

Central Midlands Regional Transit Authority



Bus Driver Lounge Renovation 2
Architect Project # 02-006.12
Invitation For Bids

Columbia, South Carolina
Date: April 1, 2021

Due Date: April 15, 2021

Time: 10:00 A.M.

Receipt Location:

The COMET Administrative Offices

ATTN: John Andoh, Contracting Officer

3613 Lucius Rd

Columbia, SC 29201

INVITATION FOR BIDS (IFB)

The IFB seeks a Bidder to complete the **Bus Driver Lounge Renovation 2**. The prime Contractor shall provide and pay for all materials, tools, equipment, labor and professional and non-professional services, and shall perform all other acts and supply all other things necessary, to fully and properly perform and complete the work. The Bidder must act as the prime Contractor and assume full responsibility for any subcontractor's performance. The Bidder will be considered the sole point of contact with regard to all situations, including payment of all charges and the meeting of all other requirements.

All bids must be submitted by April 15, 2021 at 10:00 AM.

There will be a non-mandatory site visit held on Thursday April 8, 2021 at 9:00 AM in the bus driver's lounge at The COMET offices located at 3613 Lucius Road. Columbia SC 29201. Masks will be required, and social distancing practices observed. Questions about the scope or plans should be emailed to tneeley@bstonegroup.com by Thursday April 8, 2021 at 4:00 PM. Bidders should include with their bid: a fully filled out Bid form, a 5% bid bond, all signed FTA clauses, and System for Award Management (SAM) registration. Bidders shall hold pricing for 60 days.

All bid responses should be submitted by mail AND email to:

Bus Driver Lounge Renovation Bid
The COMET Administrative Offices
ATTN: John Andoh, Contracting Officer
3613 Lucius Rd.
Columbia, SC 29201

Email: Taylor Neeley at tneeley@bstonegroup.com

A copy of the IFB is posted on The COMET website.

Usage of Disadvantaged Business Enterprise (DBE) certified firms is required. There is a 10% DBE goal established for this project.

A. TERMS AND CONDITIONS

1. Non-Discrimination.

- a. Non-discrimination Requirement. The Bidder shall not discriminate on the basis of race, color, religion, national origin, age, gender, sexual orientation, veteran status, disability and/or any other protected class under the law in the performance of this IFB.
- b. Title VI of the Civil Rights Act of 1964. The Bidder agrees to comply with all requirements of Title VI of the Civil Rights Act of 1964, 42 U.S.C. § 2000d, USDOT regulations, "Nondiscrimination in Federally-Assisted Programs of the USDOT, 49 CFR Part 21.
- c. Equal Employment Opportunity. The Bidder may not discriminate against any employee or prospective for employment because of race, color, religion, national origin, age, gender, sexual orientation, veteran status, disability and/or any other protected classes under the law. Such action shall include, but not be limited to, the following: employment, upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination, rates of pay or other forms of compensation, and selection for training, including apprenticeship. The Bidder shall insert the foregoing provision (modified only to show the particular contractual relationship) in all of its third-party contracts associated with the Contract resulting from this IFB, except contracts for standard commercial supplies or raw materials and construction contracts. Further, the Bidder shall require all such subcontractors to insert a similar provision in all subcontracts, except contracts for standard commercial supplies or raw materials, except contracts for standard commercial supplies or raw materials and construction contracts.
- d. Access Requirements for Individuals with Disabilities. Bidders must comply with all applicable requirements of the Americans with Disabilities Act of 1990 (ADA), 42 U.S.C. §§ 12101 et seq. and 49 U.S.C. § 322; Section 504 of the Rehabilitation Act of 1973, as amended, 29 U.S.C. § 794; Section 16 of the Federal Transit Act, as amended, 49 U.S.C. app. § 1612; and other applicable federal and state statutes, rules and regulations.

2. Availability of Funds. This procurement is subject to the availability of funding. The COMET will rely on funds approved by the Board of Directors on an annual basis. If sufficient funds are not approved by the Board of Directors to fund the Contract, The COMET can terminate the Contract upon written notice to the Bidder.

3. Financial Transparency. Upon written request from The COMET, the Bidder shall provide The COMET any and all documents, data, and financial records, in written or electronic form, relating to the expenditure of all funds, regardless of the source of funding, paid to the Bidder under this Contract. Such information shall be provided within five days, unless otherwise agreed upon in writing by The COMET Executive

Director/CEO or designee, of its request at no cost to The COMET. Such information shall be available for public disclosure by The COMET as provided for in the South Carolina Freedom of Information Act, S.C. Code Ann. § 30-4-10, et seq. (2014) (SCFOIA) and S.C. Code Ann. § 11-35-410 (2011). Bidder agrees to and shall insure that this financial transparency provision is included in each Contract that it has with a subcontractor to perform work under this Contract. Certified Payroll will be requested and Davis-Bacon wage rate interviews will be conducted to maintain financial transparency as FTA regulations direct.

4. Freedom of Information Act. To the extent that the South Carolina Freedom of Information Act (SCFOIA) and S.C. Code Ann. § 11-35-410 require the production and release of public records, The COMET has a statutory duty to comply with SCFOIA and is subject to civil suit, including the award of costs and attorney's fees for failure to comply therewith. Bidder acknowledges that The COMET, in its sole discretion, must determine what a public record is and what The COMET is required to release. In the event there is a dispute regarding what constitutes a public record and whether it is exempt from disclosure pursuant to S.C. Code Ann. § 30- 4-40 or § 11-35-410, The COMET will give Bidder five (5) days' notice prior to releasing such information, during which time Bidder shall take whatever action it deems necessary to challenge the release. Further, if any legal actions are brought against The COMET as a result of Bidder's refusal to provide or failure to cooperate with a The COMET request for information, Bidder shall reimburse to The COMET all costs and attorneys' fees incurred by The COMET in connection with such an action and shall in all respects indemnify and hold The COMET harmless against any losses or financial penalties in connection with such action.

5. Insurance. The Bidder shall provide insurance as follows:

The Bidder shall procure automobile liability and property damage liability insurance from a company that is authorized to write insurance in the state of South Carolina and is in good standing with the South Carolina Insurance Commissioner to protect The COMET, it's Board, officials, employees, agents and volunteers, as well as the Bidder and its employees. The COMET shall maintain limits of no less than:

- a. Workers' Compensation Statutory Amount
- b. Comprehensive General Liability \$2,000,000 - Combined Single Limit
- c. Comprehensive Auto Liability \$2,000,000 Combined Single Limit
- d. Umbrella Liability \$ 3,000,000 Combined Single Limit

The Bidder shall provide The COMET with evidence of such insurance; together with an appropriate endorsement that such insurance will not be cancelled without thirty (30) days prior written notice to The COMET (cancellation of insurance shall constitute an event enabling The COMET to immediately terminate this Contract).

6. Laws and Regulations. Bidder will comply with all applicable State, Federal and Local Laws and regulations.
7. Immigration Law Compliance. By executing and entering into this Contract, the Bidder is formally acknowledging without exception or stipulation that it is fully responsible for complying with the provisions of the Immigration Reform and Control Act of 1986 as located at 8 U.S.C. 1324, et. seq., and regulations relating thereto, as either may be amended. Failure by the Bidder to comply with the laws referenced herein shall constitute a breach of this Contract and The COMET shall have the discretion unilaterally to terminate this Contract immediately.
8. Legal Relationship. The Bidder is an independent Contractor and is not the legal representative or agent of The COMET. The Bidder and The COMET have a business relationship based entirely on and circumscribed by this Contract. No partnership, joint venture, agency, fiduciary, or employment relationship is intended or created by reason of this Contract.
9. Indemnification. Notwithstanding any limitation in this IFB, and to the fullest extent permitted by law, Bidder shall defend and hold harmless The COMET for and against any and all suits or claims of any character (and all related damages, settlement payments, attorneys' fees, costs, expenses, losses or liabilities) by a third party which are attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property arising out of or in connection with the goods or services acquired hereunder or caused in whole or in part by any act or omission of Bidder, its subcontractors, their employees, workmen, servants, agents, or anyone directly or indirectly employed by them or anyone for whose acts any of them may be liable, regardless of whether or not caused in part by The COMET, and whether or not such claims are made by a third party or The COMET; however, if an The COMET's negligent act or omission is subsequently determined to be the sole proximate cause of a suit or claim, The COMET shall not be entitled to indemnification hereunder. Bidder shall be given timely written notice of any suit or claim. Bidder obligations hereunder are in no way limited by any protection afforded under workers' compensation acts, disability benefits acts, or other employee benefit acts. This clause shall not negate, abridge, or reduce any other rights or obligations of indemnity which would otherwise exist. The obligations of this paragraph shall survive termination, cancelation, or expiration of the parties' Contract. This provision shall be construed fairly and reasonably, neither strongly for nor against either party, and without regard to any clause regarding insurance. As used in this clause, "The COMET" means the CMRTA itself, its member agencies, departments, Board of Directors of Directors, and all their respective officers, agents, volunteers and employees. Any term or condition is void to the extent it requires The COMET to indemnify, defend, or pay attorney's fees to anyone for any reason based on the South Carolina Tort Claims Act.
10. Start-up. Unless otherwise agreed upon, the Bidder is expected to start providing services under the Contract beginning the first day of the month after the Contract is executed or at such other time as the start date is set by The COMET in a Notice to Proceed (NTP).

11. **Reservation of Rights.** The COMET reserves the right to seek clarification and to request supporting documentation and Bids shall comply with these requests.
12. **Award Notification.** Notice of “Intent To Award” will be posted on The COMET website. Any amendments to this solicitation will also be provided to all known interested Bidders. Award will be made to the lowest most responsive and responsible bidder. Bidders agree to adhere to all applicable State, Federal and local laws and regulations. Applicable laws and regulations will be attached to the Contract, including necessary Federal Transit Administration clauses, certifications and assurances. The successful Bidder will be required to sign a standard “Bidder Certification- Non-Collusion” and “Bidder Certifications-Debarment” form. (Appendix A). Awards must be approved by The COMET Board before contracts can be signed.
13. **System for Awards Management (SAM).** In order to submit a bid to The COMET, the Bidder must have not been debarred or suspended from participating in Federally funded procurements. A copy of the Bidder’s SAM registration must be included in the bid submission.
14. **Protests.** These procedures will apply to all procurement actions whether by sealed bid, request for proposal or sole source and regardless of the stage of the procurement process at which the protest is filed. Protests to this solicitation or contract award must be in accordance with The COMET protest procedures contained in The COMET’s Procurement and Contract Administration Policy. A copy of the Procurement and Contract Administration Policy is posted on The COMET’s website @ www.CatchTheCOMETSC.gov/procurement/ or is available by contacting the Contracting Officer listed in the beginning of this IFB/RFQ/IFB. A summary of the protest procedures are below:

Protest Before Proposal Opening

Protests based upon restrictive specifications or alleged improprieties in the proposing procedure shall be filed, in writing, 10 business days prior to the proposal opening date. A detailed description of the facts underlying the protest plus any supporting documentation must be included with the written protest. The protest should be submitted to The COMET’s Contracting Officer.

Protest of Award

A proposer may file a protest with The COMET alleging a violation of applicable federal or state law relative to the seeking, evaluating and/or awarding of a procurement contract. Such protest must be filed no later than three business days after the date of the notice of pre-award or non-award of the contract by The COMET. A detailed description of the facts underlying the protest plus any supporting documentation should be included with the written protest. The protest should be submitted to The COMET’s Contracting Officer.

Investigation of Protest

The Contracting Officer shall investigate any protest filed pursuant to the procedures above and respond, in writing, to each point raised by the proposer within five business days. The written response shall specify any action to be taken by The COMET. If the proposer is not satisfied with the decision of the Executive Director/CEO, the proposer may appeal the decision, in writing, within three business days to The COMET Contracting Officer, whom will convene the Procurement Ad-Hoc Panel to review the protest.

The Procurement Ad-Hoc Panel shall state the action to be taken by The COMET or the fact that no action shall be taken. The decision of the Procurement Ad-Hoc Panel is the final decision of The COMET. The proposer will be notified of its right to appeal to the appropriate state of local administrative or judicial authorities.

Failure to comply with any of the requirements set forth in The COMET's proposal protest procedures may result in rejection of the protest.

13. Required Forms: Each bid must include the following required forms:

1. Signed and dated "Non-Collusion Certification"
2. Signed and dated "Ethics and No Contact Form" .
3. Signed and dated copy of Federal Transit Administration clauses acknowledgement.
4. Price Proposal Form.
5. Bid Bond equal to five percent (5%)
6. Signed and dated "SCHEDULE OF DISADVANTAGED BUSINESS ENTERPRISE (DBE) PARTICIPATION"
7. SAM Registration Verification

B. SCOPE OF PROJECT:

The project consists of demolition and renovation of the current bus drivers lounge in The COMET administrative offices. The project will create break pods for the bus drivers out of what is currently a storage area. The scope also includes electrical and HVAC work.

The HVAC Unit is Owner purchased, and Contractor installed. Ducting, labor and other materials should be provided by the Bidder and included in the "HVAC Installation/ Ducting" line item. There will be an "Alternate 1" line item for the Bidder to provide this unit; this line item is for the unit only. Contractors must use the unit specified in the Mechanical design drawings, no other alternate unit shall be accepted.

The project must be completed within 85 days after the NTP is issued. Liquidated damages will be assessed at a rate of \$100 per day for delays in the completion of the project.

APPENDIX A

NON-COLLUSION CERTIFICATION

By submission of this bid, each respondent and each person signing on behalf of any respondent certifies, and in the case of a joint proposal, each party certifies as to its own organization, under the penalty of perjury, that to the best of its knowledge and behalf:

1. The prices in this bid have been arrived at independently without collusion, consultation, communication, or agreement for the purpose of restricting competition as to any matter relating to such prices with any other Bidder or with any other competitor:
2. Unless otherwise required by law, the prices quoted in this bid have not been knowingly disclosed by the Bidder, directly or indirectly, to any other Bidder or to any other competitor prior to opening; and
3. No attempt has been made or will be made by the respondent to induce any other person, partnership, or corporation to submit or not submit a bid for the purpose of restricting competition.

Signature

Date

APPENDIX B

ETHICS AND NO CONTACT POLICY ACKNOWLEDGEMENT

After issuance of this IFB, Proposers, or anyone acting directly or indirectly on behalf of an (Bidder) or a subcontractor (Subcontractor) shall not discuss or submit inquiries about this IFB in any way with any of The COMET's employees, agents, or elected or non-elected officials that are participating in The COMET (City of Columbia, Richland County, Richland County Legislative Delegation, Lexington County, Lexington County Legislative Delegation, City of Forest Acres, Town of Eastover, City of West Columbia, City of Cayce, Town of Springdale, Town of Chapin, Town of Irmo) or a member of the Board of Directors, other than the Contracting Officer, **John Andoh**, jandoh@TheCOMETSC.gov. Any communication with the Contracting Officer must be in writing and submitted as required in this IFB. The foregoing restriction continues after a Contract has been executed. Violation of this restriction may result in disqualification of the Bidder for the award of the Contract, suspension or debarment, and may constitute a violation of the South Carolina Ethics Act. The prohibition contained herein does not apply to interviews with the Selection Committee, where such interviews are initiated by the Contracting Officer with a Bidder as provided in this IFB.

Signature

Date

APPENDIX C

THIS FORM IS TO BE COMPLETED BY ANY PROPOSER WISHING TO BE IDENTIFIED AS A DBE OR BY ANY PROPOSER WISHING TO IDENTIFY DBE PARTICIPATION IN ITS BID.

SCHEDULE OF DISADVANTAGED BUSINESS ENTERPRISE (DBE) PARTICIPATION

This Contract is subject to the requirements of Title 49, Code of Federal Regulations, Part 26, *Participation by Disadvantaged Business Enterprises in Department of Transportation Financial Assistance Programs*. The national goal for participation of Disadvantaged Business Enterprises (DBE) is 10%. The COMET's overall goal for DBE participation is 5%. **A separate Contract goal of 10% has been established for this Contract.**

The Contractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this Contract. The Contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of this DOT-assisted Contract. Failure by the Contractor to carry out these requirements is a material breach of this Contract, which may result in the termination of this Contract or such other remedy as The COMET deems appropriate. Each subcontract the Contractor signs with a subcontractor must include the assurance in this paragraph (*see* 49 CFR 26.13(b)).

Since DBE participation is encouraged, if Bidder submit DBE participants, Proposers are required to document sufficient DBE participation to meet these goals or, alternatively, document adequate good faith efforts to do so, as provided for in 49 CFR 26.53. Award of this Contract is conditioned on submission of the following **concurrent with and accompanying an initial Qualifications Statement**:

- The names and addresses of DBE Proposers that will participate in this Contract;
- A description of the work each DBE will perform;
- The dollar amount of the participation of each DBE Bidder participating;
- Written documentation of the Bidder's commitment to use a DBE subcontractor whose participation it submits to meet the Contract goal;
- Written confirmation from the DBE that it is participating in the Contract as provided in the prime Contractor's commitment; and
- If the Contract goal is not met, evidence of good faith efforts to do so.

Proposers must present the information required above **as a matter of responsiveness with initial Qualifications Statement**. (*see* 49 CFR 26.53(3)). The successful Bidder will be required to report its DBE participation obtained through race-neutral means throughout the period of performance.

The Contractor is required to pay its subcontractors performing work related to this Contract for satisfactory performance of that work no later than 30 days after the Contractor's receipt of payment for that work from The COMET. In addition, **the Contractor may not hold retainage from its subcontractors**.

The Contractor must promptly notify The COMET, whenever a DBE subcontractor performing work related to this Contract is terminated or fails to complete its work, and must make good faith efforts to engage another DBE subcontractor to perform at least the same amount of work. The Contractor may not terminate any DBE subcontractor and perform that work through its own forces or those of an affiliate without prior written consent of The COMET.

If a Bidder is a DBE or if a proposer intends to utilize DBE Proposers in the development, manufacture, or delivery of goods or services or as a joint venture under this proposal, the following schedule must be completed:

The _____ will utilize the following:
(name of Bidder)

DBE Bidder(s) in the development, manufacture, or delivery of goods or services or as a joint venture under this proposal:

<u>Item # and Description</u>	<u>Name of DBE Bidder</u>	<u>Type of Work or Parts to be Used/Performed</u>	<u>% of Proposal Attributable to DBE</u>
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- 1.
- 2.
- 3.
- 4.
- 5.

Total % of Proposal Price Attributable to DBE:

Signature of Bidder:

Date:

APPENDIX D

REQUIRED FEDERAL CLAUSES ACKNOWLEDGEMENT

As a construction project over \$ 2,000.00, the following Federal Clauses are required for this procurement:

- NO FEDERAL GOVERNMENT OBLIGATION to THIRD PARTIES
- FALSE STATEMENTS or CLAIMS CIVIL and CRIMINAL FRAUD
- ACCESS to THIRD PARTY CONTRACT RECORDS and REPORTS
- CHANGES TO FEDERAL REQUIREMENTS
- TERMINATION
- CIVIL RIGHTS REQUIREMENTS
- SPECIAL DOL EEO CLAUSE
- DISADVANTAGED BUSINESS ENTERPRISE (DBE) REQUIREMENTS
- INCORPORATION OF FEDERAL TRANSIT ADMINISTRATION (FTA) TERMS
- GOVERNMENT-WIDE DEBARMENT AND SUSPENSION
- BUY AMERICA – Requires its own certification of compliance or noncompliance
- BREACHES AND DISPUTE RESOLUTION
- LOBBYING
- CLEAN AIR
- CLEAN WATER
- DAVIS-BACON AND COPELAND ANTI-KICKBACK ACTS
- CONTRACT WORK HOURS AND SAFETY STANDARDS ACT
- BOND REQUIREMENT (Construction)
- SEISMIC SAFETY
- ENERGY CONSERVATION REQUIREMENTS
- ADA ACCESS REQUIREMENTS
- VETERANS EMPLOYMENT
- PROMPT PAY

I have carefully examined the clauses listed above and included on the following pages and have informed myself thoroughly regarding any and all conditions and requirements of them. Any additional information that is requested in the IFB is attached hereto. This certification will serve as the acknowledge of all of the federally required clauses unless otherwise noted.

Company

Address

City/State/Zip Code

Authorized Signature

Typed/Printed Name

Title

Phone

Date

NO FEDERAL GOVERNMENT OBLIGATION TO THIRD PARTIES

The Recipient (The COMET) and Contractor acknowledge and agree that, notwithstanding any concurrence by the Federal Government in or approval of the solicitation or award of the underlying Contract, absent the express written consent by the Federal Government, the Federal Government is not a party to this Contract and shall not be subject to any obligations or liabilities to the Recipient, Contractor or any other party (whether or not a party to that Contract) pertaining to any matter resulting from the underlying Contract. The Contractor agrees to include the above clause in each subcontract financed in whole or in part with Federal assistance provided by the FTA. It is further agreed that the clause shall not be modified, except to identify the subcontractor who will be subject to its provisions.

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FALSE STATEMENTS OR CLAIMS CIVIL AND CRIMINAL FRAUD

31 U.S.C. 3801 et seq.

49 CFR Part 31 18 U.S.C. 1001

49 U.S.C. 5307

The Contractor acknowledges that the provisions of the Program Fraud Civil Remedies Act of 1986, as amended, 31 U.S.C. § 3801 et seq. and U.S. DOT regulations, "Program Fraud Civil Remedies," 49 C.F.R. Part 31, apply to its actions pertaining to this Project. Upon execution of the underlying contract, the Contractor certifies or affirms the truthfulness and accuracy of any statement it has made, it makes, it may make, or causes to be made, pertaining to the underlying contract or the FTA assisted project for which this contract work is being performed. In addition to other penalties that may be applicable, the Contractor further acknowledges that if it makes, or causes to be made, a false, fictitious, or fraudulent claim, statement, submission, or certification, the Federal Government reserves the right to impose the penalties of the Program Fraud Civil Remedies Act of 1986 on the Contractor to the extent the Federal Government deems appropriate.

The Contractor also acknowledges that if it makes, or causes to be made, a false, fictitious, or fraudulent claim, statement, submission, or certification to the Federal Government under a contract connected with a project that is financed in whole or in part with Federal assistance originally awarded by FTA under the authority of 49 U.S.C. § 5307, the Government reserves the right to impose the penalties of 18 U.S.C. § 1001 and 49 U.S.C. § 5307(n)(1) on the Contractor, to the extent the Federal Government deems appropriate.

The Contractor agrees to include the above two clauses in each subcontract financed in whole or in part with Federal assistance provided by FTA. It is further agreed that the clauses shall not be modified, except to identify the subcontractor who will be subject to the provisions of the clauses.

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ACCESS TO THIRD PARTY CONTRACT RECORDS AND REPORTS

49 U.S.C. 5325
18 CFR 18.36 (i)
49 CFR 633.17

a. Record Retention.

The Contractor will retain and will require its subcontractors of all tiers to retain, complete and readily accessible records related in whole or in part to the contract, including, but not limited to, data, documents, reports, statistics, sub-agreements, leases, subcontracts, arrangements, other third-party agreements of any type, and supporting materials related to those records.

b. Retention Period.

The Contractor agrees to comply with the record retention requirements in accordance with 2 C.F.R. § 200.333. The Contractor shall maintain all books, records, accounts and reports required under this Contract for a period of at not less than three (3) years after the date of termination or expiration of this Contract, except in the event of litigation or settlement of claims arising from the performance of this Contract, in which case records shall be maintained until the disposition of all such litigation, appeals, claims or exceptions related thereto.

c. Access to Records.

The Contractor agrees to provide sufficient access to FTA and its contractors to inspect and audit records and information related to performance of this contract as reasonably may be required.

d. Access to the Sites of Performance.

The Contractor agrees to permit FTA and its contractors' access to the sites of performance under this contract as reasonably may be required.

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CHANGES TO FEDERAL REQUIREMENTS

49 CFR Part 18

Contractor shall at all times comply with all applicable FTA regulations, policies, procedures and directives, including without limitation those listed directly or by reference in the Master Agreement between The COMET and FTA, as they may be amended or promulgated from time to time during the term of this Contract. Contractor's failure to so comply shall constitute a material breach of this Contract.

TERMINATION

49 U.S.C. Part 18

FTA Circular 4220.1F

Termination for Convenience (General Provision)

The COMET may terminate this Contract, in whole or in part, at any time by written notice to the Contractor when it is in The COMET's best interest. The Contractor shall be paid its costs, including contract close-out costs, and profit on work performed up to the time of termination. The Contractor shall promptly submit its termination claim to The COMET to be paid the Contractor. If the Contractor has any property in its possession belonging to The COMET, the Contractor will account for the same, and dispose of it in the manner The COMET directs.

Termination for Default - Breach or Cause (General Provision)

If the Contractor does not deliver supplies in accordance with the contract delivery schedule, or if the contract is for services, the Contractor fails to perform in the manner called for in the contract, or if the Contractor fails to comply with any other provisions of the Contract, The COMET may terminate this contract for default. Termination shall be affected by serving a Notice of Termination on the Contractor setting forth the manner in which the Contractor is in default. The Contractor will be paid only the contract price for supplies delivered and accepted, or services performed in accordance with the manner of performance set forth in the Contract. If it is later determined by The COMET that the Contractor had an excusable reason for not performing, such as a strike, fire, or flood, events which are not the fault of or are beyond the control of the Contractor, The COMET, after setting up a new delivery of performance schedule, may allow the Contractor to continue work, or treat the termination as a Termination for Convenience.

Opportunity to Cure (General Provision)

The COMET, in its sole discretion may, in the case of a termination for breach or default, allow the Contractor 10 days in which to cure the defect. In such case, the Notice of Termination will state the time period in which cure is permitted and other appropriate conditions. If Contractor fails to remedy to The COMET's satisfaction the breach or default of any of the terms, covenants, or conditions of this Contract within 10 days after receipt by Contractor of written notice from The COMET setting forth the nature of said breach or default, The COMET shall have the right to terminate the Contract without any further obligation to Contractor. Any such termination for default shall not in any way operate to preclude The COMET from also pursuing all available remedies against Contractor and its sureties for said breach or default. Waiver of Remedies for any Breach In the event that The COMET elects to waive its remedies for any breach by Contractor of any covenant, term or condition of this Contract, such waiver by The COMET shall not limit The COMET's remedies for any succeeding breach of that or of any other covenant, term, or condition of this Contract.

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CIVIL RIGHTS REQUIREMENTS

29 U.S.C. § 623, 42 U.S.C. § 2000

42 U.S.C. § 6102, 42 U.S.C. § 12112

42 U.S.C. § 12132, 49 U.S.C. § 5332

29 CFR Part 1630, 41 CFR Parts 60 et seq.

Nondiscrimination - In accordance with Title VI of the Civil Rights Act, as amended, 42 U.S.C. § 2000d, section 303 of the Age Discrimination Act of 1975, as amended, 42 U.S.C. § 6102, section 202 of the Americans with Disabilities Act of 1990, 42 U.S.C. § 12132, and Federal transit law at 49 U.S.C. § 5332, the Contractor agrees that it will not discriminate against any employee or applicant for employment because of race, color, creed, national origin, sex, age, or disability. In addition, the Contractor agrees to comply with applicable Federal implementing regulations and other implementing requirements FTA may issue.

Equal Employment Opportunity - The following equal employment opportunity requirements apply to the underlying Contract:

Race, Color, Creed, National Origin, Sex - In accordance with Title VII of the Civil Rights Act, as amended, 42 U.S.C. § 2000e, and Federal Transit Act 49 U.S.C. § 5332, the Contractor agrees to comply with all applicable equal employment opportunity requirements of U.S. Department of Labor (U.S. DOL) regulations, "Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor," 41 C.F.R. Parts 60 et seq., (which implement Executive Order No. 11246, "Equal Employment Opportunity," as amended by Executive Order No. 11375, "Amending Executive Order 11246 Relating to Equal Employment Opportunity," 42 U.S.C. § 2000e note), and with any applicable Federal statutes, executive orders, regulations, and Federal policies that may in the future affect construction activities undertaken in the course of the Project. The Contractor agrees to take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, creed, national origin, sex, or age. Such action shall include, but not be limited to, the following: employment, upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. In addition, the Contractor agrees to comply with any implementing requirements FTA may issue.

Age - In accordance with section 4 of the Age Discrimination in Employment Act of 1967, as amended, 29 U.S.C. §§ 623 and Federal transit law at 49 U.S.C. § 5332, the Contractor agrees to refrain from discrimination against present and prospective employees for reason of age. In addition, the Contractor agrees to comply with any implementing requirements FTA may issue.

Disabilities - In accordance with section 102 of the Americans with Disabilities Act, as amended, 42 U.S.C. § 12112, the Contractor agrees that it will comply with the requirements of U.S. Equal Employment Opportunity Commission, "Regulations to Implement the Equal Employment Provisions of the Americans with Disabilities Act," 29 C.F.R. Part 1630, pertaining to employment

of persons with disabilities. In addition, the Contractor agrees to comply with any implementing requirements FTA may issue.

The Contractor also agrees to include these requirements in each subcontract financed in whole or in part with Federal assistance provided by FTA, modified only if necessary to identify the affected parties.

SPECIAL DOL EEO CLAUSE

The following notice shall be included in, and shall be a part of, all solicitations for offers and bids on all Federal and federally assisted construction contracts or subcontracts in excess of \$10,000 to be performed in geographical areas designated by the Director pursuant to §60-4.6 of this part (see 41 CFR 60-4.2(a))

NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY (EXECUTIVE ORDER 11246)

1. The Offeror's or Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Specifications" set forth herein.
2. The goals and timetables for minority and female participation, expressed in percentage terms for the Contractor's aggregate workforce in each trade on all construction work in the covered area, are as follows:

Time-tables	Goals for minority participation for each trade	Goals for female participation in each trade
	2%	2%

These goals are applicable to all the Contractor's construction work (whether or not it is Federal or federally assisted) performed in the covered area. If the contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the contractor also is subject to the goals for both its federally involved and nonfederally involved construction.

The Contractor's compliance with the Executive Order and the regulations in 41 CFR part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3(a), and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, the Executive Order and the regulations in 41 CFR part 60-4. Compliance with the goals will be measured against the total work hours performed.

3. The Contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within 10 working days of award of any construction subcontract in excess of \$10,000 at any tier for construction work under the contract resulting from this solicitation. Details available here: <https://www.dol.gov/ofccp/askofccp.htm>. The notification shall list the name, address and telephone number of the subcontractor; employer identification number of the subcontractor; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the subcontract is to be performed.

4. As used in this Notice, and in the contract resulting from this solicitation, the “covered area” is Richland County, Columbia, SC.

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DISADVANTAGED BUSINESS ENTERPRISE (DBE) REQUIREMENTS

49 CFR Part 26

This Contract is subject to the requirements of Title 49, Code of Federal Regulations, Part 26, *Participation by Disadvantaged Business Enterprises in Department of Transportation Financial Assistance Programs*. The national goal for participation of Disadvantaged Business Enterprises (DBE) is 10%. The COMET’s overall goal for DBE participation is 5%. **A separate Contract goal of 10% has been established for this Contract.**

The Contractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this Contract. The Contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of this DOT-assisted contract. Failure by the Contractor to carry out these requirements is a material breach of this Contract, which may result in the termination of this Contract or such other remedy as The COMET deems appropriate. Each subcontract the Contractor signs with a subcontractor must include the assurance in this paragraph (*see* 49 CFR 26.13(b)).

Since DBE participation is encouraged, if Bidder submit DBE participants, Bidders are required to document sufficient DBE participation to meet these goals or, alternatively, document adequate good faith efforts to do so, as provided for in 49 CFR 26.53. Award of this Contract is conditioned on submission of the following **concurrent** with and accompanying an initial bid:

The names and addresses of DBE Proposers that will participate in this Contract;

A description of the work each DBE will perform;

The dollar amount of the participation of each DBE Proposer participating;

Written documentation of the Proposer’s commitment to use a DBE subcontractor whose participation it submits to meet the Contract goal;

Written confirmation from the DBE that it is participating in the Contract as provided in the prime Contractor's commitment; and

If the Contract goal is not met, evidence of good faith efforts to do so.

Bidders must present the information required above as a matter of responsiveness with initial bid (Appendix C). (see 49 CFR 26.53(3)). The successful Bidder will be required to report its DBE participation obtained through race-neutral means throughout the period of performance.

The Contractor is required to pay its subcontractors performing work related to this Contract for satisfactory performance of that work no later than 30 days after the Contractor's receipt of payment for that work from The COMET. In addition, **the Contractor may not hold retainage from its subcontractors.**

The Contractor must promptly notify The COMET, whenever a DBE subcontractor performing work related to this Contract is terminated or fails to complete its work, and must make good faith efforts to engage another DBE subcontractor to perform at least the same amount of work. The Contractor may not terminate any DBE subcontractor and perform that work through its own forces or those of an affiliate without prior written consent of The COMET.

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INCORPORATION OF FEDERAL TRANSIT ADMINISTRATION (FTA) TERMS

FTA Circular 4220.1F

The incorporation of Federal Transit Administration (FTA) terms has unlimited flow down.

Incorporation of FTA Terms - The preceding provisions include, in part, certain Standard Terms and Conditions required by DOT, whether or not expressly set forth in the preceding contract provisions. All contractual provisions required by USDOT, as set forth in the most current FTA Circular 4220, are hereby incorporated by reference. Anything to the contrary herein notwithstanding, all FTA mandated terms shall be deemed to control in the event of a conflict with other provisions contained in this Agreement. The Contractor shall not perform any act, fail to perform any act, or refuse to comply with any The COMET requests which would cause The COMET to be in violation of the FTA terms and conditions.

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GOVERNMENT-WIDE DEBARMENT AND SUSPENSION (NONPROCUREMENT)

Applies to Contracts Valued over \$25,000

49 CFR Part 29

Executive Order 12549

This Contract is a covered transaction for purposes of 49 CFR Part 29. As such, the Contractor is required to verify that none of the Contractor, its principals, as defined at 49 CFR 29.995, or affiliates, as defined at 49 CFR 29.905, are excluded or disqualified as defined at 49 CFR 29.940 and 29.945. The Contractor is required to comply with 49 CFR 29, Subpart C and must include the requirement to comply with 49 CFR 29, Subpart C in any lower tier covered transaction it enters into. By signing and submitting its bid or proposal, the Bidder certifies as follows: The certification in this clause is a material representation of fact relied upon by The COMET. If it is later determined that the Bidder or proposer knowingly rendered an erroneous certification, in addition to remedies available to The COMET, the Federal Government may pursue available remedies, including but not limited to suspension and/or debarment. The Bidder or Proposer agrees to comply with the requirements of 49 CFR 29, Subpart C while this offer is valid and throughout the period of any Contract that may arise from this offer. The Bidder further agrees to include a provision requiring such compliance in its lower tier covered transactions.

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Buy America - The Contractor agrees to comply with 49 U.S.C. 5323(j) and 49 C.F.R. Part 661, which provide that Federal funds may not be obligated unless steel, iron, and manufactured products used in FTA-funded projects are produced in the United States, unless a waiver has been granted by FTA or the product is subject to a general waiver. General waivers are listed in 49 C.F.R. 661.7, and include final assembly in the United States for 15 passenger vans and 15 passenger wagons produced by Chrysler Corporation, and microcomputer equipment and software. Separate requirements for rolling stock are set out at 49 U.S.C. 5323(j)(2)(C) and 49 C.F.R. 661.11. Rolling stock must be assembled in the United States and have a 70 percent domestic content.

A bidder or offeror must submit to the FTA recipient the appropriate Buy America certification (below) with all bids or offers on FTA-funded contracts, except those subject to a general waiver. Bids or offers that are not accompanied by a completed Buy America certification must be rejected as nonresponsive. This requirement does not apply to lower tier subcontractors.

Certification requirement for procurement of steel, iron, or manufactured products.

Certificate of Compliance with 49 U.S.C. 5323(j)(1)

The bidder or offeror hereby certifies that it will meet the requirements of 49 U.S.C. 5323(j)(1) and the applicable regulations in 49 C.F.R. Part 661.5.

Date: _____

Signature: _____

Company _____

Name: _____

Title: _____

Certificate of Non-Compliance with 49 U.S.C. 5323(j)(1)

The bidder or offeror hereby certifies that it cannot comply with the requirements of 49 U.S.C. 5323(j)(1) and 49 C.F.R. 661.5, but it may qualify for an exception pursuant to 49 U.S.C. 5323(j)(2)(A), 5323(j)(2)(B), or 5323(j)(2)(D), and 49 C.F.R. 661.7.

Date: _____

Signature: _____

Company Name: _____

Title: _____

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BREACHES AND DISPUTE RESOLUTION

49 CFR Part 18

FTA Circular 4220.IE

Disputes - Disputes arising in the performance of this Contract which are not resolved by agreement of the parties shall be decided in writing by the authorized representative of The COMET's Contracting Officer. This decision shall be final and conclusive unless within ten (10) days from the date of receipt of its copy, the Contractor mails or otherwise furnishes a written appeal to The COMET's Contracting Officer. In connection with any such appeal, the Contractor shall be afforded an opportunity to be heard and to offer evidence in support of its position. The decision of The COMET Contractor Officer shall be binding upon the Contractor and the Contractor shall abide be the decision.

Performance During Dispute - Unless otherwise directed by The COMET, Contractor shall continue performance under this Contract while matters in dispute are being resolved.

Claims for Damages - Should either party to the Contract suffer injury or damage to person or property because of any act or omission of the party or of any of his employees, agents or others for whose acts is legally liable, a claim for damages therefor shall be made in writing to such other party within a reasonable time after the first observance of such injury of damage.

Remedies - Unless this contract provides otherwise, all claims, counterclaims, disputes and other matters in question between The COMET and the Contractor arising out of or relating to this agreement or its breach will be decided by arbitration if the parties mutually agree, or in a court of competent jurisdiction within the State in which The COMET is located.

Rights and Remedies - The duties and obligations imposed by the Contract Documents and the rights and remedies available thereunder shall be in addition to and not a limitation of any duties, obligations, rights and remedies otherwise imposed or available by law. No action or failure to act by The COMET, Architect or Contractor shall constitute a waiver of any right or duty afforded any of them under the Contract, nor shall any such action or failure to act constitute an approval of or acquiescence in any breach thereunder, except as may be specifically agreed in writing.

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LOBBYING

31 U.S.C. 1352
49 CFR Part 19
49 CFR Part 20

The Lobbying requirements mandate the maximum flow down, pursuant to Byrd Anti-Lobbying Amendment, 31 U.S.C. § 1352(b)(5) and 49 C.F.R. Part 19, Appendix A, Section 7. Byrd Anti-Lobbying Amendment, 31 U.S.C. 1352, as amended by the Lobbying Disclosure Act of 1995, P.L. 104-65 [to be codified at 2 U.S.C. § 1601, et seq.] - Contractors who apply or bid for an award of \$100,000 or more shall file the certification required by 49 CFR part 20, "New Restrictions on Lobbying." Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of a Federal agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant or any other award covered by 31 U.S.C. 1352. Each tier certifies to the tier above that it will not and has not taken any action involving the Project or the Underlying Agreement for the Project, including any award, extension, or modification. Each tier shall also disclose the name of any registrant under the Lobbying Disclosure Act of 1995 who has made lobbying contacts on its behalf with non-Federal funds with respect to that Federal contract, grant or award covered by 31 U.S.C. 1352. Such disclosures are forwarded from tier.

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CLEAN AIR

42 U.S.C. 7401 et seq
40 CFR 15.61
49 CFR Part 18

(1) The Contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act, as amended, 42 U.S.C. §§ 7401 et seq. The Contractor agrees to report each violation to the Purchaser and understands and agrees that the Purchaser will, in turn, report each violation as required to assure notification to FTA and the appropriate EPA Regional Office.

(2) The Contractor also agrees to include these requirements in each subcontract exceeding \$100,000 financed in whole or in part with Federal assistance provided by FTA.

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CLEAN WATER REQUIREMENTS

33 U.S.C 1251

Clean Water - (1) The Contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Federal Water Pollution Control Act, as amended, 33 U.S.C. 1251 et seq. – The Contractor agrees to report each violation to the Contractor and understands and agrees that the Contractor will, in turn, report each violation as required to assure notification to FTA and the appropriate EPA Regional Office.

(2) The Contractor also agrees to include these requirements in each subcontract exceeding \$100,000 financed in whole or in part with Federal assistance provided by FTA.

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DAVIS-BACON AND COPELAND ANTI-KICKBACK ACTS

The Davis-Bacon and Copeland Acts are codified at 40 USC 3141, *et seq.* and 18 USC 874. The Acts apply to grantee construction contracts and subcontracts that “at least partly are financed by a loan or grant from the Federal Government.” 40 USC 3145(a), 29 CFR 5.2(h), 49 CFR 18.36(i)(5). The Acts apply to any construction contract over \$2,000. 40 USC 3142(a), 29 CFR 5.5(a). ‘Construction,’ for purposes of the Acts, includes “actual construction, alteration and/or repair, including painting and decorating.” 29 CFR 5.5(a). The requirements of both Acts are incorporated into a single clause (*see* 29 CFR 3.11) enumerated at 29 CFR 5.5(a) and reproduced below.

Davis-Bacon and Copeland Anti-Kickback Acts

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

Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the Contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph (1)(iv) of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR Part 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classifications and wage rates conformed under paragraph (1)(ii) of this section) and the Davis- Bacon poster (WH-1321) shall be posted at all times by the Contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

(ii)(A) The Contracting Officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The Contracting Officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

- (1) Except with respect to helpers as defined as 29 CFR 5.2(n)(4), the work to be performed by the classification requested is not performed by a classification in the wage determination; and
- (2) The classification is utilized in the area by the construction industry; and
- (3) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination; and
- (4) With respect to helpers as defined in 29 CFR 5.2(n)(4), such a classification prevails in the area in which the work is performed.

(B) If the Contractor and the laborers and mechanics to be employed in the classification (if

known), or their representatives, and the Contracting Officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the Contracting Officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the Contracting Officer or will notify the Contracting Officer within the 30-day period that additional time is necessary.

(C) In the event the Contractor, the laborers or mechanics to be employed in the classification or their representatives, and the Contracting Officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the Contracting Officer shall refer the questions, including the views of all interested parties and the recommendation of the Contracting Officer, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the Contracting Officer or will notify the Contracting Officer within the 30-day period that additional time is necessary.

(ii) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs (a)(1)(ii) (B) or (C) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

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

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

(v)(A) The Contracting Officer shall require that any class of laborers or mechanics which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The Contracting Officer shall approve an additional classification and wage rate and fringe benefits therefor only when the following criteria have been met:

(1) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(2) The classification is utilized in the area by the construction industry; and

(3) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(B) If the Contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the Contracting Officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the Contracting Officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the Contracting Officer or will notify the Contracting Officer within the 30-day period that additional time is necessary.

(C) In the event the Contractor, the laborers or mechanics to be employed in the classification or their representatives, and the Contracting Officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the Contracting Officer shall refer the questions, including the views of all interested parties and the recommendation of the Contracting Officer, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the Contracting Officer or will notify the Contracting Officer within the 30-day period that additional time is necessary.

(D) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs (a)(1)(v) (B) or (C) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

(2) **Withholding** - The COMET shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld from the Contractor under this contract or any other Federal contract with the same prime Contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime Contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the Contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work (or under the United States Housing Act of 1937 or under the Housing Act of 1949

in the construction or development of the project), all or part of the wages required by the contract, The COMET may, after written notice to the Contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

(3) **Payrolls and basic records** - (i) Payrolls and basic records relating thereto shall be maintained by the Contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work (or under the United States Housing Act of 1937, or under the Housing Act of 1949, in the construction or development of the project). Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the Contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

(ii)(A) The Contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to The COMET for transmission to the Federal Transit Administration. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under section 5.5(a)(3)(i) of Regulations, 29 CFR part 5. This information may be submitted in any form desired. Optional Form WH-347 is available for this purpose and may be purchased from the Superintendent of Documents (Federal Stock Number 029-005-00014-1), U.S. Government Printing Office, Washington, DC 20402. The prime Contractor is responsible for the submission of copies of payrolls by all subcontractors.

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

(1) That the payroll for the payroll period contains the information required to be maintained under section 5.5(a)(3)(i) of Regulations, 29 CFR part 5 and that such information is correct and complete;

(2) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;

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

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

(D) The falsification of any of the above certifications may subject the Contractor or sub-Contractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

(iii) The Contractor or subcontractor shall make the records required under paragraph (a)(3)(i) of this section available for inspection, copying, or transcription by authorized representatives of the Federal Transit Administration or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the Contractor or subcontractor fails to submit the required records or to make them available, the Federal agency may, after written notice to the Contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

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

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

(ii) Trainees - Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

In the event the Employment and Training Administration withdraws approval of a training program, the Contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

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

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

(6) **Subcontracts** - The Contractor or subcontractor shall insert in any subcontracts the clauses contained in 29 CFR 5.5(a)(1) through (10) and such other clauses as the Federal Transit Administration may by appropriate instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime Contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

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

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

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

(10) **Certification of Eligibility** - (i) By entering into this contract, the Contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the Contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(ii) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

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

CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

The Contract Work Hours and Safety Standards Act is codified at 40 USC 3701, *et seq.* The Act applies to grantee contracts and subcontracts “financed at least in part by loans or grants from the [Federal] Government.” 40 USC 3701(b)(1)(B)(iii) and (b)(2), 29 CFR 5.2(h), 49 CFR 18.36(i)(6). Although the original Act required its application in any construction contract over \$2,000 or non-construction contract to which the Act applied over \$2,500 (and language to that effect is still found in 49 CFR 18.36(i)(6)), the Act no longer applies to any “contract in an amount that is not greater than \$100,000.” 40 USC 3701(b)(3) (A)(iii).

The Act applies to construction contracts and, in very limited circumstances, non-construction projects that employ “laborers or mechanics on a public work.” These non-construction applications do not generally apply to transit procurements because transit procurements (to include rail cars and buses) are deemed “commercial items.” 40 USC 3707, 41 USC 403 (12). A grantee that contemplates entering into a contract to procure a developmental or unique item should consult counsel to determine if the Act applies to that procurement and that additional language required by 29 CFR 5.5(c) must be added to the basic clause below.

Contract Work Hours and Safety Standards

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

Violation; Liability for Unpaid Wages; Liquidated Damages - In the event of any violation of the clause set forth in paragraph (1) of this section the Contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such Contractor and subcontractor shall be liable to the United States for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1) of this section, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1) of this section.

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Bond Requirement (Construction)

For those construction or facility improvement contracts or subcontracts exceeding \$100,000, FTA may accept the bonding policy and requirements of the recipient, provided that they meet the minimum requirements for construction contracts as follows:

1. A bid guarantee from each bidder equivalent to five (5%) percent of the bid price. The "bid guarantees" shall consist of a firm commitment such as a bid bond, certified check, or other negotiable instrument accompanying a bid as assurance that the bidder will, upon acceptance of his bid, execute such contractual documents as may be required within the time specified.
2. A performance bond on the part to the Contractor for 100 percent of the contract price. A "performance bond" is one executed in connection with a contract to secure fulfillment of all the Contractor's obligations under such contract.
3. A payment bond on the part of the Contractor for 100 percent of the contract price. A "payment bond" is one executed in connection with a contract to assure payment, as required by law, of all persons supplying labor and material in the execution of the work provided for in the contract. Payment bond amounts required from Contractors are as follows:
 - (a) 50% of the contract price if the contract price is not more than \$1 million;
 - (b) 40% of the contract price if the contract price is more than \$1 million but not more than \$5 million; or
 - (c) \$ 2.5 million if the contract price is more than \$5 million.
4. A cash deposit, certified check or other negotiable instrument may be accepted by a grantee in lieu of performance and payment bonds, provided the grantee has established a procedure to assure that the interest of FTA is adequately protected. An irrevocable letter of credit would also satisfy the requirement for a bond.

Bid Security - A Bid Bond must be issued by a fully qualified surety company acceptable to The COMET and listed as a company currently authorized under 31 CFR, Part 223 as possessing a Certificate of Authority as described thereunder.

Rights Reserved - In submitting this Bid, it is understood and agreed by bidder that the right is reserved by The COMET to reject any and all bids, or part of any bid, and it is agreed that the Bid may not be withdrawn for a period of ninety (90) days subsequent to the opening of bids, without the written consent of The COMET.

It is also understood and agreed that if the undersigned bidder should withdraw any part or all of his bid within ninety (90) days after the bid opening without the written consent of The

COMET, shall refuse or be unable to enter into this Contract, as provided above, or refuse or be unable to furnish adequate and acceptable Performance Bonds and Labor and Material Payments Bonds, as provided above, or refuse or be unable to furnish adequate and acceptable insurance, as provided above, he shall forfeit his bid security to the extent of The COMET's damages occasioned by such withdrawal, or refusal, or inability to enter into an agreement, or provide adequate security therefor.

It is further understood and agreed that to the extent the defaulting bidder's Bid Bond, Certified Check, Cashier's Check, Treasurer's Check, and/or Official Bank Check (excluding any income generated thereby which has been retained by The COMET shall prove inadequate to fully recompense The COMET for the damages occasioned by default, then the undersigned bidder agrees to indemnify The COMET and pay over to The COMET the difference between the bid security and The COMET's total damages, so as to make The COMET whole.

The undersigned understands that any material alteration of any of the above or any of the material contained on this form, other than that requested, will render the bid unresponsive.

Performance and Payment Bonding Requirements (Construction)

The Contractor shall be required to obtain performance and payment bonds as follows:

(a) Performance bonds

1. The penal amount of performance bonds shall be 100 percent of the original contract price, unless The COMET determines that a lesser amount would be adequate for the protection of The COMET.
2. The COMET may require additional performance bond protection when a contract price is increased. The increase in protection shall generally equal 100 percent of the increase in contract price. The COMET may secure additional protection by directing the Contractor to increase the penal amount of the existing bond or to obtain an additional bond.

(b) Payment bonds

1. The penal amount of the payment bonds shall equal:
 - (i) Fifty percent of the contract price if the contract price is not more than \$1 million.
 - (ii) Forty percent of the contract price if the contract price is more than \$1 million but not more than \$5 million; or
 - (iii) Two and one half million if the contract price is more than \$5 million.
2. If the original contract price is \$5 million or less, the (Recipient) may require additional protection as required by subparagraph 1 if the contract price is increased.

Advance Payment Bonding Requirement

The Contractor may be required to obtain an advance payment bond if the contract contains an advance payment provision and a performance bond is not furnished. The COMET shall determine the amount of the advance payment bond necessary to protect The COMET.

Warranty of the Work and Maintenance Bonds

1. The Contractor warrants to The COMET, the Architect and/or Engineer that all materials and equipment furnished under this Contract will be of highest quality and new unless otherwise specified by The COMET, free from faults and defects and in conformance with the Contract Documents. All work not so conforming to these standards shall be considered defective. If required by the project, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment.

2. The Work furnished must be of first quality and the workmanship must be the best obtainable in the various trades. The Work must be of safe, substantial and durable construction in all respects. The Contractor hereby guarantees the Work against defective materials or faulty workmanship for a minimum period of one (1) year after Final Payment by The COMET and shall replace or repair any defective materials or equipment or faulty workmanship during the period of the guarantee at no cost to The COMET. As additional security for these guarantees, the Contractor shall, prior to the release of Final Payment, furnish separate Maintenance (or Guarantee) Bonds in form acceptable to The COMET written by the same corporate surety that provides the Performance Bond and Labor and Material Payment Bond for this Contract. These bonds shall secure the Contractor's obligation to replace or repair defective materials and faulty workmanship for a minimum period of one (1) year after Final Payment and shall be written in an amount equal to ONE HUNDRED PERCENT (100%) of the CONTRACT SUM, as adjusted (if at all).

Withholding for Unpaid Wages and Liquidated Damages – The COMET shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the Contractor or subcontractor under any such contract or any other Federal contract with the same prime Contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime Contractor, such sums as may be determined to be necessary to satisfy any liabilities of such Contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2) of this section.

Subcontracts - The Contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraphs (1) through (4) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime Contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1) through (4) of this section.

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SEISMIC SAFETY REQUIREMENTS

42 U.S.C. 7701 et seq. 49

CFR Part 41

Seismic Safety - The Contractor agrees that any new building or addition to an existing building will be designed and constructed in accordance with the standards for Seismic Safety required in Department of Transportation Seismic Safety Regulations 49 CFR Part 41 and will certify to compliance to the extent required by the regulation. The Contractor also agrees to ensure that all work performed under this contract including work performed by a subcontractor is in compliance with the standards required by the Seismic Safety Regulations and the certification of compliance issued on the project.

ENERGY CONSERVATION REQUIREMENTS

42 U.S.C. 6321 et seq.

49 CFR Part 18

Energy Conservation - The Contractor agrees to comply with mandatory standards and policies relating to energy efficiency which are contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act.

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ADA ACCESS REQUIREMENTS

49 U.S.C. § 5301, 29 U.S.C. § 794, 42 U.S.C. § 12101

The Contractor shall comply with 49 USC 5301(d), stating Federal policy that the elderly and persons with disabilities have the same rights as other persons to use mass transportation services and facilities and that special efforts shall be made in planning and designing those services and facilities to implement that policy. Contractor shall also comply with all applicable requirements of Sec. 504 of the Rehabilitation Act (1973), as amended, 29 USC 794, which prohibits discrimination on the basis of handicaps, and the Americans with Disabilities Act of 1990 (ADA), as amended, 42 USC 12101 et seq., which requires that accessible facilities and services be made available to persons with disabilities, including any subsequent amendments thereto.

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VETERANS EMPLOYMENT

49 U.S.C. 5325 (k)

Veterans Employment. As provided by 49 U.S.C. § 5325(k):

- a. To the extent practicable, Contractor agrees that it:
 - 1. Will give a hiring preference to veterans (as defined in 5 U.S.C. § 2108), who have the skills and abilities required to perform construction work required under a third party

contract in connection with a capital project supported with funds made available or appropriated for 49 U.S.C. chapter 53, and

2. Will not require an employer to give a preference to any veteran over any equally qualified applicant who is a member of any racial or ethnic minority, female, an individual with a disability, or a former employee, and

b. Contractor also assures that its sub-recipients will:

1. Will give a hiring preference to veterans (as defined in 5 U.S.C. § 2108), who have the skills and abilities required to perform construction work required under a third party contract in connection with a capital project supported with funds made available or appropriated for 49 U.S.C. chapter 53, to the extent practicable, and
2. Will not require an employer to give a preference to any veteran over any equally qualified applicant who is a member of any racial or ethnic minority, female, an individual with a disability, or a former employee.

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Prompt Payment to Subcontractors

49 CFR §26.29

Requires prime contractors to pay subcontractors for satisfactory performance of their contracts no later 30 days from receipt of each payment that the grantee makes to the prime Contractor. This clause must also require the prompt return of retainage payments from the prime Contractor to the subcontractor within 30 days after the subcontractor's work is satisfactorily completed.

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BID FORM

Central Midlands Regional Transit
 Authority (The COMET)

Architect Project # 02-006.12

Bidder listed on the attached cover sheet here by submits its offer as indicated below in accordance with all provisions contained in the IFB. If this bid is accepted by The COMET, this document and the referenced bid documents shall constitute the entire agreement between the parties, and no changes will be recognized unless the parties agree in writing.

INCLUDE ALL COST IN THE SCOPE OF SERVICES.

LINE ITEM	PAY ITEM	COST
1	Demolition& Removal of Debris	
2	Masonry	
3	Install Doors and Frames	
4	Install Interior Room Finishes	
5	Install Fire Suppression	
6	HVAC Installation/ Ducting	
7	Electrical Wiring / Termination	
	BASE BID TOTAL:	
8	ALTERNATE 1: HVAC Unit	
	TOTAL WITH HVAC UNIT:	

BASE BID TOTAL AMOUNT (\$): _____

BASE BID TOTAL AMOUNT IN WORDS: _____

BID WITH HVAC UNIT (\$): _____

BID WITH HVAC UNIT IN WORDS: _____

Each offer shall be made in accordance with the specifications or approved equals as described in the IFB herein. I have carefully examined the IFB and have informed myself thoroughly regarding any and all conditions and requirements of the solicitation. Any additional information that is requested in the IFB is attached hereto.

 Company

 AuthorizedSignature

**SECTION 00 0110
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A. 00 0110 - Table of Contents

SPECIFICATIONS

2.01 DIVISION 02 -- EXISTING CONDITIONS

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2.03 DIVISION 08 -- OPENINGS

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2.04 DIVISION 09 -- FINISHES

A. 09 2900 - Gypsum Board

B. 09 5123 - Acoustical Tile Ceiling

C. 09 6519 - Resilient Base and Accessories

D. 09 6519 - Resilient Tile Flooring

E. 09 9123 - Interior Painting

**SECTION 02 4100
DEMOLITION**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Building demolition excluding removal of hazardous materials and toxic substances.
- B. Selective demolition of built site elements.
- C. Selective demolition of building elements for alteration purposes.
- D. Abandonment and removal of existing utilities and utility structures.

1.02 RELATED REQUIREMENTS

- A. Section 01 1000 - Summary: Limitations on Contractor's use of site and premises.
- B. Section 01 1000 - Summary: Description of items to be salvaged or removed for re-use by Contractor.
- C. Section 01 5000 - Temporary Facilities and Controls: Site fences, security, protective barriers, and waste removal.
- D. Section 01 6000 - Product Requirements: Handling and storage of items removed for salvage and relocation.
- E. Section 01 7000 - Execution and Closeout Requirements: Project conditions; protection of bench marks, survey control points, and existing construction to remain; reinstallation of removed products; temporary bracing and shoring.
- F. Section 01 7419 - Construction Waste Management and Disposal: Limitations on disposal of removed materials; requirements for recycling.
- G. Section 31 2000 - Earth Moving

PART 2 EXECUTION

2.01 SCOPE

- A. Remove paving and curbs as required to accomplish new work.
- B. Remove other items indicated, for salvage, relocation, recycling, and [_____].
- C. Fill excavations, open pits, and holes in ground areas generated as result of removals, using specified fill; compact fill as specified in Section 31 2200.

2.02 GENERAL PROCEDURES AND PROJECT CONDITIONS

- A. Comply with applicable codes and regulations for demolition operations and safety of adjacent structures and the public.
 - 1. Obtain required permits.
 - 2. Take precautions to prevent catastrophic or uncontrolled collapse of structures to be removed; do not allow worker or public access within range of potential collapse of unstable structures.
 - 3. Provide, erect, and maintain temporary barriers and security devices.
 - 4. Conduct operations to minimize effects on and interference with adjacent structures and occupants.
 - 5. Do not close or obstruct roadways or sidewalks without permit.
 - 6. Conduct operations to minimize obstruction of public and private entrances and exits; do not obstruct required exits at any time; protect persons using entrances and exits from removal operations.
 - 7. Obtain written permission from owners of adjacent properties when demolition equipment will traverse, infringe upon or limit access to their property.
- B. Do not begin removal until receipt of notification to proceed from Owner.
- C. Protect existing structures and other elements that are not to be removed.

1. Provide bracing and shoring.
 2. Prevent movement or settlement of adjacent structures.
 3. Stop work immediately if adjacent structures appear to be in danger.
- D. Partial Removal of Paving and Curbs: Neatly saw cut at right angle to surface.

2.03 EXISTING UTILITIES

- A. Coordinate work with utility companies; notify before starting work and comply with their requirements; obtain required permits.
- B. Protect existing utilities to remain from damage.
- C. Do not disrupt public utilities without permit from authority having jurisdiction.
- D. Do not close, shut off, or disrupt existing life safety systems that are in use without at least 7 days prior written notification to Owner.
- E. Do not close, shut off, or disrupt existing utility branches or take-offs that are in use without at least 3 days prior written notification to Owner.
- F. Locate and mark utilities to remain; mark using highly visible tags or flags, with identification of utility type; protect from damage due to subsequent construction, using substantial barricades if necessary.
- G. Remove exposed piping, valves, meters, equipment, supports, and foundations of disconnected and abandoned utilities.

2.04 SELECTIVE DEMOLITION FOR ALTERATIONS

- A. Drawings showing existing construction and utilities are based on casual field observation and existing record documents only.
 1. Verify that construction and utility arrangements are as indicated.
 2. Report discrepancies to Architect before disturbing existing installation.
 3. Beginning of demolition work constitutes acceptance of existing conditions that would be apparent upon examination prior to starting demolition.
- B. Remove existing work as indicated and as required to accomplish new work.
 1. Remove items indicated on drawings.
- C. Services (Including but not limited to HVAC, Plumbing, Fire Protection, Electrical, Telecommunications, and [_____]): Remove existing systems and equipment as indicated.
 1. Maintain existing active systems that are to remain in operation; maintain access to equipment and operational components.
 2. Where existing active systems serve occupied facilities but are to be replaced with new services, maintain existing systems in service until new systems are complete and ready for service.
 3. Verify that abandoned services serve only abandoned facilities before removal.
 4. Remove abandoned pipe, ducts, conduits, and equipment, including those above accessible ceilings; remove back to source of supply where possible, otherwise cap stub and tag with identification.
- D. Protect existing work to remain.
 1. Prevent movement of structure; provide shoring and bracing if necessary.
 2. Perform cutting to accomplish removals neatly and as specified for cutting new work.
 3. Repair adjacent construction and finishes damaged during removal work.
 4. Patch as specified for patching new work.

2.05 DEBRIS AND WASTE REMOVAL

- A. Remove debris, junk, and trash from site.
- B. Leave site in clean condition, ready for subsequent work.

C. Clean up spillage and wind-blown debris from public and private lands.

END OF SECTION

**SECTION 05 4000
COLD-FORMED METAL FRAMING**

PART 1 GENERAL

1.01 RELATED DOCUMENTS

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

1.02 SUMMARY

- A. This Section includes the following:
 - 1. Interior load-bearing steel-stud walls.
 - 2. Channel support framing system
 - 3. Field surface preparation and field touch-up.
- B. Related Sections: The following Sections contain requirements that relate to this Section:
 - 1. Division 09 Section "Gypsum Board" for gypsum board and nonload-bearing metal-stud framing and ceiling-suspension assemblies.

1.03 PERFORMANCE REQUIREMENTS

- A. AISI "Specifications": Calculate structural characteristics of cold-formed metal framing according to AISI's "Specification for the Design of Cold-Formed Steel Structural Members" and the following:
 - 1. Center for Cold-Formed Steel Structures (CCFSS) Technical Bulletin, Vol. 2, No. 1, February 1993 "AISI Specification Provisions for Screw Connections."
- B. Structural Performance: Engineer, fabricate, and erect cold-formed metal framing to withstand design loads within limits and under conditions required.
 - 1. Design Loads: As indicated.
 - 2. Design framing systems to withstand design loads without deflections greater than the following unless noted otherwise on the Structural Drawings:
 - a. Interior Load-Bearing Walls: Lateral deflection of L/240 of the wall height.
 - 3. Design framing systems to provide for movement of framing members without damage or overstressing, sheathing failure, connection failure, undue strain on fasteners and anchors, or other detrimental effects when subject to a maximum ambient temperature change (range) of 120 deg F.
 - 4. Design framing system to accommodate deflection of primary building structure and construction tolerances, and to maintain clearances at openings.
- C. Engineering Responsibility: Engage a fabricator who assumes undivided responsibility for engineering cold-formed metal framing by employing a qualified professional engineer to prepare design calculations, shop drawings, and other structural data.

1.04 SUBMITTALS

- A. General: Submit each item in this Article according to the Conditions of the Contract and Division 01 Specification Sections.
- B. Shop drawings, drawings, or documents showing location, layout, spacings, sizes, thicknesses, and types of cold-formed metal framing, fabrication, fastening and anchorage details, including mechanical fasteners. Show reinforcing channels, opening framing, supplemental framing, strapping, bracing, bridging, splices, accessories, connection details, and attachments to other units of Work.
 - 1. For cold-formed metal framing indicated to comply with design loadings, include structural calculations sealed and signed by the qualified professional engineer who was responsible for its preparation.
- C. Mill certificates signed by manufacturers of cold-formed metal framing certifying that their products comply with requirements, including uncoated steel thickness, yield strength, tensile strength, total elongation, and galvanized-coating thickness.

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- D. Welder certificates signed by Contractor certifying that welders comply with requirements specified under the "Quality Assurance" Article.

1.05 QUALITY ASSURANCE

- A. Installer Qualifications: Engage an experienced Installer who has completed cold-formed metal framing similar in material, design, and extent to that indicated for this Project and with a record of successful in-service performance.
- B. Welding Standards: Comply with applicable provisions of AWS D1.1 "Structural Welding Code--Steel" and AWS D1.3 "Structural Welding Code--Sheet Steel."
 - 1. Certify that each welder has satisfactorily passed AWS qualification tests for welding processes involved and, if pertinent, has undergone recertification.
- C. Professional Engineer Qualifications: A professional engineer legally authorized to practice in the jurisdiction where Project is located and experienced in providing engineering services of the kind indicated that have resulted in the installation of cold-formed metal framing similar to this Project in material, design, and extent and that have a record of successful in-service performance.
- D. Preinstallation Conference: Conduct conference at Project site to comply with requirements of Division 01 Section "Project Meetings."

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Protect cold-formed metal framing from corrosion, deformation, and other damage during delivery, storage, and handling.
- B. Store cold-formed metal framing, protect with a waterproof covering, and ventilate to avoid condensation.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering cold-formed metal framing that may be incorporated in the Work include, but are not limited to, the following:
- B. Manufacturers: Subject to compliance with requirements, provide cold-formed metal framing by one of the following or equal:
 - 1. Cold Form Metal Framing
 - a. Alabama Metal Industries Corp.
 - b. Consolidated Fabricators Corp.
 - c. Dale Industries, Inc.
 - d. Dietrich Industries, Inc.
 - e. Super Stud Building Products, Inc.
 - f. Unimast, Inc.
 - g. United States Steel.
 - 2. Slotted Channel Framing (Unistrut):
 - a. Unistrut
 - b. Kindorf
 - c. B-Line

2.02 MATERIALS

- A. Galvanized-Steel Sheet: ASTM A 446, zinc coated according to ASTM A 924, and as follows:
 - 1. Coating Designation: G 60 (Z 180).
 - 2. Grade: As indicated on the Drawings.

2.03 WALL FRAMING

- A. Steel Studs: Manufacturer's standard C-shaped steel studs of web depths indicated, with lipped flanges, and complying with the Structural Drawings. Gauge shall be as required to

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meet the specified deflection for interior load bearing walls. However, provide a minimum 16 gauge unless noted otherwise on the structural Drawings.

2.04 JOIST FRAMING

- A. Steel Joists: Manufacturer's standard C-shaped steel joists, unpunched, of web depths indicated, with lipped flanges, and complying with the Structural Drawings.

2.05 FRAMING ACCESSORIES

- A. Fabricate steel-framing accessories of the same material and finish used for framing members, with a minimum yield strength of 33,000 psi.
- B. Provide accessories of manufacturer's standard thickness and configuration, unless otherwise indicated, as follows:
 - 1. Supplementary framing.
 - 2. Bracing, bridging, and solid blocking.
 - 3. Web stiffeners.
 - 4. Gusset plates.
 - 5. Deflection track and vertical slide clips.
 - 6. Reinforcement plates.

2.06 ANCHORS, CLIPS, AND FASTENERS

- A. Steel Shapes and Clips: ASTM A 36, zinc coated by the hot-dip process according to ASTM A 123.
- B. Expansion Anchors: Fabricated from corrosion-resistant materials, with capability to sustain, without failure, a load equal to 5 times the design load, as determined by testing per ASTM E 488 conducted by a qualified independent testing agency.
- C. Powder-Actuated Anchors: Fastener system of type suitable for application indicated, fabricated from corrosion-resistant materials, with capability to sustain, without failure, a load equal to 10 times the design load, as determined by testing per ASTM E 1190 conducted by a qualified independent testing agency.
- D. Mechanical Fasteners: Corrosion-resistant coated, self-drilling, self-threading steel drill screws.
 - 1. Head Type: Low-profile head beneath sheathing, manufacturer's standard elsewhere.
- E. Welding Electrodes: Comply with AWS standards.

2.07 CHANNEL SUPPORT FRAMING SYSTEM

- A. All members of the channel support framing system shall be formed from galvanized steel conforming to ASTM A653, grade 33, G90. Unless indicated otherwise, channels shall be 1-5/8 inches wide and 12 gauge. Include all required seismic provisions for the seismic category of project location.
- B. Properties: Material, physical, and structural properties and the performance criteria listed by the Unistrut system shall be the basis of bid and any systems provided shall fully comply with same.
- C. Accessories
 - 1. Provide all steel tracks, slip tracks, slide blocks, blocking, lintels, clip angles, shoes, reinforcements, and accessories as required for a complete, functional, operational, and substantial installation.
 - 2. Fittings shall be punch press made from hot rolled, pickled and oiled steel plates, strip or coil conforming to ASTM A36, A575, A576, or A635.
 - 3. Fasteners
 - a. Provide all necessary screws, nuts, bolts, washers, power actuated fasteners, expansion bolts (lead, fiber, and plastic shields are not permitted.), etc. All fasteners shall be of the highest quality, corrosion resistant, and recommended by the slotted channel framing manufacturer

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- b. Fasteners shall be of sufficient size to ensure strength of connection. Minimum edge distance shall be 1/2" for all screws and pins and 1" for all bolts.
- c. All fasteners shall be sized and properly suitable for the installation in which they are being used.
- d. Unistrut nuts shall be of rectangular case-hardened steel manufactured with toothed grooves to prevent any movement of the bolt and nut within the framing member.
- e. Unistrut bolts and screws shall meet or exceed the requirements of ASTM A307.

2.08 MISCELLANEOUS MATERIALS

- A. Galvanizing Repair Paint: Use to repair all damaged galvanizing. As a minimum, galvanizing repair shall comply with the following: submit proof.
 - 1. Specifications: Fed. Spec. DOD-P-21035A and Mil Spec. Mil-P-26915A
 - 2. Registration: ISO 9001
 - 3. VOC Compliant
 - 4. Zinc in Dried Film: 95 percent, ASTM D520 Type III
 - 5. Percent Solids: 52 percent by volume.
 - 6. Pencil Hardness: 2H per ASTM D3363
 - 7. UL: Recognized by UL as being equivalent to hot dipped galvanized
 - 8. Impact Resistance: Greater than 30 inch-lbs. per ASTM D2794
 - 9. Abrasion Resistance: 11.5 liters per dry mil when tested at 3 mils DFT per ASTM D98
 - 10. Dry Time to Touch: 20-30 minutes at 1.5 mils DFT
 - 11. Recoat Time: 24-48 hours
- B. Nonmetallic, Nonshrink Grout: Premixed, nonmetallic, noncorrosive, nonstaining grout containing selected silica sands, portland cement, shrinkage-compensating agents, plasticizing and water-reducing agents, complying with ASTM C 1107, with fluid consistency and a 30-minute working time.

2.09 FABRICATION

- A. Fabricate cold-formed metal framing and accessories plumb, square, true to line, and with connections securely fastened, according to manufacturer's recommendations and the requirements of this Section. Perform fabrication in the shop.
 - 1. Fabricate framing assemblies in jig templates.
 - 2. Cut framing members by sawing or shearing; do not torch cut.
 - 3. Fasten cold-formed metal framing members by welding or screw fastening, as standard with fabricator. Wire tying of framing members is not permitted.
 - a. Comply with AWS requirements and procedures for welding, appearance and quality of welds, and methods used in correcting welding work.
 - b. Locate mechanical fasteners and install according to cold-framed metal framing manufacturer's instructions with screw penetrating joined members by not less than 3 exposed screw threads.
 - 4. Fasten other materials to cold-formed metal framing by welding, bolting, or screw fastening, according to manufacturer's recommendations.
- B. Fabrication Tolerances: Fabricate assemblies to a maximum allowable tolerance variation from plumb, level, and true to line of 1/8 inch in 10 feet and as follows:
 - 1. Spacing: Space individual framing members no more than plus or minus 1/8 inch from plan location. Cumulative error shall not exceed minimum fastening requirements of sheathing or other finishing materials.
 - 2. Squareness: Fabricate each cold-formed metal framing assembly to a maximum out-of-square tolerance of 1/8 inch.
- C. All members to be used in an exterior wall or partition or that will be exposed to weather shall be galvanized after fabrication.

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PART 3 EXECUTION

3.01 EXAMINATION

- A. Examine supporting substrates and abutting structural framing for compliance with requirements, including installation tolerances and other conditions affecting performance of cold-formed metal framing. Do not proceed with installation until unsatisfactory conditions have been corrected.

3.02 PREPARATION

- A. Grout bearing surfaces uniform and level to ensure full contact of bearing flanges or track webs on supporting concrete or masonry construction.

3.03 INSTALLATION, GENERAL

- A. Cold-formed metal framing may be shop or field fabricated for installation, or it may be field assembled.
- B. Install cold-formed metal framing and accessories plumb, square, true to line, and with connections securely fastened, according to manufacturer's recommendations and the requirements of this Section.
 - 1. Cut framing members by sawing or shearing; do not torch cut.
 - 2. Fasten cold-formed metal framing members by welding or screw fastening, as standard with fabricator. Wire tying of framing members is not permitted.
 - a. Comply with AWS requirements and procedures for welding, appearance and quality of welds, and methods used in correcting welding work.
 - b. Locate mechanical fasteners and install according to cold-framed metal framing manufacturer's instructions with screw penetrating joined members by not less than 3 exposed screw threads.
- C. Install framing members in one-piece lengths, unless splice connections are indicated for track or tension members.
- D. Provide temporary bracing and leave in place until framing is permanently stabilized.
- E. Do not bridge building expansion and control joints with cold-formed metal framing. Independently frame both sides of joints.
- F. Fasten reinforcement plate over web penetrations that exceed size of manufacturer's standard punched openings.
- G. Erection Tolerances: Install cold-formed metal framing to a maximum allowable tolerance variation from plumb, level, and true to line of 1/8 inch in 10 feet and as follows:
 - 1. Space individual framing members no more than plus or minus 1/8 inch from plan location. Cumulative error shall not exceed minimum fastening requirements of sheathing or other finishing materials.
- H. Welds, End Cut, Etc.
 - 1. Prior to erection, clean field welds, end cuts, bolted connections, and abraded areas of damaged shop primer.
 - 2. Surface Preparation: Remove loose rust, and spatter, slag, flux deposits from all surfaces, and remove all sharp and dragged edges and burrs. Prepare surfaces according to SSPC specifications as follows:
 - a. Prior To Performing Other Surface Preparation: Perform SSPC-SP 1 "Solvent Cleaning."
 - b. Perform SSPC-SP 3 "Power Tool Cleaning." After solvent cleaning.
 - 3. Priming:
 - a. Immediately after surface preparation, apply primer according to manufacturer's instructions and at rate recommended by SSPC to provide a dry film thickness of not less than 2.0 mils. Use priming methods that result in full coverage of joints, corners, edges, and exposed surfaces.
 - b. Touchup painted surfaces with same type of shop paint used on adjacent surfaces.

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4. Galvanizing: For galvanized members, clean surfaces as required, and apply galvanizing repair touch-up.

3.04 LOAD-BEARING WALL INSTALLATION

- A. Install continuous top and bottom tracks sized to match studs. Align tracks accurately and securely anchor at corners and ends, and at spacings recommended by the manufacturer, but not greater than the following:
 1. Spacing: 24 inches for nail or power-driven anchors.
 2. Spacing: 32 inches for cast-in-place or expansion anchors.
- B. Squarely seat studs against webs of top and bottom tracks. Fasten both flanges of studs to top and bottom track. Space studs as follows:
 1. Stud Spacing: 16 inches.
- C. Set studs plumb, except as needed for diagonal bracing or required for nonplumb walls or warped surfaces and similar requirements.
- D. Align studs vertically where wall-framing continuity is interrupted by floor framing. Where studs cannot be aligned, continuously reinforce track to transfer loads.
- E. Anchor studs abutting structural columns or walls, including masonry walls, to supporting structure as indicated.
- F. Install headers over wall openings wider than the stud spacing. Locate headers above openings as indicated. Fabricate headers of compound shapes indicated or required to transfer load to supporting studs, complete with clip-angle connectors, web stiffeners, or gusset plates.
 1. Frame wall openings with not less than a double stud at each jamb of frame as indicated or required by manufacturer.
 2. Install runner tracks and jack studs above and below wall openings. Anchor tracks to jamb studs with clip angles or by welding, and space jack studs same as full-height wall studs.
- G. Install supplementary framing, blocking, and bracing in stud framing indicated to support fixtures, equipment, services, casework, heavy trim, furnishings, and similar work requiring attachment to framing.
 1. Where type of supplementary support is not indicated, comply with stud manufacturer's recommendations and industry standards in each case, considering weight or load resulting from item supported.
- H. Install horizontal bridging in stud system, spaced in rows not more than 60 inches apart. Fasten at each stud intersection.
 1. Bridging: Cold-rolled steel channel, clip angle fastened to webs of punched studs.
- I. Install steel-sheet diagonal bracing straps to both stud flanges, terminate at and fasten to reinforced top and bottom track. Fasten clip-angle connectors to multiple studs at ends of bracing and anchor to structure.
- J. Install miscellaneous framing and connections, including supplementary framing, web stiffeners, clip angles, continuous angles, anchors, and fasteners, to provide a complete and stable wall-framing system.

3.05 NONLOAD-BEARING CURTAINWALL INSTALLATION

- A. Install continuous tracks sized to match studs. Align tracks accurately and securely anchor to supporting structure as indicated.
- B. Squarely seat studs against webs of top and bottom tracks. Fasten both flanges of studs to top and bottom track, unless otherwise indicated. Space studs as follows:
 1. Stud Spacing: 16 inches.
- C. Set studs plumb, except as needed for diagonal bracing or required for nonplumb walls or warped surfaces and similar requirements.

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- D. Isolate steel framing from building structure as indicated to prevent transfer of vertical loads while providing lateral support. If not indicated, coordinate with the Structural Engineer.
 - 1. Install deflection track and anchor to building structure.
 - 2. Connect studs with vertical slide clips to continuous angles or supplementary framing anchored to building structure.
- E. Install horizontal bridging in curtainwall studs, spaced in rows not more than 60 inches apart. Fasten at each stud intersection.
 - 1. Bridging: Cold-rolled steel channel, clip angle fastened to webs of punched studs.
- F. Install miscellaneous framing and connections, including stud kickers, web stiffeners, clip angles, continuous angles, anchors, fasteners, and stud girts, to provide a complete and stable curtain wall-framing system.

3.06 CHANNEL SUPPORT FRAMING SYSTEM

- A. Installation shall be accomplished by a fully trained manufacturer authorized installer.
- B. Set Strut System components into final position true to lines, level and plumb, in accordance with approved shop drawings and manufacturer's instructions. Gauge of individual formed sheet steel members shall meet manufacturer's recommendations for loads, spans, and deflection as stipulated by the Contract Documents and structural engineer.
- C. Anchor material firmly in place. Tighten all connections to their recommended torques.
- D. Adjust to manufacturer's acceptable tolerances for final approved dimensions for location, level, and plumb.

3.07 FIELD QUALITY CONTROL

- A. Testing Agency: Responsibility for an independent testing agency is defined in Division 01 Section – Quality Control to perform field quality control testing. All reports shall be sent to the Architect and Engineer.
- B. Field and shop welds will be subject to inspection and testing.
- C. Testing agency will report test results promptly and in writing to Contractor and Architect.
- D. Remove and replace Work that does not comply with specified requirements.
- E. Additional testing will be performed to determine compliance of corrected Work with specified requirements.

3.08 REPAIRS AND PROTECTION

- A. immediately after erection, clean field welds made after erection, bolted connections, and abraded areas of shop paint, and primer damaged during handling and erection.
- B. Surface Preparation: Remove loose rust, loose mill scale, and spatter, slag, or flux deposits from all surfaces, including welds and end cuts. Prepare surfaces according to SSPC specifications as follows:
 - 1. Prior To Performing Other Surface Preparation: Perform SSPC-SP 2 "Solvent Cleaning."
 - 2. Perform SSPC-SP 3 "Power Tool Cleaning." After solvent cleaning.
- C. Priming:
 - 1. Immediately after surface preparation, apply primer according to manufacturer's instructions and at rate recommended by SSPC to provide a dry film thickness of not less than 2.0 mils. Use priming methods that result in full coverage of joints, corners, edges, and exposed surfaces.
 - 2. Touchup painted surfaces with same type of shop paint used on adjacent surfaces.
- D. Galvanizing: For galvanized members, clean surfaces as required, and apply galvanizing repair touch-up.
- E. Protect gypsum sheathing that will be exposed to weather for more than one month as follows:
 - 1. Protect cutouts, corners, and joints in the sheathing by filling with a flexible sealant or by applying tape recommended by sheathing manufacturer at the time sheathing is applied.

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- F. Provide final protection and maintain conditions in a manner acceptable to manufacturer and Installer to ensure that cold-formed metal framing is without damage or deterioration at the time of Substantial Completion.

END OF SECTION

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

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Non-fire-rated hollow metal doors and frames.
- B. Hollow metal frames for wood doors.
- C. Fire-rated hollow metal doors and frames.
- D. Thermally insulated hollow metal doors with frames.
- E. Hollow metal borrowed lites glazing frames.

1.02 RELATED REQUIREMENTS

- A. Section 08 7100 - Door Hardware.
- B. Section 08 8000 - Glazing: Glass for doors and borrowed lites.
- C. Section 09 9113 - Exterior Painting: Field painting.
- D. Section 09 9123 - Interior Painting: Field painting.

1.03 ABBREVIATIONS AND ACRONYMS

- A. ANSI: American National Standards Institute.
- B. ASCE: American Society of Civil Engineers.
- C. HMMA: Hollow Metal Manufacturers Association.
- D. NAAMM: National Association of Architectural Metal Manufacturers.
- E. NFPA: National Fire Protection Association.
- F. SDI: Steel Door Institute.
- G. UL: Underwriters Laboratories.

1.04 REFERENCE STANDARDS

- A. ADA Standards - Americans with Disabilities Act (ADA) Standards for Accessible Design 2010.
- B. ANSI/SDI A250.3 - Test Procedure and Acceptance Criteria for Factory Applied Finish Coatings for Steel Doors and Frames 2007 (Reaffirmed 2011).
- C. ANSI/SDI A250.4 - Test Procedure and Acceptance Criteria for Physical Endurance for Steel Doors, Frames and Frame Anchors 2011.
- D. ANSI/SDI A250.8 - Specifications for Standard Steel Doors and Frames (SDI-100) 2017.
- E. ANSI/SDI A250.10 - Test Procedure and Acceptance Criteria for Prime Painted Steel Surfaces for Steel Doors and Frames 2011.
- F. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process 2020.
- G. ASTM A1008/A1008M - Standard Specification for Steel, Sheet, Cold-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, Required Hardness, Solution Hardened, and Bake Hardenable 2020.
- H. ASTM A1011/A1011M - Standard Specification for Steel, Sheet and Strip, Hot-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, and Ultra-High Strength 2018a.
- I. ASTM C143/C143M - Standard Test Method for Slump of Hydraulic-Cement Concrete 2020.
- J. ASTM C476 - Standard Specification for Grout for Masonry 2020.
- K. BHMA A156.115 - American National Standard for Hardware Preparation in Steel Doors and Steel Frames 2016.

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- L. ICC A117.1 - Accessible and Usable Buildings and Facilities 2017.
- M. ITS (DIR) - Directory of Listed Products current edition.
- N. NAAMM HMMA 830 - Hardware Selection for Hollow Metal Doors and Frames 2002.
- O. NAAMM HMMA 831 - Hardware Locations for Hollow Metal Doors and Frames 2011.
- P. NAAMM HMMA 840 - Guide Specifications For Receipt, Storage and Installation of Hollow Metal Doors and Frames 2007.
- Q. NFPA 80 - Standard for Fire Doors and Other Opening Protectives 2019.
- R. NFPA 252 - Standard Methods of Fire Tests of Door Assemblies 2017.
- S. UL (DIR) - Online Certifications Directory Current Edition.
- T. UL 10C - Standard for Positive Pressure Fire Tests of Door Assemblies Current Edition, Including All Revisions.

1.05 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Materials and details of design and construction, hardware locations, reinforcement type and locations, anchorage and fastening methods, and finishes; and one copy of referenced standards/guidelines.
- C. Shop Drawings: Details of each opening, showing elevations, glazing, frame profiles, and any indicated finish requirements.

1.06 QUALITY ASSURANCE

- A. Maintain at project site copies of reference standards relating to installation of products specified.

1.07 DELIVERY, STORAGE, AND HANDLING

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

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Hollow Metal Doors and Frames:
 - 1. Ceco Door, an Assa Abloy Group company; [____]: www.assaabloydss.com/#sle.
 - 2. Republic Doors, an Allegion brand; [____]: www.republicdoor.com/#sle.
 - 3. Steelcraft, an Allegion brand; [____]: www.allegion.com/#sle.
 - 4. Technical Glass Products; SteelBuilt Window & Door Systems: www.tgpamerica.com/#sle.
 - 5. Substitutions: See Section 01 6000 - Product Requirements.

2.02 DESIGN CRITERIA

- A. Requirements for Hollow Metal Doors and Frames:
 - 1. Steel Sheet: Comply with one or more of the following requirements; galvanized steel complying with ASTM A653/A653M, cold-rolled steel complying with ASTM A1008/A1008M, or hot-rolled pickled and oiled (HRPO) steel complying with ASTM A1011/A1011M, commercial steel (CS) Type B, for each.
 - 2. Accessibility: Comply with ICC A117.1 and ADA Standards.
 - 3. Exterior Door Top Closures: Flush end closure channel, with top and door faces aligned.
 - 4. Door Edge Profile: Manufacturers standard for application indicated.
 - 5. Typical Door Face Sheets: Flush.
 - 6. Glazed Lights: Non-removable stops on non-secure side; sizes and configurations as indicated on drawings. Style: Manufacturers standard.

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7. Hardware Preparations, Selections and Locations: Comply with NAAMM HMMA 830 and NAAMM HMMA 831 or BHMA A156.115 and ANSI/SDI A250.8 (SDI-100) in accordance with specified requirements.
 8. Zinc Coating for Typical Interior and/or Exterior Locations: Provide metal components zinc-coated (galvanized) and/or zinc-iron alloy-coated (galvannealed) by the hot-dip process in accordance with ASTM A653/A653M, with manufacturer's standard coating thickness, unless noted otherwise for specific hollow metal doors and frames.
 - a. Based on SDI Standards: Provide at least A40/ZF120 (galvannealed) when necessary, coating not required for typical interior door applications, and at least A60/ZF180 (galvannealed) for corrosive locations.
- B. Combined Requirements: If a particular door and frame unit is indicated to comply with more than one type of requirement, comply with the specified requirements for each type; for instance, an exterior door that is also indicated as being sound-rated must comply with the requirements specified for exterior doors and for sound-rated doors; where two requirements conflict, comply with the most stringent.

2.03 HOLLOW METAL DOORS

- A. Type [] , Exterior Doors: Thermally insulated.
1. Based on SDI Standards: ANSI/SDI A250.8 (SDI-100).
 - a. Level 1 - Standard-duty.
 - b. Physical Performance Level C, 250,000 cycles; in accordance with ANSI/SDI A250.4.
 - c. Model 1 - Full Flush.
 - d. Door Face Metal Thickness: 20 gage, 0.032 inch (0.8 mm), minimum.
 2. Door Thickness: 1-3/4 inches (44.5 mm), nominal.

2.04 HOLLOW METAL FRAMES

- A. Comply with standards and/or custom guidelines as indicated for corresponding door in accordance with applicable door frame requirements.
- B. Exterior Door Frames: Knock-down type.
1. Galvanizing: Components hot-dipped zinc-iron alloy-coated (galvannealed) in accordance with ASTM A653/A653M, with A40/ZF120 coating.
 2. Frame Metal Thickness: 18 gage, 0.042 inch (1.0 mm), minimum.
 3. Frame Finish: Factory primed and field finished.
 4. Weatherstripping: Separate, see Section 08 7100.
- C. Interior Door Frames, Non-Fire Rated: Full profile/continuously welded type.
1. Terminated Stops: Provide at interior doors; closed end stop terminated 6 inch (150 mm), maximum, above floor at 45 degree angle.
 2. Frame Metal Thickness: 18 gage, 0.042 inch (1.0 mm), minimum.
 3. Frame Finish: Factory primed and field finished.
- D. Door Frames, Fire-Rated: Knock-down type.
1. Fire Rating: Same as door, labeled.
 2. Terminated Stops: Provide at interior doors; closed end stop terminated 6 inch (150 mm), maximum, above floor at 45 degree angle.
 3. Frame Finish: Factory primed and field finished.
- E. Frames for Wood Doors: Comply with frame requirements in accordance with corresponding door.
- F. Borrowed Lites Glazing Frames: Construction and face dimensions to match door frames, and as indicated on drawings.
- G. Provide mortar guard boxes for hardware cut-outs in frames to be installed in masonry or to be grouted.
- H. Frames in Masonry Walls: Size to suit masonry coursing with head member 4 inches (102 mm) high to fill opening without cutting masonry units.

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2.05 FINISHES

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

2.06 ACCESSORIES

- A. Glazing: As specified in Section 08 8000, factory installed.
- B. Grout for Frames: Mortar grout complying with ASTM C476 with maximum slump of 4 inches (102 mm) as measured in accordance with ASTM C143/C143M for hand troweling in place; plaster grout and thinner pumpable grout are prohibited.
- C. Silencers: Resilient rubber, fitted into drilled hole; provide three on strike side of single door, three on center mullion of pairs, and two on head of pairs without center mullions.
 - 1. Temporary Frame Spreaders: Provide for factory- or shop-assembled frames.

2.07 FINISHES

- A. Primer: Rust-inhibiting with ANSI/SDI A250. 10, door manufacturer's standard.
- B. Factory Finish: Complying with ANSI/SDI A250.3, manufacture's standard coating.
 - 1. Color: As indicated on drawings.
- C. Bituminous Coating: Asphalt emulsion or other high-build, water-resistant, resilient coating.

PART 3 EXECUTION

3.01 EXAMINATION

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

3.02 PREPARATION

- A. Coat inside of frames to be installed in masonry or to be grouted, with bituminous coating, prior to installation.

3.03 INSTALLATION

- A. Install doors and frames in accordance with manufacturer's instructions and related requirements of specified door and frame standards or custom guidelines indicated.
- B. Install prefinished frames after painting and wall finishes are complete.
- C. Coordinate frame anchor placement with wall construction.
- D. Grout frames in masonry construction, using hand trowel methods; brace frames so that pressure of grout before setting will not deform frames.
- E. Install door hardware as specified in Section 08 7100.

3.04 TOLERANCES

- A. Maximum Diagonal Distortion: 1/16 inch (1.6 mm) measured with straight edge, corner to corner.

3.05 ADJUSTING

- A. Adjust for smooth and balanced door movement.

END OF SECTION

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**SECTION 09 2900
GYPSUM BOARD**

PART 1 GENERAL

1.01 RELATED DOCUMENTS

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

1.02 SUMMARY

- A. Section Includes:
 - 1. Interior gypsum board.
- B. Related Requirements:
 - 1. Section 092216 "Non-Structural Metal Framing" for non-structural steel framing and suspension systems that support gypsum board panels.
 - 2. Division 09 painting sections for primers applied to gypsum board surfaces.

1.03 ACTION SUBMITTALS

- A. Product Data: For each type of product.

1.04 QUALITY ASSURANCE

- A. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1.05 DELIVERY, STORAGE AND HANDLING

- A. Store materials inside under cover and keep them dry and protected against weather, condensation, direct sunlight, construction traffic, and other potential causes of damage. Stack panels flat and supported on risers on a flat platform to prevent sagging.

1.06 FIELD CONDITIONS

- A. Environmental Limitations: Comply with ASTM C 840 requirements or gypsum board manufacturer's written instructions, whichever are more stringent.
- B. Do not install panels that are wet, moisture damaged, and mold damaged.
 - 1. Indications that panels are wet, or moisture damaged include, but are not limited to, discoloration, sagging, or irregular shape.
 - 2. Indications that panels are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.

PART 2 PRODUCTS

2.01 PERFORMANCE REQUIREMENTS

- A. Fire-Resistance-Rated Assemblies: For fire-resistance-rated assemblies, provide materials and construction identical to those tested in assembly indicated according to ASTM E 119 by an independent testing agency.
- B. STC-Rated Assemblies: For STC-rated assemblies, provide materials and construction identical to those tested in assembly indicated according to ASTM E 90 and classified according to ASTM E 413 by an independent testing agency.

2.02 GYPSUM BOARD, GENERAL

- A. Size: Provide maximum lengths and widths available that will minimize joints in each area and that correspond with support system indicated.

2.03 INTERIOR GYPSUM BOARD

- A. Gypsum Board, Type X: ASTM C 1396/C 1396M.
 - 1. Thickness: 5/8 inch.
 - 2. Long Edges: Tapered.
- B. Gypsum Ceiling Board: ASTM C 1396/C 1396M.

1. Use setting-type compound for installing paper-faced metal trim accessories.
 2. Fill coat: For second coat, use setting-type. sandable topping compound.
 3. Finish coat: For third coat, use setting-type. sandable topping compound.
- C. Joint Compound for Mold-Resistant Gypsum Board Products: Use product recommended by gypsum board panel manufacturer for application.

2.04 AUXILIARY MATERIALS

- A. General: Provide auxiliary materials that comply with referenced installation standards and manufacturer's written instructions.
- B. Laminating Adhesive: Adhesive or joint compound recommended for directly adhering gypsum panels to continuous substrate.
- C. Steel Drill Screws: ASTM C 1002 unless otherwise indicated.
1. Use screws complying with ASTM C 954 for fastening panels to steel members from 0.033 to
 - a. inch thick.
- D. Sound-Attenuation Blankets: ASTM C 665, Type I (blankets without membrane facing) produced by combining thermosetting resins with mineral fibers manufactured from glass, slag wool, or rock wool.
1. Fire-Resistance-Rated Assemblies: Comply with mineral-fiber requirements of assembly.
- E. Acoustical Sealant: : Manufacturer's standard nonsag, paintable, nonstaining latex sealant complying with ASTM C 834. Product effectively reduces airborne sound transmission through perimeter joints and openings in building construction as demonstrated by testing representative assemblies according to ASTM E 90.
1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Accumetric LLC; BOSS 824 Acoustical Sound Sealant.
 - b. Grabber Construction Products; Acoustical Sealant GSC.
 - c. Specified Technologies, Inc.; Smoke N Sound Acoustical Sealant.
 - d. USG Corporation; SHEETROCK Acoustical Sealant.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Examine areas and substrates including welded hollow-metal frames and support framing, with Installer present, for compliance with requirements and other conditions affecting performance of the Work.
- B. Examine panels before installation. Reject panels that are wet, moisture damaged, and mold damaged.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.02 APPLYING AND FINISHING PANELS, GENERAL

- A. Comply with ASTM C 840.
- B. Install ceiling panels across framing to minimize the number of abutting end joints and to avoid abutting end joints in central area of each ceiling. Stagger abutting end joints of adjacent panels not less than one framing member.
- C. Install panels with face side out. Butt panels together for a light contact at edges and ends with not more than 1/16 inch of open space between panels. Do not force into place.
- D. Locate edge and end joints over supports, except in ceiling applications where intermediate supports or gypsum board back-blocking is provided behind end joints. Do not place tapered edges against cut edges or ends. Stagger vertical joints on opposite sides of partitions. Do not make joints other than control joints at corners of framed openings.
- E. Form control and expansion joints with space between edges of adjoining gypsum panels.

- F. Cover both faces of support framing with gypsum panels in concealed spaces (above ceilings, etc.), except in chases braced internally.
 - 1. Unless concealed application is indicated or required for sound, fire, air, or smoke ratings, coverage may be accomplished with scraps of not less than 8 sq. ft. in area.
 - 2. Fit gypsum panels around ducts, pipes, and conduits.
 - 3. Where partitions intersect structural members projecting below underside of floor/roof slabs and decks, cut gypsum panels to fit profile formed by structural members; allow 1/4- to 3/8-inch-wide joints to install sealant.
- G. Isolate perimeter of gypsum board applied to non-load-bearing partitions at structural abutments. Provide 1/4- to 1/2-inch-wide spaces at these locations and trim edges with edge trim where edges of panels are exposed. Seal joints between edges and abutting structural surfaces with acoustical sealant.
- H. Attachment to Steel Framing: Attach panels so leading edge or end of each panel is attached to open (unsupported) edges of stud flanges first.
- I. STC-Rated Assemblies: Seal construction at perimeters, behind control joints, and at openings and penetrations with a continuous bead of acoustical sealant. Install acoustical sealant at both faces of partitions at perimeters and through penetrations. Comply with ASTM C 919 and with manufacturer's written instructions for locating edge trim and closing off sound-flanking paths around or through assemblies, including sealing partitions above acoustical ceilings.
- J. Install sound attenuation blankets before installing gypsum panels unless blankets are readily installed after panels have been installed on one side.

3.03 APPLYING INTERIOR GYPSUM BOARD

- A. Install interior gypsum board in the following locations:
 - 1. Type X: Vertical surfaces unless otherwise indicated.
 - 2. Ceiling Type: Ceiling surfaces.
 - 3. Abuse-Resistant and Mold-Resistant Type: High Schools and Elementary Schools: Vertical surfaces to 8 feet AFF in the following:
 - a. Janitor closets.
 - b. Ceiling at Group Toilet Rooms.
 - c. Mechanical rooms.
 - d. Food preparation areas.
 - e. Areas indicated to receive epoxy paint.
 - f. Food Preparation Areas.
- B. Single-Layer Application:
 - 1. On ceilings, apply gypsum panels before wall/partition board application to greatest extent possible and at right angles to framing unless otherwise indicated.
 - 2. On partitions/walls, apply gypsum panels vertically (parallel to framing) unless otherwise indicated or required by fire-resistance-rated assembly, and minimize end joints.
 - a. Stagger abutting end joints not less than one framing member in alternate courses of panels.
 - b. At stairwells and other high walls, install panels horizontally unless otherwise indicated or required by fire-resistance-rated assembly.
 - 3. On Z-furring members, apply gypsum panels vertically (parallel to framing) with no end joints. Locate edge joints over furring members.
- C. Fastening Methods: Apply gypsum panels to supports with steel drill screws.
- D. Multilayer Application:
 - 1. On ceilings, apply gypsum board indicated for base layers before applying base layers on walls/partitions; apply face layers in same sequence. Apply base layers at right angles to framing members and offset face-layer joints one framing member, 16 inches minimum, from parallel base-layer joints, unless otherwise indicated or required by fire-resistance-rated assembly.

2. On partitions/walls, apply gypsum board indicated for base layers and face layers vertically (parallel to framing) with joints of base layers located over stud or furring member and face-layer joints offset at least one stud or furring member with base-layer joints unless otherwise indicated or required by fire-resistance-rated assembly. Stagger joints on opposite sides of partitions.
3. On Z-furring members, apply base layer vertically (parallel to framing) and face layer either vertically (parallel to framing) or horizontally (perpendicular to framing) with vertical joints offset at least one furring member. Locate edge joints of base layer over furring members.
4. Fastening Methods: Fasten base layers and face layers separately to supports with screws.

3.04 INSTALLING TRIM ACCESSORIES

- A. General: For trim with back flanges intended for fasteners, attach to framing with same fasteners used for panels. Otherwise, attach trim according to manufacturer's written instructions.
- B. Control Joints: Install control joints at locations indicated on Drawings, or if not indicated, according to ASTM C 840 and in specific locations approved by Architect for visual effect.
- C. Interior Trim: Install in the following locations:
 1. Cornerbead: Use at outside corners.
 2. LC-Bead: Use at exposed panel edges.
 3. L-Bead: Use where indicated.
- D. Aluminum Trim: Install in locations indicated on Drawings.

3.05 FINISHING GYPSUM BOARD

- A. General: Treat gypsum board joints, interior angles, edge trim, control joints, penetrations, fastener heads, surface defects, and elsewhere as required to prepare gypsum board surfaces for decoration. Promptly remove residual joint compound from adjacent surfaces.
- B. Prefill open joints and damaged surface areas.
- C. Apply joint tape over gypsum board joints, except for trim products specifically indicated as not intended to receive tape.
- D. Gypsum Board Finish Levels: Finish panels to levels indicated below and according to ASTM C 840:
 1. Level 1: Ceiling plenum areas, concealed areas, and where indicated.
 2. Level 4: At panel surfaces that will be exposed to view unless otherwise indicated.
 - a. Primer and its application to surfaces are specified in Section 099123 "Interior Painting."

3.06 PROTECTION

- A. Protect adjacent surfaces from drywall compound and promptly remove from floors and other non-drywall surfaces. Repair surfaces stained, marred, or otherwise damaged during drywall application.
- B. Protect installed products from damage from weather, condensation, direct sunlight, construction, and other causes during remainder of the construction period.
- C. Remove and replace panels that are wet, moisture damaged, and mold damaged.
 1. Indications that panels are wet, or moisture damaged include, but are not limited to, discoloration, sagging, or irregular shape.
 2. Indications that panels are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.

END OF SECTION

**SECTION 09 5123
ACOUSTICAL TILE CEILINGS**

PART 1 GENERAL

1.01 RELATED DOCUMENTS

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

1.02 SUMMARY

I. SECTION INCLUDES:

- A. Acoustical tiles for interior ceilings.
- B. Fully concealed, direct-hung, suspension systems.
- C. Direct attachment of tiles to substrates with adhesive.
- D. Direct attachment of tiles to substrates with staples.

I. RELATED REQUIREMENTS:

- E. Section 09 51 13 "Acoustical Panel Ceilings" for ceilings consisting of mineral-base and glass-fiber-base acoustical panels and exposed suspension systems.

1.03 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site.
- B. ACTION SUBMITTALS
- C. Product Data: For each type of product.
- D. Samples for Initial Selection: For components with factory-applied finishes.

1.04 INFORMATIONAL SUBMITTALS

- A. Coordination Drawings: Reflected ceiling plans, drawn to scale, on which the following items are shown and coordinated with each other, using input from installers of the items involved:
- B. Ceiling suspension-system members.
- C. Structural members to which suspension systems will be attached.
 - 1. Items penetrating finished ceiling and ceiling-mounted items including the following:
- D. Lighting fixtures.
 - 1. Diffusers.
 - 2. Grilles.
 - 3. Speakers.
 - 4. Sprinklers.
 - 5. Access panels.
 - 6. Perimeter moldings.
 - 7. Product Test Reports: For each acoustical tile ceiling, for tests performed by manufacturer and witnessed by a qualified testing agency.
 - 8. Field quality-control reports.

1.05 MAINTENANCE MATERIAL SUBMITTALS

- A. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
- B. Acoustical Ceiling Units: Full-size tiles equal to 1 box of tiles, but not less than 16 tiles of each type installed.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Deliver acoustical tiles, suspension-system components, and accessories to Project site and store them in a fully enclosed, conditioned space where they will be protected against damage

from moisture, humidity, temperature extremes, direct sunlight, surface contamination, and other causes.

- B. Before installing acoustical tiles, permit them to reach room temperature and a stabilized moisture content.
- C. Handle acoustical panels carefully to avoid chipping edges or damaging units in any way.

1.07 FIELD CONDITIONS

- A. Environmental Limitations: Do not install acoustical tile ceilings until spaces are enclosed and weathertight, wet-work in spaces is complete and dry, work above ceilings is complete, and ambient temperature and humidity conditions are maintained at the levels indicated for Project when occupied for its intended use.

PART 2 PRODUCTS

2.01 MANUFACTURES

- A. Source Limitations:
 - 1. Suspended Acoustical Tile Ceilings: Obtain each type of acoustical ceiling tile and its suspension system from single source from single manufacturer.

2.02 PERFORMANCE REQUIREMENTS

- A. Surface-Burning Characteristics: Comply with ASTM E 84; testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.
- B. Flame-Spread Index: Class A according to ASTM E 1264.
- C. Smoke-Developed Index: 50 or less.

2.03 ACOUSTICAL TILES

- A. Basis-of-Design Product: Subject to compliance with requirements, provide USG Mars Clima Plus Performance or comparable product. Classification: Fine Textured. Additional manufacturers that may be incorporated into the work are as follows, but not limited to:
 - B. Armstrong World Industries, Inc.
 - C. CertainTeed Corporation.
 - D. United States Gypsum Company.
- E. Acoustical Tile Standard: Provide manufacturer's standard tiles of configuration indicated that comply with ASTM E 1264 classifications as designated by type, form, pattern, acoustical rating, and light reflectance unless otherwise indicated.
- F. Classification: Provide tiles as follows:
 - 1. ACT 1
 - 2. Type and Form: Type IV, Forms 1 and 2.
 - 3. Pattern E and G.
 - 4. Color: Flat White.
 - 5. Light Reflectance (LR): 89.
- G. Ceiling Attenuation Class (CAC): 35.
- H. Noise Reduction Coefficient (NRC): Not less than 0.70.
- I. Edge/Joint Detail: Square Tegular
- J. Thickness: $\frac{3}{4}$ inch.
- K. Modular Size: 24 inches by 24 inches.

2.04 METAL SUSPENSION SYSTEM, GENERAL

- A. Metal Suspension-System Standard: Provide manufacturer's standard, direct-hung, fully concealed, metal suspension system and accessories of type, structural classification, and finish indicated that complies with applicable requirements in ASTM C 635/C 635M.

- B. Attachment Devices: Size for five times the design load indicated in ASTM C 635/C 635M, Table 1, "Direct Hung," unless otherwise indicated. Comply with seismic design requirements.
- C. Wire Hangers, Braces, and Ties: Provide wires as follows:
- D. Zinc-Coated, Carbon-Steel Wire: ASTM A 641/A 641M, Class 1 zinc coating, soft temper.
- E. Size: Wire diameter sufficient for its stress at three times hanger design load (ASTM C 635/C 635M, Table 1, "Direct Hung") will be less than yield stress of wire, but not less than 0.106-inch-diameter wire.
- F. METAL EDGE MOLDINGS AND TRIM
- G. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - 1. Armstrong
 - 2. CertainTeed Corporation.
 - 3. Chicago Metallic Corporation.
 - 4. United States Gypsum Company.
- H. Roll-Formed, Sheet-Metal Edge Moldings and Trim: Type and profile indicated or, if not indicated, manufacturer's standard moldings for edges and penetrations complying with seismic design requirements; formed from sheet metal of same material, finish, and color as that used for of suspension-system runners.
- I. For circular penetrations of ceiling, provide edge moldings fabricated to diameter required to fit penetration exactly.
- J. Extruded-Aluminum Edge Moldings and Trim: Where indicated, provide manufacturer's extruded-aluminum edge moldings and trim of profile indicated or referenced by manufacturer's designations, including splice plates, corner pieces, and attachment and other clips, complying with seismic design requirements.
- K. Baked-Enamel or Powder-Coat Finish: Minimum dry film thickness of 1.5 mils (0.04 mm). Comply with ASTM C 635/C 635M and coating manufacturer's written instructions for cleaning, conversion coating, and applying and baking finish.

PART 3 EXECUTION

3.01 EXAMINAATION

- A. Examine substrates, areas, and conditions, including structural framing and substrates to which acoustical tile ceilings attach or abut, with Installer present, for compliance with requirements specified in this and other Sections that affect ceiling installation and anchorage and for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
- B. Examine acoustical tiles before installation. Reject acoustical tiles that are wet, moisture damaged, or mold damaged.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.02 PREPARATION

- A. Measure each ceiling area and establish layout of acoustical tiles to balance border widths at opposite edges of each ceiling. Avoid using less-than-half-width tiles at borders unless otherwise indicated and comply with layout shown on reflected ceiling plans.

3.03 INSTALLATION OF SUSPENDED ACOUSTICAL TILE CEILINGS

- A. Install suspended acoustical tile ceilings according to ASTM C 636/C 636M, seismic design requirements, and manufacturer's written instructions.
- B. Suspend ceiling hangers from building's structural members and as follows:
 - 1. Install hangers plumb and free from contact with insulation or other objects within ceiling plenum that are not part of supporting structure or of ceiling suspension system.

2. Splay hangers only where required to miss obstructions; offset resulting horizontal forces by bracing, countersplaying, or other equally effective means.
3. Where width of ducts and other construction within ceiling plenum produces hanger spacings that interfere with location of hangers at spacings required to support standard suspension-system members, install supplemental suspension members and hangers in form of trapezes or equivalent devices.
4. Secure wire hangers to ceiling suspension members and to supports above with a minimum of three tight turns. Connect hangers directly to structure or to inserts, eye screws, or other devices that are secure and appropriate for substrate and that will not deteriorate or otherwise fail due to age, corrosion, or elevated temperatures.
5. Secure flat, angle, channel, and rod hangers to structure, including intermediate framing members, by attaching to inserts, eye screws, or other devices that are secure and appropriate for both the structure to which hangers are attached and the type of hanger involved. Install hangers in a manner that will not cause them to deteriorate or fail due to age, corrosion, or elevated temperatures.
6. Do not support ceilings directly from permanent metal forms or floor deck. Fasten hangers to cast-in-place hanger inserts, post installed mechanical or adhesive anchors, or power-actuated fasteners that extend through forms into concrete.
7. When steel framing does not permit installation of hanger wires at spacing required, install carrying channels or other supplemental support for attachment of hanger wires.
8. Do not attach hangers to steel deck tabs.
9. Do not attach hangers to steel roof deck. Attach hangers to structural members.
10. Space hangers not more than 48 inches (1200 mm) o.c. along each member supported directly from hangers unless otherwise indicated; provide hangers not more than 8 inches (200 mm) from ends of each member.
11. Size supplemental suspension members and hangers to support ceiling loads within performance limits established by referenced standards.
12. Install edge moldings and trim of type indicated at perimeter of acoustical ceiling area and where necessary to conceal edges of acoustical tiles.
 - a. Screw attach moldings to substrate at intervals not more than 16 inches (400 mm) o.c. and not more than 3 inches (75 mm) from ends. Miter corners accurately and connect securely.
 - b. Do not use exposed fasteners, including pop rivets, on moldings and trim.
13. Install suspension-system runners so they are square and securely interlocked with one another. Remove and replace dented, bent, or kinked members.
14. Arrange directionally patterned acoustical tiles as follows:
 - a. As indicated on reflected ceiling plans.

3.04 CLEANING

- A. Clean exposed surfaces of acoustical tile ceilings, including trim and edge moldings. Comply with manufacturer's written instructions for cleaning and touchup of minor finish damage.
- B. Remove and replace tiles and other ceiling components that cannot be successfully cleaned and repaired to permanently eliminate evidence of damage.
- C. Examine acoustical tiles before installation. Reject acoustical tiles that are wet, moisture damaged, or mold damaged.
- D. Proceed with installation only after unsatisfactory conditions have been corrected.

3.05 PREPARATION

- A. Measure each ceiling area and establish layout of acoustical tiles to balance border widths at opposite edges of each ceiling. Avoid using less-than-half-width tiles at borders unless otherwise indicated and comply with layout shown on reflected ceiling plans.

3.06 INSTALLATION OF SUSPENDED ACOUSTICAL TILE CEILINGS

- A. Install suspended acoustical tile ceilings according to ASTM C 636/C 636M, seismic design requirements, and manufacturer's written instructions.

- B. Suspend ceiling hangers from building's structural members and as follows:
1. Install hangers plumb and free from contact with insulation or other objects within ceiling plenum that are not part of supporting structure or of ceiling suspension system.
 2. Splay hangers only where required to miss obstructions; offset resulting horizontal forces by bracing, countersplaying, or other equally effective means.
 3. Where width of ducts and other construction within ceiling plenum produces hanger spacings that interfere with location of hangers at spacings required to support standard suspension-system members, install supplemental suspension members and hangers in form of trapezes or equivalent devices.
 4. Secure wire hangers to ceiling suspension members and to supports above with a minimum of three tight turns. Connect hangers directly to structure or to inserts, eye screws, or other devices that are secure and appropriate for substrate and that will not deteriorate or otherwise fail due to age, corrosion, or elevated temperatures.
 5. Secure flat, angle, channel, and rod hangers to structure, including intermediate framing members, by attaching to inserts, eye screws, or other devices that are secure and appropriate for both the structure to which hangers are attached and the type of hanger involved. Install hangers in a manner that will not cause them to deteriorate or fail due to age, corrosion, or elevated temperatures.
 6. Do not support ceilings directly from permanent metal forms or floor deck. Fasten hangers to cast-in-place hanger inserts, post installed mechanical or adhesive anchors, or power-actuated fasteners that extend through forms into concrete.
 7. When steel framing does not permit installation of hanger wires at spacing required, install carrying channels or other supplemental support for attachment of hanger wires.
 8. Do not attach hangers to steel deck tabs.
 9. Do not attach hangers to steel roof deck. Attach hangers to structural members.
 10. Space hangers not more than 48 inches (1200 mm) o.c. along each member supported directly from hangers unless otherwise indicated; provide hangers not more than 8 inches (200 mm) from ends of each member.
 11. Size supplemental suspension members and hangers to support ceiling loads within performance limits established by referenced standards.
 12. Install edge moldings and trim of type indicated at perimeter of acoustical ceiling area and where necessary to conceal edges of acoustical tiles.
 - a. Screw attach moldings to substrate at intervals not more than 16 inches (400 mm) o.c. and not more than 3 inches (75 mm) from ends. Miter corners accurately and connect securely.
 - b. Do not use exposed fasteners, including pop rivets, on moldings and trim.
 13. Install suspension-system runners so they are square and securely interlocked with one another. Remove and replace dented, bent, or kinked members.
 14. Arrange directionally patterned acoustical tiles as follows:
 - a. As indicated on reflected ceiling plans.

3.07 CLEANING

- A. Clean exposed surfaces of acoustical tile ceilings, including trim and edge moldings. Comply with manufacturer's written instructions for cleaning and touchup of minor finish damage.
- B. Remove and replace tiles and other ceiling components that cannot be successfully cleaned and repaired to permanently eliminate evidence of damage.

END OF SECTION

**SECTION 09 6513
RESILIENT BASE AND ACCESSORIES**

GENERAL

1.01 SUMMARY

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

1.02 ACTION SUBMITTALS

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

1.03 DELIVERY, STORAGE, AND HANDLING

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

1.04 COORDINATION

1.05 FIELD CONDITIONS

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

1.06 PRODUCTS

1.07 THERMOSET-RUBBER BASE

- A. Subject to compliance with requirements, provide products by one of the following:
- B. Product Standard: ASTM F 1861, Type TS (rubber, vulcanized thermoset), Group I (solid, homogeneous).
 - 1. Style and Location:
 - a. Style A, Straight: Provide in areas with carpet.
 - b. Style B, Cove: Provide in areas with resilient flooring and exposed concrete.
- C. Thickness: 0.125 inch.
- D. Height: 4 inches.
- E. Lengths: oils in manufacturer's standard length.
- F. Outside Corners: Job formed.
- G. Inside Corners: Job formed.
- H. Colors: As indicated.

1.08 RUBBER MOLDING ACCESSORIES

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

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1. Roppe Corporation, USA.
 2. VPI Corporation.
- B. Description: Rubber carpet edge for glue-down applications; nosing for carpet; nosing for resilient flooring; reducer strip for resilient flooring; joiner for tile, and carpet transition strips.
 - C. Profile and Dimensions: As required by applications.
 - D. Colors and Patterns: As selected by Architect from full range of industry colors for each application.

1.09 INSTALLATION MATERIALS

- A. Trowelable Leveling and Patching Compounds: Latex-modified, portland cement based or blended hydraulic-cement-based formulation provided or approved by resilient-product manufacturer for applications indicated.
- B. Adhesives: Water-resistant type recommended by resilient-product manufacturer for resilient products and substrate conditions indicated.

1.10 EXECUTION

1.11 EXAMINATION

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

1.12 PREPARATION

- A. Prepare substrates according to manufacturer's written instructions to ensure adhesion of resilient products.
- B. Concrete Substrates for Resilient Stair Accessories: Prepare horizontal surfaces according to ASTM F 710.
 1. Verify that substrates are dry and free of curing compounds, sealers, and hardeners.
 2. Remove substrate coatings and other substances that are incompatible with adhesives and that contain soap, wax, oil, or silicone, using mechanical methods recommended by manufacturer. Do not use solvents.
 3. Alkalinity and Adhesion Testing: Perform tests recommended by manufacturer. Proceed with installation only after substrate alkalinity falls within range on pH scale recommended by manufacturer in writing, but not less than 5 or more than 10 pH.
 4. Moisture Testing: Proceed with installation only after substrates pass testing according to manufacturer's written recommendations, but not less stringent than the following:
 - a. Perform relative humidity test using in situ probes according to ASTM F 2170. Proceed with installation only after substrates have maximum 75 percent relative humidity level.
- C. Fill cracks, holes, and depressions in substrates with trowelable leveling and patching compound; remove bumps and ridges to produce a uniform and smooth substrate.
- D. Do not install resilient products until they are the same temperature as the space where they are to be installed.
 1. At least 48 hours in advance of installation, move resilient products and installation materials into spaces where they will be installed.
- E. Immediately before installation, sweep and vacuum clean substrates to be covered by resilient products.

1.13 RESILIENT BASE INSTALLATION

- A. Comply with manufacturer's written instructions for installing resilient base.

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- B. Apply resilient base to walls, columns, pilasters, casework and cabinets in toe spaces, and other permanent fixtures in rooms and areas where base is required.
- C. Install resilient base in lengths as long as practical without gaps at seams and with tops of adjacent pieces aligned.
- D. Tightly adhere resilient base to substrate throughout length of each piece, with base in continuous contact with horizontal and vertical substrates.
- E. Do not stretch resilient base during installation.
- F. On masonry surfaces or other similar irregular substrates, fill voids along top edge of resilient base with manufacturer's recommended adhesive filler material.
- G. Job-Formed Corners:
 - 1. Outside Corners: Use straight pieces of maximum lengths possible and form with returns not less than 6 inches in length.
 - a. Form without producing discoloration (whitening) at bends.
 - 2. Inside Corners: Use straight pieces of maximum lengths possible and form with returns not less than 6 inches in length.
 - a. Miter or cope corners to minimize open joints.

1.14 RESILIENT ACCESSORY INSTALLATION

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

1.15 CLEANING AND PROTECTION

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

END OF SECTION

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**SECTION 09 6519
RESILIENT TILE FLOORING**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Resilient tile flooring.
- B. Installation accessories:
 - 1. Adhesives.
 - 2. Finishes and cleaners.

1.02 RELATED REQUIREMENTS

- A. Section 01 6116 - Volatile Organic Compound (VOC) Content Restrictions: SCS FloorScore certification documentation.
- B. Section 01 7419 - Construction Waste Management and Disposal.
- C. Section 07 9200 - Joint Sealants.
- D. Section 07 9513 - Expansion Joint Cover Assemblies.

1.03 REFERENCE STANDARDS

- A. ASTM F137 - Standard Test Method for Flexibility of Resilient Flooring Materials with Cylindrical Mandrel Apparatus; 2008 (Reapproved 2013).
- B. ASTM F386 - Standard Test Method for Thickness of Resilient Flooring Materials Having Flat Surfaces 2017.
- C. ASTM F710 - Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring 2019, with Editorial Revision (2020).
- D. ASTM F1869 - Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride 2016a.
- E. ASTM F1914 - Standard Test Method for Short-Term Indentation and Residual Indentation of Resilient Floor Covering; 2007 (Reapproved 2011).
- F. ASTM F2055 - Standard Test Method for Size and Squareness of Resilient Floor Tile by Dial Gage Method 2017.
- G. ASTM F2170 - Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using in situ Probes 2019a.
- H. ASTM F2199 - Standard Test Method for Determining Dimensional Stability of Resilient Floor Tile after Exposure to Heat; 2009 (Reapproved 2014).
- I. ASTM F2421 - Standard Test Method for Measurement of Resilient Floor Plank by Dial Gage; 2005 (Reapproved 2011).

1.04 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Manufacturer's documentation for flooring and accessories:
 - 1. Technical Data.
 - 2. Warranty.
- C. Selection Samples: Submit manufacturer's complete set of color samples for Architect's initial selection.
- D. Verification Samples: Submit two samples, 4 by 4 inch (100 by 100 mm) in size illustrating color and pattern for each resilient flooring product specified.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Upon receipt, immediately remove any shrink-wrap and check materials for damage and that the material is of the correct style, color, quantity and run number(s).

- B. Store all materials flat and off of the floor in an acclimatized, weather-tight space between 65 to 85 degrees F (18 to 29 degrees C).
- C. Do not double stack pallets.

1.06 FIELD CONDITIONS

- A. Acclimate material at jobsite between 65 to 85 degrees F (18 to 29 degrees C) and 35 percent to 85 percent relative humidity for 48 hours prior to installation. Temperature and relative humidity should also be maintained at the same levels during installation, and after installation.
- B. Spread unopened cartons no more than 6 cartons high and at least 4 inches (101 mm) apart.
- C. Keep away from heating and cooling ducts and direct sunlight.
- D. If permanent HVAC is not operational, temporary means should be used to maintain the recommended temperature and relative humidity levels.

1.07 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section, with not less than five years of experience.

1.08 WARRANTY

- A. Aspecta® Five Warranty - 25-Year Limited Non-Prorated Commercial Material Warranty. Coverage includes:
 - 1. 100 percent cost of material for the entire duration of warranty (25 Years).
 - 2. Pro-rated cost of labor (fair-market value) for the first 10 Years.
 - 3. One-time transferability of warranty.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Basis of Design: Armstrong Flooring ; StandardExcelon Tite
VCT: <https://www.armstrongflooring.com/commercial/en-us/products/vinyl-composition-tile/std-excelon-imp-texture.html>
- B. Other Acceptable Manufacturers:
 - 1. Metroflor Corporation.
 - 2. Johnsonite Azrock Commercial Flooring.

2.02 RESILIENT TILE FLOORING

- A. Vinyl Composite Tile:
 - 1. Color: Per Architect's recommendations..
 - 2. Physical Properties:
 - a. Construction: Phthalate-free solid plank and tile made from 100 percent virgin vinyl.
 - b. Wear Layer Thickness: 28 mil (0.70 mm).
 - c. Total Thickness (Gauge): 0.126 inch (3.2 mm).
 - d. Finish: Urethane coating with ceramic bead particles.
 - 3. Manufacturing, Performance, and Safety Standards:
 - a. ASTM F386, Thickness: Passes requirements.
 - b. ASTM F2421/F2055, Size and Squareness: Passes requirements.
 - c. ASTM F1914, Residual Indentation: Surpasses requirements.
 - d. ASTM F137, Flexibility: Surpasses requirements.
 - e. ASTM F2199, Dimensional Stability: Surpasses requirements.

2.03 ACCESSORIES

- A. Moldings, Transition and Edge Strips: Same material as flooring.
- B. Adhesives:
 - 1. VOC Content Limits: As specified in Section 01 6116.
 - 2. Products:

- C. Finishes and Cleaners:
 - 1. VOC Content Limits: As specified in Section 01 6116.

PART 3 EXECUTION

3.01 EXAMINATION - SEE ALSO SECTION 01 7000.

- A. Install flooring and accessories after other operations (including painting) have been completed.
- B. Acceptance of Conditions: Carefully examine all installation areas with installer/applicator present, for compliance with requirements affecting work performance.
 - 1. Verify that field measurements, product, adhesives, substrates, surfaces, structural support, tolerances, levelness, temperature, humidity, moisture content level, pH, cleanliness and other conditions are as required by the manufacturer, and ready to receive work.
- C. Verify that substrate is contaminant-free, including old adhesives and abatement chemicals.
- D. Test substrates as required by manufacturer to verify proper conditions exist.
 - 1. Concrete:
 - a. Check for concrete additives such as fly ash, curing compounds, hardeners, or other surface treatments that may prevent proper bonding of floor coverings.
 - b. Moisture testing: Perform either the In-Situ Relative Humidity (RH) test (ASTM F2170) or Moisture Vapor Emission Rate (MVER) test (ASTM F1869). Refer to the Manufacturer's Installation Guide/Manual for the maximum allowable substrate moisture content. Substrates above the maximum allowable moisture content will require a moisture mitigation system.
 - c. Perform alkalinity testing per ASTM F710 to verify pH level is between 7 to 10.
 - d. Check substrate for absorbency per manufacturer's recommendations.
 - e. Perform bond testing per ASTM F710 to determine compatibility of adhesive to concrete substrate.
- E. Verify that required floor-mounted utilities are in correct location.

3.02 PREPARATION

- A. Flooring installation should not begin until all site conditions have been assessed, testing has been completed and subfloor conditions have been approved.
- B. Prepare per manufacturer's written instructions, Section 01 7000, and as follows:

3.03 INSTALLATION

- A. Installation per manufacturer's written instructions, Section 01 7000, and as follows:
 - 1. Layout shall be specified by Architect, Designer or End User.
 - 2. Follow layout and ensure installation reference lines are square.
 - 3. Field tiles shall be installed with directional arrows on back aligned in the same direction, or may be installed in quarter-turned fashion.
 - 4. Check cartons for and do not mix dye lots.
 - 5. Expansion Joints: Locate expansion, isolation, and other moving joints prior to installation.
 - a. Do not fill expansion, isolation, and other moving joints with patching compound nor cover with resilient flooring.
 - b. Install movement joint systems per manufacturer's instructions and per Section 07 9200 and Section 07 9513.
 - 6. Adhesives: Adhere flooring to substrate using the full spread method resulting in a completed installation without gaps, voids, raised edges, bubbles or any other surface imperfections.
 - a. Select appropriate adhesive, trowel and follow manufacturer's instructions.
 - b. Periodically spot-check transfer of adhesive to back of tile during installation.
 - c. Roll floor with a 100 pound roller to ensure proper transfer of adhesive and bonding.
 - d. Protect floor from traffic per manufacturer's instructions.

- e. Do not wet mop floor until the adhesive has properly set per written instructions.

3.04 CLEANING

- A. Waste Management per Section 01 7000 and Section 01 7419, and as follows:
 - 1. Coordinate material reclamation program with manufacturer, if applicable.
 - a. Store and return cartons and pallets to manufacturer or recycler for reuse or recycling.
- B. Provide progress cleaning per manufacturer's written instructions, Section 01 7000, and as follows:
 - 1. Work Areas: Clean areas where work is in progress to the level of cleanliness necessary for proper execution of the work.
 - a. Clean and protect completed construction until Date of Substantial Completion.
 - b. During installation, remove wet adhesive from surface of flooring per manufacturer's instructions.
 - 2. Site: Maintain project site free of waste materials and debris.
- C. Provide final cleaning immediately prior to Date of Substantial Completion inspection per manufacturer's written instructions and Section 01 7000.
 - 1. Protection: Remove manufacturer's and other installed protection immediately prior to Date of Substantial Completion inspection, unless required otherwise.
 - 2. Clean floor with a neutral 6-8 pH cleaner.

3.05 MAINTENANCE

- A. Initial maintenance per flooring manufacturer's written instructions and as follows:
 - 1. Allow the adhesive to cure for at least 48 hours prior to wet cleaning the floor.
 - 2. Sweep, dust mop or vacuum the floor thoroughly to remove all loose dirt, dust, grit and debris. Do not use vacuums with a beater bar assembly.
 - 3. Remove any dried adhesive residue from the surface with mineral spirits applied to a clean, lint-free cloth.
 - 4. Damp mop the floor using a cleaner recommended by the flooring manufacturer.
 - 5. If necessary, scrub the floor using an auto scrubber or rotary machine (300 rpm or less) with a cleaner recommended by the flooring manufacturer. Maintain the proper dilution ratio and use the appropriate scrubbing brush or pad.
 - 6. Thoroughly rinse the entire floor with fresh, clean water. Remove the dirty residue with a wet-vacuum or clean mop and allow the floor to dry completely.

3.06 PROTECTION

- A. Protect materials from construction operations until Date of Substantial Completion or Owner occupancy, whichever occurs first.
 - 1. Protect finished floor from abuse and damage by using heavy non-staining kraft paper, drop cloths or equivalent. Use additional, non-damaging protective materials as needed.
 - 2. Light foot traffic on a newly installed floor can be permitted after 24 hours.
 - 3. Keep heavy traffic and rolling loads off the newly installed LVT flooring for 48 hours.
 - 4. Protect the floor from rolling loads by covering with protective boards.

END OF SECTION

**SECTION 09 9123
INTERIOR PAINTING**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Surface preparation.
- B. Field application of paints.
- C. Scope: Finish interior surfaces exposed to view, unless fully factory-finished and unless otherwise indicated.
 - 1. Both sides and edges of plywood backboards for electrical and telecom equipment before installing equipment.
 - 2. Mechanical and Electrical:
 - a. In finished areas, paint insulated and exposed pipes, conduit, boxes, insulated and exposed ducts, hangers, brackets, collars and supports, mechanical equipment, and electrical equipment, unless otherwise indicated.
- D. Do Not Paint or Finish the Following Items:
 - 1. Items factory-finished unless otherwise indicated; materials and products having factory-applied primers are not considered factory finished.
 - 2. Items indicated to receive other finishes.
 - 3. Items indicated to remain unfinished.
 - 4. Fire rating labels, equipment serial number and capacity labels, bar code labels, and operating parts of equipment.
 - 5. Floors, unless specifically indicated.
 - 6. Glass.
 - 7. Concealed pipes, ducts, and conduits.

1.02 RELATED REQUIREMENTS

- A. Section 01 6116 - Volatile Organic Compound (VOC) Content Restrictions.
- B. Section 09 9113 - Exterior Painting.

1.03 REFERENCE STANDARDS

- A. ASTM D4258 - Standard Practice for Surface Cleaning Concrete for Coating 2005 (Reapproved 2017).
- B. MPI (APL) - Master Painters Institute Approved Products List; Master Painters and Decorators Association Current Edition.
- C. MPI (APSM) - Master Painters Institute Architectural Painting Specification Manual Current Edition.

1.04 SUBMITTALS

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

1.05 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing the products specified, with minimum three years documented experience.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Deliver products to site in sealed and labeled containers; inspect to verify acceptability.
- B. Container Label: Include manufacturer's name, type of paint, brand name, lot number, brand code, coverage, surface preparation, drying time, cleanup requirements, color designation, and instructions for mixing and reducing.
- C. Paint Materials: Store at minimum ambient temperature of 45 degrees F (7 degrees C) and a maximum of 90 degrees F (32 degrees C), in ventilated area, and as required by manufacturer's instructions.

1.07 FIELD CONDITIONS

- A. Do not apply materials when surface and ambient temperatures are outside the temperature ranges required by the paint product manufacturer.
- B. Follow manufacturer's recommended procedures for producing best results, including testing of substrates, moisture in substrates, and humidity and temperature limitations.
- C. Provide lighting level of 80 ft candles (860 lx) measured mid-height at substrate surface.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Provide paints and finishes used in any individual system from the same manufacturer; no exceptions.
- B. Paints:
 - 1. Base Manufacturer: Sherwin-Williams Company: www.sherwin-williams.com/#sle..
 - 2. Behr Process Corporation: www.behr.com/#sle.
 - 3. PPG Paints: www.ppgpaints.com/#sle.
- C. Primer Sealers: Same manufacturer as top coats.

2.02 PAINTS AND FINISHES - GENERAL

- A. Paints and Finishes: Ready mixed, unless intended to be a field-catalyzed paint.
 - 1. Provide paints and finishes of a soft paste consistency, capable of being readily and uniformly dispersed to a homogeneous coating, with good flow and brushing properties, and capable of drying or curing free of streaks or sags.
 - 2. Supply each paint material in quantity required to complete entire project's work from a single production run.
 - 3. Do not reduce, thin, or dilute paint or finishes or add materials unless such procedure is specifically described in manufacturer's product instructions.
- B. Volatile Organic Compound (VOC) Content: Comply with Section 01 6116.
- C. Colors: As indicated on drawings.
 - 1. Extend colors to surface edges; colors may change at any edge as directed by Architect.
 - 2. In finished areas, finish pipes, ducts, conduit, and equipment the same color as the wall/ceiling they are mounted on/under.

2.03 PAINT SYSTEMS - INTERIOR

- A. Color Scheme noted on documents Sheet A-900

2.04 PRIMERS

- A. Primers: Provide the following unless other primer is required or recommended by manufacturer of top coats.

2.05 ACCESSORY MATERIALS

- A. Accessory Materials: Provide primers, sealers, cleaning agents, cleaning cloths, sanding materials, and clean-up materials as required for final completion of painted surfaces.
- B. Patching Material: Latex filler.
- C. Fastener Head Cover Material: Latex filler.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that surfaces are ready to receive work as instructed by the product manufacturer.
- B. Examine surfaces scheduled to be finished prior to commencement of work. Report any condition that may potentially effect proper application.
- C. Test shop-applied primer for compatibility with subsequent cover materials.

- D. Measure moisture content of surfaces using an electronic moisture meter. Do not apply finishes unless moisture content of surfaces are below the following maximums:
 - 1. Gypsum Wallboard: 12 percent.

3.02 PREPARATION

- A. Clean surfaces thoroughly and correct defects prior to application.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
- C. Remove or mask surface appurtenances, including electrical plates, hardware, light fixture trim, escutcheons, and fittings, prior to preparing surfaces or finishing.
- D. Seal surfaces that might cause bleed through or staining of topcoat.
- E. Concrete:
- F. Masonry:
 - 1. Remove efflorescence and chalk. Do not coat surfaces if moisture content or alkalinity of surfaces or if alkalinity of mortar joints exceed that permitted in manufacturer's written instructions. Allow to dry.
 - 2. Prepare surface as recommended by top coat manufacturer.
- G. Gypsum Board: Fill minor defects with filler compound. Spot prime defects after repair.

3.03 APPLICATION

- A. Remove unfinished louvers, grilles, covers, and access panels on mechanical and electrical components and paint separately.
- B. Apply products in accordance with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual".
- C. Do not apply finishes to surfaces that are not dry. Allow applied coats to dry before next coat is applied.
- D. Apply each coat to uniform appearance in thicknesses specified by manufacturer.
- E. Vacuum clean surfaces of loose particles. Use tack cloth to remove dust and particles just prior to applying next coat.
- F. Reinstall electrical cover plates, hardware, light fixture trim, escutcheons, and fittings removed prior to finishing.

3.04 FIELD QUALITY CONTROL

- A. See Section 01 4000 - Quality Requirements, for general requirements for field inspection.

3.05 CLEANING

- A. Collect waste material that could constitute a fire hazard, place in closed metal containers, and remove daily from site.

3.06 PROTECTION

- A. Protect finishes until completion of project.
- B. Touch-up damaged finishes after Substantial Completion.

END OF SECTION

CMRTA - BUS DRIVER LOUNGE

CONSTRUCTION DOCUMENTS
PROJECT NO.: 02-006.11
FEBRUARY 5, 2021



DESIGN TEAM

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LIST OF DRAWINGS

G100	COVER SHEET
LS100	LIFE SAFETY PLAN
A101	FLOOR PLANS, DETAILS, RCP, & DOOR DETAILS
E100	ELECTRICAL SPECIFICATIONS
E102	ELECTRICAL PLAN
M001	MECHANICAL NOTES, LEGENDS, AND SYMBOLS
M101	MECHANICAL FLOOR PLANS

ABBREVIATIONS

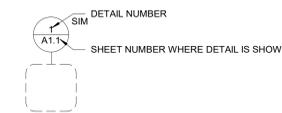
AB ABOVE	LAM LAMINATE	LAM GL LAMINATED GLASS
AF ABOVE FINISH FLOOR	LAND LANDSCAPE	LAV LAVATORY
APC ACOUSTICAL PANEL CEILING	LEAD LEAD LINE, LIVE LOAD	LF LENGTH LINE, LONG
AWC ACOUSTICAL WALL COVERING	LEAF LEAF FEET	LFL LINE FEET
ADJ ADJACENT, ADJUSTABLE	LI LIGHT	LTL LITTEL
AGG AGGREGATE	LV LIGHTWEIGHT	LOC LOCATE, LOCATED, LOCATION
AHU AIR HANDLING UNIT	LP LOW POINT, LIGHT POLE	LVR LOUVER
AC AIR CONDITION	LS POUND	MACH MACHINE, MACHINERY
ALUM ALUMINUM	MFR MANUFACTURER, MANUFACTURED	MB MARKERBOARD
ALT ALTERNATE	MAS MASONRY	MCJ MASONRY CONTROL JOINT
APPROX APPROXIMATELY	MO MASONRY OPENING	MATL MATERIAL
ARCH ARCHITECT, ARCHITECTURE, ARCHITECTURAL	MAX MAXIMUM	MCH MECHANICAL
ASPH ASPHALT	MEZ MEZZANINE	MIN MINIMUM
AT	MIR MIRROR	MIS MISCELLANEOUS
AV AUDIO VISUAL	MR MOISTURE RESISTANT	MRSB MOISTURE RESISTANT GYPSUM BOARD
BNI BEAM BENCHMARK	MTD MOUNTED	MEL MILLION
BRG BEARING	NRC NOISE REDUCTION COEFFICIENT	NOM NOMINAL
BFF BELOW FINISH FLOOR	NS NON SHRINK	N NORTH
BTWN BETWEEN	NA NOT APPLICABLE	NC NOT IN CONTRACT
BLK BLOCK	NTS NOT TO SCALE	NO. # NUMBER
BLKG BLOCKING	OFF OFFICE	OC ON CENTER
BO BOARD	OPN OPENING	OPR OPERABLE
BOT BOTTOM	OPP OPPOSITE	OH OPPOSITE HAND
BOS BOTTOM OF STEEL	OD OUTSIDE DIAMETER, OUTSIDE DIMENSION	OA OVERALL
BR BRICK	OAL OVERALL LENGTH	OF OVERFLOW, OUTSIDE FACE
BRP BRICK PAVERS	ORD OVERFLOW ROOF DRAIN	OS OVERFLOW SCUPPER
BLDG BUILDING	OFI OWNER FURNISHED, OWNER INSTALLED	OFCI OWNER FURNISHED, CONTRACTOR INSTALLED
BUR BUILT UP ROOFING	PAINT PAINT	PTM PAINT TO MATCH
CC CABINET	PR PAIR	PJ PANEL JOINT
CAB CABINET	PTD PAPER TOWEL DISPENSER	PTN PARTITION
CPT CARPET	PLAM PLASTIC LAMINATE	PLAS PLASTER
CPTT CARPET TILE	PL PLATE, PROPERTY LINE	PLMB PLUMBING
CI CAST IRON	PLY PLYWOOD	PT POINT
CB CATCH BASIN	PP POWER POLE	PT PRESSURE TREATED
CLG CEILING	Q QUARRY TILE	R RAD
CEM CEMENT	OH OPPOSITE HAND	RECPT RECEPTACLE
CSB CEMENTITIOUS BACKER BOARD	OD OUTSIDE DIAMETER, OUTSIDE DIMENSION	REF REFLECTED CEILING PLAN
CTR CENTER	OAL OVERALL LENGTH	REF REFERENCE
CC CENTER TO CENTER	OF OVERFLOW, OUTSIDE FACE	REINFORC REINFORCING, REINFORCEMENT
CL CENTERLINE	ORD OVERFLOW ROOF DRAIN	REM REMOVE, REMOVABLE, REMOVED
CP CENTER POINT	OFI OWNER FURNISHED, OWNER INSTALLED	REQD REQUIRED
CT CERAMIC TILE	OFCI OWNER FURNISHED, CONTRACTOR INSTALLED	REV REVERSE
CTB CERAMIC TILE BASE	PAINT PAINT	RFB RESILIENT FLOORING
CWT CERAMIC WALL TILE	PR PAIR	ROW RIGHT OF WAY
CO CLEAN OUT	PTD PAPER TOWEL DISPENSER	R ROOF DRAIN
CLR CLEAR	PTN PARTITION	RM ROOM
CL CLOSET	PLAM PLASTIC LAMINATE	RO ROUGH OPENING
CTG COATING	PLAS PLASTER	RB RUBBER BASE
CW COLD WATER	PLMB PLUMBING	SND SANITARY NAPKIN DISPENSER
COL COLUMBIA	PLY PLYWOOD	SCH SCHEDULE
CONC CONCRETE	PP POWER POLE	SCT SECTION
CMU CONCRETE MASONRY UNIT	PT PRESSURE TREATED	SEP SEPARATE, SEPARATED, SEPARATION
CONSTR CONSTRUCTION	Q QUARRY TILE	SS SERVICE SINK
CONT CONTINUOUS	R RAD	SHT SHEET
CONTR CONTRACTOR	RECPT RECEPTACLE	SV SHEET VINYL
CTR COUNTER	REF REFLECTED CEILING PLAN	SIM SIMILAR
CSK COUNTERSINK	REF REFERENCE	SQL SINGLE
DE DEGREE	REINFORC REINFORCING, REINFORCEMENT	SD SOAP DISPENSER
DEMO DEMOLITION	REM REMOVE, REMOVABLE, REMOVED	SC SOLID CORE
DET DETAIL	REQD REQUIRED	STC SOUND TRANSMISSION CLASS
DA DIAMETER	REV REVERSE	S SOUTH
DM DIMENSION	RFB RESILIENT FLOORING	SPEC SPECIFICATIONS
DSP DISPENSER	ROW RIGHT OF WAY	SPR SPRINKLER
DR DOOR / DRAIN	R ROOF DRAIN	SQ SQUARE
DBL DOUBLE	RM ROOM	SQF SQUARE FEET, SQUARE FOOT
DN DOWN	RO ROUGH OPENING	ST STAIN
DL DOWN LEADER	RB RUBBER BASE	STM STAIN TO MATCH
DS DOWN SPOUT	SND SANITARY NAPKIN DISPENSER	SST STAINLESS STEEL
DWR DRAWER	SCH SCHEDULE	STD STANDARD
DWG DRAWING	SCT SECTION	STF STANCHION
DF DRINKING FOUNTAIN	SEP SEPARATE, SEPARATED, SEPARATION	STP STEEL
DSP DRY STANDOFF	SS SERVICE SINK	STOR STORAGE
EA EACH	SHT SHEET	SD STORM DRAIN
E EAST	SV SHEET VINYL	STR STRUCTURAL
EO EDGE OF	SIM SIMILAR	STRUCT STRUCTURAL
EW ELECTRIC WATER COOLER	SQL SINGLE	SUBSP SUBSPRINGER
ELEC ELECTRICAL	SD SOAP DISPENSER	SYM SYMMETRICAL
ELEV ELEVATION	SC SOLID CORE	TB TACKBOARD
EMER EMERGENCY	STC SOUND TRANSMISSION CLASS	TAP TAPERED
ENCL ENCLOSURE	S SOUTH	TELE TELEPHONE
EQU EQUIPMENT	SPEC SPECIFICATIONS	TEMP TEMPORARY
EXH EXHAUST	SPR SPRINKLER	TER TERRAZZO
EJ EXPANSION JOINT	SQ SQUARE	THK THICK
EXT EXTERIOR	SQF SQUARE FEET, SQUARE FOOT	TH THROUGH
EPS EXTERIOR INSULATION FINISH SYSTEM	ST STAIN	THRU THROUGH
EXIST EXISTING	STM STAIN TO MATCH	TA TACK ACCESSORY
EXP EXPANSION	SST STAINLESS STEEL	T&G TONGUE AND GROOVE
FG FROSTED GLASS	STD STANDARD	T TOP
FWC FABRIC WALL COVERING	STF STANCHION	TO TOP OF
FOC FACE OF CONCRETE, CURB	STP STEEL	TOC TOP OF CONCRETE
FOF FACE OF FINISH	STOR STORAGE	TOM TOP OF MASONRY
FOM FACE OF MASONRY	SD STORM DRAIN	TOS TOP OF STEEL
FOS FACE OF STUDS	STR STRUCTURAL	TOW TOP OF WALL
FV FIELD VERIFY	STRUCT STRUCTURAL	TS TUBE STEEL
FIN FINISH	SUBSP SUBSPRINGER	TYP TYPICAL
FIN FL FINISH FLOOR	SYM SYMMETRICAL	UL UNDERWRITER'S LABORATORY
FIN GR FINISH GRADE	TB TACKBOARD	UNO UNLESS NOTED OTHERWISE
FO FINISH OPENING	TAP TAPERED	UTL UTILITY
FDC FIRE DEPARTMENT CONNECTION	TELE TELEPHONE	VERT VERTICAL
FEB FIRE EXTINGUISHER ON BRACKET	TEMP TEMPORARY	VEST VESTIBULE
FEC FIRE EXTINGUISHER IN CABINET	TER TERRAZZO	VCT VINYL COMPOSITION TILE
FHC FIRE HOSE CABINET	THK THICK	VENT THROUGH ROOF
FI FIRE HYDRANT	TH THROUGH	VVC VINYL WALL COVERING
FP FIRE PROOFING	THRU THROUGH	VOL VOLUME
FR FIRE RATED, FIRE RETARDANT, FIRE RESISTANT	TA TACK ACCESSORY	W WATER, WEST, WIDE, WIDTH
FLASH FLASHING	T&G TONGUE AND GROOVE	WC WATER CLOSET
FLR FLOOR	T TOP	WH WATER HEATER
FLC FLOOR CLEAN OUT	TO TOP OF	WR WATER RESISTANT
FD FLOOR DRAIN	TOC TOP OF CONCRETE	WP WATERPROOF
FOOT FOOT OR FEET	TOM TOP OF MASONRY	WS WEATHER STRIPPING
FT FOOTING	TOS TOP OF STEEL	WT WEIGHT, WATERIGHT
FT FULLY TEMPERED (GLASS)	TOW TOP OF WALL	WWF WELDED WIRE FABRIC
FS FULL SIZE	TS TUBE STEEL	WDW WINDOW
FURN FURNITURE, FURNISH (ED)	TYP TYPICAL	W WITH
FURR FURRING	UL UNDERWRITER'S LABORATORY	WO WITHOUT
GALV GALVANIZED	UNO UNLESS NOTED OTHERWISE	WB WOOD BASE
GA GAUGE	UTL UTILITY	WD WOOD
GEN GENERAL	VERT VERTICAL	WP WORKING POINT
GC GENERAL CONTRACTOR	VEST VESTIBULE	
GL GLASS	VCT VINYL COMPOSITION TILE	
GLBLK GLASS BLOCK	VENT THROUGH ROOF	
GFRG GLASS FIBER REINFORCED CONCRETE	VVC VINYL WALL COVERING	
GWT GLAZED WALL TILE	VOL VOLUME	
GR GRADE	W WATER, WEST, WIDE, WIDTH	
GYP GYPSUM	WC WATER CLOSET	
GYP BD GYPSUM BOARD	WH WATER HEATER	
GSB GYPSUM SHEATHING BOARD	WR WATER RESISTANT	
HB BOARD	WS WEATHER STRIPPING	
HDWR HARDWARE	WT WEIGHT, WATERIGHT	
HWDR HARDWOOD	WWF WELDED WIRE FABRIC	
HTG HEATING	WDW WINDOW	
HTR HEATER	W WITH	
HVAC HEATING VENTILATION AIR-CONDITIONING	WO WITHOUT	
HD HEAD	WB WOOD BASE	
HT HEIGHT	WD WOOD	
H HIGH POINT	WP WORKING POINT	
HM HOLLOW METAL		
HORZ HORIZONTAL		
HB HOSE BIB		
HW HOT WATER		
HR HOUR		
IN INCH		
INCL INCLUDE		
INFO INFORMATION		
ID INSIDE DIAMETER		
INST INSTALL, INSTALLED, INSTALLATION		
INSUL INSULATION, INSULATED, INSULATING		
INT INTERIOR		
JAN JANITOR		
JT JOINT		
KP KICK PLATE		
KIT KITCHEN		
KS KNEE SPACE		
KO KNOCK OUT		

SYMBOLS

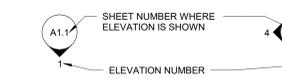
DRAWING REFERENCE



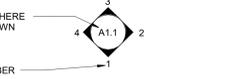
PLAN DETAIL REFERENCE



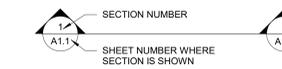
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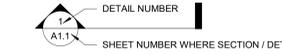
ALTERNATE ELEVATION REFERENCE



BUILDING SECTION REFERENCE



WALL SECTION / DETAIL SECTION REFERENCE

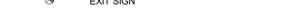


SIM SIMILAR CONDITION
OH OPPOSITE HAND
OPP OPPOSITE HAND
ROT ROTATED CONDITION

ROOM TAG SYMBOL

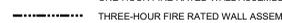


DOOR TAG SYMBOL

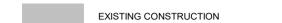
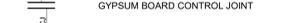
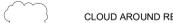


FIRE RATED WALL SYMBOLS

NOTE: SEE PARTITION TYPES FOR UL DESIGNATION NO.'S



REVISION SYMBOL

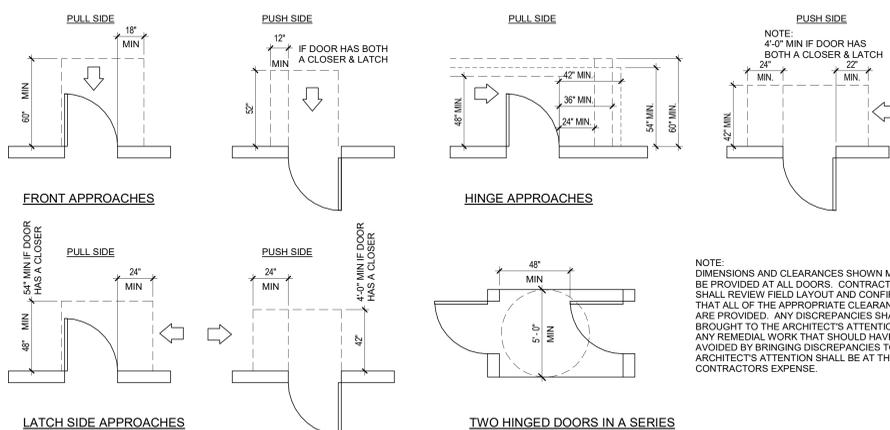


LOCATION MAP



PROJECT BUILDING LOCATION

ADA / ANSI A117.1 DOOR CLEARANCES



MATERIALS LEGEND

	CONCRETE		COMPACTED EARTH
	CONCRETE MASONRY UNIT (CMU)		WOOD FINISHED
	BRICK		PLYWOOD
	STEEL		BATT INSULATION
	WOOD (ROUGH)		POROUS FILL (STONE OR GRAVEL)
	SAND, PLASTER, CEMENT, GROUT, GYPSUM BOARD		RIGID INSULATION

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Client
CMRTA
3613 LUCIUS ROAD
COLUMBIA, SC 29201

Project
BUS DRIVER LOUNGE

Issued For
CONSTRUCTION DOCUMENTS

No.	Item	Date

Key Plan

Date: 2.5.2021

Sheet Title

COVER SHEET

G100

Drawn By: JS
Checked By: AL

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Seal



Client
CMRTA
 3613 LUCIUS ROAD
 COLUMBIA, SC 29201

Project
BUS DRIVER LOUNGE

Issued For
 CONSTRUCTION DOCUMENTS

No.	Item	Date

Key Plan

Date: 2.5.2021

Sheet Title

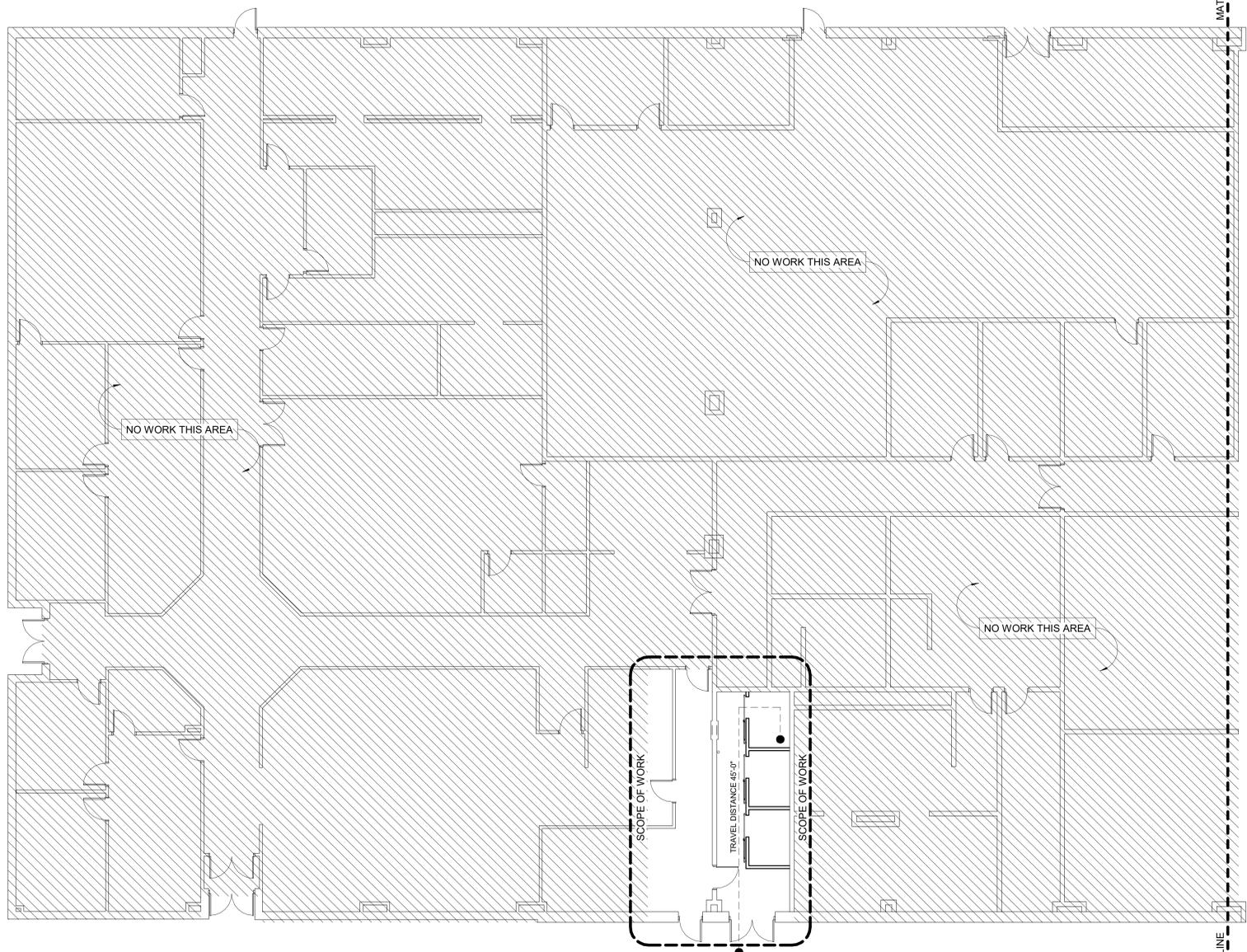
LIFE SAFETY PLAN

LS100

Drawn By JS
 Checked By AL

EXISTING BUILDING CODE ANALYSIS

CODE ITEM		CODE REFERENCE	DESCRIPTION
OCCUPANCY CLASSIFICATION			
CONSTRUCTION CLASSIFICATION		CHAPTER 3	B - BUSINESS / S-1 - STORAGE
HEIGHT IN LIN. FT.	ALLOWED	CHAPTER 6	III - B. SPRINKLERED
HEIGHT WITH INCREASE ALLOWED		TABLE 504.3	55'
HEIGHT IN LIN. FT.	ACTUAL	CHAPTER 5	NA
HEIGHT WITH INCREASE ALLOWED		CHAPTER 5	29'
AREA IN SQ. FT.	ALLOWED	TABLE 506.2	19,000 SF
AREA WITH INCREASE ALLOWED		CHAPTER 5	38,000 SF
AREA IN SQ. FT.	ACTUAL EXISTING		46,664 SF
STRUCTURAL MEMBERS			
PRIMARY STRUCTURAL FRAME			
BEARING WALLS	EXTERIOR	TABLE 601	0 HR
	INTERIOR	TABLE 601	0 HR
NON BEARING WALLS			
	EXTERIOR	TABLE 601	1 HR
	INTERIOR	TABLE 601	0 HR
FLOOR CONSTRUCTION			
ROOF CONSTRUCTION			
		TABLE 601	0 HR
		TABLE 601	0 HR
SPECIAL REQUIREMENTS			
ATRIUMS			
		SECTION 404	NA
STAGES AND PLATFORMS			
		SECTION 410	NA
SEPARATION WALLS			
OCCUPANCY SEPARATION WALLS			
		TABLE 508.4	2 HR
EXIT STAIR			
		SECTION 707	1 HR
EXIT ACCESS CORRIDOR WALLS			
		TABLE 1020.1	0 HR
ELEVATOR SHAFT WALLS			
		SECTION 713.4	1 HR
INTERIOR PARTITIONS			
		SECTION 602	0 HR
OCCUPANCY/EGRESS REQUIREMENTS			
OCCUPANT LOAD			
		SECTION 1004	467
REQUIRED EXIT @ 0.2"/PERSON			
		SECTION 1005	NA
ACTUAL LEVEL EXIT			
		SECTION 1006.3.1	NA
NO. OF REQUIRED EXITS			
	REQUIRED		7
	PROVIDED		7
REQUIRED STAIR WIDTH @ 0.3"/PERSON			
		SECTION 1005	NA
ACTUAL STAIR WIDTH			
			NA
MINIMUM CORRIDOR WIDTH			
	REQUIRED	TABLE 1020.2	36"
	PROVIDED		NA
CORRIDOR FIRE-RESISTANCE RATING			
		TABLE 1020.1	0 HR
MAX. OCCUPANT LOAD WITH ONE MEANS OF EGRESS			
		TABLE 1006.2.1	49
EXIT TRAVEL DISTANCE			
			75'
PLUMBING REQUIREMENTS			
MIN. NO OF REQUIRED FIXTURES			
LAVATORIES - MEN			
	REQUIRED	TABLE 2902.1	NA
	PROVIDED		NA
LAVATORIES - WOMEN			
	REQUIRED	TABLE 2902.1	NA
	PROVIDED		NA
WATER CLOSETS - MEN			
	REQUIRED	TABLE 2902.1	NA
	PROVIDED		NA
WATER CLOSETS - WOMEN			
	REQUIRED	TABLE 2902.1	NA
	PROVIDED		NA
SHOWERS/BATH TUBS			
		TABLE 2902.1	NA
DRINKING FOUNTAINS			
	REQUIRED	TABLE 2902.1	NA
	PROVIDED		NA
SERVICE SINK			
	REQUIRED	TABLE 2902.1	NA
	PROVIDED		NA



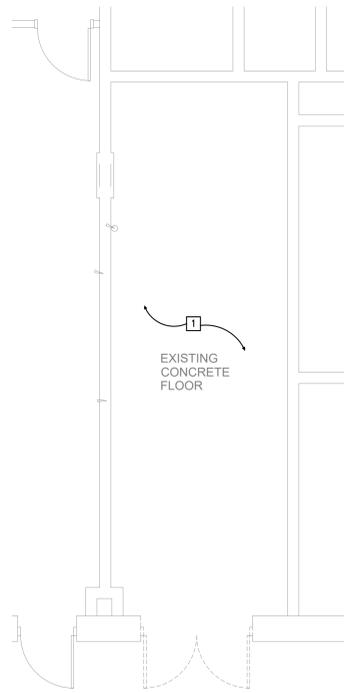
1 OVERALL FLOOR PLAN
 1/8" = 1'-0"

DEMOLITION GENERAL NOTES:

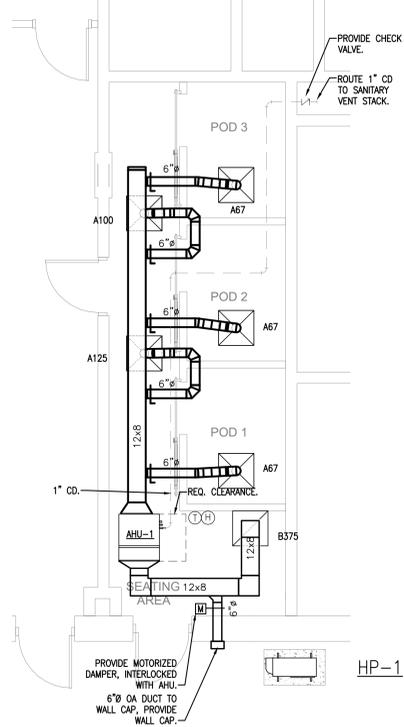
- ALL DUCT, AIR DEVICES, HANGARS, AND ACCESSORIES ABOVE CEILING FOR OFFICE AREA TO BE DEMOLISHED.
- MECHANICAL CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND EQUIPMENT. DEMOLITION PLAN PRESENTS BEST KNOWN LOCATIONS AND EQUIPMENT CONFIGURATIONS.

DEMOLITION PLAN NOTES:

1 DEMOLISHING EXISTING HVAC SYSTEMS, AND DUCTWORK (F ANY).



1 MECHANICAL DEMOLITION PLAN
 M101 Scale: 1/4" = 1'-0"



2 MECHANICAL RENOVATION PLAN
 M101 Scale: 1/4" = 1'-0"

MECHANICAL EQUIPMENT NOTE (AS DICTATED BY OTHERS):

"THE HVAC UNIT IS OWNER PURCHASED, AND CONTRACTOR INSTALLED. DUCTING, LABOR AND MATERIALS SHOULD BE PROVIDED BY THE CONTRACTOR AND INCLUDED IN THE "HVAC INSULATION" LINE ITEM. THERE WILL BE AN "ALTERNATE 1" LINE ITEM FOR THE CONTRACTOR TO PROVIDE FOR THIS UNIT, THIS LINE ITEM IS FOR THE UNIT ONLY. CONTRACTORS MUST USE THE UNIT SPECIFIED ON THE MECHANICAL DESIGN DRAWINGS, NO OTHER ALTERNATE SHALL BE SUBSTITUTED."

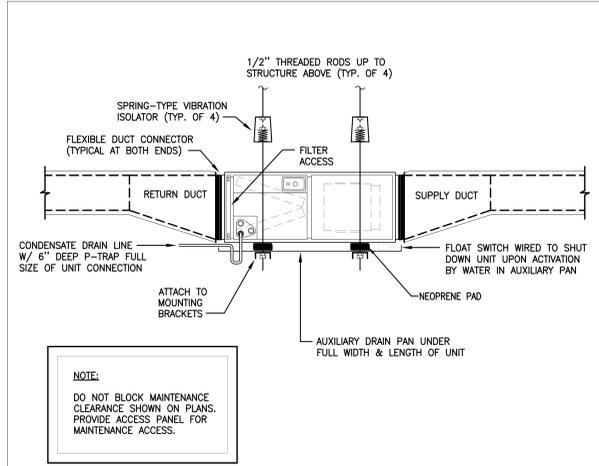
SPLIT SYSTEM HEAT PUMP SCHEDULE		AIR HANDLING UNIT										HEAT PUMP CONDENSING UNIT										ACCESSORIES							
MARK	AREA SERVED	FAN				COOLING				AIR HANDLING UNIT		HEAT PUMP CONDENSING UNIT										SEER / EER	HSPF / COP	ACCESSORIES					
		TOTAL AIR (CFM)	OUTSIDE AIR (CFM)	EXT. S.P. (IN. W.G.)	(HP)	ENT. AIR DB (°F)	WB (°F)	LVG AIR DB (°F)	WB (°F)	COIL SENS. (MBH)	COIL TOTAL (MBH)	MCA	MOCP	MARK	AMBIENT AIR TEMP (°F)	HEAP PUMP CAPACITY	NOMINAL TONS	COMPRESSOR TYPE	VOLTS/PH	MCA	MOCP				WEIGHT	MANUFACTURER.	MODEL		
AHU-1	LOUNGE	425	50	0.3	130 WATTS	56.0	56.0	76.0	64.0	8.0	9.8	FLA 0.73A, POWER FROM OUTDOOR UNIT.	70	DAIKIN	FDMQ12RVJU	HP-1	95	12	1	SCROLL	208/1	9.1	15	50	DAIKIN	RX12RMVU9	19.4/11.6	10.6/3.7	2.5.6

REMARKS

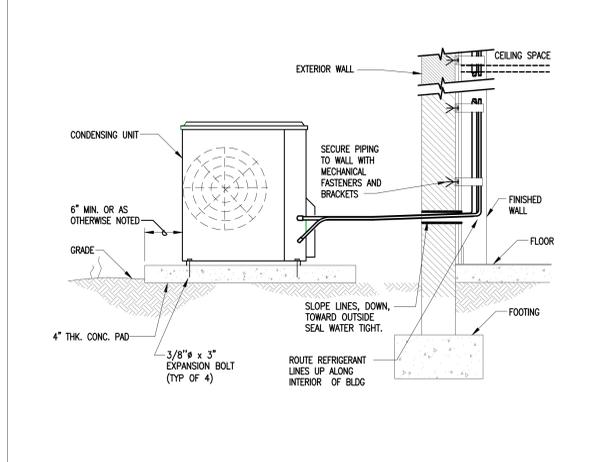
- FAN HP IS ESTIMATED FOR ELECTRICAL SERVICING REQUIREMENTS ONLY. MANUFACTURER/CONTRACTOR SHALL DETERMINE FAN HP BASED ON SCHEDULED EXT. S.P., MANUFACTURER'S ESTIMATED INTERNAL S.P., AND CFM.
- PROVIDE UNIT-MOUNTED ELECTRICAL DISCONNECT FOR AIR HANDLER AND CONDENSING UNIT
- PROVIDE AUXILIARY DRAIN PAN UNDER UNIT SIZED PER STANDARD BUILDING CODE.
- UNIT SENS. AND UNIT TOTAL MBH ARE NET UNIT CAPACITIES & DO NOT REPRESENT COIL CAPACITIES ONLY. NET CAPACITIES SHALL BE MET & SHALL INCLUDE BOTH THE MECHANICAL & THE THERMAL ENERGY TRANSFERRED TO THE AIR STREAM VIA THE FAN/MOTOR COMBINATION. UNIT CAPACITY SHALL BE MET REGARDLESS OF MODEL NUMBER REFERENCED.
- SIZE REFRIGERANT LINE PER MANUFACTURER'S RECOMMENDATIONS

ACCESSORIES

- PROVIDE NEMA 1 DISCONNECT FOR AHU AND PROVIDE NEMA 3R DISCONNECT FOR HP
- PROVIDE CORROSION PROTECTION COATING ON BOTH INDOOR AND OUTDOOR COILS.
- PROVIDE INVERTER CONTROLLED VARIABLE SPEED SCROLL COMPRESSORS WITH MAULTI STAGE CAPABILITIES (MIN 6 STAGES).
- PROVIDE AHU WITH ECM VARIABLE SPEED MOTOR, AND ELECTRONIC EXPANSION VALVE.
- PROVIDE MERV 11 FILTERS FOR AHU
- UNIT SHALL BE FURNISHED WITH MOTORIZED OUTDOOR AIR DAMPERS AS SHOWN ON PLANS.



A1 HORIZONTAL AHU INSTALLATION DETAIL
 M101 NTS



A2 CONDENSING UNIT DETAIL
 M101 NTS

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Client
CMRTA
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 COLUMBIA, SC 2901

Project
BUS DRIVER LOUNGE

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Date: 2.5.2021
 Sheet Title
MECHANICAL FLOOR PLANS

M101

Drawn By _____ AG
 Checked By _____