BOXES, AND OTHER PENETRATIONS MUST BE SEALED
- 2. OPENINGS AROUND PENETRATIONS ARE TO BE SEALED.
- 3. ALL EXPOSED JOINTS, ANGLES, AND ABUTMENTS IN THE SYSTEM, INCLUDING FLOOR AND ABOVE CEILING MUST BE TAPED AND FINISHED.
- 4. SEAL THE INTERFACE BETWEEN WALLS AND DOOR JAMBS, OR SIDELIGHT FRAMES.
- b. FIRE WALLS AND FIRE BARRIERS: FIRE WALLS AND FIRE BARRIERS MUST BE SIMILARLY CONSTRUCTED AS A COMPLETE BARRIER TO RESIST THE SPREAD OF SMOKE AND FIRE. PENETRATIONS MUST BE SEALED AND LABELED WITH AN APPROVED FIRE RESISTANT JOINT SYSTEM. INSTALL A FIRE RESISTANT JOINT SYSTEM AT THE HEAD AND FLOOR CONDITION OF FIRE RATED WALLS AND BARRIERS.
- c. FIRE AND SMOKE WALL / BARRIER / WALLS LABELING:
- WHERE THERE IS AN ACCESSIBLE CONCEALED FLOOR, FLOOR-CEILING, OR ATTIC SPACE, FIRE WALLS, FIRE BARRIERS, FIRE PARTITIONS, SMOKE BARRIERS, AND SMOKE PARTITIONS OR ANY OTHER WALL REQUIRED TO HAVE PROTECTED OPENINGS OR PENETRATIONS SHALL BE EFFECTIVELY AND PERMANENTLY IDENTIFIED WITH SIGNS OR STENCILING IN THE CONCEALED SPACE. SUCH IDENTIFICATION SHALL:
- A. BE LOCATED WITHIN 15 FEET (4572 MM) OF THE END OF EACH WALL AND AT INTERVALS NOT EXCEEDING 30 FEET (9144 MM) MEASURED HORIZONTALLY ALONG THE WALL OR PARTITION.
- B. INCLUDE LETTERING NOT LESS THAN 3 INCHES (76 MM) IN HEIGHT WITH A MINIMUM 3/8-INCH (9.5 MM) STROKE IN A CONTRASTING COLOR INCORPORATING THE SUGGESTED WORDING, "FIRE AND/OR SMOKE BARRIER -PROTECT ALL OPENEINGS," OR OTHER WORDING.
- d. ACOUSTICAL WALLS: WALLS INDICATED WITH ACOUSTICAL BATT, AND/OR A GIVEN AN STC RATING, SHALL BE CONSTRUCTED TO MINIMIZE SOUND TRANSMISSION AS FOLLOWS:
- 1. PROVIDE ACOUSTICAL SEALANT AT ALL FLOOR AND HEAD LEVELS, EACH SIDE OF THE WALLS.
- 2. SET TRACK IN 3 CONTINUOUS BEADS OF ACOUSTICAL SEALANT
- 3. EXTEND SOUND BATTS THOROUGH ANY INTERSECTING WALLS
- 4. STAGGER OUTLETS A MINIMUM OF 24 INCHES HORIZONTAL. DO NOT INSTALL MORE THAN ONE OUTLET IN A COMMON STUD CAVITY. SEAL JOINTS AROUND OUTLETS WITH ACOUSTICAL SEALANT.
- D. GYPSUM BOARD WALL COMPONENTS AND ACCESSORIES: WALL TYPES DO NOT INDICATE FINAL FINISHES. REFER TO FINISH PLANS AND FINISH SCHEDULE.
- b. GYPSUM BOARD SHALL BE TYPE "X" FIRE RATED WITH:
- 1. LEVEL 1 FINISH AT JOINTS WHICH WILL REMAIN CONCEALED. PROVIDE GALVANIZED STEEL CORNER BEADS AT
- 2. LEVEL 3 FINISH WHERE WALLS EXPOSED TO VIEW SCHEDULED FOR PAINT IN SERVICE SPACES (eg. TELE / DATA CLOSETS, MECHANICAL ROOMS, JANITOR CLOSETS, STORAGE ROOMS).
- 3. LEVEL 4 FINISH WHERE EXPOSED TO VIEW UPON PROJECT COMPLETION U.N.O.
- 4. LEVEL 5 FINISH AT GRAPHIC CORRIDOR, AS WELL AS DRY ERASE AND CHALK BOARD PAINTED AREAS. REFER TO FINISH LOCATION ON PLANS, AND COORDINATE WITH DESIGNER IN THE FIELD.
- c. PROVIDE MOISTURE/ MOLD / ABUSE RESISTANT GYPSUM BOARD AT WALLS IN TOILET ROOMS, JANITORS CLOSETS AND ANY ROOM WHERE MOISTURE CONDITIONS WILL OCCUR AND NOT RECEIVING TILE FINISH.
- PROVIDE GLASS MATT GYPSUM BOARD AT WALLS DIRECTLY ADJACENT TO LIVING WALL ELEMENT AND AT ALL WET AREAS (SHOWER ROOMS, COMMUNAL KITCHEN/DISHWASHER, ETC.) GLASS MAT GYPSUM BOARD SHALL RECEIVE FIBERGLASS TAPE AND FINISH AS RECOMMENDED BY MANUFACTURER.
- e. METAL TRIM:
- 1. EXPOSED METAL J-TRIM TO BE COMPLETELY COVERED WITH SKIM COAT
- 2. NON-METALIC J-TRIM OR OTHER SHAPES ARE NOT ACCEPTABLE, UNLESS OTHERWISE NOTED
- f. LOCATIONS WHERE GYPSUM BOARD WALLS TERMINATE AT DISSIMILAR MATERIALS, PROVIDE A FINISH-ABLE METAL END TRIM AND A 1/4" GAP BETWEEN TRIM AND ADJACENT MATERIAL. FILL GAP WITH BACKER ROD AND SEALANT.
- g. PROVIDE SOLID FIRE TREATED WOOD BLOCKING IN WALL AND CEILING CONSTRUCTION AS REQUIRED TO SUPPORT WALL MOUNTED MILLWORK AND CASEWORK, FURNISHINGS, RAILINGS, GRAB BARS, TOILET & BATH ACCESSORIES OR ANY OTHER WALL MOUNTED ITEMS INDICATED ON THESE DRAWINGS REQUIRING BLOCKING. REFER TO DIAGRAMS ON DRAWING A-### FOR MOUNTING LOCATIONS OF GRAB BARS.
- h. PROVIDE PAPER FACED "L" SHAPED TAPE ON TRIM AT THE TOP OF ALL GYP. BD. THAT ABUTS SUSPENDED CEILINGS AND EXPOSED STRUCTURE.

a. PROVIDE IN GYPSUM WALL BOARD CONSTRUCTION AS FOLLOWS:

- PROVIDE CONTROL JOINTS IN EXPANSES OF WALLS AT MAXIMUM 25-FOOT INTERVALS, AND FULL HEIGHT. CONTROL JOINTS ARE RECOMMENDED AT DOOR JAMBS, EXTENDING FROM DOOR HEAD TO TOP OF WALL.
- 2. CONTROL JOINTS ARE REQUIRED IN CEILINGS TO LIMIT AREAS TO 2,500 SQUARE FEET. INSTALL CONTROL JOINTS IN CEILINGS TO LIMIT DIMENSIONS IN EITHER DIRECTION TO 50 FEET MAXIMUM WITH PERIMETER RELIEF, 30 FEET MAXIMUM OTHERWISE. INSTALL CONTROL JOINTS WHERE CEILING FRAMING OR FURRING CHANGES DIRECTION.
- 3. PROVIDE CONTROL JOINTS IN GYPSUM WALL BOARD WHERE THE UNDERLYING STRUCTURE CONTAINS A CONTROL OR MOVEMENT JOINT.
- 4. IN AN ACOUSTICALLY RATED ASSEMBLY, PROVIDE ACOUSTICALLY TESTED CONTROL JOINT ASSEMBLY WITH A STO RATING MINIMALLY EQUAL TO THE WALLS STC RATING. COORDINATE REQUIRED LOCATIONS ON FEATURE WALLS WITH DESIGNER IN THE FIELD. METAL TRIM: EXPOSED METAL OR NON-METALLIC J-MOLD IS NOT ACCEPTABLE.
- 5. PROVIDE CONTROL JOINTS AT ALL BUILDING CONTROL OR EXPANSION JOINTS.
- b. IN CONCRETE MASONRY UNIT WALLS REFER TO STRUCTURAL FOR CONTROL JOINT SPACING
- c. IN CLAY MASONRY VENEERS REFER TO ARCHITECTURAL EXTERIOR ELEVATIONS FOR EXPANSION JOINT LOCATIONS

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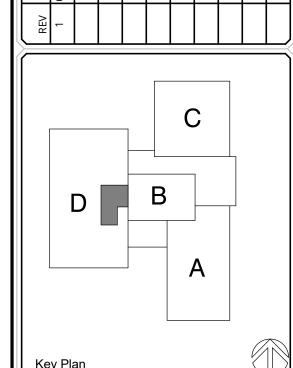
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& Design 05/30/2025 S KHUMALO B HUYLER AS SHOWN OIECT NUMBER: DRAWING NAME:

GENERAL NOTES AND

LEGENDS

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

WT WALL TILE

#### ALLOWANCES:

- A. AT THE EARLIEST PRACTICAL DATE AFTER AWARD OF THE CONTRACT, ADVISE ARCHITECT OF THE DATE WHEN FINAL SELECTION, OR PURCHASE AND DELIVERY, OF EACH PRODUCT OR SYSTEM DESCRIBED BY AN ALLOWANCE MUST BE COMPLETED BY THE OWNER TO AVOID DELAYING THE WORK.
- B. OBTAIN PROPOSALS FOR EACH ALLOWANCE FOR USE IN MAKING FINAL SELECTIONS. INCLUDE RECOMMENDATIONS THAT ARE RELEVANT TO PERFORMING
- C. SUBMIT PROPOSALS FOR PURCHASE OF PRODUCTS OR SYSTEMS INCLUDED IN ALLOWANCES IN THE FORM SPECIFIED FOR CHANGE ORDERS. THIS ALLOWANCE INCLUDES MATERIAL COST, RECEIVING, HANDLING, AND INSTALLATION AND CONTRACTOR OVERHEAD AND PROFIT.

2. QUANTITY ALLOWANCE NO.2: INCLUDE XXXX (SF-LF-CY) OF XXXXXXXXXXXXXXXXXX INSTALLED.

E. CONTINGENCY ALLOWANCE: INCLUDE A CONTINGENCY ALLOWANCE OF \$X,XXX.00 FOR USE ACCORDING TO OWNER'S WRITTEN INSTRUCTIONS.

### UNIT PRICES:

- A. UNIT PRICE IS AN AMOUNT INCORPORATED INTO THE AGREEMENT, APPLICABLE DURING THE DURATION OF THE WORK AS A PRICE PER UNIT OF MEASUREMENT FOR MATERIALS, EQUIPMENT, OR SERVICES, OR A PORTION OF THE WORK, ADDED TO OR DEDUCTED FROM THE CONTRACT SUM BY APPROPRIATE MODIFICATION, IF THE SCOPE OF WORK OR ESTIMATED QUANTITIES OF WORK REQUIRED BY THE CONTRACT DOCUMENTS ARE INCREASED OR DECREASED.
- B. UNIT PRICES INCLUDE ALL NECESSARY MATERIAL, PLUS COST FOR DELIVERY, INSTALLATION, INSURANCE, APPLICABLE TAXES, OVERHEAD, AND PROFIT.
- C. MEASUREMENT AND PAYMENT: SEE QUANTITY ALLOWANCE FOR WORK THAT REQUIRES ESTABLISHMENT OF UNIT PRICES. UNITS OF MEASUREMENT AND PAYMENT FOR UNIT PRICES ARE LISTED IN THAT SECTIONS.
- D. OWNER RESERVES THE RIGHT TO REJECT CONTRACTOR'S MEASUREMENT OF WORK-IN-PLACE THAT INVOLVES USE OF ESTABLISHED UNIT PRICES AND TO HAVE THIS WORK MEASURED, AT OWNER'S EXPENSE, BY AN INDEPENDENT SURVEYOR ACCEPTABLE TO CONTRACTOR.
- E. UNIT PRICE NO. 1 QUANTITY ALLOWANCE NO. 1: PROVIDE COST PER UNIT LISTED FOR ADDING TO OR DEDUCTING FROM THE CONTRACT AMOUNT.
- F. UNIT PRICE NO. 2 QUANTITY ALLOWANCE NO. 2: PROVIDE COST PER UNIT LISTED FOR ADDING TO OR DEDUCTING FROM THE CONTRACT AMOUNT.

#### ΔΙ ΤΕΡΝΙΔΤΕς:

- A. ALTERNATE: AN AMOUNT PROPOSED BY BIDDERS AND STATED ON THE BID FORM FOR CERTAIN WORK DEFINED IN THE BIDDING REQUIREMENTS THAT MAY BE ADDED TO OR DEDUCTED FROM THE BASE BID AMOUNT IF THE OWNER DECIDES TO ACCEPT A CORRESPONDING CHANGE EITHER IN THE AMOUNT OF CONSTRUCTION TO BE COMPLETED OR IN THE PRODUCTS, MATERIALS, EQUIPMENT, SYSTEMS, OR INSTALLATION METHODS DESCRIBED IN THE CONTRACT DOCUMENTS
- B. INCLUDE AS PART OF EACH ALTERNATE, MISCELLANEOUS DEVICES, ACCESSORY OBJECTS, AND SIMILAR ITEMS INCIDENTAL TO OR REQUIRED FOR A COMPLETE INSTALLATION WHETHER INDICATED AS PART OF ALTERNATE. EXECUTE ACCEPTED ALTERNATES UNDER THE SAME CONDITIONS AS OTHER WORK OF THE CONTRACT.
- C. PROVIDE ALTERNATE PRICING AS FOLLOWS:
- ALTERNATE NO 1: BASE BID, (DESCRIBE MATERIAL OR SYSTEM). ALTERNATE BID, (DESCRIBE MATERIAL OR SYSTEM)
   ALTERNATE NO 2: BASE BID, (DESCRIBE MATERIAL OR SYSTEM). ALTERNATE BID, (DESCRIBE MATERIAL OR SYSTEM)

#### SUBSTITUTION PROCEDURES:

- A. SUBSTITUTIONS FOR CAUSE: CHANGES PROPOSED BY CONTRACTOR THAT ARE REQUIRED DUE TO CHANGED PROJECT CONDITIONS, SUCH AS UNAVAILABILITY OF PRODUCT, REGULATORY CHANGES, OR UNAVAILABILITY OF REQUIRED WARRANTY TERMS.
- B. SUBSTITUTIONS FOR CONVENIENCE: CHANGES PROPOSED BY CONTRACTOR OR OWNER THAT ARE NOT REQUIRED IN ORDER TO MEET OTHER PROJECT REQUIREMENTS BUT MAY OFFER ADVANTAGE TO CONTRACTOR OR OWNER. SUBSTITUTIONS FOR CONVENIENCE ARE ALLOWED ONLY BY APPROVAL OF THE OWNER OR OWNER'S AGENT.
- C. SUBMIT REQUEST FOR CONSIDERATION. IDENTIFY PRODUCT OR FABRICATION OR INSTALLATION METHOD TO BE REPLACED. INCLUDE PRODUCT, MATERIAL OR SYSTEM NAME AND AFFECTED DRAWING NUMBERS AND TITLES.
- D. EXECUTE ACCEPTED SUBSTITUTIONS UNDER THE SAME CONDITIONS AS OTHER WORK OF THE CONTRACT.
- E. DOCUMENTATION: SHOW COMPLIANCE WITH REQUIREMENTS FOR SUBSTITUTIONS AND THE FOLLOWING, AS APPLICABLE:
- 1. COST INFORMATION, INCLUDING A PROPOSAL OF CHANGE, IF ANY, IN THE CONTRACT SUM.
- INDICATED IN SUBSTITUTION REQUEST, IS COMPATIBLE WITH RELATED MATERIALS AND IS APPROPRIATE FOR APPLICATIONS INDICATED.

2. CONTRACTOR'S CERTIFICATION THAT PROPOSED SUBSTITUTION COMPLIES WITH REQUIREMENTS IN THE CONTRACT DOCUMENTS, EXCEPT AS

- 3. STATEMENT INDICATING WHY SPECIFIED PRODUCT OR FABRICATION, OR INSTALLATION METHOD CANNOT BE PROVIDED, IF APPLICABLE.
- 4. COORDINATION OF INFORMATION, INCLUDING A LIST OF CHANGES OR REVISIONS NEEDED TO OTHER PARTS OF THE WORK AND TO CONSTRUCTION PERFORMED BY OWNER AND SEPARATE CONTRACTORS THAT WILL BE NECESSARY TO ACCOMMODATE PROPOSED SUBSTITUTION.
- 5. PRODUCT DATA, INCLUDING DRAWINGS AND DESCRIPTIONS OF PRODUCTS AND FABRICATION AND INSTALLATION PROCEDURES. INCLUDE DETAILED COMPARISON OF SIGNIFICANT QUALITIES OF PROPOSED SUBSTITUTIONS WITH THOSE OF THE WORK SPECIFIED. SIGNIFICANT QUALITIES MAY INCLUDE ATTRIBUTES, SUCH AS PERFORMANCE, WEIGHT, SIZE, DURABILITY, VISUAL EFFECT, SUSTAINABLE DESIGN CHARACTERISTICS, WARRANTIES, AND SPECIFIC FEATURES AND REQUIREMENTS INDICATED. INDICATE DEVIATIONS, IF ANY, FROM THE WORK SPECIFIED
- 6. CONTRACTOR'S WAIVER OF RIGHTS TO ADDITIONAL PAYMENT OR TIME THAT MAY SUBSEQUENTLY BECOME NECESSARY BECAUSE OF FAILURE OF PROPOSED SUBSTITUTION TO PRODUCE INDICATED RESULTS.
- F. ARCHITECT'S ACTION: IF NECESSARY, ARCHITECT WILL REQUEST ADDITIONAL INFORMATION OR DOCUMENTATION FOR EVALUATION WITHIN 7 DAYS OF RECEIPT OF A REQUEST FOR SUBSTITUTION. ARCHITECT WILL NOTIFY CONTRACTOR OF ACCEPTANCE OR REJECTION OF PROPOSED SUBSTITUTION WITHIN 14 DAYS OF RECEIPT OF REQUEST, OR 7 DAYS OF RECEIPT OF ADDITIONAL INFORMATION OR DOCUMENTATION.
- G. ARCHITECT WILL CONSIDER CONTRACTOR'S REQUEST FOR SUBSTITUTION WHEN THE LISTED REQUIREMENTS ARE SATISFIED. IF THE LISTED REQUIREMENTS ARE NOT SATISFIED, ARCHITECT WILL RETURN REQUESTS WITHOUT ACTION, EXCEPT TO RECORD NONCOMPLIANCE WITH LISTED
- H. FORMS OF ACCEPTANCE: CHANGE ORDER, CONSTRUCTION CHANGE DIRECTIVE, OR ARCHITECT'S SUPPLEMENTAL INSTRUCTIONS FOR MINOR CHANGES IN

# SUBMITTAL REQUIREMENTS:

- A. PREPARE SUBMITTAL SCHEDULE: SUBMIT, AS AN ACTION SUBMITTAL, A LIST OF SUBMITTALS, ARRANGED IN CHRONOLOGICAL ORDER BY DATES REQUIRED BY CONSTRUCTION SCHEDULE. INCLUDE TIME REQUIRED FOR REVIEW, ORDERING, MANUFACTURING, FABRICATION, AND DELIVERY WHEN ESTABLISHING DATES. INCLUDE ADDITIONAL TIME REQUIRED FOR MAKING CORRECTIONS OR REVISIONS TO SUBMITTALS NOTED BY ARCHITECT AND CONTRACTOR OR CONSTRUCTION MANAGER AND ADDITIONAL TIME FOR HANDLING AND REVIEWING SUBMITTALS REQUIRED BY THOSE CORRECTIONS.
- B. PREPARE AND SUBMIT SUBMITTALS AS INCLUDED IN THE SUBMITTAL SCHEDULED.
- C. EMAIL: PREPARE SUBMITTALS AS PDF PACKAGE AND TRANSMIT TO ARCHITECT BY SENDING VIA EMAIL. INCLUDE PDF TRANSMITTAL FORM. INCLUDE INFORMATION IN EMAIL SUBJECT LINE AS REQUESTED BY ARCHITECT.
- D. WEB-BASED PROJECT MANAGEMENT SOFTWARE: PREPARE SUBMITTALS IN PDF FORM, AND UPLOAD TO WEB-BASED PROJECT MANAGEMENT SOFTWARE WEBSITE. ENTER REQUIRED DATA IN WEB-BASED SOFTWARE SITE TO FULLY IDENTIFY SUBMITTAL.
- E. ACTION SUBMITTALS AND INFORMATIONAL SUBMITTALS: REVIEW EACH SUBMITTAL AND CHECK FOR COORDINATION WITH OTHER WORK OF THE CONTRACT AND FOR COMPLIANCE WITH THE CONTRACT DOCUMENTS. NOTE CORRECTIONS AND FIELD DIMENSIONS. MARK WITH APPROVAL STAMP BEFORE SUBMITTING TO ARCHITECT.
- F. USE FOR CONSTRUCTION: RETAIN COMPLETE COPIES OF SUBMITTALS ON PROJECT SITE. USE ONLY FINAL ACTION SUBMITTALS THAT ARE MARKED WITH APPROVAL NOTATION FROM ARCHITECT'S AND CONTRACTOR'S OR **CONSTRUCTION MANAGER'S** ACTION STAMP.
- G. SUBMITTAL INFORMATION: INCLUDE THE FOLLOWING INFORMATION IN EACH SUBMITTAL:

  1. PROJECT NAME, DATE AND INDICATION OF FULL OR PARTIAL SUBMITTAL.
- 2. ARCHITECT'S AND CONTRACTOR'S AND/OR CONSTRUCTION MANAGER'S, FIRM OR ENTITY THAT PREPARED SUBMITTAL AND SUBCONTRACTOR, MANUFACTURER, AND SUPPLIER NAMES.
- 3. NUMBER AND TITLE OF SPECIFICATION SECTION, WITH PARAGRAPH NUMBER AND GENERIC NAME FOR EACH OF MULTIPLE ITEMS
- 4. MATERIAL OR SYSTEM NAME AND DRAWING NUMBER AND DETAIL REFERENCES, AS APPROPRIATE.
- 5. IDENTIFY OPTIONS REQUIRING SELECTION BY ARCHITECT.
- 6. LOCATION(S) WHERE PRODUCT IS TO BE INSTALLED, AS APPROPRIATE AND OTHER NECESSARY INFORMATION.
- 7. ON EACH SUBMITTAL, CLEARLY INDICATE DEVIATIONS FROM REQUIREMENTS IN THE CONTRACT DOCUMENTS, INCLUDING MINOR VARIATIONS AND LIMITATIONS; INCLUDE RELEVANT ADDITIONAL INFORMATION AND REVISIONS, OTHER THAN THOSE REQUESTED BY ARCHITECT AND CONTRACTOR OR CONSTRUCTION MANAGER ON PREVIOUS SUBMITTALS. INDICATE BY HIGHLIGHTING ON EACH SUBMITTAL OR NOTING ON ATTACHED SEPARATE SHEET
- H. INCOMPLETE SUBMITTALS ARE UNACCEPTABLE, WILL BE CONSIDERED NONRESPONSIVE, AND WILL BE RETURNED FOR RESUBMITTAL WITHOUT REVIEW.
- I. ARCHITECT'S ACTION: ARCHITECT WILL REVIEW INFORMATION OR DOCUMENTATION NOTIFY CONTRACTOR OF ACCEPTANCE REQUEST FOR MORE INFORMATION OR REJECTION WITHIN 14 DAYS OF RECEIPT. ARCHITECT WILL REVIEW RESUBMITTAL WITHIN 7 DAYS OF RECEIPT.
- J. SUBMITTALS NOT REQUIRED BY THE CONTRACT DOCUMENTS WILL BE RETURNED BY ARCHITECT WITHOUT ACTION.

#### QUALITY REQUIREMENTS:

- A. CONFLICTING STANDARDS AND OTHER REQUIREMENTS: IF COMPLIANCE WITH TWO OR MORE STANDARDS OR REQUIREMENTS IS SPECIFIED AND THE STANDARDS OR REQUIREMENTS ESTABLISH DIFFERENT OR CONFLICTING REQUIREMENTS FOR MINIMUM QUANTITIES OR QUALITY LEVELS, INFORM THE ARCHITECT REGARDING THE CONFLICT AND OBTAIN CLARIFICATION PRIOR TO PROCEEDING WITH THE WORK. REFER CONFLICTING REQUIREMENTS THAT ARE DIFFERENT, BUT APPARENTLY EQUAL, TO ARCHITECT FOR CLARIFICATION BEFORE PROCEEDING.
- B. PREPARE AND SUBMIT CERTIFIED WRITTEN REPORTS REQUIRED. INCLUDE THE FOLLOWING:
- 1. PROJECT TITLE AND NUMBER AND DATE OF ISSUE. RECORD OF TEMPERATURE AND WEATHER CONDITIONS AT TIME OF SAMPLE TAKING AND TESTING AND INSPECTION. NAME AND SIGNATURE OF LABORATORY INSPECTOR.
- 2. NAME, ADDRESS, TELEPHONE NUMBER, AND EMAIL ADDRESS OF TESTING AGENCY
- 3. DATES AND LOCATIONS OF SAMPLES AND TESTS OR INSPECTIONS.
- 4. TEST AND INSPECTION RESULTS AND AN INTERPRETATION OF TEST RESULTS. COMMENTS OR PROFESSIONAL OPINION ON WHETHER TESTED OR INSPECTED WORK COMPLIES WITH THE CONTRACT DOCUMENT REQUIREMENTS. RECOMMENDATIONS ON RETESTING AND REINSPECTING.
- C. MANUFACTURER QUALIFICATIONS: A FIRM EXPERIENCED IN MANUFACTURING PRODUCTS OR SYSTEMS SIMILAR TO THOSE INDICATED FOR THIS PROJECT AND WITH A RECORD OF SUCCESSFUL IN-SERVICE PERFORMANCE, AS WELL AS SUFFICIENT PRODUCTION CAPACITY TO PRODUCE REQUIRED UNITS. AS APPLICABLE, PROCURE PRODUCTS FROM MANUFACTURERS ABLE TO MEET QUALIFICATION REQUIREMENTS, WARRANTY REQUIREMENTS, AND TECHNICAL OR FACTORY-AUTHORIZED SERVICE REPRESENTATIVE REQUIREMENTS.
- D. FABRICATOR QUALIFICATIONS: A FIRM EXPERIENCED IN PRODUCING PRODUCTS SIMILAR TO THOSE INDICATED FOR THIS PROJECT AND WITH A RECORD OF SUCCESSFUL IN-SERVICE PERFORMANCE, AS WELL AS SUFFICIENT PRODUCTION CAPACITY TO PRODUCE REQUIRED UNITS.
- E. INSTALLER QUALIFICATIONS: A FIRM OR INDIVIDUAL EXPERIENCED IN INSTALLING, ERECTING, APPLYING, OR ASSEMBLING WORK SIMILAR IN MATERIAL, DESIGN, AND EXTENT TO THAT INDICATED FOR THIS PROJECT, WHOSE WORK HAS RESULTED IN CONSTRUCTION WITH A RECORD OF SUCCESSFUL IN-SERVICE PERFORMANCE.
- F. TESTING AND INSPECTING AGENCY QUALIFICATIONS: AN NRTL, AN NVLAP, OR AN INDEPENDENT AGENCY WITH THE EXPERIENCE AND CAPABILITY TO CONDUCT TESTING AND INSPECTION INDICATED, AS DOCUMENTED ACCORDING TO [ASTM E329] <INSERT STANDARD>; AND WITH ADDITIONAL QUALIFICATIONS REQUIRED BY THE CONSTRUCTION DOCUMENTS; AND, WHERE REQUIRED BY AUTHORITIES HAVING JURISDICTION, THAT IS ACCEPTABLE TO AUTHORITIES.
- G. PRECONSTRUCTION TESTING: WHERE TESTING AGENCY IS INDICATED TO PERFORM PRECONSTRUCTION TESTING FOR COMPLIANCE WITH SPECIFIED REQUIREMENTS FOR PERFORMANCE AND TEST METHODS, COMPLY WITH THE FOLLOWING:
- 1. CONTRACTOR RESPONSIBILITIES INCLUDE THE FOLLOWING: PROVIDE TEST SPECIMENS REPRESENTATIVE OF PROPOSED PRODUCTS AND CONSTRUCTION. SUBMIT SPECIMENS IN A TIMELY MANNER WITH SUFFICIENT TIME FOR TESTING AND ANALYZING RESULTS TO PREVENT DELAYING THE WORK. WHEN TESTING IS COMPLETE, REMOVE TEST SPECIMENS AND TEST ASSEMBLIES, AND MOCKUPS UNLESS NOTED OTHERWISE: DO NOT REUSE PRODUCTS ON PROJECT.
- 2. TESTING AGENCY RESPONSIBILITIES: SUBMIT A CERTIFIED WRITTEN REPORT OF EACH TEST, INSPECTION, AND SIMILAR QUALITY-ASSURANCE SERVICE TO ARCHITECT, CONTRACTOR OR **CONSTRUCTION MANAGER AND COMMISSIONING AUTHORITY**. INTERPRET TESTS AND INSPECTIONS AND STATE IN EACH REPORT WHETHER TESTED AND INSPECTED WORK COMPLIES WITH OR DEVIATES FROM THE CONTRACT DOCUMENTS.
- H. MOCKUPS: BEFORE INSTALLING PORTIONS OF THE WORK REQUIRING MOCKUPS, BUILD MOCKUPS FOR EACH FORM OF CONSTRUCTION AND FINISH REQUIRED TO COMPLY WITH THE FOLLOWING REQUIREMENTS, USING MATERIALS INDICATED FOR THE COMPLETED WORK, TO SIZE AND LOCATION INDICATED. DEMONSTRATE THE PROPOSED RANGE OF AESTHETIC EFFECTS AND WORKMANSHIP. NOTIFY ARCHITECT, CONTRACTOR AND CONSTRUCTION MANAGER 7 DAYS IN ADVANCE OF DATES AND TIMES WHEN MOCKUPS WILL BE CONSTRUCTED AND ALLOW 7 DAYS FOR REVIEW AND APPROVAL. OBTAIN THE APPROVAL FROM ARCHITECT, CONTRACTOR AND CONSTRUCTION MANAGER BEFORE STARTING CORRESPONDING WORK, FABRICATION, OR CONSTRUCTION. MAINTAIN MOCKUPS DURING CONSTRUCTION IN AN UNDISTURBED CONDITION AS A STANDARD FOR JUDGING THE COMPLETED WORK. DEMOLISH AND REMOVE MOCKUPS WHEN DIRECTED UNLESS OTHERWISE INDICATED.

#### I. QUALITY CONTROL:

- 1. CONTRACTOR RESPONSIBILITIES: TESTS AND INSPECTIONS ARE CONTRACTOR'S RESPONSIBILITY. PERFORM ADDITIONAL QUALITY-CONTROL ACTIVITIES, WHETHER SPECIFIED OR NOT, TO VERIFY AND DOCUMENT THAT THE WORK COMPLIES WITH REQUIREMENTS. ENGAGE A QUALIFIED TESTING AGENCY TO PERFORM QUALITY-CONTROL SERVICES. NOTIFY TESTING AGENCIES AT LEAST [72] HOURS IN ADVANCE OF TIME WHEN WORK THAT REQUIRES TESTING OR INSPECTION WILL BE PERFORMED. COOPERATE WITH AGENCIES AND REPRESENTATIVES PERFORMING REQUIRED TESTS, INSPECTIONS, AND SIMILAR QUALITY-CONTROL SERVICES, AND PROVIDE REASONABLE AUXILIARY SERVICES AS REQUESTED.
- 2. TESTING AGENCY RESPONSIBILITIES: COOPERATE WITH ARCHITECT, CONTRACTOR OR CONSTRUCTION MANAGER AND **COMMISSIONING AUTHORITY** IN PERFORMANCE OF DUTIES. PROVIDE QUALIFIED PERSONNEL TO PERFORM REQUIRED TESTS AND INSPECTIONS. INTERPRET
  TESTS AND INSPECTIONS AND STATE IN EACH REPORT WHETHER TESTED AND INSPECTED WORK COMPLIES WITH OR DEVIATES FROM
  REQUIREMENTS. NOTIFY ARCHITECT, CONTRACTOR OR CONSTRUCTION MANAGER AND **COMMISSIONING AUTHORITY** PROMPTLY OF
  IRREGULARITIES OR DEFICIENCIES OBSERVED IN THE WORK DURING PERFORMANCE OF ITS SERVICES.
- 3. CONTRACTOR AND TESTING AGENCY SHALL COORDINATE SEQUENCE OF ACTIVITIES TO ACCOMMODATE REQUIRED QUALITY-ASSURANCE AND QUALITY-CONTROL SERVICES WITH A MINIMUM OF DELAY AND TO AVOID NECESSITY OF REMOVING AND REPLACING CONSTRUCTION TO ACCOMMODATE TESTING AND INSPECTION.
- J. SPECIAL TESTS AND INSPECTIONS: OWNER WILL ENGAGE A QUALIFIED **TESTING AGENCY** OR **SPECIAL INSPECTOR** TO CONDUCT SPECIAL TESTS AND INSPECTIONS REQUIRED BY AUTHORITIES HAVING JURISDICTION AS THE RESPONSIBILITY OF OWNER AS INDICATED IN THE STATEMENT OF SPECIAL INSPECTIONS, AND AS FOLLOWS:
- 1. VERIFYING THAT MANUFACTURER MAINTAINS DETAILED FABRICATION AND QUALITY-CONTROL PROCEDURES AND REVIEWING THE COMPLETENESS AND ADEQUACY OF THOSE PROCEDURES TO PERFORM THE WORK.
- 2. NOTIFY ARCHITECT, CONTRACTOR OR CONSTRUCTION MANAGER AND **COMMISSIONING AUTHORITY** PROMPTLY OF IRREGULARITIES OR DEFICIENCIES OBSERVED IN THE WORK DURING PERFORMANCE OF ITS SERVICES.
- 3. SUBMITTING A CERTIFIED WRITTEN REPORT OF EACH TEST, INSPECTION, AND SIMILAR QUALITY-CONTROL SERVICE TO ARCHITECT, CONTRACTOR OR CONSTRUCTION MANAGER AND **COMMISSIONING AUTHORITY** WITH COPY TO CONTRACTOR AND TO AUTHORITIES HAVING JURISDICTION. SUBMIT A FINAL REPORT OF SPECIAL TESTS AND INSPECTIONS AT SUBSTANTIAL COMPLETION, WHICH INCLUDES A LIST OF UNRESOLVED DEFICIENCIES.
- 4. RETESTING AND REINSPECTING CORRECTED WORK.
- K. ALL RETESTING/REINSPECTING: REGARDLESS OF WHETHER ORIGINAL TESTS OR INSPECTIONS WERE CONTRACTOR'S RESPONSIBILITY OR THE OWNER'S SPECIAL INSPECTIONS, PROVIDE QUALITY-CONTROL SERVICES, INCLUDING RETESTING AND REINSPECTING, FOR CONSTRUCTION THAT REPLACED WORK THAT FAILED TO COMPLY WITH THE CONTRACT DOCUMENTS.

# CONSTRUCTION WASTE MANAGEMENT:

- A. DEVELOP A WASTE MANAGEMENT PLAN AND SUBMIT PLAN FOR APPROVAL WITHIN 14 DAYS OF DATE ESTABLISHED FOR COMMENCEMENT OF THE
- B. DISTRIBUTE AND IMPLEMENT APPROVED WASTE MANAGEMENT PLAN. PROVIDE HANDLING, CONTAINERS, STORAGE, SIGNAGE, TRANSPORTATION, AND OTHER ITEMS AS REQUIRED TO IMPLEMENT WASTE MANAGEMENT PLAN DURING THE ENTIRE DURATION OF THE CONTRACT.
- C. TRAIN WORKERS, SUBCONTRACTORS, AND SUPPLIERS ON PROPER WASTE MANAGEMENT PROCEDURES, AS APPROPRIATE FOR THE WORK.
- D. SITE ACCESS AND TEMPORARY CONTROLS: CONDUCT WASTE MANAGEMENT OPERATIONS TO ENSURE MINIMUM INTERFERENCE WITH ROADS, STREETS, WALKS, WALKWAYS, AND OTHER ADJACENT OCCUPIED AND USED FACILITIES. DESIGNATE AND LABEL SPECIFIC AREAS ON PROJECT SITE NECESSARY FOR SEPARATING MATERIALS THAT ARE TO BE SALVAGED AND RECYCLED.

# CLOSEOUT PROCEDURES:

- A. CONTRACTOR'S LIST OF INCOMPLETE ITEMS: PREPARE AND SUBMIT A LIST OF ITEMS TO BE COMPLETED AND CORRECTED (CONTRACTOR'S "PUNCH LIST"), INDICATING THE VALUE OF EACH ITEM ON THE LIST AND REASONS WHY THE WORK IS INCOMPLETE.
- B. SUBMITTALS PRIOR TO SUBSTANTIAL COMPLETION: COMPLETE THE FOLLOWING A MINIMUM OF **10** DAYS PRIOR TO REQUESTING INSPECTION FOR DETERMINING DATE OF SUBSTANTIAL COMPLETION.

# 1. SUBMIT A FINAL APPLICATION FOR PAYMENT.

- 2. CERTIFICATE OF INSURANCE: SUBMIT EVIDENCE OF FINAL, CONTINUING INSURANCE COVERAGE.
- 3. CERTIFIED LIST OF INCOMPLETE ITEMS: SUBMIT CERTIFIED COPY OF ARCHITECT'S SUBSTANTIAL COMPLETION INSPECTION LIST OF ITEMS TO BE COMPLETED OR CORRECTED (PUNCH LIST), ENDORSED AND DATED BY ARCHITECT. CERTIFIED COPY OF THE LIST SHALL STATE THAT EACH ITEM HAS BEEN COMPLETED OR OTHERWISE RESOLVED FOR ACCEPTANCE.
- 4. CERTIFICATES OF RELEASE: OBTAIN AND SUBMIT RELEASES FROM AUTHORITIES HAVING JURISDICTION, PERMITTING OWNER UNRESTRICTED USE OF THE WORK AND ACCESS TO SERVICES AND UTILITIES. INCLUDE OCCUPANCY PERMITS, OPERATING CERTIFICATES, AND SIMILAR
- 5. SUBMIT CLOSEOUT SUBMITTALS AS REQUIRED, INCLUDING SPECIFIC WARRANTIES, WORKMANSHIP BONDS, MAINTENANCE SERVICE AGREEMENTS, FINAL CERTIFICATIONS, AND SIMILAR DOCUMENTS.
- 6. SUBMIT MAINTENANCE MATERIAL SUBMITTALS SPECIFIED IN INDIVIDUAL SECTIONS, INCLUDING TOOLS, SPARE PARTS, EXTRA MATERIALS, AND SIMILAR ITEMS, AND DELIVER TO LOCATION DESIGNATED BY OWNER OR OWNER'S AGENT. LABEL WITH MANUFACTURER'S NAME AND MODEL NUMBER.
- 7. SUBMIT TESTING, ADJUSTING, AND BALANCING RECORDS.
- 8. SUBMIT CHANGEOVER INFORMATION RELATED TO OWNER'S OCCUPANCY, USE, OPERATION, AND MAINTENANCE.

#### C. FINAL CLEANING

- 1. EMPLOY EXPERIENCED WORKERS OR PROFESSIONAL CLEANERS FOR FINAL CLEANING. CLEAN EACH SURFACE OR UNIT TO CONDITION EXPECTED IN AN AVERAGE COMMERCIAL BUILDING CLEANING AND MAINTENANCE PROGRAM. COMPLY WITH MANUFACTURER'S WRITTEN INSTRUCTIONS.
- 2. USE CLEANING PRODUCTS THAT COMPLY WITH GREEN SEAL'S GS-37, OR IF GS-37 IS NOT APPLICABLE, USE PRODUCTS THAT COMPLY WITH THE CALIFORNIA CODE OF REGULATIONS MAXIMUM ALLOWABLE VOC LEVELS.
- 3. CLEAN EXPOSED EXTERIOR AND INTERIOR HARD-SURFACED FINISHES TO A DIRT-FREE CONDITION, FREE OF STAINS, FILMS, AND SIMILAR FOREIGN
  SUBSTANCES. AVOID DISTURBING NATURAL WEATHERING OF EXTERIOR SURFACES. RESTORE REFLECTIVE SURFACES TO THEIR ORIGINAL CONDITION
- 4. VACUUM CARPET AND SIMILAR SOFT SURFACES, REMOVING DEBRIS AND EXCESS NAP; CLEAN ACCORDING TO MANUFACTURER'S RECOMMENDATIONS IF VISIBLE SOIL OR STAINS REMAIN.
- 5. CLEAN TRANSPARENT MATERIALS, INCLUDING MIRRORS AND GLASS IN DOORS AND WINDOWS. REMOVE GLAZING COMPOUNDS AND OTHER NOTICEABLE, VISION-OBSCURING MATERIALS. POLISH MIRRORS AND GLASS, TAKING CARE NOT TO SCRATCH SURFACES.
- 6. CLEAN PLUMBING FIXTURES TO A SANITARY CONDITION, FREE OF STAINS, INCLUDING STAINS RESULTING FROM WATER

#### OPERATIONS AND MAINTENANCE DATA:

- A. SUBMIT EACH MANUAL IN FINAL FORM PRIOR TO REQUESTING INSPECTION FOR SUBSTANTIAL COMPLETION AND AT LEAST 10 DAYS BEFORE COMMENCING DEMONSTRATION AND TRAINING.
- B. CORRECT OR REVISE EACH MANUAL TO COMPLY WITH ARCHITECT'S **AND COMMISSIONING AUTHORITY'S** COMMENTS. SUBMIT COPIES OF EACH CORRECTED MANUAL WITHIN 10 DAYS OF RECEIPT OF ARCHITECT'S **AND COMMISSIONING AUTHORITY'S** COMMENTS AND PRIOR TO COMMENCING DEMONSTRATION AND TRAINING.
- C. SUBMIT ON DIGITAL MEDIA ACCEPTABLE TO ARCHITECT BY UPLOADING TO WEB-BASED PROJECT SOFTWARE SITE OR BY EMAIL TO ARCHITECT, IF WEB-BASED SOFTWARE IS NOT UTILIZED. ENABLE REVIEWER COMMENTS ON DRAFT SUBMITTALS.
- 1. ELECTRONIC FILES: USE ELECTRONIC FILES PREPARED BY MANUFACTURER WHERE AVAILABLE. WHERE SCANNING OF PAPER DOCUMENTS IS REQUIRED, CONFIGURE SCANNED FILE FOR MINIMUM READABLE FILE SIZE.
- 2. BOOKMARK INDIVIDUAL DOCUMENTS BASED ON FILE NAMES. NAME DOCUMENT FILES TO CORRESPOND TO SYSTEM, SUBSYSTEM, AND EQUIPMENT NAMES USED IN MANUAL DIRECTORY AND TABLE OF CONTENTS. GROUP DOCUMENTS FOR EACH SYSTEM AND SUBSYSTEM INTO INDIVIDUAL COMPOSITE BOOKMARKED FILES, THEN CREATE COMPOSITE MANUAL, SO THAT RESULTING BOOKMARKS REFLECT THE SYSTEM, SUBSYSTEM, AND EQUIPMENT NAMES IN A READILY NAVIGATED FILE TREE. CONFIGURE ELECTRONIC MANUAL TO DISPLAY BOOKMARK PANEL ON OPENING FILE.
- D. ORGANIZATION OF MANUALS: UNLESS OTHERWISE INDICATED, ORGANIZE EACH MANUAL INTO A SEPARATE SECTION FOR EACH SYSTEM AND SUBSYSTEM, AND A SEPARATE SECTION FOR EACH PIECE OF EQUIPMENT NOT PART OF A SYSTEM. PROVIDE A TITLE PAGE AND TABLE OF CONTENTS.
- 1. TITLE PAGE SHALL INCLUDE:
- a. SUBJECT MATTER INCLUDED IN MANUAL.
- b. DATE OF SUBMITTAL.

d. NAME AND CONTACT INFORMATION FOR COMMISSIONING AUTHORITY.

INCORPORATING NEW AND REVISED DRAWINGS AS MODIFICATIONS ARE ISSUED.

- c. NAME AND CONTACT INFORMATION FOR CONTRACTOR AND CONSTRUCTION MANAGER WHEN APPLICABLE
- 2. EMERGENCY MANUAL: ASSEMBLE A COMPLETE SET OF EMERGENCY INFORMATION INDICATING PROCEDURES FOR USE BY EMERGENCY PERSONNEL AND BY OWNER'S OPERATING PERSONNEL FOR TYPES OF EMERGENCIES INDICATED.
- 3. SYSTEMS AND EQUIPMENT OPERATION MANUAL: ASSEMBLE A COMPLETE SET OF DATA INDICATING OPERATION OF EACH SYSTEM, SUBSYSTEM, AND PIECE OF EQUIPMENT NOT PART OF A SYSTEM. INCLUDE INFORMATION REQUIRED FOR DAILY

OPERATION AND MANAGEMENT, OPERATING STANDARDS, AND ROUTINE AND SPECIAL OPERATING PROCEDURES.

- 4. SYSTEMS AND EQUIPMENT MAINTENANCE MANUALS: ASSEMBLE A COMPLETE SET OF DATA INDICATING MAINTENANCE OF EACH SYSTEM, SUBSYSTEM, AND PIECE OF EQUIPMENT NOT PART OF A SYSTEM. INCLUDE MANUFACTURERS' MAINTENANCE DOCUMENTATION, PREVENTIVE MAINTENANCE PROCEDURES AND FREQUENCY, REPAIR PROCEDURES, WIRING AND SYSTEMS DIAGRAMS, LISTS OF SPARE PARTS, AND WARRANTY INFORMATION.
- 5. PRODUCT MAINTENANCE MANUAL: ASSEMBLE A COMPLETE SET OF MAINTENANCE DATA INDICATING CARE AND MAINTENANCE OF EACH PRODUCT, MATERIAL, AND FINISH INCORPORATED INTO THE WORK.

# PROJECT RECORD DOCUMENTS:

- A. RECORD PRINTS: MAINTAIN ONE SET OF MARKED-UP PAPER COPIES OF THE CONTRACT DRAWINGS AND SHOP DRAWINGS,
- B. MAINTAIN ONE COPY OF EACH SUBMITTAL DURING THE CONSTRUCTION PERIOD FOR PROJECT RECORD DOCUMENT PURPOSES.
- C. RECORD DIGITAL DATA FILES: IMMEDIATELY BEFORE INSPECTION FOR CERTIFICATE OF SUBSTANTIAL COMPLETION, REVIEW MARKED-UP RECORD DOCUMENTS WITH ARCHITECT, CONTRACTOR AND/OR **CONSTRUCTION MANAGER**. WHEN AUTHORIZED, PREPARE A FULL SET OF CORRECTED DIGITAL DATA FILES OF THE CONTRACT DOCUMENTS. SEE OPERATIONS AND MAINTENANCE DATA SECTION ABOVE FOR SUBMISSION FORMAT REQUIREMENTS.

POST CHANGES AND REVISIONS TO PROJECT RECORD DOCUMENTS AS THEY OCCUR; DO NOT WAIT UNTIL END OF PROJECT.

# DEMONSTRATION AND TRAINING:

INSTRUCTION TIMES, AND LOCATION.

USE **A DEMONSTRATION** PERFORMANCE-BASED TEST.

- A. FACILITATOR: CONTRACTOR OR CONSTRUCTION MANAGER SHALL PREPARE INSTRUCTION PROGRAM AND TRAINING MODULES, TO COORDINATE INSTRUCTORS, AND TO COORDINATE BETWEEN CONTRACTOR AND OWNER FOR NUMBER OF PARTICIPANTS,
- B. ENGAGE QUALIFIED INSTRUCTORS TO INSTRUCT OWNER'S PERSONNEL TO ADJUST, OPERATE, AND MAINTAIN SYSTEMS, SUBSYSTEMS, AND EQUIPMENT NOT PART OF A SYSTEM.
- C. PROVIDE INSTRUCTION AT MUTUALLY AGREED-ON TIMES. FOR EQUIPMENT THAT REQUIRES SEASONAL OPERATION, PROVIDE SIMILAR INSTRUCTION AT START OF EACH SEASON.
- D. TRAINING LOCATION AND REFERENCE MATERIAL: CONDUCT TRAINING ON-SITE IN THE COMPLETED AND FULLY OPERATIONAL FACILITY USING THE ACTUAL EQUIPMENT IN-PLACE. CONDUCT TRAINING USING FINAL OPERATION AND MAINTENANCE DATA SUBMITTALS.
- F. COLLECT USED AND LEFTOVER EDUCATIONAL MATERIALS AND **GIVE TO OWNER**. REMOVE INSTRUCTIONAL EQUIPMENT. RESTORE SYSTEMS AND EQUIPMENT TO CONDITION EXISTING BEFORE INITIAL TRAINING USE.

E. EVALUATION: AT CONCLUSION OF EACH TRAINING MODULE, ASSESS AND DOCUMENT EACH PARTICIPANT'S MASTERY OF MODULE BY

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CALE: DATE: DRAWN BY: CHECKED BY:
AS SHOWN 05/30/2025 S KHUMALO B HUYLER

PROJECT NUMBER: DRAWING NAME: REVIEWED BY:

GENERAL REQUIREMENTS



2' x 4' SUSPENDED CEILING TILE

GYPSUM BOARD CEILING/SOFFIT

# **LEGEND**

WORK SCOPE AREA REFER TO CEILING NOTES

WORK SCOPE AREA REFER TO CEILING NOTES

# CEILING PLAN KEYNOTES 1

- REMOVE EXISTING CEILING LAY-IN TILE. CEILING GRID, LIGHT FIXTURES AND DIFFUSERS TO BE ADJUSTED TO ACCOMMODATE NEW WALL.
- REMOVE AND SALVAGE ANY EXISTING SPEAKER SYSTEM AND WIFI, TO BE RELOCATED FOR NEW DESIGN.
- REMOVE, SALVAGE AND RELOCATE DIFFUSERS AND LIGHT FIXTURES TO ACCOMODATE NEW WALL. REUSE LIGHT FIXTURES AND DIFFUSERS FOR NEW DESIGN.
- REMOVE AND REPLACE EXISTING CEILING LAY-IN TILE AND EXISTING GRID TO REMAIN. PREP ENTIRE CEILING SYSTEM TO RECEIVE NEW LAY-IN TILE.
- REMOVE PORTION OF EXISTING CEILING IN CORRIDOR FOR REMOVAL OF MASONRY WALL. REPLACE AS REQUIRED REFER TO ARCHITECTURAL.
- REMOVE CEILING IN THIS AREA AND INSTALL HARD LID GYP BOARD
- REMOVE LIGHT FIXTURE AS REQUIRED FOR REMOVAL OF MASONARY WALL. REPLACE AS REQUIRED.

# CLASSROOM CLASSROOM CLASSROOM CORRIDOR I.M.C STORAGE CLASSROOM INSTRUCTIONAL MATERIALS 9' - 0" - CEILINGS TO BE REMOVE AND RELOCATE SEPARATED BY LIGHT FIXTURES AND DIFFUSER TO ACCOMODATE NEW WALL SEE, SHEET A101 INSTALLATION OF NEW WALL. EXT. MULTI-PURPOSE ROOM C5 CLASSROOM C1 C2 C3 HIGHLIGHTED AREA OF CEILING MODIFICATION FOR NEW WALL. REPLACE TILE AND GRID AS RQUIRED FOR INSTALLATION OF C4 NEW WALL. CORRIDOR TCHR PLANNING CLASSROOM 126 TCHR LOUNGE CORRIDOR

# FIRST FLOOR REFLECTED CEILING DEMOLITION PLAN

# KEYNOTES 1

- EXISTING MASONARY WALL TO BE DEMOED TO CREATE OPENING FOR ALCOVE LEADING TO NEW DOOR. REFER TO ARCHITECTURAL FOR DIMENSIONAL REQUIREMENTS.
- 2 EXISTING SHORT THROW PROJECTION TO BE REMOVED AND RETURNED TO OWNER. MASONARY WALL TO BE PATCHED BEHIND REMOVAL.
- 3 EXISITNG HARDWARE TO BE SALVAGED AND RETURNED TO OWNER. PREP AND REPAIR DOOR AS REQUIRED TO RECIEVE NEW HARDWARE.
- 4 EXISITNG ELECTRICAL SWITCHES, OUTLETS, CONDUITS, PLUGMOLD, PLANES, SHUT OFFS, ETC. REMOVAL SHALL BE THE ELECTRICAL CONTRACTORS RESPONSIBILITY-COORDINATE WITH GC.
- 5 REMOVE CABINETS AND SHELVING.

CLASSROOM 110

CLASSROOM

113

 $\times$ 

CLASSROOM

(14)

13

- REMOVE ALL MOVEABLE FOLDING PARTITION WALL. SALVAGE AND RETUREN TO OWNER.
- 8 REMOVE WHITE BOARD FROM WALL. PATCH AND REPAIR WALL AS REQUIRED TO RECIEVE NEW WORK.
- 9 REMOVE FLOOR RUG. SALVAGE AND RETURN TO OWNER.

- 10 PATCH, CLEAN AND REPAIR FLOORING WHERE WALL WAS REMOVED. FLOORING TO MATCH EXISTING.
- 11 REMOVE MASONRY AND PREP JAMBS FOR NEW TOOTHED IN BULLNOSED
- 12 REMOVE EXISTING FLOORING TILE IN NEW ALCOVE AREA AND REPLACE WITH NEW. REFER TO ARCHITECTURAL.
- 13 REMOVE EXISTING BASE IN ENTIRE ROOM. PATCH AND CLEAN WALL AS REQUIRED FOR THE INSTALLING OF NEW BASE.

CLASSROOM

# **GENERAL NOTES**

- A. CONTRACTOR SHALL COORDINATE REMOVAL OF FLOORS, WALLS AND CEILINGS WITH MECHANICAL, ELECTRICAL AND PLUMBING TRADES. ALL POWER, MECHANICAL AND PLUMBING LINES SHALL BE REMOVED BACK TO NEAREST MAIN BRANCH LINE OR PANEL.
- B. CONTRACTOR SHALL PROTECT EXISTING CONSTRUCTION AND EQUIPMENT NOTED TO REMAIN FROM DAMAGE RESULTING FROM DEMOLITION ACTIVITIES. ANY DAMAGE TO EXISTING PROPERTY RESULTING FROM DEMOLITION SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
- C. CONTRACTOR SHALL PROTECT ADJACENT SURFACES IN PREPARATION OF SAW CUTTING REQUIRED FOR DEMOLITION ACTIVITIES.

EXT. MULTI-PURPOSE

I.M.C STORAGE

5



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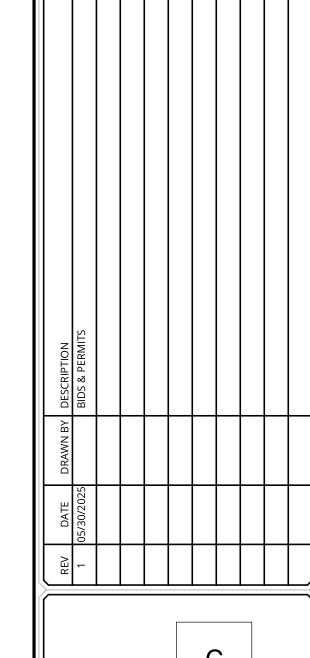
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Key Plan

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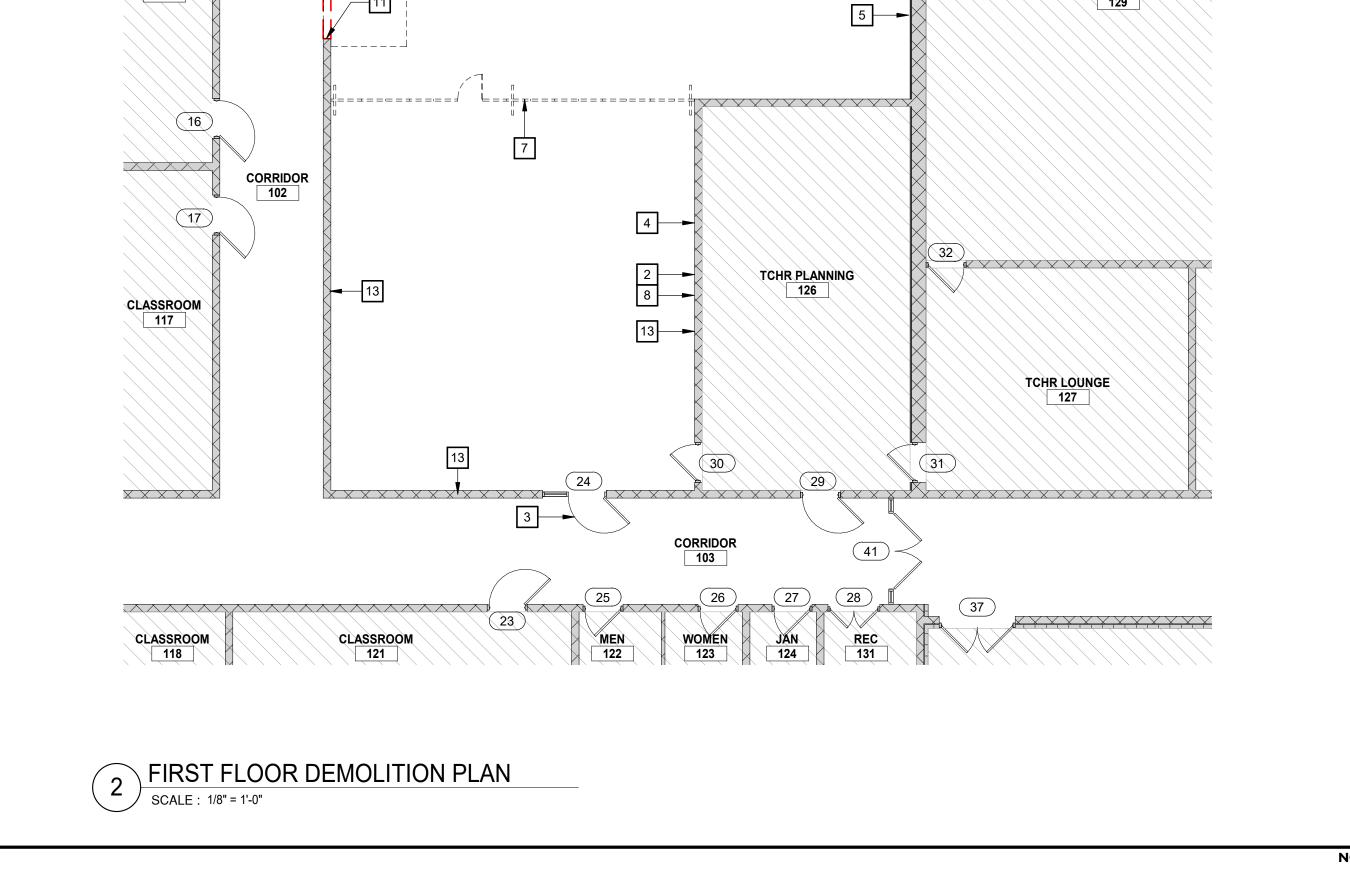
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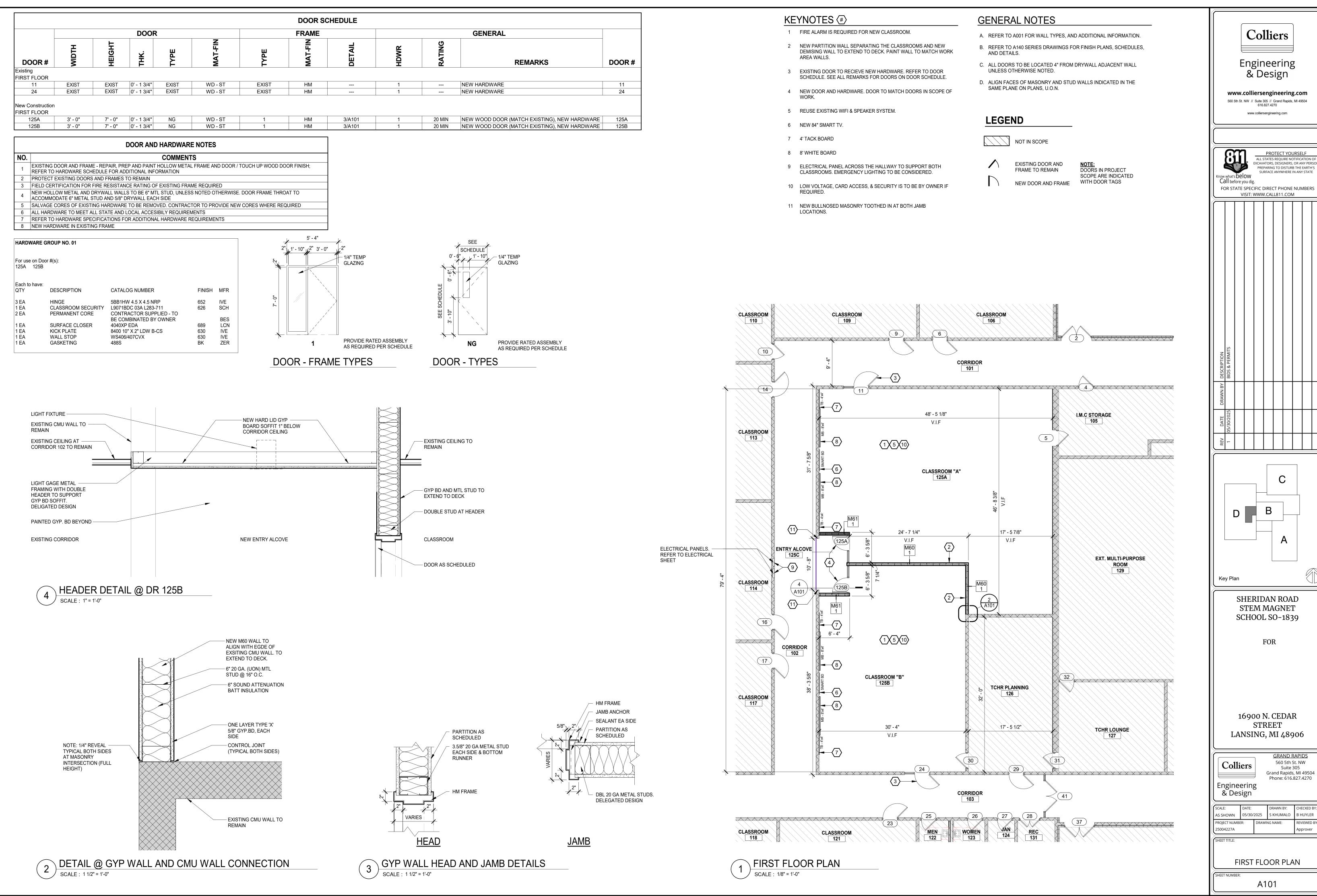
& Design S KHUMALO B HUYLER

5004227A FIRST FLOOR DEMO AND

REFLECTED CEILING PLAN

AD101





# KEYNOTES (#)

1 NEW CEILING LAY-IN TILE TO MATCH EXISTING - VERIFY EXTENT WITH DEMOLITION TO ACCOMODATE NEW LAYOUT.

- 2 2X4 ACOUSTICAL CEILING TILE TO BE INSTALLED IN EXISTING GRID (RE-USE EXISTING LIGHTS AND DIFFUERS).
- 3 EXISTING SPEAKERS AND WIFI TO REMAIN, VERIFIY NEW LOCATION WITH ONWER.
- 4 EXISTING CEILING TO BE ADJUSTED AND MOVED FOR CONSTRUCTION OF NEW WALL. LIGHT FIXTURES, GRID AND TILE TO ACCOMODATED NEW WALL.
- 5 PATCH AND REPAIR ANY DAMAGES ON THE EXISTING GRID AT THE INSTALLATION OF NEW WALL.
- 6 EXISTING CABINET HEATER TO BE PAINTED TO MATCH CEILING.

# **GENERAL NOTES**

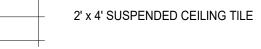
A. REFER TO A001 FOR WALL TYPES, AND ADDITIONAL INFORMATION.

B. REFER TO A140 SERIES DRAWINGS FOR FINISH PLANS, SCHEDULES,

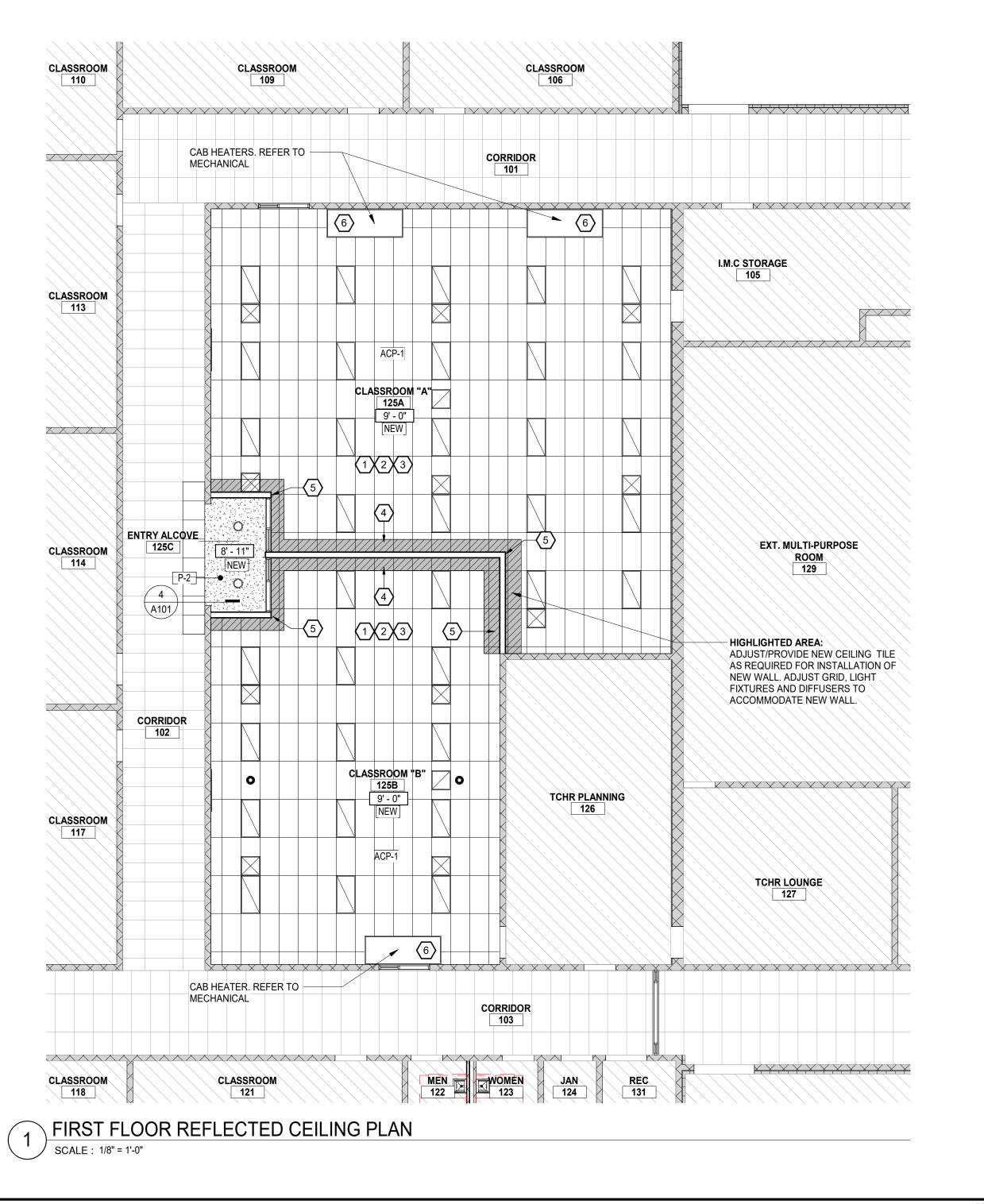
- AND DETAILS. C. ALL DOORS TO BE LOCATED 4" FROM DRYWALL ADJACENT WALL
- UNLESS OTHERWISE NOTED.
- D. ALIGN FACES OF MASONRY AND STUD WALLS INDICATED IN THE SAME PLANE ON PLANS, U.O.N.

# **CEILING LEGEND**

NOTE: SEE OTHER DISCIPLINE DRAWINGS (E.G. MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS) FOR ASSOCIATED SYSTEMS AND INFORMATION ABOUT SYMBOLS NOT INDICATED IN THIS LEGEND.



GYPSUM BOARD CEILING/SOFFIT





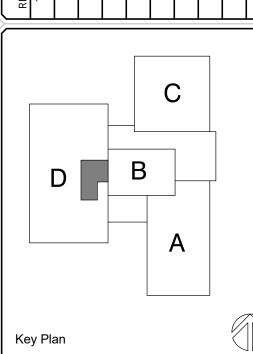
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REFLECTED CEILING PLAN

A121

| ROOM FINISH SCHEDULE     |               |              |      |       |      |       |      |        |                                |
|--------------------------|---------------|--------------|------|-------|------|-------|------|--------|--------------------------------|
| ROOM WALL FINISH CEILING |               |              |      |       |      |       |      |        |                                |
| NUMBER NAME              |               | <b>FLOOR</b> | BASE | NORTH | EAST | SOUTH | WEST | FINISH | REMARKS                        |
| FIRST FLOOR              | -             |              |      | •     |      |       |      |        |                                |
| 125A                     | CLASSROOM "A" | EXIST/LVT    | RB-1 | PT-1  | PT-1 | PT-1  | PT-1 | ACT-1  | PAINT ALL WALLS ENTIRE<br>ROOM |
| 125B                     | CLASSROOM "B" | EXIST/LVT    | RB-1 | PT-1  | PT-1 | PT-1  | PT-1 | ACT-1  | PAINT ALL WALLS ENTIRE<br>ROOM |
| 125C                     | ENTRY ALCOVE  | NEW/LVT      | RB-1 | PT-1  | PT-1 | PT-1  |      | PT-2   | PAINT WALL AT NEW CONSTUCTION  |

| ROOM FINISH SCHEDULE NOTES |  |  |  |  |  |
|----------------------------|--|--|--|--|--|
| NO.                        | COMMENTS                               |  |  |  |  |
| 1                          | EXISTING FLOOR TO REMAIN IN CLASSROOMS |  |  |  |  |
| 2                          | PAINT WALLS                            |  |  |  |  |

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

# BASIS OF DESIGN

# 09 51 13 ACOUSTIC CEILING PANEL

**ACP-1**: CEILING TILE (MATCH EXISTING) MANUFACTURER: ARMSTRONG STYLE: SCHOOL ZONE, SQUARE SIZE: 2' X 4' PANEL GRID: 15/16" COLOR: WHITE LOCATION:

# 09 65 13 RESILIENT BASE AND ACCESSORIES

RB-1: RESILIENT WALL BASE; 4" H (MATCH EXISTING) MANUFACTURER: TARKETT/JOHNSONITE

TRADITIONAL DURACOVE THERMOPLASTIC RUBBER TYPE: SIZE:

COLOR: TO MATCH EXISTING

# 09 91 23 INTERIOR PAINTING

P-1: FIELD - CMU - PREVIOUSLY PAINTED MANUFACTURER: SHERWIN WILLIAMS

COLOR: FINISH: LOCATION:

P-1: FIELD - GYPSUM BOARD - NEW AND PREVIOUSLY PAINTED

TBD. BY CLIENT

MANUFACTURER: SHERWIN WILLIAMS COLOR: TBD. BY CLIENT

FINISH: LOCATION:

P-2: FIELD - GYPSUM BOARD CEILING - NEW PAINT MANUFACTURER: SHERWIN WILLIAMS COLOR: TBD. BY CLIENT

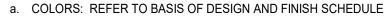
FINISH: LOCATION:

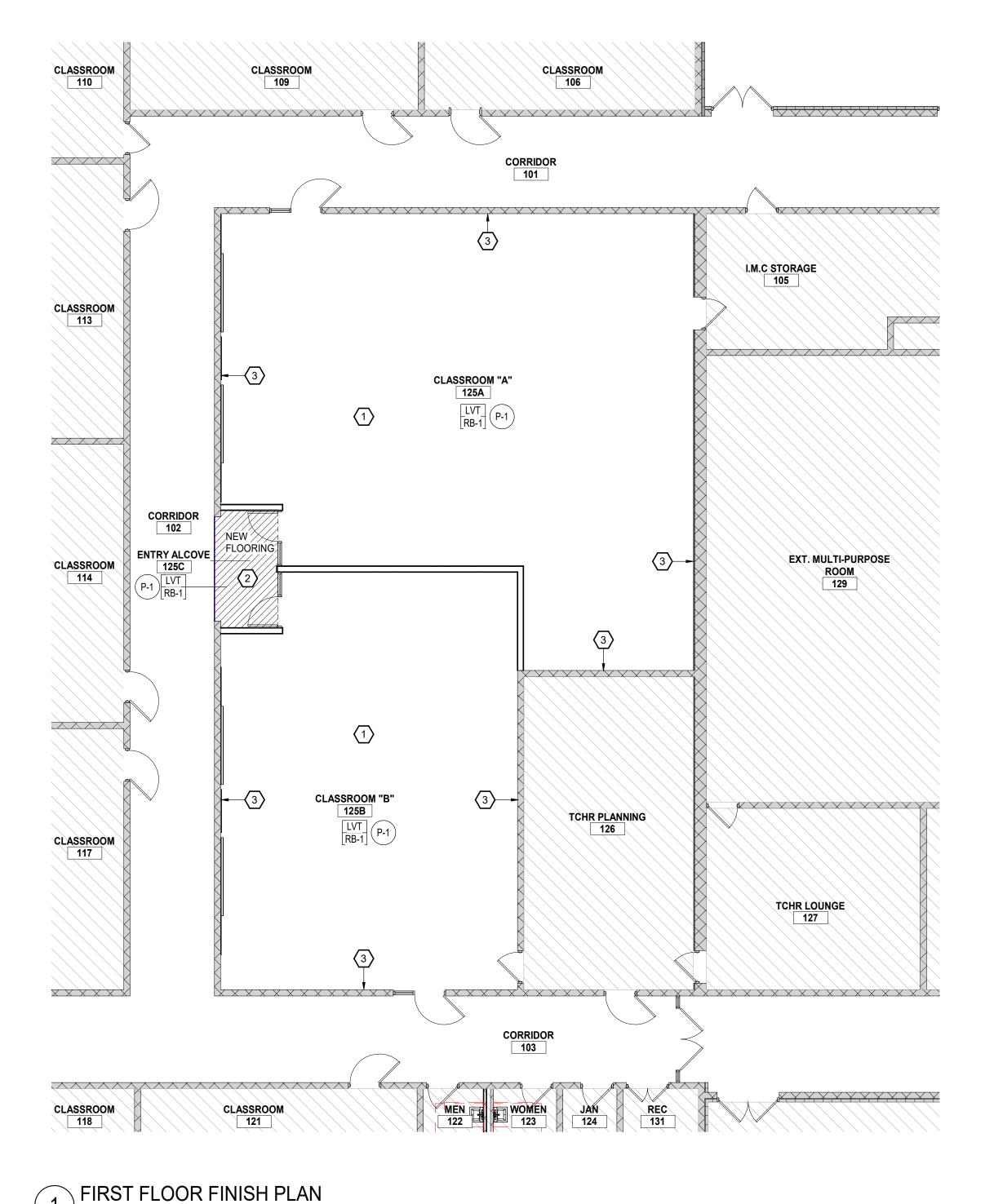
P-3 HOLLOW METAL DOOR FRAME PAINT MANUFACTURER: SHERWIN WILLIAMS TO MATCH EXISTING COLOR: FINISH: SEMI GLOSS LOCATION: SEE DOOR SCHEDULE

VERIFY EXISTING MATERIAL ATTIC STOCK WITH OWNER FOR PAINT, FLOORING, CEILING, AND WALL BASE. FINISH MATERIALS SHOULD MATCH EXISTING U.O.N.

# PAINT SPECIFICATION

- A. BASIS OF DESIGN MANUFACTURER: SHERWIN WILLIAMS. ALSO ACCEPTABLE BENJAMIN MOORE AND PPG PAINTS
- B. INTERIOR PAINT SYSTEMS:
- a. GYPSUM BOARD AND PLASTER: NEW & PREVIOUSLY PAINTED. PRIMER: PROMAR 200 ZERO VOC INTERIOR LATEX PRIMER, B28 SERIES
- INTERMEDIATE COAT: MATCH TOPCOAT
- TOPCOAT: PROMAR 200 ZERO VOC INTERIOR LATEX EG-SHEL, B20
- b. CMU: PREVIOUSLY PAINTED
- LOXON CONCRETE AND MASONRY PRIMER LX02 SERIES
- INTERMEDIATE COAT: MATCH TOPCOAT TOPCOAT: PROMAR 200 ZERO VOC INTERIOR LATEX EG-SHEL, B20
- c. HOLLOW METAL FRAMES AND DOORS
- PRO INDUSTRIAL PRO CRYL UNIVERSAL PRIMER, B66 SERIES.
- INTERMEDIATE COAT: MATCH TOPCOAT TOPCOAT: PRO INDUSTRIAL PRE CATALYZED WATERBASED EPOXY EG-SHEL,
- a. WOOD: PREVIOUSLY PAINTED (FRAMES AND DOORS) PRIMER: PREPRITE PROBLOCK LATEX, B51 SERIES
- INTERMEDIATE COAT: MATCH TOPCOAT TOPCOAT: PROMAR 200 ZERO VOC INTERIOR LATEX EG-SHEL, B20





# **GENERAL NOTES**

- A. COMPLY WITH MANUFACTURER'S RECOMMENDATIONS FOR PREPARING AND INSTALLING FINISHES.
- B. PROTECT ADJACENT WORK BY SUITABLY COVERING DURING WORK.
- C. REMOVE ADHESIVE OR PAINT SPOTS FROM FINISHED FLOORS, WALLS, GLASS OR OTHER SURFACES. FINISHES TO MEET OR EXCEED CODE REQUIREMENTS.
- D. INSTALL MATERIALS USING MANUFACTURER'S APPROVED ADHESIVES AND METHODS, U.O.N.
- E. FILL MINOR DRYWALL IRREGULARITIES WITH SPACKLING COMPOUND AND SAND TO A SMOOTH LEVEL SURFACE. EXERCISE CARE TO AVOID RAISING THE NAP OF PAPER
- F. DO NOT PERFORM PAINTING AND OTHER FINISHING WORK UNDER CONDITIONS UNSUITABLE FOR EXECUTION OF PAINTING WORK. AIR SHALL BE FREE FROM DUST AND DIRT TO PREVENT LODGING OF FOREIGN MATTER IN FRESH PAINT. FLOORS MUST BE BROOM CLEAN BEFORE PAINTING IS STARTED.
- G. PAINT DESIGNATIONS INDICATE COLOR ONLY, REFER TO SPECIFICATION FOR FINISH TYPE.
- H. EDGES OF PAINT ADJOINING OTHER COLORS OR MATERIALS TO BE SHARP AND CLEAN WITHOUT OVERLAP.
- I. EXAMINE SURFACES TO RECEIVE PAINT CAREFULLY FOR DEFECTS. DO NOT PROCEED WITH WORK UNTIL DEFECTS ARE CORRECTED.
- J. WHENEVER NECESSARY TO OBTAIN REQUIRED RESULTS, REFINISH
- AN ENTIRE WALL RATHER THAN SPOT FINISHING WHERE A PORTION OF THE FINISH HAS BEEN DAMAGED OR IS UNSATISFACTORY. K. PREPARE FLOOR SURFACES INCLUDING, BUT NOT LIMITED TO, THE
- FOLLOWING: A. PREPARE/PROPERLY REPAIR AND PATCH SUBFLOORS TO A SMOOTH AND LEVEL FINISH.
- L. PROVIDE SELF LEVELING TROWELABLE UNDERLAYMENT WHERE REQUIRED TO OBTAIN FINISH MANUFACTURER'S REQUIRED SUBFLOOR CONDITION.

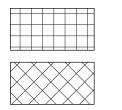
B. FLASH PATCH AS REQUIRED, READY TO RECEIVE NEW FINISH.

- M. FOLLOW THE CARPET AND RUG INSTITUTE METHODS OF INSTALLATION.
- N. INSTALL TILE PER THE TILE COUNCIL OF NORTH AMERICA'S INSTALLATION SPECIFICATIONS.
- O. PROVIDE THE REQUIRED TRANSITIONS BASED ON TYPES IDENTIFIED ON DRAWINGS AT EACH FINISH TRANSITION LOCATION
- P. CENTER FLOOR MATERIAL TRANSITIONS ON DOOR ABOVE.
- Q. FINISHED FLOORS EXTEND INTO TOE SPACES, CLOSETS, DOOR REVEALS AND SIMILAR OPENINGS.
- R. REFER TO REFLECTED CEILING PLANS FOR CEILING FINISHES.
- S. REFER TO ELEVATIONS FOR MILLWORK FINISHES.

# KEYNOTES (#)

- 1 EXISTING FLOOR TO REMAIN. REMOVING EXISTING BASE IN BOTH CLASSROOMS AND INSTALLING NEW BASE, CLASSROOM WALLS TO BE PAINTED.
- INSTALL NEW BASE AND PATCH NEW FLOORING AT THE ALCOVE. ALCOVE WALLS TO BE PAINTED.
- INSTALL NEW BASE AROUND THE BASE PERIMETER OF THE EXISTING WALLS. REFER TO FINISH SCHEDULE.

# FINISH HATCH LEGEND



HATCH ONE

HATCH TWO HATCH THREE

# FINISH SYMBOL LEGEND

FLOOR FINISH

WALL BASE FINISH

XX# FLOOR FINISH ONLY

(X#) GENERAL WALL FINISH — ACCENT WALL FINISH - TO EXTENTS

WALL FINISH ABOVE WAINSCOT

- WAINSCOT FINISH

X# WINDOW TREATMENT



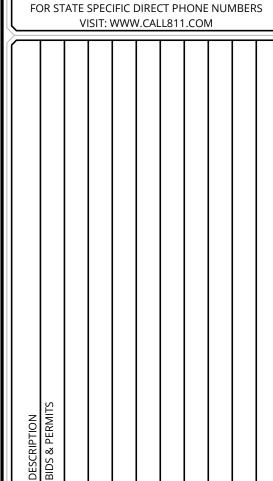


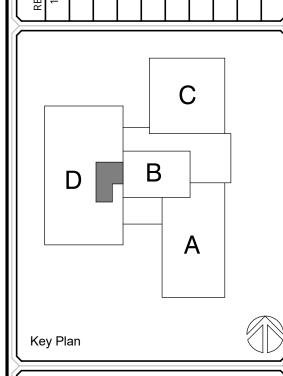
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SHERIDAN ROAD STEM MAGNET SCHOOL SO-1839

FOR

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Colliers Grand Rapids, MI 49504 Phone: 616.827.4270

& Design S KHUMALO B HUYLER

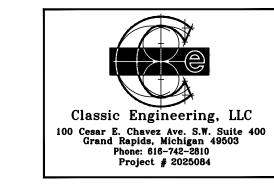
**GRAND RAPIDS** 

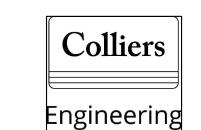
560 5th St. NW

Suite 305

FIRST FLOOR FINISH PLAN

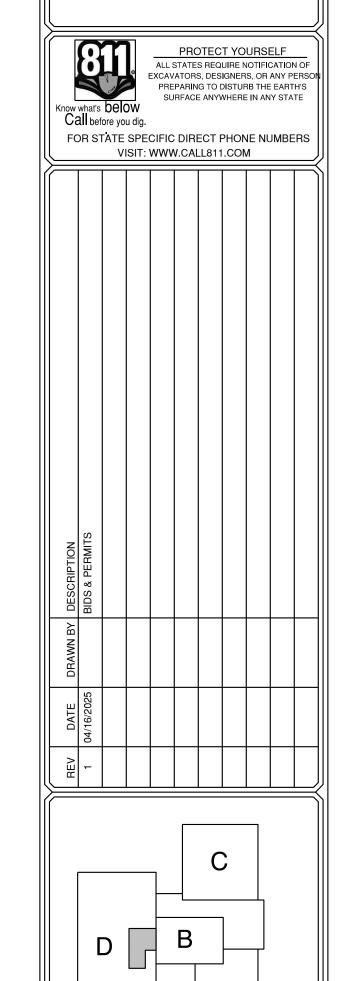
A141

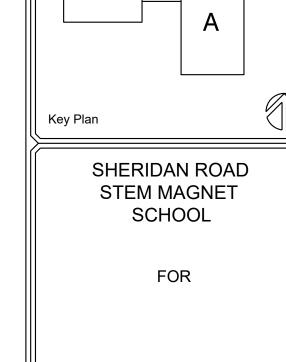




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| IΚ       |             |                        |
|----------|-------------|------------------------|
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| Ш        | Calliana    | 560 5th St. NW         |
| Ш        | Colliers    | Suite 305              |
| Ш        |             | Grand Rapids, MI 49504 |
| Ш        |             | Phone: 616.827.4270    |
|          | Engineering |                        |

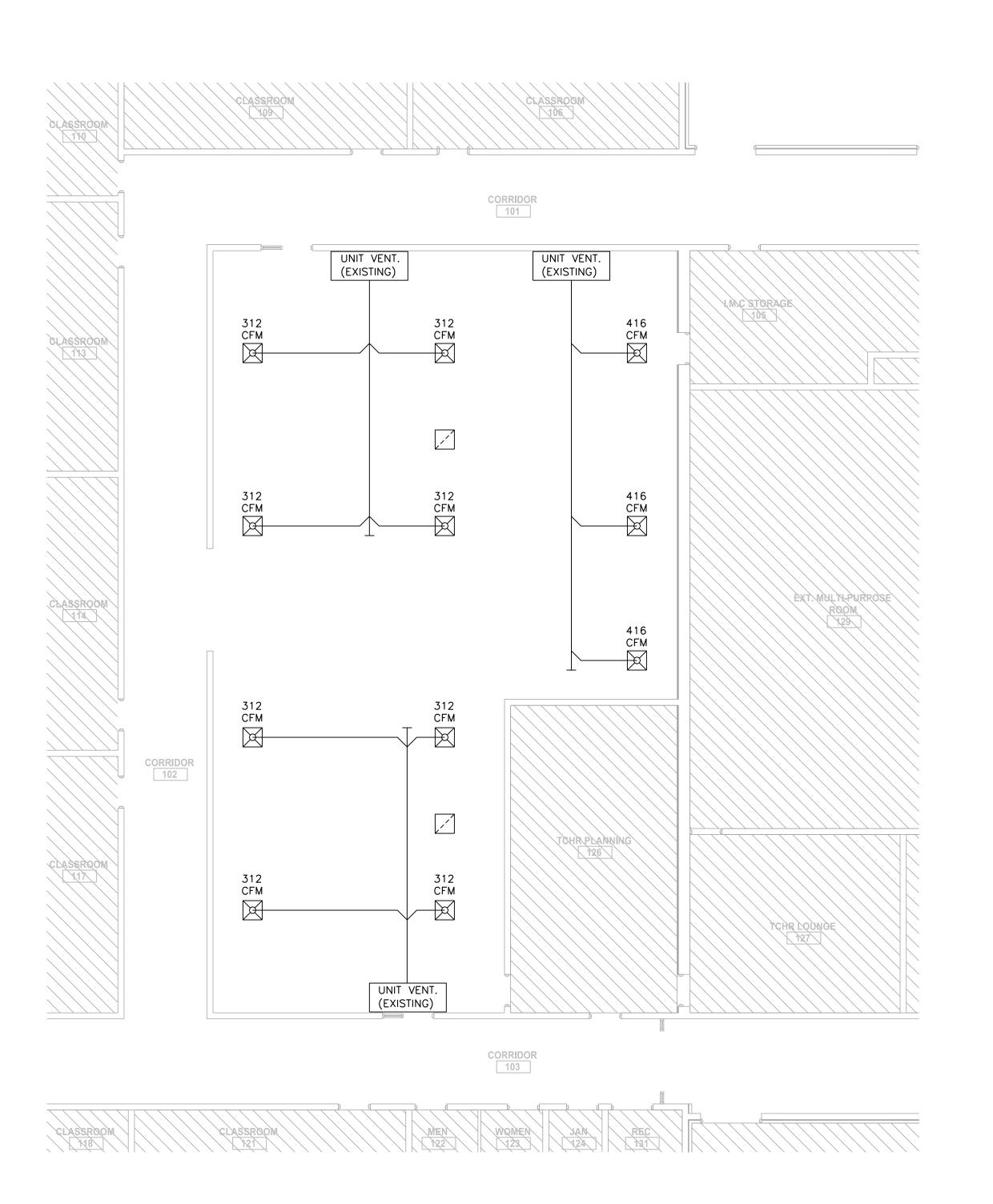
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AS SHOWN
PROJECT NUMBER: DRAWING NAME: REVIEW
25004227A

FIRST FLOOR PLAN -MECHANICAL DEMOLITION

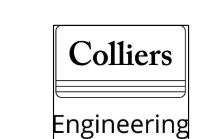
MD101

# GENERAL MECHANICAL NOTES

- 1. REFER TO ARCHITECTURAL SHEET AD101 FOR ADDITIONAL WORK REQUIRED BY THIS CONTRACTOR AND COORDINATE WITH OTHER TRADES AS REQUIRED.
- 2. EXISTING UNIT VENTILATORS, DUCTWORK, AND DIFFUSERS ARE TO REMAIN AND BE REUSED AS IS, EXCEPT AS NOTED.
- 3. CEILING SUPPLY DIFFUSERS AND RETURN GRILLES ARE TO BE REMOVED AND STORED FOR REMOVAL AND REINSTALLATION OF CEILING GRID AND CEILING TILES.
- 4. PRIOR TO REMOVAL OF DIFFUSERS, M.C. SHALL PERFORM INITIAL BALANCE OF ALL DIFFUSERS AND RECORD CFM AT EACH.
- 5. DISPOSE OF ALL FLEXIBLE DUCT BRANCH TAKE-OFFS.
- 6. AFTER INSTALLATION OF NEW CEILING GRID, REINSTALL CEILING DIFFUSERS, ATTACHING NEW FLEXIBLE DUCT TO BRANCH TAKE—OFFS.
- 7. PERFORM SECONDARY BALANCE AND CONFIRM CFM AT EACH DIFFUSER IS EQUIVALENT TO QUANTITY PRIOR TO DEMOLITION.
- 8. EXISTING DIFFUSERS THAT ARE BEING REUSED SHALL BE CLEANED PRIOR TO INSTALL

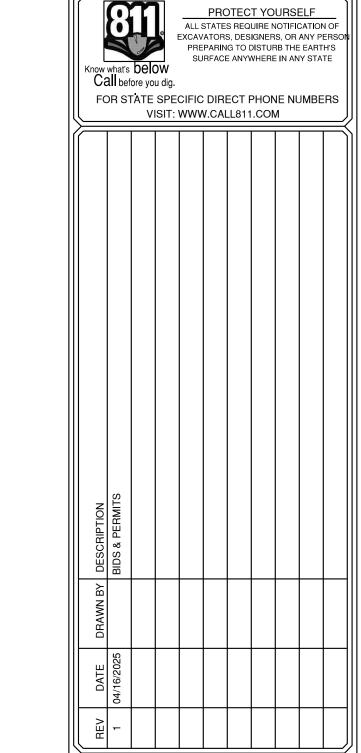


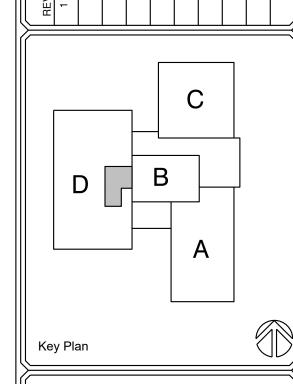




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LAWRENCE J

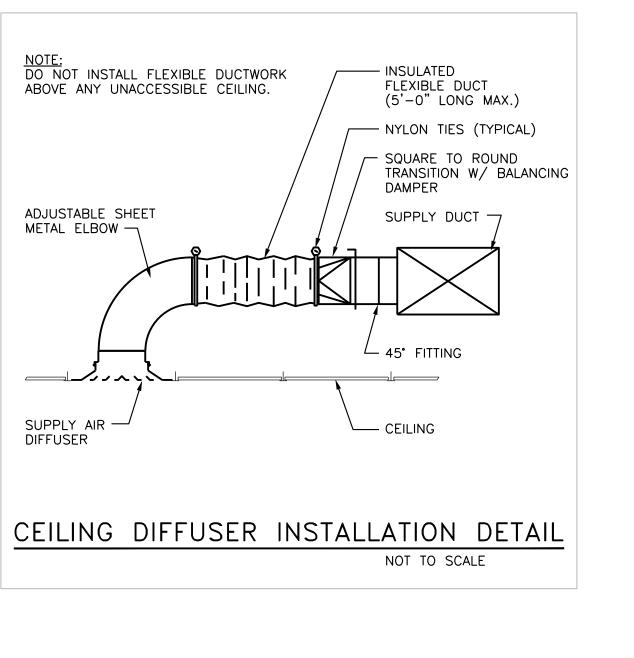
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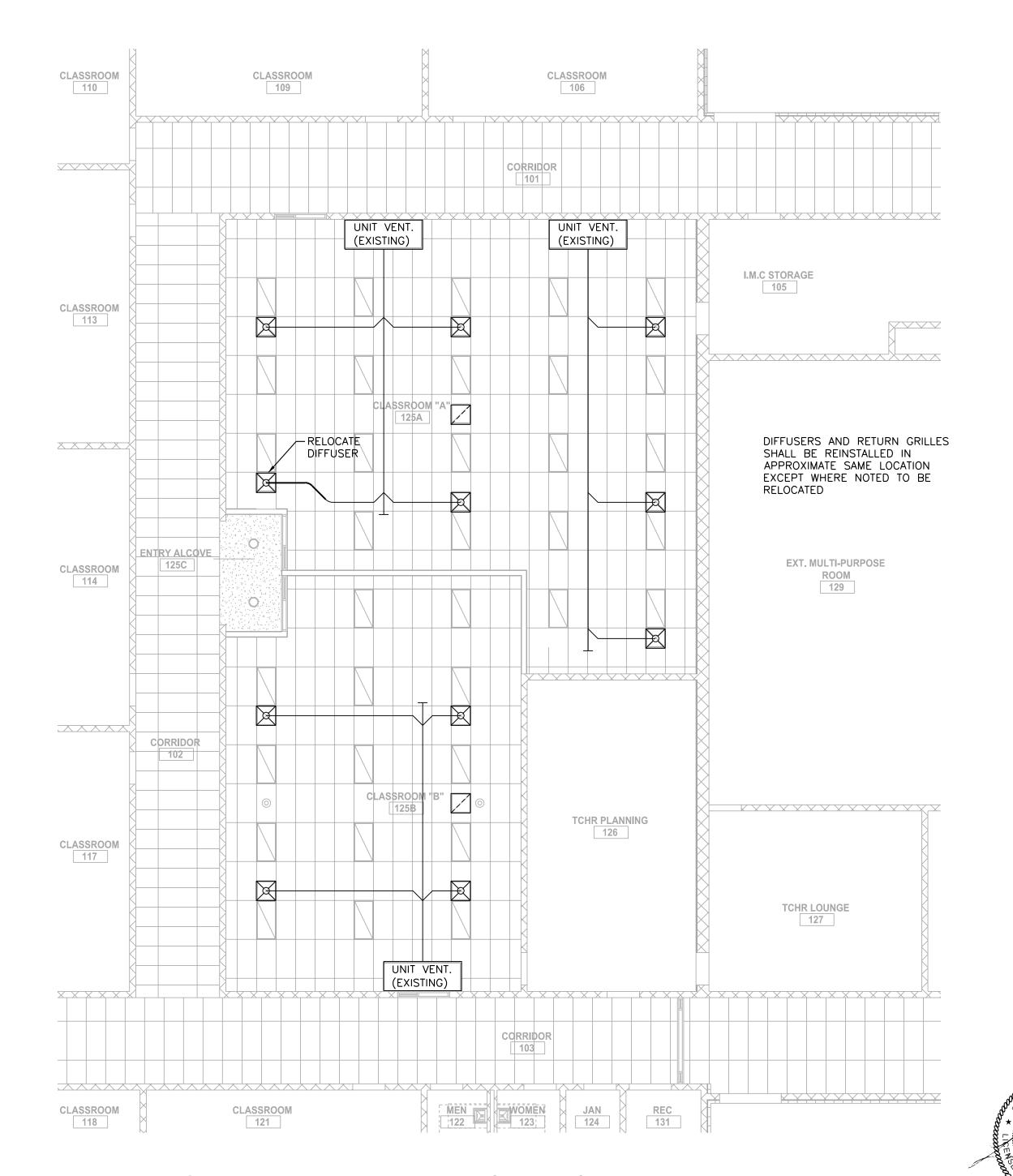
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Suite 305
Grand Rapids, MI 49504
Phone: 616.827.4270

DRAWN BY: CHECKED BY: AS SHOWN PROJECT NUMBER: DRAWING NAME: 25004227A

> FIRST FLOOR PLAN -MECHANICAL

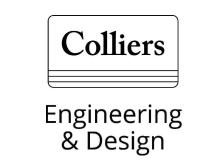
> > M101





# FIRST FLOOR PLAN - MECHANICAL





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AS SHOWN Author
PROJECT NUMBER: DRAWING NAME:

SHEET TITLE:
FIRST FLOOR PLAN -

FIRST FLOOR PLAN -LIGHTING/POWER DEMOLITION/PHOTOMETRICS

ED101

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DEMOLITION POWER KEYNOTES:

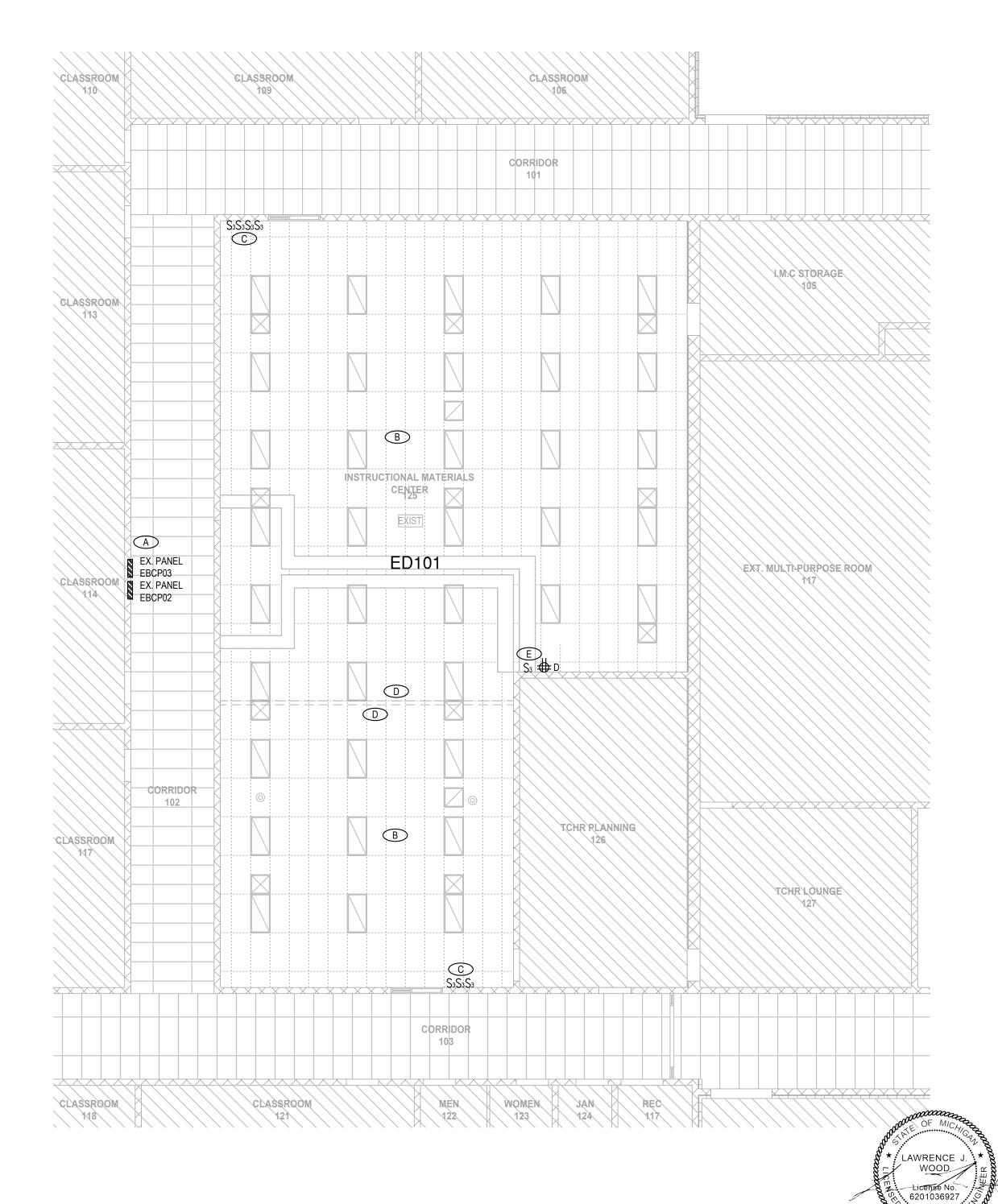
A EXISTING PANELS TO REMAIN.

B EXISTING LIGHTS TO REMAIN.

© EXISTING 3-WAY SWITCHES TO BE CHANGED TO SINGLE POLE SWITCHES TO CONTROL LIGHTS IN EACH ROOM.

D EXISTING SURFACE MOUNTED RACEWAY LOCATED ON REMOVABLE WALLS TO BE REMOVED.

E REMOVE EXISTING 3-WAY SWITCH AND PROVIDE BLANK PLATE.



FIRST FLOOR PLAN - LIGHTING/POWER DEMOLITION OF SCALE: 1/8" = 1'-0"

OS.30.25

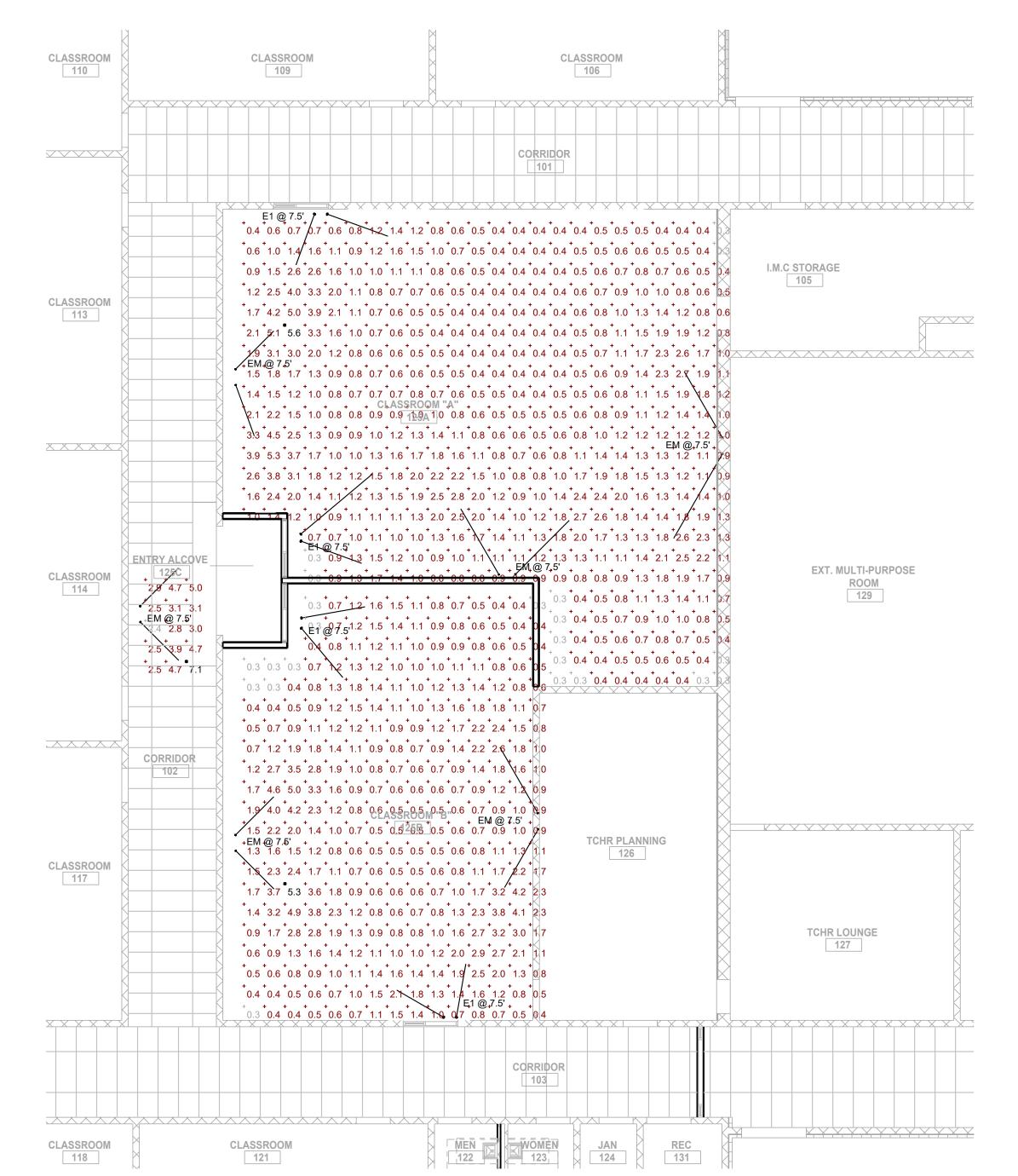
LSD Sheridan Road\W

Number Lamp QTY LLF QUANTUM LED EMERGENCY COMBO (ONE E1

| Statistics              |        |        |        |        |         |         |
|-------------------------|--------|--------|--------|--------|---------|---------|
| Description             | Symbol | Avg    | Max    | Min    | Max/Min | Avg/Min |
| CLASSROOM B 125B        | +      | 1.3 fc | 5.3 fc | 0.3 fc | 17.7:1  | 4.3:1   |
| CORRIDOR 102 PANEL AREA | +      | 3.7 fc | 7.1 fc | 2.4 fc | 3.0:1   | 1.5:1   |
| CLASSROOM A 125 A       | +      | 1.1 fc | 5.6 fc | 0.3 fc | 18.7:1  | 3.7:1   |

Lithonia Lighting

EM



FIRST FLOOR PLAN - PHOTOMETRICS

LIGHTING KEY NOTES:

- A NEW SINGLE POLE SWITCHES, TO CONTROL EXISTING LIGHTS. REUSE EXISTING CIRCUITS.
- B PROVIDE NEW EMERGENCY LIGHT ABOVE EXISTING ELECTRICAL PANELS.
- © NO WORK IN THIS AREA.

#### **GENERAL LIGHTING NOTES:**

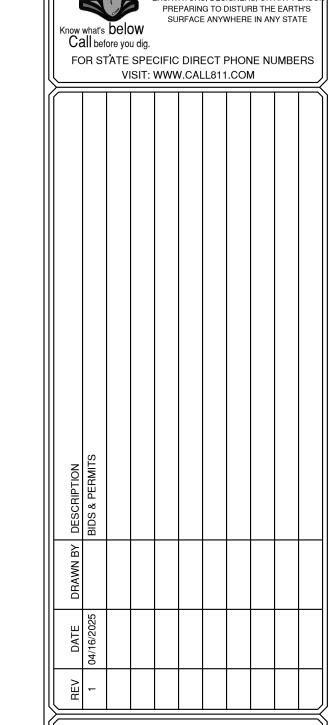
- 1. CONNECT EMERGENCY LIGHTING TO CIRCUIT FEEDING GENERAL LIGHTING IN THAT AREA. 2. EXIT SIGNS TO BE CONNECTED TO UNSWITCHED LIGHTING CIRCUIT OR EMERGENCY LIGHTING CIRCUIT FEEDING THAT AREA.
- 3. LIGHTING CONTROL SHALL COMPLY WITH 2015 MICHIGAN ENERGY CODE WHERE APPLICABLE.



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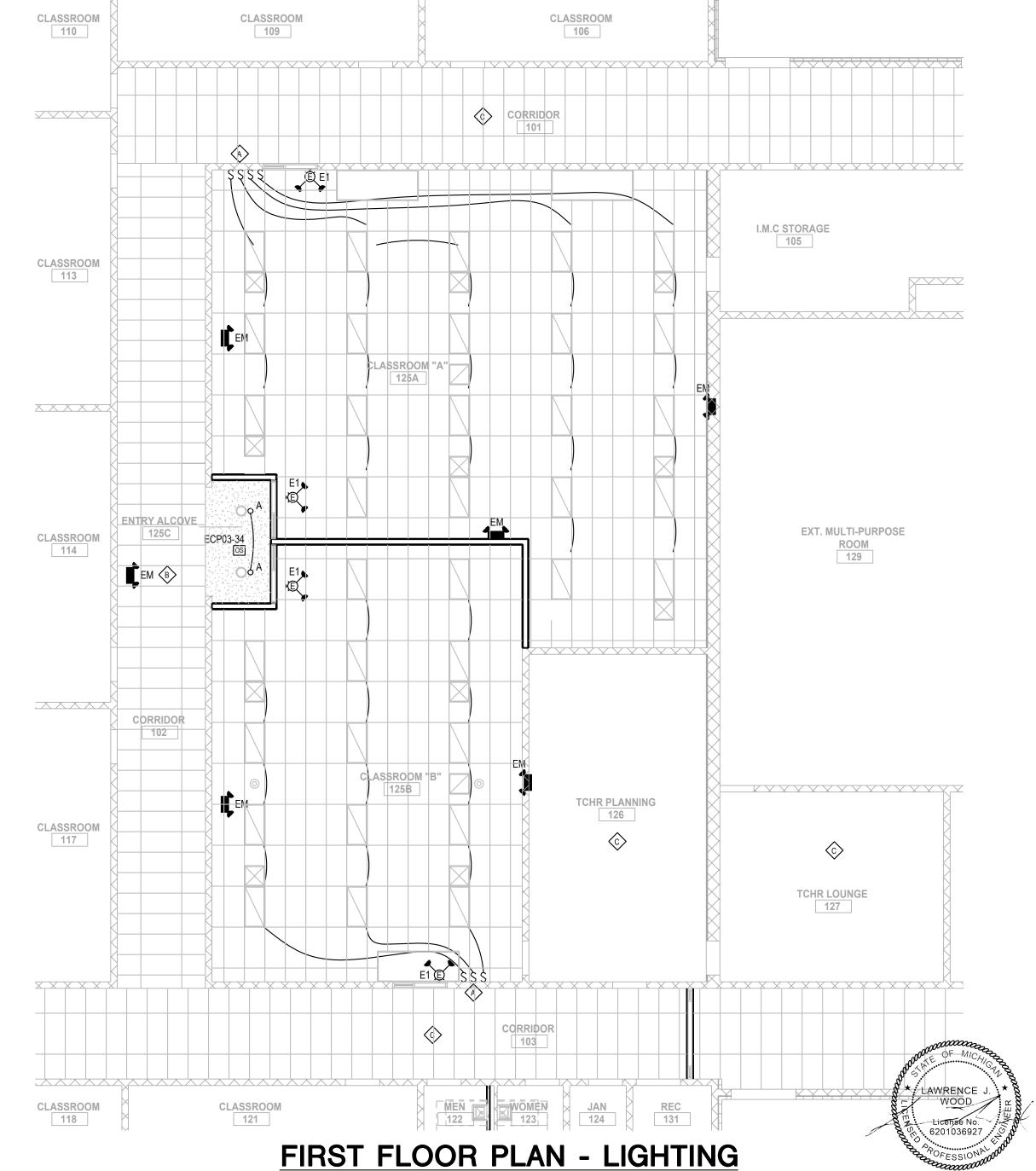
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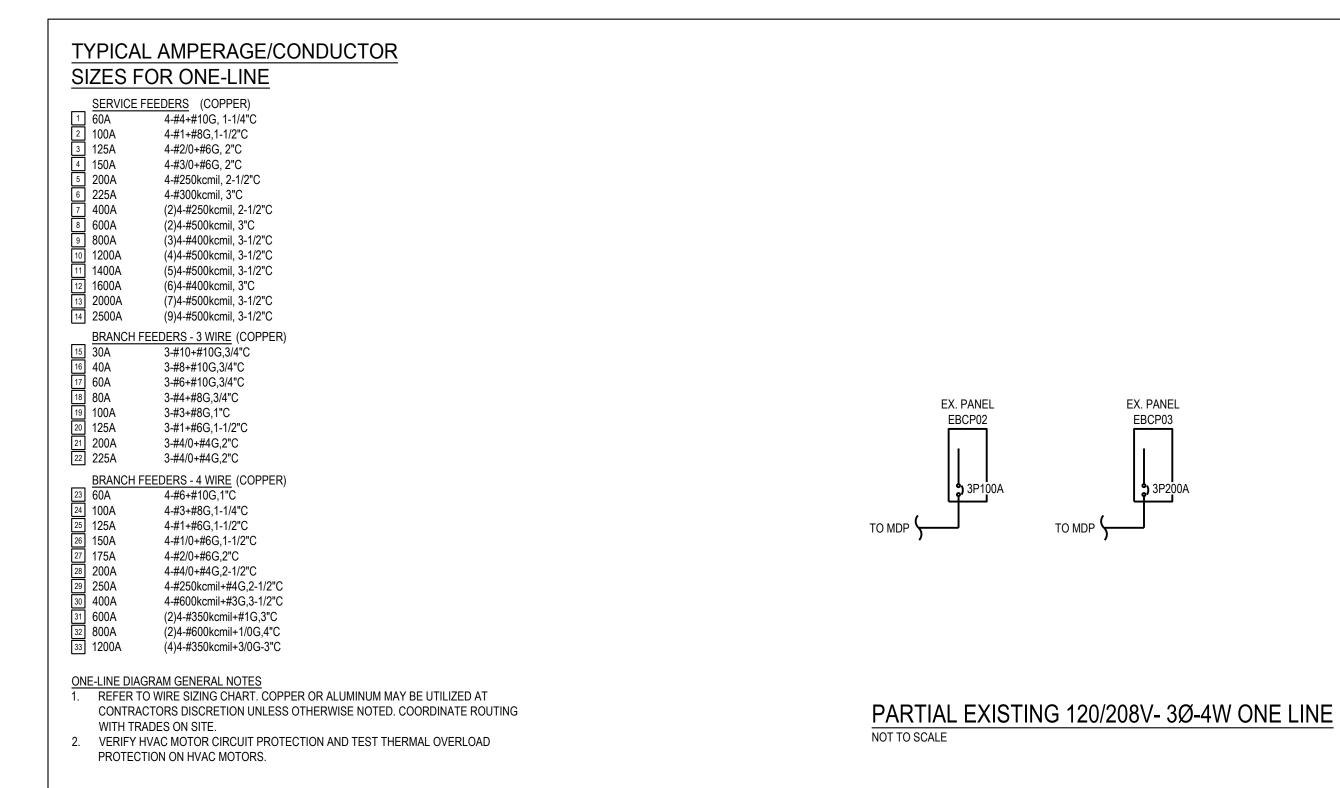
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FIRST FLOOR PLAN -LIGHTING/PHOTOMETRICS

EL101





|       |        |         |           |        |        |                 | EB   | U   | -03  |               |              |        |         |      |       |      |
|-------|--------|---------|-----------|--------|--------|-----------------|------|-----|------|---------------|--------------|--------|---------|------|-------|------|
|       | В      | ASED C  | N SQ.D    | I-LINE | OR EQI | JAL             |      |     |      |               |              |        |         |      |       |      |
| CKT   |        | V       | OLT AME   | -S     |        | DECODIDATION    | CKT  | ١.  | СКТ  | DECODIDEION   |              | V      | OLT AMF | PS   |       | СКТ  |
| NO.   | LTG.   | HVAC    | MTRS.     | REC.   | OTHER  | DESCRIPTION     | BRKR | ┞┖  | BRKR | DESCRIPTION   | LTG.         | HVAC   | MTRS.   | REC. | OTHER | NC   |
| 1     | 1000   |         |           |        |        | EX LIGHTS       | 20   | Α   | 20   | EX LIGHTS     | 1000         |        |         |      |       | 2    |
| 3     | 1000   |         |           |        |        | EX LIGHTS       | 20   | В   | 20   | EX LIGHTS     | 1000         |        |         |      |       | 4    |
| 5     | 1000   |         |           |        |        | EX LIGHTS       | 20   | С   | 20   | EX LIGHTS     | 1000         |        |         |      |       | 6    |
| 7     | 1000   |         |           |        |        | EX LIGHTS       | 20   | Α   | 20   | EX LIGHTS     | 1000         |        |         |      |       | 8    |
| 9     | 1000   |         |           |        |        | EX LIGHTS       | 20   | В   | 20   | EX LIGHTS     | 1000         |        |         |      |       | 10   |
| 11    | 1000   |         |           |        |        | EX LIGHTS       | 20   | С   | 20   | EX LIGHTS     | 1000         |        |         |      |       | 12   |
| 13    | 1000   |         |           |        |        | EX LIGHTS       | 20   | Α   | 20   | EX LIGHTS     | 1000         |        |         |      |       | 14   |
| 15    | 1000   |         |           |        |        | EX LIGHTS       | 20   | В   | 20   | EX LIGHTS     | 1000         |        |         |      |       | 16   |
| 17    | 1000   |         |           |        |        | EX LIGHTS       | 20   | С   | 20   | EX POWER POLE |              |        |         | 720  |       | 18   |
| 19    | 1000   |         |           |        |        | EX LIGHTS       | 20   | Α   | 20   | EX CIRCUIT    |              |        |         |      | 600   | 20   |
| 21    |        |         |           |        | 1200   | EX GARAGE OPEN  | 20   | В   | 20   | EX CIRCUIT    |              |        |         |      | 600   | 22   |
| 23    |        |         |           |        | 600    | EX CIRCUIT      | 20   | С   | 20   | EX CIRCUIT    |              |        |         |      | 600   | 24   |
| 25    |        |         |           |        | 600    | EX CIRCUIT      | 20   | Α   | 20   | EX CIRCUIT    |              |        |         |      | 600   | 26   |
| 27    |        |         |           |        | 7488   | EX CIRCUIT      | 50\2 | В   | 20   | EX CIRCUIT    |              |        |         |      | 600   | 28   |
| 29    |        |         |           |        |        | 1               | 1    | С   | 20   | RECEPT        |              |        |         | 720  |       | 30   |
| 31    |        |         |           |        |        |                 |      | Α   | 20   | RECEPT        |              |        |         | 720  |       | 32   |
| 33    |        |         |           |        |        |                 |      | В   | 20   | LIGHTS        | 20           |        |         |      |       | 34   |
| 35    |        |         |           |        |        |                 |      | С   |      |               |              |        |         |      |       | 36   |
| 37    |        |         |           |        |        |                 |      | Α   |      |               |              |        |         |      |       | 38   |
| 39    |        |         |           |        |        |                 |      | В   |      |               |              |        |         |      |       | 40   |
| 41    |        |         |           |        |        |                 |      | С   |      |               |              |        |         |      |       | 42   |
| SUBT  | 10000  | 0       | 0         | 0      | 9888   |                 |      |     |      |               | 8020         | 0      | 0       | 2160 | 3000  | SUE  |
| TOTAL | LOAD   |         | 33,06     | 88 VA  |        | DIVERSITY       |      |     |      |               | VOLTS        |        | •       |      | 208Y  | /120 |
|       | LTG.=  |         |           | 20 VA  | 125%   |                 | 22,  | 525 | VA   |               | PHASE        |        |         |      | 3     | ,    |
| ŀ     | -IVAC= |         | · ·       | 0      | 100%   |                 | ,    | 0   |      |               |              |        |         |      |       |      |
|       | TORS=  |         |           | 0      | 0%     | 125%LRGST +100% |      | 0   |      |               | CIRCU        | T CAPA | CITY:   |      |       |      |
| *RE   | CEPT=  |         | 2.16      | 0 VA   |        | 50%>10kVA       | 2.1  | 160 | VA   |               | MAIN BREAKER |        | 200A    |      |       |      |
|       | THER=  |         |           | 38 VA  | 100%   |                 |      |     | VA   |               | MOUNTING:    |        |         |      |       |      |
| TC    | DTAL D | IV. LOA |           |        |        | 37,573 VA       | ,    |     |      |               | LOCAT        |        |         |      |       |      |
|       | MPS=   |         |           | 1      | 04     | ,               |      |     |      |               |              |        |         |      |       |      |
|       |        | X 1.25  | <b>i=</b> |        | 130 A  |                 |      |     |      |               |              |        |         |      |       |      |
| IOTES |        |         |           |        |        |                 |      |     |      |               |              |        |         |      |       |      |
| OILO  | ·-     |         |           |        |        |                 |      |     |      |               |              |        |         |      |       |      |

POWER KEYNOTES:

PROVIDE NEW CLOCK TO MATCH EXISTING SYSTEM.

2 PROVIDE A PER UNIT PRICE TO REPLACE EXISTING RECEPTACLES WITH NEW TAMPER PROOF RATED 20A, WITH NEW STAINLESS STEEL PLATE.

> CLASSROOM 110

3 NO WORK IN THIS AREA.

EX. PANEL

TO MDP 🕌

**GENERAL POWER NOTES:** 

CLASSROOM

109

1. ALL 15A & 20A 120V NON-LOCKING RECEPTACLES WITH PUBLIC SPACES WHERE CHILDREN CAN BE FOUND SHALL BE LISTED TAMPER RESISTANT PER NEC 406.12. THIS INCLUDES SCHOOLS, CLINICS, AND PLACES OF WAITING AND ALL COMMON USE AREAS (CORRIDORS, GYM, MUSIC ETC.). ALL EXISTING WIRING DEVICES SHALL BE REPLACED WITH TAMPER PROOF AS WELL.

2. FIRE ALARM SHOWN ARE FOR A NEW SYSTEM. SYSTEMS. ONCE DEVICES ARE INSTALLED, NEWE SYSTEM SHALL BE CERTIFIED. THE BUILDINGS EXISTING SYSTEM IS OLD, PROVIDE NEW ADDRESSABLE PANEL FOR NEW DEVICES TO MATCH. LOCATE NEW FIRE ALARM PANEL IN FRONT OFFICE 113. REFER TO DRAWING 1.00 FOR FIRE ALARM SPECIFICATION.

CLASSROOM

106

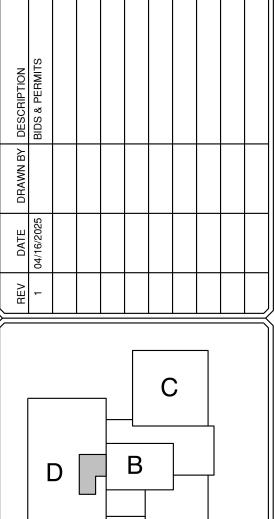
Classic Engineering, LLC 100 Cesar E. Chavez Ave. S.W. Suite 400 Grand Rapids, Michigan 49503 Phone: 616-742-2810 Project # 2025084

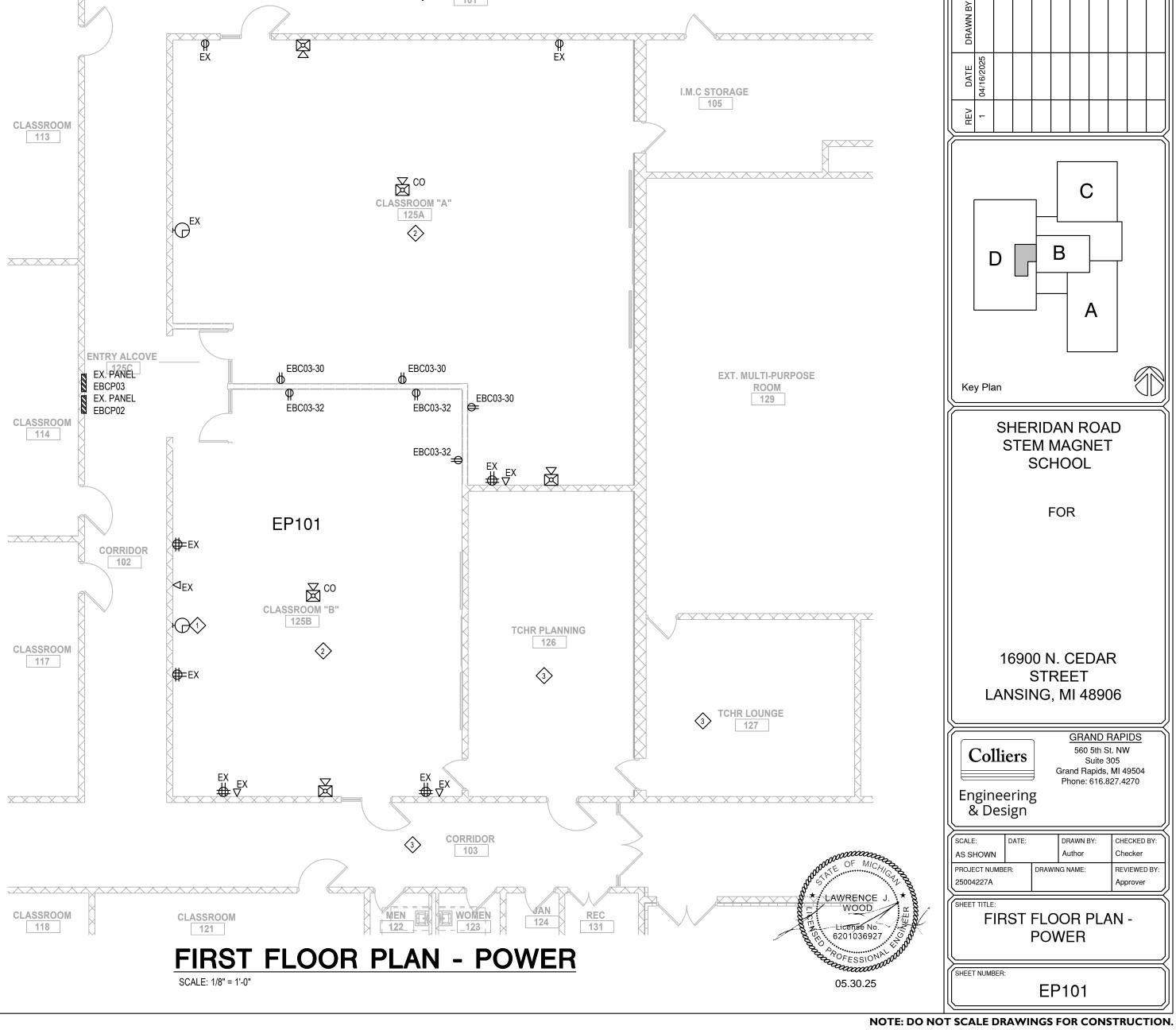
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ELECTRICAL SYMBOL LEGEND

MTG. HT. TO Q

SYMBOL

S S3

DESCRIPTION

SPECIFICATION GRADE

SINGLE POLE OR 3-WAY SWITCH

FOUR WAY SWITCH-SPEC. GRADE

|             | SYSTEMS SYMBOL LEGEND                                   |               |
|-------------|---|---------------|
| MBOL        | DESCRIPTION   | MTG. HT. TO © |
| F           | FIRE ALARM PULL STATION                                 | 46"           |
| WP WP       | FIRE ALARM HORN/STROBE LIGHT (WP-DENOTES WEATHER PROOF) | 80"           |
| 2           | AREA SMOKE DETECTOR-PHOTOELECTRIC                       |               |
| $\boxtimes$ | VISUAL ONLY ALARM                                       | 80"           |

AUDIO ONLY ALARM

CEILING SPEAKER

SMOKE/HORN BASE

SPEAKER/STROBE LIGHT

MAGNETIC DOOR HOLD OPEN

DUCT SMOKE DETECTOR

O,S,&Y TAMPER SWITCH

WATER FLOW SWITCH

BEAM DETECTOR

CEILING SPEAKER

CARD READER

FIRE/SMOKE DAMPER

F/SD

F.A.A.

STANDARD TOGGLE

SWITCH PLATE

FRONT -

REAR SIDE

OF PLATE

REMOTE ALARM KEY TEST SWITCH

FIRE ALARM CONTROL RELAY

FIRE ALARM CONTROL PANEL

SECURITY DOOR CONTACT

CHEVRON INDICATES AIM LINE

SECURITY DOOR REQUEST TO EXIT

SECURITY CAMERA - "W" DENOTES WALL MOUNTED

E.C. TO PROVIDE CONNECTION TO ALL DUCT DETECTORS WHETHER SHOWN ON ELECTRICAL

000/

LP4-13,15,17

(A-1) ELECTRICAL IDENTIFICATION

DRAWINGS OR NOT. COORDINATE QUANTITY AND LOCATIONS WITH MECHANICAL

CONTRACTOR SCHEDULES, REVIEWING ALL CFM REQUIREMENTS. PROVIDE DUCT

SECURITY INTERCOM

DETECTORS IF NOT NOTED TO BE PROVIDE BY M.C.

LABEL CKT. NO. OF EACH DEVICE ON REAR

OTHER METHOD APPROVED BY THE ENGINEER

LABEL COVERS WITH CKT.'S CONTAINED —

WITHIN. USE PERMANENT MARKER PEN OR OTHER APPROVED METHOD.

**LE1.00** ✓ N.T.S.

SIDE OF COVER PLATE. USE PERMANENT MARKER PEN, BRADY MARKING SYSTEM OR

JUNCTION BOXES (EXPOSED -

OR CONCEALED ABOVE

ACCESSIBLE CEILING)

AT DOOR HEAD

TYPICALLY CLG

AT DOOR HEAD

DUPLEX RECEPTACLE

REAR SIDE OF

- FOR J.B.'S CONTAINING OTHER

LABEL COVERS INDICATING

SYSTEM TYPE AND ZONES.

"FIRE ALARM-ZONES 2&3"

"P.A. ZONES 4,5,&6" "DATA

CIRCUITS A&B" "EXIT

SIGNS-EMI&2" "EMERG. CKTS. BPEM-3,4"

THAN POWER OR LIGHTING CKT.'S

PLATE

MOUNTED

FIRE ALARM ANNUNCIATOR PANEL

HEAT DETECTOR

CO-DENOTES COMBO CARBON MONOXIDE/SMOKE

CARBON MONOXIDE SENSOR. E.C TO ROUGH-IN SINGLE

GANG BOX AND 1/2"C. TO ACCESSIBLE CEILING SPACE.

# 26-0500 GENERAL PROVISIONS

#### 1. FURNISH AND INSTALL FIRST-CLASS WORKING SYSTEMS, TESTED AND READY FOR OPERATION, COMPLETE WITH LABOR AND MATERIALS (U.L. APPROVED COMMERCIAL GRADE). CONFORM TO DRAWINGS, SPECIFICATIONS AND OTHER CONTRACT DOCUMENTS. USE PROPER NEMA RATED EQUIPMENT (i.e. "3R" WEATHERPROOF, "1" GENERAL DUTY, ETC.)

**ELECTRICAL SPECIFICATIONS** 

- 2. COORDINATE WITH THE DRAWINGS AND SPECIFICATIONS OF THE OTHER TRADES AND WITH
- 3. FIELD VERIFICATION OF ALL DIMENSIONS ARE REQUIRED, EXACT LOCATIONS, DISTANCES,
- 4. COMPLY WITH THE NATIONAL ELECTRICAL CODE 2023, PLUS LOCAL OR STATE CODES, LAWS, ORDINANCES, RULES AND REGULATIONS APPLICABLE TO THE PARTICULAR CLASS OF WORK; ANY FEES IN CONNECTION THEREWITH ARE TO BE PAID BY ELECTRICAL CONTRACTOR.
- 5. WORK SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR FROM DATE OF FINAL ACCEPTANCE.

AND LEVELS WILL BE GOVERNED BY ACTUAL FIELD CONDITIONS.

1. WORK REQUIRED UNDER THIS HEADING SHALL BE BY THE ELECTRICAL CONTRACTOR (OR AS NOTED) AND INCLUDES ALL SUPERVISION, LABOR, MATERIALS, INSTRUMENTATION AND EQUIPMENT NECESSARY TO EFFECTIVELY TEST, MEASURE AND VERIFY THE PERFORMANCE OF THE ELECTRICAL EQUIPMENT SYSTEMS.

#### 26-0 529, 26-0533, 260534 RACEWAY, BOXES, AND FITTINGS

- 1. ALL WIRING SHALL BE RUN IN CONCEALED EMT (THINWALL) CONDUIT IN THE FINISHED AREAS OF THE BUILDING. CONDUIT MAY BE EXPOSED IN EQUIPMENT ROOMS OR OVERHEAD IN ROOMS WITHOUT CEILINGS. CONDUITS EXPOSED TO WEATHER TO BE RGC (RIGID GALVANIZED CONDUIT).MC CABLE ALLOWED IN AREAS ALLOWED PER NATIONAL ELECTRICAL CODE AND NOT SUBJECT TO DAMAGE.
- 2. HORIZONTAL AND VERTICAL CONDUIT RUNS MAY BE SUPPORTED BY ONE-HOLE MALLEABLE STRAPS, CLAMP-BACKS OR OTHER APPROVED DEVICES.
- 3. CONDUITS SHALL NOT BE RUN IN NOR SUPPORTED FROM DUCTWORK.

# 26-0219 CONDUCTORS

ALL CONDUCTORS SHALL BE NEW. ALL CONDUCTORS FOR POWER AND LIGHTING SYSTEMS WIRING SHALL BE 98% CONDUCTIVITY COPPER TYPE THHN OR THW. ALUMINUM IS TO BE IS PERMITED FOR SERVICE ENTRANCE AND PANEL FEEDS. BRANCH CIRCUIT WIRING SHALL BE COPPER OR ALUMINUM.

ROMEX SHALL BE PERMITTED IN LCOATIONS ALLOWED PER NEC 2017

# 26-2736 WIRING DEVICES

- 1. CONVENIENCE OUTLETS SHALL BE SPECIFICATION GRADE, RATED AT 20 AMPERE, GROUNDING TYPE, 125 VOLT, AND BEAR U.L. LABEL OF APPROVAL. STAINLESS STEEL. REFER TO DRAWINGS FOR AIC AND GFCI RATED DEVICES.
- 2. COVER PLATES. MANUFACTURERS: PASS AND SEYMOUR CATALOG 5251-1, OR EQUAL BY HUBBLE, AND LEVITON. COLOR TO BE CHOSEN BY OWNER.
- 3. ALL SWITCHES FOR LIGHTING SHALL BE SPECIFICATION GRADE RATED AT 20 AMPERE 120/277 VOLTS. PASS AND SEYMOUR CATALOG 20AC-1 OR EQUAL BY HUBBLE, AND LEVITON. COLOR TO BE CHOSEN BY OWNER.

# 16350 GROUNDING

- 1. INSTALL COMPLETE GROUNDING SYSTEM IN ACCORDANCE WITH NATIONAL ELECTRICAL
- 2. INSTALL BONDING WIRE IN NONMETALLIC AND FLEXIBLE CONDUIT CONNECTED AT SOURCE END TO PANELBOARD EQUIPMENT GROUND BAR AND AT LOAD END TO ENCLOSURE.
- 3. EXTEND COMPLETE BUILDING GROUNDING SYSTEM IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE. INCLUDE INSULATED GROUND FOR ALL EXTERIOR AS WELL AS TOILET

#### <u>26-5113 LIGHTING</u>

1. THE ELECTRICAL CONTRACTOR SHALL INSTALL ALL OWNER PROVIDED LIGHT FIXTURES WITH LAMPS, AS SHOWN ON THE DRAWINGS AND AS LISTED IN THE FIXTURE LEGEND. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR INSTALLING ADEQUATE SUPPORTING FACILITIES FOR THE LIGHTING SYSTEM.

Classic Engineering, LLC 100 Cesar E. Chavez Ave. S.W. Suite 400 Grand Rapids, Michigan 49503 Phone: 616-742-2810

- WHERE RECESSED FIXTURES ARE INSTALLED IN CEILINGS FINISHED IN ACOUSTICAL TILE PATTERNS OR LAYOUTS, THE ELECTRICAL CONTRACTOR SHALL WORK IN COOPERATION WITH THE CEILING SUPPLIERS IN LOCATING AND FRAMING FIXTURES.
- 3. WHERE LIGHTING FIXTURES ARE INSTALLED IN OTHER CEILINGS, VERIFY ANY ADDITIONAL REQUIREMENTS FOR THE INSTALLATION OF THE FIXTURES (i.e. FIRE RATING, PLASTER TRIM,
- EXIT LIGHT FIXTURES SHALL BE SUITABLE FOR WALL, CEILING FOR PENDANT MOUNTING AS INDICATED, WITH STENCIL FACES AND ONE-EIGHTH INCH THICK RED (OR GREEN PER ARCHITECT OR OWNER) ACRYLIC PANELS, WITH LED LAMPS AND BATTERY PACKS SHOWN IN THE LIGHTING FIXTURE LEGEND.
- 5. LAMPS TO BE AS SHOWN IN THE LIGHTING FIXTURE LEGEND.

EMERGENCY LIGHTING REQUIREMENTS SHALL BE INSTALLED TO SATISFY THE RESPECTIVE CODES, INCLUDING INTERNATIONAL BUILDING CODE (i.e. 1 FC AVERAGE, .6 FC MINIMUM AND 40:1 RATIO OF MAX TO MIN). PHOTOMETRICS, NOT PROVIDED ON THE BID DOCUMENTS SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR AND SHALL BE INCLUDED IN THE FINAL BID PROPOSAL – BY EC, SUPPLIER OR ENGINEER

#### 26-0528 SYSTEMS

- WORK REQUIRED UNDER THIS HEADING INCLUDES THE COMPLETE INSTALLATION, SETUP, AND TESTING OF ALL SYSTEMS, WHICH ARE A PERMANENT PART OF THE BUILDING. THESE SYSTEMS SHALL INCLUDE, BUT ARE NOT LIMITED TO THE TELEPHONE, DATA AND FIRE ALARM SYSTEMS. THE CONTRACTOR AND /OR HIS SUB-CONTRACTOR(S) SHALL PROVIDE MINIMUM INSTRUCTIONS, FOR EACH SYSTEM THE EC IS RESPONSIBLE FOR, TO THE OWNER.
- 2. IT ALSO INCLUDES THE INSTALLATION OF CONDUIT SYSTEMS FOR EQUIPMENT NOT BELONGING TO THE OWNER BUT INSTALLED AND OPERATED FOR THE OWNER BY OTHERS.
- 3. CONDUIT; MINIMUM SIZE 3/4".
- 4. BACKBOARDS: ¾ INCH WEATHERPROOF PLYWOOD, WITH FIRE RETARDANT SEALER, ONE PIECE PER INSTALLATION.

#### 26-2816 CONTROLS

1. COMPLETE CONTROLS FOR LIGHTING AND MECHANICAL EQUIPMENT, AS NOTED ON THE DRAWINGS. ALL LIGHTING CONTROLS SHALL COMPLY WITH 2015 MICHIGAN ENERGY CODE. 2. APPROVED MANUFACTURERS FOR LIGHTING CONTROL: ACUITY, COOPER, HUBBELL AND

### 28-3100 FIRE ALARM SYSTEM

- SUPERVISED, NON-CODED, ZONE ANNUNCIATED, CLOSED LOOP, 24 VOLT DC FIRE ALARM SYSTEM. THE SYSTEM SHALL BE DESIGNED TO SUPERVISE THE SYSTEM WIRING AND THE CONNECTION TO EACH DEVICE; DEVICES SHALL HAVE FACTORY INSTALLED TERMINAL BLOCKS SO THAT ALL WIRING IS TERMINATED WITHOUT USE OF PIGTAIL CONNECTIONS. SYSTEM SHALL BE WIRED IN ACCORDANCE WITH NFPA
- PROVIDE FULLY SUPERVISED FIRE ALARM STATIONS, THERMAL DETECTORS, SMOKE DETECTORS, AUDIO/VISUAL ALARMS, ANNUNCIATED CIRCUITS AND FIRE PROTECTION
- PROVIDE U.L. APPROVED ALARM VERIFICATION OPERATION FOR SMOKE DETECTOR ALARM CONDITIONS.
- ACTUATION OF MANUAL STATIONS, AUTOMATIC DETECTORS AND FIRE PROTECTION FLOW SWITCHES, SHALL CAUSE THE FOLLOWING FUNCTIONS:
  - a. ACTUATE GENERAL ALARM RELAY IN CONTROL PANEL TO INITIATE AUDIBLE AND VISIBLE ALARMS CONTINUOUSLY THROUGHOUT BUILDING.
- ACCEPTABLE MANUFACTURERS:
  - NOTIFIER, EDWARDS EST, JOHNSON CONTROLS, SIMPLEXGRINNELL
- EQUIPMENT SHALL BE PURCHASED FROM AN ESTABLISHED SUPPLIER LOCATED WITHIN 100 MILES OF PROJECT WHO IS A STOCKING DISTRIBUTOR WITH A FULL-TIME STAFF OF FACTORY TRAINED SERVICE PERSONNEL.
- FIRE ALARM STATION
  - CODED, SEMI-FLUSH MOUNTED, INDICATING OPERATION PHYSICALLY UNTIL RESET.
- HEAT DETECTION EQUIPMENT
  - DETECTORS: COMBINED FIXED TEMPERATURE/RATE OF RISE FOR CEILING MOUNTING.
  - FIXED TEMPERATURE: 135°F (57°C).
  - RATE OF RISE: 14°F (8°C) PER MINUTE

RESETTING: PROVIDE AUTOMATIC RESET RATE-OF-RISE ELEMENT AND NON-RESET, INDICATING TYPE FIXED TEMPERATURE ELEMENT.

# SMOKE DETECTORS.

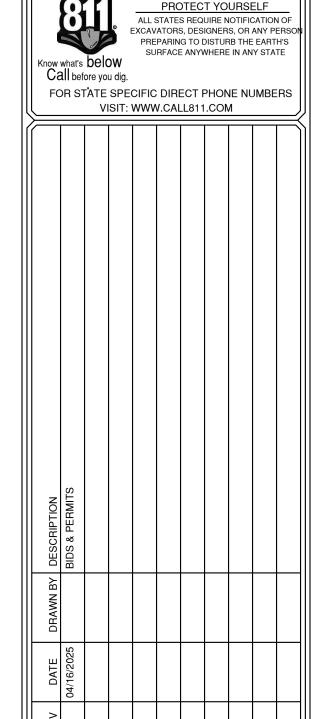
CARBON MONOXIDE DETECTORS.

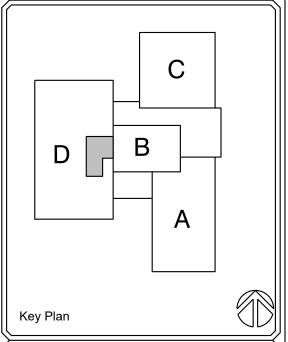
LIGHT FIXTURE LEGEND CATALOG PART# FIXTURE DESCRIPTION LAMPS FINISH | VOLTAGE REMARKS RECESSED DOWNLIGHT LITHONIA LDN4 3010 L04 AR LSS TRW MVOLT GZ10 WHITE MVOLT LED METALUX 3000K CREE 1000LM E1 EXIT COMBO ITHONIA LHQM LED R M6 WHITE MVOLT MOUNT AT 7'-6" AFF LED W/BATTERY WILLIAMS DUAL LITE MOUNT AT 7'-6" AFF EM1 EMERGENCY AINOHTI WHITE MVOLT LED W/BATTERY ISOLITE WILLIAMS UAL LITE

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SHERIDAN ROAD STEM MAGNET SCHOOL

FOR

16900 N. CEDAR STREET LANSING, MI 48906

| Engine<br>& Des | ering | 560 5th St<br>Suite 30<br>Grand Rapids, I<br>Phone: 616.82 | 05<br>MI 49504 |
|-----------------|-------|--|----------------|
|                 |       |  |                |
| SCALE:          | DATE: | DRAWN BY:  | CHECKED        |

AS SHOWN PROJECT NUMBER: DRAWING NAME 25004227A

DETAILS, SYMBOL LEGENDS AND **SPECIFICATIONS** 

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

E1.00

GRAND RAPIDS

"AC" DENOTES ABOVE COUNTER. COORDINATE HEIGHT WITH ARCHITECT.

"F" DENOTES MOUNTED IN FACE OF CABINETS.

BATTERY EMERGENCY LUMINAIRE

"H" DENOTES HORIZONTAL MOUNTING OF DEVICE. "B" DENOTES MOUNTED IN BASE.