

PROJECT MANUAL

DELTA COLLEGE

MAIN CAMPUS L & M WINGS RECONFIGURATION BID PACKAGE #1

University Center, MI 48710

April 30, 2026



William A. Kibbe & Associates, Inc.
Architects – Engineers – Consultants

1475 S. Washington Ave., Saginaw, Michigan 48601
Ph (989) 752-5000 Fax (989) 752-5002

www.kibbe.com

WAK No. 26-0543- 0015

SECTION 000200 - INVITATION TO BID

1.1 GENERAL

- A. Delta College will be receiving sealed proposals for renovations to the L&M Wings Reconfiguration Project Bid Package #1 (BP #1) of the main campus Building located at 1961 Delta Road, University Center, Michigan 48710.

WAGE RATES: Project will be required to comply with the latest minimum State Prevailing Wage requirements.

- B. Owner requests proposals on Work as follows:

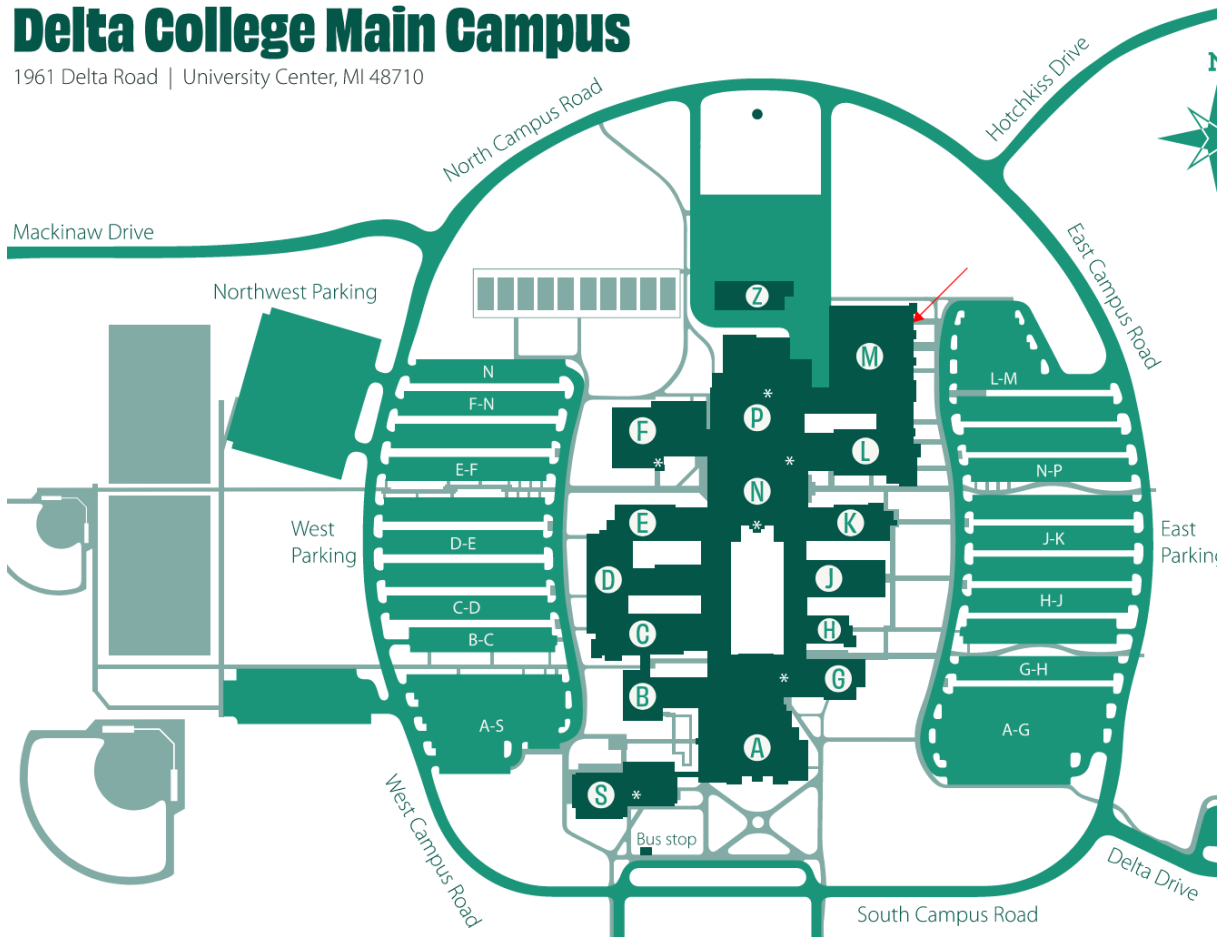
1. Project: Delta College
L&M Wings Reconfiguration – BP #1
2. Project Address: Delta College
1961 Delta Road
University Center, Michigan 48710
3. Owner: Delta College
Anthony Khalil, RA
Planning and Construction Manager
Office: 989-686-9407
anthonykhalil@delta.edu
4. Architect/Engineer: William A. Kibbe & Associates, Inc.
1475 S. Washington Avenue
Saginaw, MI 48601
Office: 989-752-5000
Casey Tucker, Project Manager
(ctucker@kibbe.com)
Ivars “Buzz” Dzirnys, AIA, Project Architect
(bdzirnys@kibbe.com)
5. Sealed Bids Due: **By 2:00 pm Local Time, Tuesday, May 19, 2026**
6. Place Due: Delta College, Room P029
Attention: Mr. Anthony Khalil, RA
1961 Delta Road
University Center, MI 48710
Or emailed to anthonykhalil@delta.edu
7. Type of Bidding: Prime/General Contract, to include All Trades Work

8. Label Sealed Bid: **DELTA COLLEGE
L&M WINGS RECONFIGURATION PROJECT
BID PACKAGE #1
“SEALED BID - DO NOT OPEN”**

9. Pre-bid Meeting: **Tuesday, May 5, 2026 @ 10:00am.
Delta College – Main Campus
M Wing – Room M162**

Delta College Main Campus

1961 Delta Road | University Center, MI 48710



C. Sealed bid proposals must be on the forms furnished by the Architect/Engineer. Blank forms for bidding are included in the electronic bid documents, which can be obtained at the offices of:

1. William A. Kibbe & Associates
1475 S. Washington Avenue, Saginaw, MI 48601
Office 989-752-5000 | Fax 989-752-5002
2. PDF Files will be e-mailed to all bidders at no cost. If a printed set is requested, they can be provided at the cost of printing and postage. Notify the Architect in advance to make sure the printed sets are available prior to pick up.

D. Bid Opening:

1. Bids will be publically opened & read immediately after the receipt of bids.

E. Withdrawal:

1. Bids may not be withdrawn prior to 60 calendar days after the actual date of opening bids.

F. Rejection:

1. Owner reserves the right to waive any informality or to reject any or all bids and to accept any bid deemed most advantageous to the Owner.

G. Bonding & Insurances:

1. 5% Bid Bond.
2. 100% Labor, Material & Performance Bonds will be required for this project, from the awarded bidder.
3. Certificate of Insurance will be required from the accepted bidder, per bid specification.

H. All other requirements for bidding are detailed in the Instruction to Bidders.

END OF SECTION 000200

SECTION 000050 – TABLE OF CONTENTS

DIVISION 00 PROCUREMENT AND CONTRACTING REQUIREMENTS

000010	Cover Page
000020	Invitation to Bid
000050	Table of Contents
001000	Instructions to Bidders
003000	Bid Form
005000	Agreement Form
007000	General Conditions
008000	Supplementary Conditions
009000	Equal Employment Opportunity

DIVISION 1 GENERAL REQUIREMENTS

010100	Summary of Work
010190	Contract Considerations
010270	Application for Payment
010280	Change Order Procedure
010390	Coordination and Meetings
013400	Shop Drawings
014000	Quality Requirements
015000	Construction Facilities
017000	Contract Closeout

DIVISION 02 EXISTING CONDITIONS

See Architectural drawings for all requirements and specifications.

DIVISION 05 METALS

See Architectural drawings for all requirements and specifications.

DIVISION 07 THERMAL AND MOISTURE PROTECTION

See Architectural drawings for all requirements and specifications.

DIVISION 08 OPENINGS

See Architectural drawings for all requirements and specifications.

DIVISION 09 FINISHES

See Architectural drawings for all requirements and specifications.

DIVISION 23 HEATING, VENTILATING, AND AIR CONDITIONING (HVAC)

230923.16	Gas Instruments
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DIVISION 26 ELECTRICAL

See Electrical drawings for all requirements and specifications.

SECTION 001000 - INSTRUCTIONS TO BIDDERS

1.1 GENERAL

- A. Delta College, Anthony Khalil, RA – Planning and Construction Manager, (herein called the “Owner”), invites bids for construction of the “L&M Wings Reconfiguration Project Bid Package #1” at the Delta College Main Campus, 1961 Delta Rd, University Center, Michigan, per the Invitation to Bid.
- B. Bids will be received at the place and time indicated in the “Invitation to Bid”.
- C. Where any Article of the General Conditions of the Contract is supplemented hereby, provisions of such article shall remain in effect. All supplemental provisions shall be considered as added thereto. Where any such article is amended, voided or superseded, the provisions of such article not so specifically amended, voided or superseded shall remain in effect.
- D. The Contractor shall provide all items, articles, materials, operations, or methods listed, mentioned, or scheduled on the drawings, and/or herein, including all labor, materials, equipment, and incidentals necessary and required for their completion.
- E. For convenience of reference and to facilitate letting of subcontracts, the specifications located in this book specification & on the drawings, are separated into sections. Such separations shall not operate to make the Architect an arbiter or to establish subcontract limits between Contractor and Subcontractor.
- F. Submit a sealed envelope containing bid and addressed to:

Delta College
Room P029
1961 Delta Road
University Center, MI 48710
Attention: **Anthony Khalil, RA**
Email: anthonykhalil@delta.edu

DELTA COLLEGE
L&M WINGS RECONFIGURATION PROJECT
BID PACKAGE #1
“SEALED BID - DO NOT OPEN”

- G. Project Manager will publicly open bids immediately following the receipt of bids.
- H. Owner invites the Bid on the “L&M Wings Reconfiguration Project Bid Package #1” to include the work of all trades included in contract documents. Refer to bid form for specific requirements regarding bids, alternates, unit prices and cost breakdowns.
- I. Examination of Site:

1. It is necessary for bidders to inform themselves of the conditions under which work is to be performed, the sites and buildings for the work, and obstacles which may be encountered and all other relevant matters concerning the work to be performed. The bidder, if awarded the contract, shall not be allowed any extra compensation by reason of any matter or thing concerning which such bidder might have become fully self-informed because of a failure to have so informed self-prior to the bidding.

J. Preparation of Bid

1. Submit on forms furnished herein.
2. Fill out in ink or typewritten, without erasure, interlineation or changes.
3. Make Bid in name of principal and if co-partnership, give names of all parties. Give complete address. If bid is submitted by an agent, provide satisfactory evidence of agency authority.
4. Fill in all blank spaces for bid prices in both words and figures. Submit each bid in sealed envelope. Indicate on outside of envelope, name of bidder, bidders address, and name of project for which bid is submitted. If forwarded by mail, enclose sealed envelope containing bid in another envelope addressed indicated.
5. Bid must be received prior to due date and time indicated in Invitation for Bid.

K. Bid Guaranty / Security:

1. Proposal must be accompanied by a five percent (5%) bidder's bond, by an authorized surety company.
2. The bid guaranty of all except the three (3) lowest accepted bidders will be returned within seven (7) days after opening of bids. Bid guaranty of accepted bidders will be returned after executed contract and required bonds have been finally approved by Owner. If no award has been made within sixty (60) days after the opening of bids, the bid security shall be returned upon demand of the bidder, so long as he has not been notified of the acceptance of his bid. If any bidder refuses to enter into a contract, the Owner will retain his bid security as liquidated damages, but not as a penalty.
3. Sureties on all bonds must be acceptable to the Owner. U.S. Treasury Circular No. 570 lists approved sureties, states or licensure and underwriting limits. A copy of this circular may be obtained by writing to Audit Staff, Bureau of Government Financial Operations, U.S. Treasury Department, Washington, D.C. 20226. In addition, approved surety to be listed by A.M. Best as "B" rating or better and be licensed to operate in the State of Michigan.

L. Requirements for Signing Bids:

1. Bids which are not signed by the individual making them should have attached thereto a power of attorney evidencing authority to sign in the name of the person for whom it is signed.

2. Bids which are signed for a partnership should be signed by one of the partners or by an attorney-in-fact. If signing by an attorney-in-fact, there should be attached to the bid a power of attorney evidencing authority to sign the bid, executed by the partners.
3. Bids which are signed for a corporation should have the correct corporate name thereon and the signature of the president or other authorized officer of the corporation, manually written below the corporate name following the word, "By_____". Provide a signature authorization certificate.

M. Substitutions:

1. Proposals shall be based on the various brands, makes and standards of materials specified, and unless substitutions are authorized in writing within seven (7) days prior to the receipt of bids, all contracts will be so awarded. Requests shall clearly describe the product for which approval is requested, including all data necessary to demonstrate acceptability. If the product is acceptable, the Architect will approve it in an addendum issued to all prime bidders on record.
2. Proposed substitutions that are unable to be approved seven (7) days prior to receipt of bids may be bid as a voluntary alternate on the bid/tender form. Under this condition, each bidder shall state on the bid/tender form under voluntary alternate(s) the name(s) of proposed substitution(s) to be used if approved and the amount to be added or deducted from the proposal amount if accepted. Submit all data necessary to demonstrate acceptability to the Architect.
3. NO SUBSTITUTIONS WILL BE PERMITTED AFTER THE AWARD OF CONTRACTS.

M. Taxes:

1. Each proposal submitted shall include and the successful bidder shall be required to pay all taxes which are levied by Federal, State, or Municipal Governments upon labor, and for materials entering into the work. The Owner reserves the right to require evidence of payment of such taxes prior to final payment.
2. In compliance with the regulations of the Michigan Sales Tax Commission, sales and use tax is to be included in the proposals.

N. Withdrawal or Revision to Bid:

1. Bid may be withdrawn or revised prior to scheduled time for opening, under following terms:
 - a. Bidders may, without prejudice to themselves, withdraw a bid after it has been deposited, provided request for such withdrawal is received in

writing, before time set for opening. Telephonic communications are not acceptable. After opening, no Bid may be withdrawn for the period indicated.

- b. Bidder may modify his bid by written confirmation prior to scheduled time of bid opening. Bidders must have time & date noted to be valid.

O. Time for Completion:

- 1. It is hereby understood and mutually agreed, by and between the Contractor and the Owner, that the date of beginning and the time for completion of each phase of the project are ESSENTIAL CONDITIONS of this contract.
- 2. All trades of work as specified in the contract documents shall be completed within the time frames indicated for each phase with only such minor replacements, corrections or adjustment items that do not interfere with the complete operation and utilization of all other parts of the contracted work. The project as completed must be approvable for occupancy by Governing Agencies.

- 3. Completion is as follows – Milestone Schedule:

April 30, 2026	Issued for Bid Documents
May 5, 2026 @ 10:00 am	Site Walk-Thru (at Main Campus)
May 19, 2026, by 2:00 pm	Bids Due (at Main Campus Room P029)
May 20 - 21, 2026	Bid Review, Post bid interviews
May 22, 2026	Bid Award & Notice to Proceed
June 1, 2026	Begin Construction
July 31, 2026	Substantial Completion

- 4. It shall be the Prime Contractor's responsibility to immediately identify and order long lead items that may jeopardize the substantial completion and final occupancy dates as specified.
- 5. Contractor shall be expected to fully man the project on all working days. The only exceptions that will be accepted shall be weather, labor strikes, or unavailability of materials.

P. Irregular Bids

- 1. Bids are considered irregular and may be rejected for the following reasons unless otherwise provided by law:
 - a. If form furnished is not used or is altered.

- b. If there are unauthorized additions, conditional bids, or irregularities of any kind which may tend to make bid incomplete, indefinite, or ambiguous as to its meaning.
 - c. If bidder adds any provisions reserving right to accept or reject any award, or to into contact pursuant to an award.
 - d. If unit or lump sum prices contained in bid schedule are obviously unbalanced either in excess of, or below, reasonable cost analysis values.
 - e. If bidder fails to insert alternate and unit prices for every item indicated.
 - f. If bidder fails to complete bid in any other particulars where information is requested so bid can not be properly evaluated.
2. Owner reserves right to reject any or all bids and to waive irregularities or informalities as may be deemed in Owner's interest.

Q. Interpretations

1. If bidder for proposed work is in doubt as to the true meaning of any part of the contact documents, submit written request for interpretation (RFI). Bidder submitting request is responsible for its prompt and actual delivery. Interpretations will not be made orally. The architect is not responsible for any other explanations or interpretations which anyone presumes to make.
2. Written request for interpretation shall be made to William A. Kibbe & Associates, Inc., 1475 S. Washington Ave., Saginaw, Michigan 48601, Casey Tucker, ctucker@kibbe.com. Request must be received AT LEAST 3 DAYS PRIOR to date fixed for opening of bids. All interpretations or supplemental instructions will be in form of written addenda e-mailed or mailed prior to date fixed for opening of bids. Copy of such addenda will be e-mailed or mailed to each individual or entity issued contract documents. Failure to receive such addenda does not relieve bidder from any obligation under his bid as submitted. All addenda are part of the contract documents.
3. Bidder desiring approval of material or equipment not specified must comply with this Section for Substitutions prior to receipt of bids.
4. Project Contacts:
 - a. Owner: Anthony Khalil, RA; Planning & Construction Manager
E-mail: anthonykhalil@delta.edu
 - b. Project Manager:
Casey Tucker
E-mail: ctucker@kibbe.com
Phone: 989-752-5000
 - c. Project Architect
Ivars "Buzz" Dzirnys, AIA
E-mail: bdzirnys@kibbe.com

Phone: 989-752-5000

- d. Project Principal
Eric Marter
E-mail: emarter@kibbe.com
Phone: 989-752-5000

R. Method of Award

- 1. Upon receiving notice of acceptance of a bid, contractor will enter into a contract with Owner or its agent within four (4) weeks.

S. Contractor Qualifications

- 1. All contractors shall be licensed contractors, possessing good labor relations, capable of performing quality workmanship and working in harmony with other contractors on the job. All work shall be coordinated with the general project work. In the event contractor willfully violates the requirements of this paragraph, Owner shall have the right to order contractor to remove itself, its equipment, and its employees from the job.
- 2. Bidder to whom award is contemplated may be required to furnish the following information:
 - a. Financial statement.
 - b. Performance record, including past & present projects, amount of contracts, present completion, owner, architect.
 - c. List of references and similar projects.
 - d. List of company, key personnel with their background and experience.

T. Non-Iran Linked Business

- 1. By signing the proposal bid form, I certify and agree on behalf of myself and the company submitting this proposal the following: (1) that I am duly authorized to legally bind the company submitting this proposal; and (2) that the company submitting this proposal is not an "Iran linked business," as that term is defined in Section 2(e) of the Iran Economic Sanctions Act, being Michigan Public Act No. 517 of 2012; and (3) That I and the company submitting this proposal will immediately comply with any further certifications or information submissions requested by the School District in this regard."

U. Prevailing Wage Rates

- 1. This project is subject to the requirements of State of Michigan Prevailing Wage Rates. The contractor must comply with the minimum rates for wages for laborers and mechanics as determined by the Secretary of Labor in accordance with the provisions of the Prevailing Wage Rates. Attached is a copy of the "Unofficial" Rates for Bay County. It is the bidder's responsibility to obtain and ensure that they are

using the correct wage rates as determined by the State of Michigan for this project.
Included is a link to the State of Michigan's website for reference.

<https://www.michigan.gov/leo/-/media/Project/Websites/leo/Documents/PWRS-By-County/2026-March/2026-PW-Bay.pdf?rev=e3958698725c4decb3fe76ad8b78a95&hash=BC2BF67AB303EFCABF2191202E6E2418>

END OF SECTION 001000

SECTION 003000 – BID FORM - CONSTRUCTION TRADES

BID FORM - CONSTRUCTION TRADES
DELTA COLLEGE
PIONEER GYM LIGHTING

PROJECT: Delta College
L&M Wings Reconfiguration Project
Bid Package #1
WAK Project No. 26-0543-0015

TO: Delta College
1961 Delta Road
University Center, MI 48710

ARCHITECT/
ENGINEER: William A. Kibbe & Associates, Inc.
1475 S. Washington Avenue
Saginaw, MI 48601

BASE PROPOSAL: All Construction Trades

The Undersigned, having visited the site and familiarized themselves with the local conditions affecting the cost of the work and the contract documents, including plans, project manual, and technical specifications, Invitation to Bid, Instructions to Bidders, General Conditions, Supplementary Conditions, and any addenda issued thereto, hereby proposes to perform and to provide and furnish all the labor, materials, tools, expendable equipment, utility and transportation services, etc., necessary to perform and complete in a workmanlike manner all work required under base bid for the aforementioned project, all in strict accordance with the Contract Documents, as prepared by William A. Kibbe & Associates, Inc., Architects/Engineers.

In consideration of all the above requirements, the undersigned agrees to accept in payment the sum of:

PROPOSAL: ALL CONSTRUCTION TRADES (BASE BID):

_____ (\$_____).

Exceptions to the specifications: _____

If none, please indicate _____ No Exceptions taken to the Project Specifications.

Said sum to be subject to all the terms of the contract and to include Wage Rates and all Taxes of whatever character or description and all requirements noted in the specifications applicable thereto.

ADDENDA: Addenda issued during bidding period covering clarifications, additions, deletions or changes are acknowledged and are included in the proposal as follows:

Addenda Number: _____ Dated _____

Addenda Number: _____ Dated _____

Addenda Number: _____ Dated _____

VOLUNTARY ALTERNATES:

The following voluntary alternates are offered for substituting materials and/or equipment. (Attach product information).

1. _____ ADD/DEDUCT \$ _____

2. _____ ADD/DEDUCT \$ _____

3. _____ ADD/DEDUCT \$ _____

CHANGES IN THE WORK: For authorized changes in the work, involving additions to or deletions from the work, the Undersigned agrees to perform or delete, or to cause to be performed or deleted by the subcontractors, such authorized work at net cost to him plus the following percentages to be added to the cost or credited to the Owner, which percentages shall include all the contractor's cost for on-site superintendent, supervision, overhead and profit.

Work performed by own forces:	15%
Work under subcontract:	10%

COMPLETION TIME: The Undersigned agrees to commence work operations immediately upon formal notice of award of contract and to substantially complete the whole of the work on or before the proposed substantial completion date as provided on this Bid Form.

The Prime Bidder hereby proposes to be **substantially complete** by the following date noted below:

July 31, 2026

This date will be used in the contractual agreement between the Contractor/Owner for this project.

NEGOTIATION: The Undersigned agrees that, should the overall cost exceed the funds available, they will be willing to negotiate with the Owner and Architect/Engineer for the purpose of making further reductions in the contract work, and shall agree to give full credit for all such reductions in the work requested by the

Owner, including full value of labor, materials and subcontracted work and reasonable proportionate reductions in overhead and profit, thereby arriving at an agreed upon contract price. Contractor will endeavor to determine the most cost effective method of accomplishing the Owner's objective and report same to Owner and Architect/Engineer.

WITHDRAWAL/PROPOSAL GUARANTY: The Undersigned agrees in submitting this proposal (bid), that the quotation stated will not be withdrawn for a period of sixty (60) consecutive calendar days from bid due date. Further, accompanying this proposal is a proposal guaranty, as required, consisting of:

(State Nature of Guarantee & Amount)

CONTRACT EXECUTION: The undersigned agrees to execute a contract for work covered by this proposal provided that notification of its acceptance is within thirty (30) calendar days after the opening of the proposal (bid).

The Undersigned hereby declares that he/she has the legal status checked below:

() Individual

() Partnership having the following partners:

() Corporation incorporated under the state laws of

This proposal is submitted in the name of and notice of acceptance should be mailed, telegraphed, or delivered to:

FIRM NAME _____

BY _____ TITLE _____
(Signature)

DATE _____ TELEPHONE _____

IN PRESENCE OF:

_____ TITLE _____

INSTRUCTIONS: Submit one copy and retain one copy for file.

END OF SECTION 003000

SECTION 005000 - AGREEMENT FORM

1.1 DOCUMENTS:

The "Standard Form of Agreement between Owner and Contractor", A.I.A. Document A101, 2017 Edition, where the basis of payment is a stipulated sum will be the form of agreement utilized for this project.

1.2 RELATED INFORMATION:

Attention is directed to the following divisions of the specifications for additional information relative to the agreement form.

003000	Bid Form - Under "Time of Completion"
007000	General Conditions
008000	Supplementary Conditions

Contractors shall be held responsible for having familiarized themselves with this document and all other documents affecting their contracts in this specification.

This document is on file at the Architect's office or can be obtained from:

Michigan Society of Architects
553 East Jefferson
Detroit, Michigan 48226

END OF SECTION 005000

SECTION 007000 - GENERAL CONDITIONS

1.1 DOCUMENTS:

"The General Conditions of the Contract for Construction", A.I.A. Document A-201, 2017 Edition, forms a part of these specifications and shall have the same effect as if bound herein.

This document is modified as described in Modifications of the General Conditions.

Contractors shall be held responsible for having familiarized themselves with this document and all other documents affecting their contracts in this specification.

This document is on file at the Architect's office or can be obtained from:

Michigan Society of Architects
553 East Jefferson
Detroit, Michigan 48226

END OF SECTION 007000

SECTION 008000 - SUPPLEMENTARY CONDITIONS

The following Supplementary Conditions modify, change, delete from or add to the "General Conditions of the Contract for Construction", A.I.A. Document A-201, 2017 Edition, where any article of the General Conditions is modified or any paragraph, subparagraph or clause thereof is modified or deleted by these Supplementary Conditions. The unaltered provisions of the article, paragraph, subparagraph, or clause shall remain in effect.

ARTICLE 1 - CONTRACT DOCUMENTS

Modify Article 1.1.3 as follows:

1.1.3 The Work

The work comprises all required demolition and removal work, and completely new construction and renovation as required by the contract documents, including all labor necessary to produce such construction, and all materials, equipment and incidentals incorporated or to be incorporated in such construction to produce the intended results.

Modify Article 1.2.3 as follows:

1.2.3 The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the work. The Contract Documents are complimentary, and what is required by one shall be as binding as if required by all. Work not covered in the Contract Documents will not be required unless it is consistent therewith and is reasonably inferable therefrom as being necessary to produce the intended results. Words and abbreviations which have well known technical, or trade meanings are used in the Contract Documents in accordance with such recognized meanings. Where reference is made to specifications of manufacturers, trade associations or the like, such is understood to be made a part of this specification to have the same effect as if fully reproduced herein. Approval or equal, acceptable, and words of similar definition are understood to mean, "in the judgment of the Architect".

Add Article 1.2.4 as follows:

1.2.4 Computed dimensions take precedence over scaled dimensions, large scale details over smaller. Should there be conflict(s) between or within drawings and/or specifications, that which requires the highest degree of performance (quality, quantity, strength, finish, completion, complexity, sophistication, etc.), will be required and shall be provided at no increase in contract amount. All such conflicts shall be brought to the attention of the Architect/Engineer for interpretation of the intent of the drawings and/or specifications.

ARTICLE 2 - OWNER

Add Article 2.4.2 as follows:

2.4.2 As stated in the contract documents, certain equipment may be pre-purchased by the Owner, the cost of which is not to be included in the contract.

Add Article 2.4.3 as follows:

2.4.3 The Owner and their representative shall at all times have access to the work wherever it is in preparation of progress and the contractor shall provide proper facilities for such access and for review of construction.

ARTICLE 3 - CONTRACTOR

Add Article 3.1.4 as follows:

3.1.4 Term "GENERAL CONTRACTOR" or "PRIME CONTRACTOR" means person, firm or corporation who performs Architectural Trades Work and who is fully responsible to the Owner for all administration, handling and coordination of Work.

Add Article 3.1.5 as follows:

3.1.5 Term "MECHANICAL CONTRACTOR" means person, firm or corporation who performs the Mechanical Work, as a Subcontractor to the General Contractor. Can also be the Prime Contractor.

Add Article 3.1.6 as follows:

3.1.6 Term "PLUMBING CONTRACTOR" means person, firm or corporation who performs the Plumbing Work, as a Subcontractor to the General Contractor.

Add Article 3.1.7 as follows:

3.1.7 Term "ELECTRICAL CONTRACTOR" means person, firm or corporation who performs the Electrical Work, as a Subcontractor to the General Contractor.

Add Article 3.1.8 as follows:

3.1.8 Term "SITE CONTRACTOR" means person, firm or corporation who performs the Site Work (if other than General Contractor) as a Subcontractor to the General Contractor.

Add Article 3.3.4 as follows:

3.3.4 All work shall be furnished and installed in strict accordance with Federal, State & Local laws and codes regarding handicapped requirements as well as the requirements of the governing Health Department, State and Local Mechanical Codes, Plumbing Codes, Electrical Codes, Building Code(s), Office of Fire Safety, testing agencies referenced, i.e. U.L., F.M., etc., and/or all other governing codes.

Add Article 3.4.4 as follows:

3.4.4 The Contractor shall be responsible for all work, equipment and materials to accommodate continuous construction. Responsibility shall include but not be limited to: temporary haul roads,

temporary drives, fuel, heat, power, water, air, enclosures, blankets, straw, snow removal, etc. The Owner will not accept claims for additional costs due to site or climatic conditions.

Add Article 3.5.3 as follows:

3.5.3 The Contractor warrants that the contract has been completed in full conformity with the intent of the contract documents and has not made any substitutions of materials except as authorized in writing by the Owner and the Architect. The Contractor agrees to return to the site of the work within fourteen (14) working days of receipt of written notice from the Owner or the Architect and will furnish at contractor's expense all necessary labor and material to make proper repairs or corrections made necessary by defective materials or inferior workmanship furnished or performed under contract, including damage to adjacent materials or equipment caused by the defect, all corrective work shall be without cost to the Owner and shall be completed to the satisfaction of the Owner and Architect. Failure to take action by the contractor on warranted work shall result in notification of the bonding company by the Owner or Architect with the intent to have the defective material or inferior workmanship corrected at the contractor's expense. The warranty of work shall commence upon the substantial completion date of the project and remain in full force and effect for one (1) year from the date thereof.

Add Article 3.5.4 as follows:

3.5.4 Defective material or inferior workmanship corrected by the contractor shall be warranty for an additional year from date of acceptance by the Owner or Architect of the warranty work.

Add Article 3.6.1 as follows:

3.6.1 The Contractor submitting a bid shall include and the successful bidder shall be required to pay all taxes which are levied by Federal, State or Municipal governments upon labor, and for materials entering into the work. The Owner reserves the right to require evidence of payment of such taxes prior to final payment. The above includes taxes which are legally enacted at the time bids are received, whether or not yet effective.

Modify Article 3.7.1 as follows:

3.7.1 The Prime Contractor shall obtain and pay for the building permit and for all other permits and governmental fees, licenses and inspections necessary for the proper execution and completion of the work which are customarily secured after execution of the contract and which are legally required at the time bids are received, excluding the following trades:

- .1 The Mechanical Trades Contractor shall obtain and pay for all required mechanical permits and inspections.
- .2 The Plumbing Trades Contractor shall obtain and pay for all required plumbing permits and inspections.
- .3 The Electrical Trades Contractor shall obtain and pay for all required electrical permits and inspections.

- .4 The Site Work Contractor shall obtain and pay for all required site work permits and inspections.

Add Article 3.9.4 as follows:

3.9.4 The Contractor shall maintain a competent Project Manager and Superintendent approved by the Architect/Engineer and Owner throughout the period of construction. The Project Manager or Superintendent shall be deemed an agent of the contractor and any orders given him by the Architect/Engineer shall be binding upon the contractor. The Project Manager or Superintendent of the Contractor may not be removed from (or replaced on) the job during the period of construction without approval of the Architect/Engineer and Owner.

Add to Article 3.12.5 as follows:

3.12.5 The Contractor shall mark corrections, notations, etc., and note his approval on each copy of shop drawings before they are submitted to the Architect. Shop drawings which, in the opinion of the Architect have not been fully checked by the Contractor will not be reviewed by the Architect. The shop drawings will be returned for proper checking by the Contractor. No extension of the contract completion date will be allowed because of such action by the Architect.

Add Article 3.13.1 as follows:

3.13.1 The Contractor shall coordinate with the Owner all arrangements necessary to conduct construction operations, with a minimum of interference to the Owner's operations. Clean-up of areas not within the construction limits shall be daily and complete, and any damage to these areas caused by construction operations shall be repaired to original condition immediately.

Add Article 3.13.2 as follows:

3.13.2 The Contractor shall not disrupt any of the existing utility services without prior approval. The Contractor shall obtain permission to do so from the Owner through the Architect. Requests for permission to disrupt any utility shall be submitted well in advance of the need in order to not delay the work. The refusal by the Owner of such a request which is submitted on short notice, will not be accepted as a basis for time extension.

ARTICLE 4 – ARCHITECT/ENGINEER

Add Article 4.2.7.1 as follows:

4.2.7.1 The Architect/Engineer shall make all interpretations concerning the contract documents during bidding and construction phases of the project.

ARTICLE 7 - CHANGES IN THE WORK

Add Article 7.1.4 as follows:

7.1.4 If the Architect/Engineer or Owner needs or wishes to change the scope or character of the work, a bulletin may be issued by the Architect. The Contractor upon receipt of the bulletin shall within ten (10) days, submit to the Architect a completely itemized lump sum quotation in two (2) copies, indicating the cost or credit to the Owner resulting from the change in the work.

Add Article 7.1.5 as follows:

7.1.5 Extra compensation will not be authorized for work which, though not specifically detailed or specified, is reasonably inferable to satisfy the design intent and/or obviously necessary to maintain the quality of construction and finish established by the drawings and specifications. The contractor is expected to examine the drawings, specifications and site of the work carefully before submitting a proposal and to obtain from the Architect in writing, any additional information which would affect its bid.

Add Article 7.3.3.1.1 as follows:

7.3.3.1.1 By mutual acceptance of a lump sum properly itemized bulletin quotation indicating; quantities, unit costs, and total costs of materials including applicable sales and use taxes and delivery charges; hours of labor, hourly rates and total labor costs, including direct and indirect payroll taxes and insurance based upon direct cost of labor; copies of detailed subcontractor's quotations; fee as stated in the proposal and the contract, which shall include all costs for on-site superintendence, general supervision, other direct and indirect costs or charges of any nature, overhead and profit; this shall apply to subcontractors as well as the contractor. Charges for direct and indirect taxes on labor, insurance and other payroll loadings, sales and use taxes, premium time (overtime) costs shall be computed separately and shall not be subject to the percentage fee. This shall apply to subcontractors as well as the contractor. Should the change result in both work being added and work being omitted, the applicable fee shall be computed on the net costs of the change even though the change results in different trades being employed.

ARTICLE 8 - TIME

Modify Article 8.1.2 as follows:

8.1.2 The date of commencement of the work shall be the date of the Owner/Contractor Agreement.

Add Article 8.1.5 as follows:

8.1.5 The total project shall be substantially complete and ready for use by the Owner as follows:

	<u>Commence</u>	<u>Substantial Completion</u>
BP #1:	June 15, 2026	August 10, 2026

ARTICLE 9 - PAYMENTS AND COMPLETION

Modify Article 9.3.1 as follows:

9.3.1 At least ten (10) days before the date for each progress payment established in the Owner/Contractor Agreement, the Contractor shall submit to the Architect an itemized application for payment utilizing AIA Document G702 & Continuation Sheet G703, "Application and Certificate for Payment"; notarized and supported by such data substantiating the contractor's right to payment as the Owner or the Architect may require, reflecting retainage which shall be ten (10%) percent through substantial completion of the entire project. Upon reaching substantial completion, the Architect shall determine such retainages as may be required to finish incomplete work and unsettled claims. In addition, each Application for Payment shall be accompanied by the following: all in a form and substance satisfactory to the Owner and in compliance with applicable statutes set forth by the State in which the work is being done.

- .1 A current Sworn Statement from the Contractor setting forth all subcontractors and materialmen with whom the Contractor has subcontracted, the amount of each subcontract, the amount requested for any subcontractor or materialman in the application for payment and the amount to be paid to the Contractor from such progress payment, together with a current duly executed waiver of construction, mechanics' and materialmen's liens from the Contractor establishing receipt of payment or satisfaction of the payment requested by the Contractor in the current Application for Payment;
- .2 Commencing with the second (2nd) Application for Payment submitted by the Contractor, duly executed so-called "after the fact" waivers of construction, mechanics' and materialmen's liens from all subcontractors, materialmen and, when appropriate from lower tier subcontractors, establishing receipt of payment or satisfaction of payment of all amounts requested on behalf of such entities and disbursed prior to submittal by the Contractor of the current Application for Payment, plus sworn statements from all subcontractors, materialmen and, where appropriate from lower tier subcontractors, covering all amounts described in previous applications for payment.
- .3 Final waivers of lien must be submitted for all contracts, subcontracts and material for final payments.

Add Article 9.3.1.3 as follows:

9.3.1.3 When the construction contract has been completed to fifty (50%) percent, the Architect and Owner may, upon evaluation reduce retainage. The amount of reduction shall be determined by the Architect/Engineer and will be based upon satisfactory performance relative to percentage of completion and quality of the work in place as well as other determining factors. If in the opinion of the Architect/Engineer and Owner, the Contractor is not performing after reductions have been initiated, the Architect/Engineer reserves the authority to reinstate the ten (10%) percent retainage.

Add Article 9.10.6 as follows:

9.10.6 Upon completion of the project, or portions thereof, the Contractor shall transfer to the Owner all applicable items accumulated throughout construction. Satisfaction of the following requirements shall be considered a part of payment requests. These include but are not limited to the following items:

- .1 Service manuals, installation instructions, special tools and specialties.
- .2 Spare parts ordered as part of this contract.
- .3 Submittal of the Contractors' one year guarantee.
- .4 Submittal of manufacturer's guarantees, bonds, and letters of coverage extending beyond the time limitations of the Contractor's guarantee.
- .5 Delivery of any salvaged or borrowed materials or equipment to the Owner.
- .6 Record documents of completed facilities. See separate section for specific requirements.
- .7 All keys to all doors, gates and equipment.

Add Article 9.11 as follows:

9.11 Liquidated Damages: **(NOT USED)**

~~9.11.1 If the Contractor shall neglect, fail, or refuse to complete the work within the timeframes indicated, or any proper extension thereof granted by the Owner, then the Contractor does hereby agree, as a part consideration for the awarding of this contract, to pay to the Owner the sum of **Five Hundred Dollars (\$500.00)** per day, not as a penalty but as liquidated damages for such breach of contract, for each and every calendar day that the Contractor shall be in default after the time stipulated for completing the work or portions of the work as stipulated in Article 8.1.5 of these Supplementary Conditions.~~

~~9.11.2 The said amount is fixed and agreed upon by and between the Contractor and the Owner because of the impracticability and extreme difficulty of fixing and ascertaining the actual damages the Owner would in such event sustain, and said amount shall be retained from time to time by Owner from current periodical estimates.~~

~~9.11.3 It is further agreed that the Contractor shall not be charged with liquidated damages or any excess cost when the delay in completion of the work is due:~~

- ~~.1 To any preference, priority or allocation order duly issued by the Government.~~
- ~~.2 To unforeseeable cause beyond the control and without the fault or negligence of the Contractor, including but not restricted to, Acts of God, or of the public enemy, acts of the Owner, acts of another contractor in the performance of a contract with the Owner, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, and unusually severe weather; and~~

~~3 To any delays of subcontractors or suppliers occasioned by any of the causes specified in subsections (.1) and (.2) of this article.~~

~~9.11.4 Provided further, that the Contractor shall, within ten (10) days from the beginning of such delay, unless the Owner shall grant a further period of time prior to the date of final settlement of the contract, notify the Owner, in writing, of the causes of the delay. The Owner shall ascertain the facts and extent of the delay and notify the Contractor within a reasonable time of its decision in the matter.~~

ARTICLE 10 - PROTECTION OF PERSONS AND PROPERTY

Add Article 10.5 as follows:

10.5 General construction industry safety rules and regulations for the state in which the work is being prosecuted and the U.S. Department of Labor, Safety and Health Regulations for Construction, known as the U.S. Construction Safety Act shall be adhered to by all Contractors and Subcontractors on this project. Certification of this coverage shall be submitted along with that required in Article 11.

ARTICLE 11 - INSURANCE

Add to Article 11.1.1 as follows:

11.1.1 The Contractor shall purchase and maintain such insurance from a company or companies licensed to do business in the state in which the project is located and will protect him from claims set forth below which may arise out of or result from the Contractor's operations under the Contract, whether such operations be by himself or by any subcontractor or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable. Liability insurance shall include all major divisions of coverage on a comprehensive basis including; premises operations (including X, C, U); independent contractor's protective, products and completed operations, contractual liability; owned, non-owned, and hired motor vehicles and broad form property damage including completed operations.

Modify Article 11.1.2 as follows:

11.1.2 The insurance required by subparagraph 11.1.1 shall be written for not less than any limits of liability specified in the Contract Documents, or required by law, whichever is greater, provide minimum limits as follows:

a. Worker's Compensation:

- (1) State-statutory.
- (2) Applicable federal - statutory.
- (3) Employer's liability - \$500,000.
- (4) Benefits required by labor union contracts.

b. Contractor's liability insurance shall be comprehensive general liability including contractual liability.

- (1) Bodily Injury:

- \$1,000,000 Each occurrence.
\$2,000,000 Aggregate.
- (2) Property damage (including completed operations broad form):
\$1,000,000 Each occurrence.
\$2,000,000 Aggregate.
- (3) Broad form completed operations and product liability insurance shall be maintained until final payment is made and Contractor shall continue to provide evidence of such coverage to Owner on an annual basis during the coverage period. **(Name: Delta College and William A. Kibbe & Associates, Inc. & Consultants as an additional insured).**
- (4) Property damage liability insurance shall include coverage for X (Explosion), C (Collapse), and U (Underground).
- (5) Contractual Liability (Hold Harmless Coverage):
- (a) Bodily Injury: \$1,000,000 Each Occurrence.
(b) Property Damage: \$1,000,000 Each Occurrence.
\$2,000,000 Aggregate.
- (6) Personal Injury with Employment Exclusion Deleted:
\$1,000,000 Each Person Aggregate.
\$2,000,000 General Aggregate.
- c. Comprehensive automotive liability (owned, non-owned, hired):
- (1) Bodily injury: \$1,000,000 Each person.
\$1,000,000 Each occurrence.
(2) Property damage: \$1,000,000 Each occurrence.
- d. An umbrella policy extending all limits to a minimum of an additional \$2,000,000.
- e. This insurance shall not be intended to cover any responsibility for damages as included herein under heading of "Damages", Articles 7.4 and 8.3.

Add Article 11.1.5 as follows:

11.1.5 The Contractor shall furnish to the Owner and the Architect/Engineer, insurance policies protecting both the Owner and the Architect/Engineer from liability for damages as provided for under the Contractor's liability insurance. Liability limits shall be the same as for the Contractor's liability insurance.

Add to Article 11.2.4 as follows:

11.2.4 The Owner shall secure and maintain property insurance, all risk, completed value, in the amount equal to the contract sum for the work.

Modify Article 11.3.1 as follows:

11.3.1 The Owner and Contractor waive all rights against: (1) each other and the subcontractors, sub-subcontractors, agents, and employees each of the other, and (2) the Architect/Engineer, his consultants, and separate contractors, if any, and any of their subcontractors, sub-subcontractors, agents and employees for damages caused by fire or other perils to the extent covered by insurance obtained pursuant to this policy or any other property insurance applicable to the work, except such rights as they may have to the proceeds of such insurance held by the Owner as trustee. The foregoing waiver afforded the Architect, his agents and employees shall not extend to the liability imposed. The Owner or the Contractor, as appropriate, shall require of the Architect/Engineer, separate contractors, subcontractors, sub-subcontractors, by appropriate agreements written where legally required for validity, similar waivers each in favor of all parties enumerated in this agreement.

Add Article 11.4.1 as follows:

11.4.1 Performance Bond and Labor and Material Payment Bond shall be from a security company duly approved by the U.S. Department of Treasury and listed in the U.S.T. Circular No. 570, latest edition. Surety company shall be rated A.M. Best as 'B' or better and licensed to operate in the State of Michigan. The total cost of the bonds or any additional costs as may be required by the Prime Contractor's Surety Company shall be borne by the Prime Contractor and included in the Prime Contractor's bid.

Add Article 15 as follows:

ARTICLE 16 - EQUAL OPPORTUNITY

16.1 The Contractor shall maintain policies of employment as follows:

16.1.1 The Contractor and all subcontractors shall not discriminate against any employee or applicant for employment because of race, religion, color, sex, national origin or age. The Contractor shall take affirmative action to insure that applicants are employed, and that employees are treated during employment without regard to their race, religion, color, sex, national origin or age. Such action shall include, but not be limited to the following: employment, upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination, rates of pay or other forms of compensation, and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the policies of non-discrimination.

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

END OF SECTION 008000

(Revised 06/09)

EQUAL EMPLOYMENT
OPPORTUNITY SECTION

EQUAL EMPLOYMENT OPPORTUNITY

It is the policy of Delta College not to discriminate in employment, education, public accommodation or public service on the basis of religion, race, color, national origin, age, sex, marital status, sexual orientation, height, weight, arrest record, veteran status, disability, or other classifications as required by applicable U.S. federal, state or local law. Direct inquiries to the equity/compliance officer, Delta College, 1961 Delta Road, office J101, University Center, MI 48710, telephone 989-686-9122, or email: equityoffice@delta.edu.

All contractors, subcontractors and/or vendors doing business with the Delta College shall comply with all applicable laws relative to equal employment opportunity and shall not discriminate against any employee or applicant for employment because of race, color, religion, creed, sex, height, weight, marital status, or national origin. It is expected that the contractor, subcontractor, and /or vendor will carry out that pan of this contract pertaining to equal employment opportunity with the same amount of thought and action as he will in any other part of the contract.

SECTION 010100 - SUMMARY OF WORK

1.1 GENERAL SUMMARY

- A. Comply with procedures described in this section relative to construction of the project, and Owner's use of the site.
- B. Related Documents:
 - 1. Documents affecting the work of this section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and sections in Division 1 of these specifications.

1.2 DESCRIPTION OF PROPOSED IMPROVEMENTS:

- A. L&M Wings Reconfiguration Project – Bid Package #1 (BP #1):
 - 1. This project consists of converting the former Robotics Lab (M162) to a new Heavy Duty Diesel (HDD) training program. The existing overhead door opening will be enlarged to accommodate a taller overhead door. Exhaust snorkels will be installed for the diesel exhaust, and a gas detection system will be installed.
 - 2. The Robotics Lab and similar equipment will be relocated into a temporary Robotics Lab (M111) location. The former Automotive Storage Room (M111) will be renovated to accommodate the temporary robotics equipment. HVAC, plumbing, lighting, and power upgrades are included to support the equipment located in this location.

1.3 OWNER OCCUPANCY

Students / Visitors may be in the building throughout the duration of the project. Provide safety barriers around construction areas and all the areas being worked on. This will need to be coordinated with the Owner & the awarded contractor. Maintain existing exits and circulation to all required areas not being used for construction access.

1.4 PRE-ORDERED PRODUCTS (NOT USED)

END OF SECTION 010100

SECTION 010190 - CONTRACT CONSIDERATIONS

PART 1 - GENERAL

1.0 RELATED DOCUMENTS

- A. Attention is directed to Division 0, Bidding and Contract Requirements to Division 1, General Requirements, which are hereby made a part of this specification.

1.1 CASH ALLOWANCES

- A. Construction Testing (Soils & Materials): (NOT USED).
- B. Construction Staking: (NOT USED).

1.2 CONTINGENCY ALLOWANCE (NOT USED).

1.3 SPECIAL INSPECTIONS AND TESTING ALLOWANCES. (Paid for by the Owner, if required by AHJ)

1.4 SCHEDULE OF VALUES

- A. Within 24 hours after opening of the proposals, the successful bidder shall submit in duplicate to the Architect for his inspection a complete bid breakdown. The schedule of values shall be on AIA Form G703. (Contractor's standard form or electronic media printout will be considered).
- B. In addition, within 48 hours after the opening of bids, the successful bidder shall submit to the Architect, in duplicate, for his inspection and approval, a list of all subcontractors and major suppliers proposed to be employed on this project.

1.5 APPLICATIONS FOR PAYMENT

- A. Submit one (1) emailed copy of each application on AIA Form G702.
- B. Content and Format: Utilize Schedule of Values for listing items in Application for Payment.

1.6 CHANGE PROCEDURES

- A. Change Order Forms: Change orders will be processed on forms provided by the Architect.

1.7 ALTERNATES

- A. Alternates quoted on Bid Forms will be reviewed and accepted or rejected at the Owner's option.
- B. Coordinate related Work and modify surrounding Work as required.
- C. Schedule of Alternates: (See Bid Form, Section 003000).

END OF SECTION 010190

SECTION 010270 - APPLICATIONS FOR PAYMENT

1.1 GENERAL SUMMARY

- A. Comply with procedures described in this Section when applying for progress payment and final payment under the Contract.
- B. Related Work:
 - 1. Documents affecting work of this section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and sections in Division 1 of these specifications.
 - 2. The Contract Sum and the schedule for payments are described in the Form of Agreement.
 - 3. Payments upon Substantial Completion and Completion of the Work are described in the General Conditions and in Section 001700 of these specifications.
 - 4. The Architect/Engineer's approval of applications for progress payment and final payment may be contingent upon the Architect/Engineer's approval of status of Project Record Documents as described in Section 001700 of these Specifications.

1.2 QUALITY ASSURANCE

- A. Prior to start of construction, secure the Architect/Engineer's approval of the schedule of values required to be submitted under Paragraph 9.2 of the General Conditions, and further described in Section 000100 of these Specifications.
- B. During progress of the Work, modify the schedule of values as approved by the Architect to reflect changes in the Contract Sum due to Change Orders or other modifications of the Contract.
- C. Base requests for payment on the approved schedule of values.

1.3 PROCEDURES

- A. Informal submittal: Unless otherwise directed by the Architect/Engineer:
 - 1. Make an informal submittal of request for payment by filling in, with erasable pencil or on word processor, pertinent portions of AIA Document G702, "Application and Certificate for Payment," plus continuation sheet or sheets.
 - 2. Make this preliminary submittal to the Architect at least ten days prior to the end of the month or at the last regular job meeting of the month.
 - 3. Revise the informal submittal of request for payment as agreed at the job meeting, initialing all copies.
 - 4. Submit a request/application for payment each calendar month.
 - 5. Waivers of Lien: Do not submit copies of partial or full waivers of lien with informal submittal.

- B. Formal submittal: Unless otherwise directed by the Project Manager:
1. Make formal submittal of request for payment by filling in the agreed data, by typewriter or neat lettering in ink, on AIA Document G702, "Application and Certificate for Payment," plus continuation sheet or sheets.
 2. Sign and notarize the Application and Certificate for Payment.
 3. Submit the original and four copies of the Application and Certificate for Payment, including copies of the continuation sheet or sheets and waivers to the Project Manager.
 4. Waivers of Lien: Submit partial waivers on each item for amount requested, prior to deduction for retainage, on each item. When an application shows completion of an item, submit final or full waivers.
 5. Submit sworn statement with each request for payment.
 6. The Architect/Engineer will compare the formal submittal with the approved informal submittal and, when approved, will sign the Application and Certificate for Payment, will make required copies, and will distribute:
 - a. One copy to Contractor;
 - b. One copy to Owner;
 - c. One copy to Project Manager's file.
 7. The Owner, upon approval, will disburse directly to the Contractor.

END OF SECTION 010270

SECTION 010280 - CHANGE ORDER PROCEDURE

1.1 GENERAL SUMMARY

- A. Make such changes in the Work, in the Contract Sum, in the Contract Time for Completion, or any combination thereof, as are described in written Change Orders signed by the Owner and the Architect/Engineer and issued after execution of the Contract, in accordance with the provisions of this Section.

- B. Related Work:
 - 1. Documents affecting work of this section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and sections in Division 1 of these specifications.
 - 2. Changes in the Work are described further in the General Conditions and Supplemental Conditions.
 - 3. Architect/Engineer's supplemental instructions:
 - a. From time to time during progress of the Work, the Architect may issue supplemental instructions which interpret the Contract Documents or order minor changes in the Work without change in Contract Sum or Contract Time.
 - b. Should the Contractor consider that a change in Contract Sum or Contract Time is required, he shall submit an itemized proposal to the Architect immediately and before proceeding with the Work. If the proposal is found to be satisfactory and in proper order, the supplemental instructions in that event will be superseded by a Change Order.
 - 4. Proposal requests:
 - a. From time to time during progress of the Work, the Architect may issue a proposal request (bulletin) for an itemized quotation for changes in the Contract Sum and/or Contract Time incidental to proposed modifications to the Contract Documents.
 - b. This will not be a Change Order and will not be a direction to proceed with the changes described therein.

1.2 QUALITY ASSURANCE

- A. Include within the Contractor's quality assurance program such measures as are needed to assure familiarity of the Contractor's staff and employees with these procedures for processing Change Order data.

1.3 DELIVERY, STORAGE, AND HANDLING

- A. Maintain a "Register of proposal requests, supplemental instructions, and Change Orders" at the job site, accurately reflecting current status of all pertinent data.

- B. Make the Register available to the Architect for review at his request.

1.4 PROCESSING PROPOSAL REQUESTS

- A. Make written reply to the Architect in response to each proposal request.
 - 1. State proposed change in the Contract Sum, if any.
 - 2. State proposed change in the Contract Time of Completion, if any.
 - 3. Clearly describe other changes in the Work, if any, required by the proposed change or desirable therewith.
 - 4. Include full backup data such as subcontractor's letter of proposal or similar information.
 - 5. Submit this response in single copy.

- B. When cost or credit for the change has been agreed upon by the Owner and the Contractor, or the Owner has directed that cost or credit be determined in accordance with provisions of the General Conditions, the Architect/Engineer will issue a Change Order to the Contractor.

1.5 PROCESSING CHANGE ORDERS

- A. Change Orders will be numbered in sequence and dated.
 - 1. The Change Order will describe the change(s), will refer to the proposal requests or supplemental instructions involved, and will be signed by the Owner and the Architect/Engineer.
 - 2. The Architect/Engineer will issue three copies of each Change Order to the Owner.
 - a. The Owner will promptly sign all three copies and return two copies to the Architect/Engineer.
 - b. The Architect/Engineer will retain one signed copy in his file, will forward one signed copy to the Contractor.

END OF SECTION 010280

SECTION 010390 - COORDINATION AND MEETINGS

1.1 GENERAL

- A. Attention is directed to Division 0, Bidding and Contract Requirements, and to Division 1, General Requirements, which are hereby made a part of this specification.

1.2 COORDINATION

- A. Coordinate scheduling, submittals, and Work of the various Sections of specifications to assure efficient and orderly sequence of installation of interdependent construction elements.
- B. Verify utility requirement characteristics of operating equipment are compatible with building utilities.
- C. Coordinate space requirements and installation of special equipment, and mechanical and electrical work which are indicated diagrammatically on Drawings. Follow routing shown for pipes, ducts, and conduit, as closely as practicable.
- D. In finished areas, conceal pipes, ducts, and wiring within the construction.

1.3 CUTTING AND PATCHING

- A. Employ a skilled and experienced mechanic to perform cutting and patching new or existing Work; restore Work with new Products.
- B. Submit written request in advance of cutting or altering structural or building enclosure elements.
- C. Fit Work tight to adjacent elements. Maintain integrity of wall, ceiling, or floor construction; completely seal voids.
- D. Refinish surfaces to match adjacent finishes.

1.4 CONFERENCES

- A. Prime Contractor will schedule a pre-construction conference after Notice of Award has been sent to the Prime Contractor.

1.5 PROGRESS MEETINGS

- A. The Prime Contractor will schedule and administer meetings throughout progress of the Work at maximum monthly intervals.

END OF SECTION 010390

SECTION 013400 - SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES

1.1 GENERAL SUMMARY

- A. Make submittals required by the Contract Documents, and revise and resubmit as necessary to establish compliance with the specified requirements, all as described in this Section. Coordinate all submittals with the Progress Schedule and actual work progress.
- B. Related Work:
 - 1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Sections in Division 1 of these Specifications.
 - 2. Individual requirements for submittals also may be described in pertinent Sections of these Specifications.
- C. Work not included:
 - 1. Non-required submittals will not be reviewed by the Architect/Engineer.

1.2 SUBMITTALS

- A. Make submittals of Shop Drawings, samples, substitution requests, and other items in accordance with the provisions of this Section. Provide additional copies as may be required for Governing Authorities.

1.3 QUALITY ASSURANCE

- A. Coordination of submittals:
 - 1. Prior to each submittal, carefully review and coordinate all aspects of each item being submitted.
 - 2. Verify that each item and the submittal for it conform in all respects with the specified requirements.
 - 3. By affixing the Contractor's signature to each submittal, certify that this coordination has been performed.

2.0 PRODUCTS

2.1 SHOP DRAWINGS

- A. Scale and measurements: Make Shop Drawings accurately to a scale sufficiently large to show all pertinent aspects of the item and its method of connection to the Work.
- B. Types of prints required:
 - 1. Submit (5 total sets) of Shop Drawings in the form of original documents or (1) electronic submittal in PDF format, e-mailed to Architect.
- C. Review comments of the Architect will be shown when it is returned to the Contractor. The Contractor may make and distribute such copies as are required for his purposes.

2.2 MANUFACTURERS' LITERATURE

- A. Where contents of submitted literature from manufacturers includes data not pertinent to the submittal, **clearly show which portions of the contents are being submitted for review. If actual items are not identified, they will be returned without being reviewed.**
- B. Submit the number of copies which are required to be returned, plus two copies which will be retained by the Architect.
- C. Where the product data is required for maintenance manuals and close-out documents, submit two additional copies which will be returned. Maintain one additional copy at the project site for reference purposes.
 - 1. Do not proceed with the installation of manufactured products until a copy of related product data is in the installer's possession at the project site.

2.3 SAMPLES

- A. Provide Sample or Samples identical to the precise article proposed to be provided. Identify as described under "Identification of Submittals" below. Colored scans are not acceptable.
- B. Number of Samples required:
 - 1. Submit three sets of samples; one set will be returned. Provide 3 or more samples in each set where variations in color, pattern or texture are observable; show average condition and extreme range of variations. Submit full documentation with each set. Sample submittals are for Architect/Engineer's review of color, texture, pattern and "kind"; maintain returned samples at project site for purposes of quality control comparisons.
 - 2. By pre-arrangement in specific cases, a single sample may be submitted for review and, when approved, be installed in the Work at a location agreed upon by the Architect.

2.4 MISCELLANEOUS SUBMITTALS

- A. Provide copies of miscellaneous submittals as follows:
 - 1. Warranties: Submit 2 executed copies, plus additional copies as required for maintenance & close-out manuals.
 - 2. Maintenance Manuals: Submit 2 bound copies.
 - 3. Record Drawings: Submit original maintained marked-up prints (2 sets).

3.0 EXECUTION

3.1 IDENTIFICATION OF SUBMITTALS

- A. Consecutively number all submittals.
 - 1. When material is resubmitted for any reason, transmit under a new letter of transmittal and with a new transmittal number.
 - 2. On re-submittals, cite the original submittal number for reference.
- B. Accompany each submittal with a letter of transmittal showing all information required for identification and checking.
- C. On at least the first page of each submittal, and elsewhere as required for positive identification, show the submittal number in which the item was included.
- D. Submittal Log:

1. Maintain an accurate submittal log for the duration of the Work, showing current status of all submittals at all times.
2. Make the submittal log available to the Architect for the Architect's review upon request.

3.2 GROUPING OF SUBMITTALS

- A. Unless otherwise specified, make submittals in groups containing all associated items to assure that information is available for checking each item when it is received.
1. Partial submittals may be rejected as not complying with the provisions of the Contract.
 2. The Contractor may be held liable for delays so occasioned.
 3. Items requiring color selection; i.e. interior finishes shall be submitted as a group to facilitate overall color coordinated selection. Color selections will not be made until the majority of samples are received.

3.3 TIMING OF SUBMITTALS

- A. Make submittals far enough in advance of scheduled dates for installation to provide time required for reviews, for securing necessary approvals, for possible revisions and re-submittals, and for placing orders and securing delivery.
- B. In scheduling, allow up to ten working days for review by the Architect following the Architect's receipt of the submittal.

3.4 ARCHITECT/ENGINEER'S ACTIONS

- A. Review of the shop drawings by the Architect/Engineer is to determine general conformance with the design concept of the project and with the information given in the contract documents. **Neither the receipt nor the review of shop drawings by the Architect/Engineer shall relieve the contractor of his responsibility for performance of the work in accordance with the requirements of the contract documents.** Contractor shall be responsible for dimensions to be confirmed and correlated at the site; for information that pertains to fabrication process or to the means, method, techniques, sequences and procedures of construction, and for coordination of the work of all trades.
- B. Contractor Submittals, Shop Drawings or Product Data from time to time are submitted with errors. **If overlooked by the Architect/Engineer review process, it shall not grant the contractor leave to proceed in error, and regardless of any information contained in the Shop Drawing review, the contractor shall be required to meet the requirements of the drawings and specifications. Shop drawings and/or product data review shall not waive or supersede in any way the requirements of the contract documents (drawings and specifications).**

3.5 REQUIRED SUBMITTALS

- A. Submittals required by the Contract Documents: The General Contractor shall be responsible for review of the following divisions of the specifications and submission of requested shop drawings: Division 00 thru 33. The Mechanical & Plumbing Subcontractor shall be responsible for review of the following divisions of specifications and submission of requested shop drawings: (Division 00 thru 33). The Electrical Subcontractor shall be responsible for review of the following divisions of the specifications and submission of requested shop drawings: (Division 00 thru 33). All shop drawings shall be submitted as detailed under Division 01, Section 013400.

END OF SECTION 013400

SECTION 014000 - QUALITY REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

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

1.2 DEFINITIONS

- A. Experienced: When used with an entity or individual, "experienced" unless otherwise further described means having successfully completed a minimum of five previous projects similar in nature, size, and extent to this Project; being familiar with special requirements indicated; and having complied with requirements of authorities having jurisdiction.
- B. Field Quality-Control Tests: Tests and inspections that are performed on-site for installation of the Work and for completed Work.
- C. Installer/Applicator/Erector: Contractor or another entity engaged by Contractor as an employee, Subcontractor, or Sub-subcontractor, to perform a particular construction operation, including installation, erection, application, assembly, and similar operations.
 - 1. Use of trade-specific terminology in referring to a trade or entity does not require that certain construction activities be performed by accredited or unionized individuals, or that requirements specified apply exclusively to specific trade(s).
- D. Mockups: Full-size physical assemblies that are constructed on-site either as freestanding temporary built elements or as part of permanent construction. Mockups are constructed to verify selections made under Sample submittals; to demonstrate aesthetic effects and qualities of materials and execution; to review coordination, testing, or operation; to show interface between dissimilar materials; and to demonstrate compliance with specified installation tolerances. Mockups are not Samples. Unless otherwise indicated, approved mockups establish the standard by which the Work will be judged.

1. Integrated Exterior Mockups: Mockups of the exterior envelope constructed on-site as freestanding temporary built elements, consisting of multiple products, assemblies, and subassemblies.
- E. Preconstruction Testing: Tests and inspections performed specifically for Project before products and materials are incorporated into the Work, to verify performance or compliance with specified criteria.
- F. Product Tests: Tests and inspections that are performed by a nationally recognized testing laboratory (NRTL) according to 29 CFR 1910.7, by a testing agency accredited according to NIST's National Voluntary Laboratory Accreditation Program (NVLAP), or by a testing agency qualified to conduct product testing and acceptable to authorities having jurisdiction, to establish product performance and compliance with specified requirements.
- G. Source Quality-Control Tests: Tests and inspections that are performed at the source; for example, plant, mill, factory, or shop.
- H. Testing Agency: An entity engaged to perform specific tests, inspections, or both. Testing laboratory shall mean the same as testing agency.
- I. Quality-Assurance Services: Activities, actions, and procedures performed before and during execution of the Work to guard against defects and deficiencies and substantiate that proposed construction will comply with requirements.
- J. Quality-Control Services: Tests, inspections, procedures, and related actions during and after execution of the Work to evaluate that actual products incorporated into the Work and completed construction comply with requirements. Contractor's quality-control services do not include contract administration activities performed by Architect.

1.3 DELEGATED-DESIGN SERVICES

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

1.4 CONFLICTING REQUIREMENTS

- A. Conflicting Standards and Other Requirements: If compliance with two or more standards or requirements are specified and the standards or requirements establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer conflicting requirements that are different, but apparently equal, to Architect for direction before proceeding.
- B. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits.

To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to Architect for a decision before proceeding.

1.5 ACTION SUBMITTALS

- A. Delegated-Design Services Submittal: In addition to Shop Drawings, Product Data, and other required submittals, submit a statement signed and sealed by the responsible design professional, for each product and system specifically assigned to Contractor to be designed or certified by a design professional, indicating that the products and systems are in compliance with performance and design criteria indicated. Include list of codes, loads, and other factors used in performing these services.

1.6 INFORMATIONAL SUBMITTALS

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

1.7 REPORTS AND DOCUMENTS

- A. Test and Inspection Reports: Prepare and submit certified written reports specified in other Sections. Include the following:
 - 1. Date of issue.
 - 2. Project title and number.
 - 3. Name, address, telephone number, and email address of testing agency.
 - 4. Dates and locations of samples and tests or inspections.
 - 5. Names of individuals making tests and inspections.
 - 6. Description of the Work and test and inspection method.
 - 7. Identification of product and Specification Section.
 - 8. Complete test or inspection data.
 - 9. Test and inspection results and an interpretation of test results.
 - 10. Record of temperature and weather conditions at time of sample taking and testing and inspection.

11. Comments or professional opinion on whether tested or inspected Work complies with the Contract Document requirements.
 12. Name and signature of laboratory inspector.
 13. Recommendations on retesting and re-inspecting.
- B. Manufacturer's Technical Representative's Field Reports: Prepare written information documenting manufacturer's technical representative's tests and inspections specified in other Sections. Include the following:
1. Statement on condition of substrates and their acceptability for installation of product.
 2. Statement that products at Project site comply with requirements.
 3. Summary of installation procedures being followed, whether they comply with requirements and, if not, what corrective action was taken.
 4. Results of operational and other tests and a statement of whether observed performance complies with requirements.
 5. Other required items indicated in individual Specification Sections.
- C. Factory-Authorized Service Representative's Reports: Prepare written information documenting manufacturer's factory-authorized service representative's tests and inspections specified in other Sections. Include the following:
1. Statement that equipment complies with requirements.
 2. Results of operational and other tests and a statement of whether observed performance complies with requirements.
 3. Other required items indicated in individual Specification Sections.

1.8 QUALITY ASSURANCE

- A. General: Qualifications paragraphs in this article establish the minimum qualification levels required; individual Specification Sections specify additional requirements.
- B. Manufacturer Qualifications: A firm experienced in manufacturing products or systems similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units. As applicable, procure products from manufacturers able to meet qualification requirements, warranty requirements, and technical or factory-authorized service representative requirements.
- C. Fabricator Qualifications: A firm experienced in producing products similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.
- D. Installer Qualifications: A firm or individual experienced in installing, erecting, applying, or assembling work similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in-service performance.
- E. Professional Engineer Qualifications: A professional engineer who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing engineering services of the kind indicated. Engineering services are defined as those

performed for installations of the system, assembly, or product that are similar in material, design, and extent to those indicated for this Project.

- F. Specialists: Certain Specification Sections require that specific construction activities shall be performed by entities who are recognized experts in those operations. Specialists shall satisfy qualification requirements indicated and shall be engaged for the activities indicated.
 - 1. Requirements of authorities having jurisdiction shall supersede requirements for specialists.
- G. Testing Agency Qualifications: An NRTL, an NVLAP, or an independent agency with the experience and capability to conduct testing and inspection indicated, as documented according to ASTM E 329; and with additional qualifications specified in individual Sections; and, where required by authorities having jurisdiction, that is acceptable to authorities.
- H. Manufacturer's Technical Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to observe and inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.
- I. Factory-Authorized Service Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.
- J. Preconstruction Testing: Where testing agency is indicated to perform preconstruction testing for compliance with specified requirements for performance and test methods, comply with the following:
 - 1. Contractor responsibilities include the following:
 - a. Provide test specimens representative of proposed products and construction.
 - b. Submit specimens in a timely manner with sufficient time for testing and analyzing results to prevent delaying the Work.
 - c. Build laboratory mockups at testing facility using personnel, products, and methods of construction indicated for the completed Work.
 - d. When testing is complete, remove test specimens and test assemblies, and mockups; do not reuse products on Project.
 - 2. Testing Agency Responsibilities: Submit a certified written report of each test, inspection, and similar quality-assurance service to Architect, with copy to Contractor. Interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from the Contract Documents.
- K. Mockups: Before installing portions of the Work requiring mockups, build mockups for each form of construction and finish required to comply with the following requirements, using materials indicated for the completed Work:
 - 1. Build mockups of size indicated.

2. Build mockups in location indicated or, if not indicated, as directed by Architect.
3. Notify Architect seven days in advance of dates and times when mockups will be constructed.
4. Employ supervisory personnel who will oversee mockup construction. Employ workers that will be employed to perform same tasks during the construction at Project.
5. Demonstrate the proposed range of aesthetic effects and workmanship.
6. Obtain Architect's approval of mockups before starting corresponding work, fabrication, or construction.
 - a. Allow seven days for initial review and each re-review of each mockup.
7. Maintain mockups during construction in an undisturbed condition as a standard for judging the completed Work.
8. Demolish and remove mockups when directed unless otherwise indicated.

1.9 QUALITY CONTROL

- A. Owner Responsibilities: Where quality-control services are indicated as Owner's responsibility, Owner will engage a qualified testing agency to perform these services.
 1. Owner will furnish Contractor with names, addresses, and telephone numbers of testing agencies engaged and a description of types of testing and inspection they are engaged to perform.
 2. Costs for retesting and re-inspecting construction that replaces or is necessitated by work that failed to comply with the Contract Documents will be charged to Contractor.
- B. Contractor Responsibilities: Tests and inspections not explicitly assigned to Owner are Contractor's responsibility. Perform additional quality-control activities, whether specified or not, to verify and document that the Work complies with requirements.
 1. Engage a qualified testing agency to perform quality-control services.
 - a. Contractor shall not employ same entity engaged by Owner, unless agreed to in writing by Owner.
 2. Notify testing agencies at least 24 hours in advance of time when Work that requires testing or inspection will be performed.
 3. Where quality-control services are indicated as Contractor's responsibility, submit a certified written report, in duplicate, of each quality-control service.
 4. Testing and inspection requested by Contractor and not required by the Contract Documents are Contractor's responsibility.
 5. Submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.
- C. Retesting/Reinspection: Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and reinspection, for construction that replaced Work that failed to comply with the Contract Documents.

- D. Testing Agency Responsibilities: Cooperate with Architect and Contractor in performance of duties. Provide qualified personnel to perform required tests and inspections.
 - 1. Notify Architect and Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.
 - 2. Determine the locations from which test samples will be taken and in which in-situ tests are conducted.
 - 3. Conduct and interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from requirements.
 - 4. Submit a certified written report, in duplicate, of each test, inspection, and similar quality-control service through Contractor.
 - 5. Do not release, revoke, alter, or increase the Contract Document requirements or approve or accept any portion of the Work.
 - 6. Do not perform duties of Contractor.
- E. Manufacturer's Field Services: Where indicated, engage a factory-authorized service representative to inspect field-assembled components and equipment installation, including service connections. Report results in writing as specified in Section 013300 "Submittal Procedures."
- F. Manufacturer's Technical Services: Where indicated, engage a manufacturer's technical representative to observe and inspect the Work. Manufacturer's technical representative's services include participation in pre-installation conferences, examination of substrates and conditions, verification of materials, observation of Installer activities, inspection of completed portions of the Work, and submittal of written reports.
- G. Associated Contractor Services: Cooperate with agencies and representatives performing required tests, inspections, and similar quality-control services, and provide reasonable auxiliary services as requested. Notify agency sufficiently in advance of operations to permit assignment of personnel. Provide the following:
 - 1. Access to the Work.
 - 2. Incidental labor and facilities necessary to facilitate tests and inspections.
 - 3. Adequate quantities of representative samples of materials that require testing and inspection. Assist agency in obtaining samples.
 - 4. Facilities for storage and field curing of test samples.
 - 5. Preliminary design mix proposed for use for material mixes that require control by testing agency.
 - 6. Security and protection for samples and for testing and inspection equipment at Project site.
- H. Coordination: Coordinate sequence of activities to accommodate required quality-assurance and quality-control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspection.
 - 1. Schedule times for tests, inspections, obtaining samples, and similar activities.

1.10 SPECIAL TESTS AND INSPECTIONS

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

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 TEST AND INSPECTION LOG

- A. Test and Inspection Log: Prepare a record of tests and inspections. Include the following:
1. Date test or inspection was conducted.
 2. Description of the Work tested or inspected.
 3. Date test or inspection results were transmitted to Architect.
 4. Identification of testing agency or special inspector conducting test or inspection.
- B. Maintain log at Project site. Post changes and revisions as they occur. Provide access to test and inspection log for Architect's reference during normal working hours.
1. Submit log at Project closeout as part of Project Record Documents.

3.2 REPAIR AND PROTECTION

- A. General: On completion of testing, inspection, sample taking, and similar services, repair damaged construction and restore substrates and finishes.
1. Provide materials and comply with installation requirements specified in other Specification Sections or matching existing substrates and finishes. Restore patched

areas and extend restoration into adjoining areas with durable seams that are as invisible as possible. Comply with the Contract Document requirements for cutting and patching in Section 017300 "Execution."

- B. Protect construction exposed by or for quality-control service activities.
- C. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

END OF SECTION 014000

SECTION 015000 - CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS

1.01 GENERAL SUMMARY

- A. This Section describes construction facilities and temporary controls required for the Work.
- B. The Contractor provides all temporary utilities, controls and services as described in this section. No extra compensation will be provided should temporary utilities, controls and services provided prove to be inadequate or incompatible with the needs of the Contractor, Subcontractors, and Sub-subcontractors. The Contractor, Subcontractors, and Sub-subcontractors shall make other arrangements as needed.
- C. Related Work:
 - 1. Documents affecting work of this section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and sections in Division 1 of these specifications.
 - 2. Except that equipment furnished by subcontractors shall comply with requirements of pertinent safety regulations, such equipment normally furnished by the individual trades in execution of their own portions of the Work is not part of this Section.
 - 3. Permanent installation and hookup of the various utility lines are described in other Sections.

1.02 REQUIREMENTS

- A. The General (Prime) Contractor shall provide construction facilities and temporary controls when first needed, ready for use, to avoid delay in the work. Maintain, expand and modify as needed. Do not remove until no longer needed or replaced by authorized use of permanent facilities.
- B. Construction facilities and temporary controls shall consist of, but not be limited to:
 - 1. Temporary utilities such as heat, water, electricity, and telephone;
 - 2. Field office for the Prime Contractor's personnel, if needed.
 - 3. Sanitary facilities need to be provided by the contractor.
 - 4. Enclosures such as tarpaulins, temporary insulated enclosures, barricades, canopies, and temporary partitions.
 - 5. Temporary fencing of the construction site; to be determined by the contractor and it needs to be adequate for all areas disturbed by new work, including layout & material storage areas. (if required)
 - 6. Project sign (not required)
 - 7. Subcontractors shall provide their own field office, if desirable, located per the Prime Contractor. All utilities and telephone to be by contractor.

1.03 DELIVERY, STORAGE, AND HANDLING

- A. Maintain temporary facilities and controls in proper and safe condition throughout progress of the Work.

1.04 REGULATIONS, STANDARDS AND INSTALLATION

- A. Regulations: Comply with requirements of local laws and regulations governing construction and local industry standards, in the installation and maintenance of temporary services and facilities.
- B. Standards: Comply with the requirements of NFPA Code 241, "Building Construction and Demolition Operations", the ANSI-A10 Series Standards for "Safety Requirements for Construction and Demolition", and the NECA National Joint Guideline NJG-6 "Temporary Job Utilities and Services".
- C. Installation: Use qualified tradesmen for installation. Locate temporary services and facilities where they will serve the project adequately and result in minimum interference with the work.

PART 2. PRODUCTS

A. Sanitary Facilities:

- 1. Contractor shall install single occupancy self-contained toilet units of the chemical, aerated recirculation or combustion type, properly vented and fully enclosed with glass fiber reinforced polyester shell.
- 2. Maintain in a sanitary condition at all times.
- 3. Construction personnel are not allowed to use existing building washroom facilities.
- 4. Contractor to coordinate location for toilet unit with owner.

B. First Aid Supplies:

- 1. The General Contractor and Subcontractors shall comply with governing regulations and recognized recommendations within the construction industry.

C. Temporary Fire Protection:

- 1. The Contractor and subcontractors shall keep their area clear of combustible debris. Each contractor, who is welding, cutting or performing any operation that may result in a fire, shall have an approved fire-extinguishing device in the area.

D. Temporary Controls:

- 1. The Contractor shall provide for site cleaning, dust control and maintenance of site traffic, including the Owner's use of the site.

E. Occupied Areas:

- 1. The facility will be occupied during the construction period. Provide proper safety barricades and fencing along with dust barriers to protect the facilities from exposure.

F. Use of Premises:

- 1. The facility will remain in full operation during the renovations. Barricades will need to be installed, and temporary signage will be needed to direct traffic around construction areas.

This will need to be coordinated with the owner, engineer & awarded contractor. Maintain circulation paths not being used for construction access. All workmen shall park their cars in areas designated by the Contractor's Superintendent as agreed to by the Owner.

2.02 TEMPORARY FENCING & BARRICADES

- A. The Contractor and each Subcontractor or Sub-subcontractor shall provide for their work: Barricades, Warning Signs: Comply with recognized standards and code requirements for erection of substantial barricades where needed to prevent accidents. Paint with appropriate colors and warning signs to inform personnel at the site and the public, of the hazard being protected against. Provide lighting where needed, including flashing warning lights where appropriate.
- B. Provide and maintain for the duration of construction a temporary fence if so indicated on the drawings, of a design and type needed to prevent entry onto the Work by the public.
- C. Interior barricades: (Not Required)

2.03 REMOVAL OF UTILITIES, FACILITIES AND CONTROLS

- A. Clean and repair damage caused by installation or use of temporary work.
- B. Restore existing facilities used during construction to original condition. Restore permanent facilities used during construction to specified condition.

PART 3. EXECUTION

3.01 MAINTENANCE AND REMOVAL

- A. Maintain temporary facilities and controls as long as needed for safe and proper completion of the Work.
- B. Establish a system for daily collection and disposal of waste materials. Enforce requirements strictly. Do not hold collected materials longer than 4 days.
 - 1. Burying or burning of waste materials on the site or washing waste material down sewers will not be permitted.
- C. Contractor, shall maintain and enforce regulations covering all fire hazards, including smoking, and shall provide adequate fire extinguishers and other protective measures in proper locations. Additionally, enforcement of all applicable provisions of the Michigan Occupational Safety and Health Act shall be the responsibility of the General Contractor.

END OF SECTION 015000

SECTION 017000 - CONTRACT CLOSEOUT

1.0 GENERAL

- A. Attention is directed to Division 0, Bidding and Contract Requirements, and to Division 1, General Requirements, which are hereby made a part of this specification. Also see Mechanical, Plumbing & Electrical specifications for any additional requirements.

1.1 CONTRACT CLOSEOUT PROCEDURES

- A. Submit written certification that Contract Documents have been reviewed, Work has been inspected, and Work is substantially complete in accordance with Contract Documents and ready for Architect/Engineer's inspection. Identify any and all items that remain to be completed or corrected.
- B. After inspection by Owner and Architect, and if the Architect concurs that work is substantially completed, he shall prepare a Certification of Substantial Completion on A.I.A. Form G704, accompanied by Contractor's list of items to be completed or corrected, as verified and amended by the Architect, Owner and General Contractor.
- C. When the Contractor considers the work to be complete, he shall submit a final request for inspection. The Architect, Owner, and General Contractor shall inspect the work and if found to be acceptable, the Architect shall request the Contractor to make closeout submittals.
- D. If the Contractor does not have work completed in accordance with the contract documents and ready for final inspection, and the Architect must make an additional final inspection trip, the cost of this final inspection(s) shall be deducted from the contract.
- E. When Architect and Owner complete final inspection and approve the project, the Contractor shall submit final Application for Payment identifying total adjusted Contract Sum/Price, previous payments, and amount remaining due. If required, the Architect will prepare a final change order reflecting approved adjustments to the contract sum which were not previously made by change orders.

1.2 FINAL CLEANING

- A. Execute final cleaning prior to final inspection.
- B. If the Contractor fails to clean up at the completion of the work, the Owner may do so and the cost thereof shall be charged to the Contractor(s) as the Architect so determines.
- C. Clean debris from site, roofs, gutters, downspouts, and drainage systems.
- D. Remove waste and surplus materials, rubbish, demolition materials, and construction facilities from the site. Burning of rubbish and debris on the premises will not be permitted at any time.
- E. Contractor shall repair all damaged site work as a result of demolition or construction.

1.3 ADJUSTING

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

1.4 PROJECT RECORD DOCUMENTS (For each Building)

- A. Maintain on site, one set of Contract Documents to be utilized for record documents. This requirement is for all trades, architectural, mechanical, and electrical.
- B. Record actual revisions to the Work. Record information concurrent with construction progress.

- C. Specifications: Legibly mark and record at each Product Section a description of actual Products installed.
- D. Record Documents and Shop Drawings: Legibly mark each item to record actual construction.
- E. Submit documents to Architect/Engineer with claim for final Application for Payment.

1.5 OPERATION AND MAINTENANCE DATA

- A. Submit to the Architect two (2) sets prior to final inspection, bound in 8-1/2 x 11 inch text pages, three D size ring binders with durable plastic covers. One flash drive with all documents (PDF) scanned. (Separate Binder for each Building)
- B. Prepare binder cover with printed title "OPERATION AND MAINTENANCE INSTRUCTIONS", and title of project.
- C. Internally subdivide the binder contents with permanent page dividers, logically organized, with tab titling clearly printed under reinforced laminated plastic tabs.
- D. Contents:
 - 1. Directory, listing names, addresses, and telephone numbers of Architect/Engineer, Contractor, Subcontractors, and major equipment suppliers.
 - 2. Operation and maintenance instructions, arranged by system.
 - 3. Project documents and certificates.

1.6 WARRANTIES

- A. Provide duplicate notarized copies.
- B. Execute and assemble documents from Subcontractors, suppliers, and manufacturers.
- C. Submit to Architect prior to final Application for Payment. (can be combined but must separate by each building)

1.7 SPARE PARTS AND MAINTENANCE MATERIALS: See individual Specifications.

END OF SECTION 017000

SECTION 230923.16 - GAS INSTRUMENTS

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section Includes the Following Gas Instruments:
 - 1. Multipoint carbon-monoxide monitoring system.
 - 2. Multipoint nitrogen-dioxide monitoring system.
- B. Related Requirements:
 - 1. Section 230993 "Sequence of Operations for HVAC Controls" for requirements that relate to Section 230923.16.

1.3 DEFINITIONS

- A. NDIR: Nondispersive infrared.

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product, including the following:
 - 1. Operating characteristics, electrical characteristics, and furnished accessories indicating process operating range, accuracy over range, control signal over range, default control signal with loss of power, calibration data specific to each unique application, electrical power requirements, and limitations of ambient operating environment, including temperature and humidity.
 - 2. Installation instructions, including factor affecting performance.
 - 3. Product description with complete technical data, performance curves, product specification sheets.

PART 2 – PRODUCTS

2.1 MULTIPOINT CARBON-MONOXIDE MONITORING SYSTEM

- A. Products: Subject to compliance with requirements, provide the following:
 - 1. Intec Controls.
 - 2. Critical Environment Technologies.
- B. Description:
 - 1. Each sampling point shall monitor any variation in the carbon-monoxide concentration level.
 - 2. Each sampling point shall be individually piped to the monitoring system.

3. Provide each sampling point with a 0.3-micron filter.
4. Each sampling point shall be an alarm point.
5. A dual-head diaphragm pump shall draw an air sample through piping system and through a microprocessor-controlled sequencer feeding an analyzer with a new sample every 15 seconds.
6. Sample time shall be adjustable in 1 second increments from zero to 60 minutes.
7. Span and zero calibration gas shall be automatically initiated by the microprocessor. System shall also provide manual initiation of span and zero calibration gas.
8. Analyzer output shall be corrected by the microprocessor.
9. Monitoring system shall have 8 sample points.
10. System shall operate on 24-V ac, single-phase, 60-Hz power.
11. Final adjustment; calibration, testing, and startup of the system shall be performed by a trained representative of manufacturer.

C. Analyzer:

1. Analyzer shall operate using principle of nondispersive infrared absorption.
2. Sampling response time shall be within 10 seconds.
3. Zero drift and span drift shall be less than 1 percent of full scale within a 24-hour period.
4. Repeatability shall be within 1 percent of full scale.
5. Accuracy shall be within 1 percent of full scale.
6. Calibration range shall be zero to 250 ppm.
7. Digital display on analyzer face with scale shall be in ppm.
8. Temperature shall be compensated from 30 to 120 deg F ambient temperature.

D. Control and Display:

1. Each sample shall send a 4-20 mA output signal proportional to the highest concentration.
2. Alphanumeric visual display of current analyzer concentration reading shall be in ppm or another industry-accepted measurement.
3. Visual indication for sample analyzing, sample high-concentration alarm, analyzer malfunction, and calibration.
4. Any number and configuration of sample points shall be capable of being bypassed.
5. Each sample point shall be capable of being manually sampled through an override feature.
6. System parameters shall be stored in nonvolatile memory.
7. Provide at least an eight-hour battery backup of current alarm status. Battery shall be rechargeable.

E. Enclosure:

1. NEMA 4X.
2. Hinged and locking door, full size of face.
3. House all system components. Multiple adjoining enclosures are acceptable if joined to a common support structure.

F. Calibration Equipment:

1. Provide equipment necessary to automatically and manually calibrate the system, including, but not be limited to, the following:
 - a. Regular assembly.
 - b. Zero cap.
 - c. Calibration cap.
 - d. Two cylinders filled with calibration gas.
 - e. Instruction book.
 - f. Carrying case.

2.2 MULTIPOINT NITROGEN-DIOXIDE MONITORING SYSTEM

- A. Products: Subject to compliance with requirements, provide the following:
 1. Intec Controls.
 2. Critical Environment Technologies.
- B. Description;
 1. Each sampling point shall monitor any variations in the nitrogen-dioxide concentration level.
 2. Each sampling point shall be individually piped to the monitoring system.
 3. Provide each sampling point with a 0.3-micron filter.
 4. Each sampling point shall be an alarm point.
 5. A dual-head diaphragm pump shall draw an air sample through piping system and through a microprocessor-controlled sequencer feeding analyzer with a new sample every 15 seconds.
 6. Sample time shall be adjustable in 1 second increments from zero to 60 minutes.
 7. Span and zero calibration gas shall be automatically initiated by the microprocessor. System shall also provide manual initiation of span and zero calibration gas.
 8. Analyzer output shall be corrected by the microprocessor.
 9. Monitoring shall have 8 sample points.
 10. System shall operate on 24-V ac, single-phase 60-Hz power.
 11. Final adjustment; calibration, testing, and startup of the system shall be performed by a trained representative of manufacturer.
- C. Analyzer
 1. Analyzer shall operate using principle of nondispersive infrared absorption.
 2. Sampling response time shall be within 10 seconds.
 3. Zero drift and span drift shall be less than 1 percent of full scale within a 24-hour period.
 4. Repeatability shall be within 1 percent of full scale.
 5. Accuracy shall be within 1 percent of full scale.
 6. Calibration range shall be zero to 30 ppm.
 7. Digital display on analyzer face with scale shall be in ppm.
 8. Temperature shall be compensated from 30 to 120 deg F ambient temperature.
- D. Control and Display:
 1. Each sample shall send a 4-20 mA output signal proportional to the higher concentration.
 2. Alphanumeric visual display of current analyzer concentration reading shall be

in ppm or an other industry-accepted measurement.

3. Visual indication for sample analyzing, sample high-concentration alarm, analyzer malfunction, and calibration.
4. Any number and configuration of sample points shall be capable of being bypassed.
5. Each sample point shall be capable of being manually sampled through an override feature.
6. System parameters shall be stored in nonvolatile memory.
7. Provide at least an eight-hour battery backup of current alarm status. Battery shall be rechargeable.

E. Enclosure

1. NEMA 4X.
2. Hinged and locking door, full size of face.
3. House all system components. Multiple adjoining enclosures are acceptable if joined to a common support structure.

F. Calibration Equipment:

1. Provide equipment necessary to automatically and manually calibrate the system, including, but not limited to, the following:
 - a. Regular assembly.
 - b. Zero cap.
 - c. Calibration cap.
 - d. Two cylinders filled with calibration gas.
 - e. Instruction book.
 - f. Carrying case.

2.3 CONTROL SEQUENCES:

- A. Gas equipment detection to be interlocked with MAU-1 and EF-1. Refer to Section 237423.13 and 233416 for controls sequences.

PART 3 – EXECUTION

3.1 EXAMINATION

- A. Examine substrates and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
- B. Examine roughing-in for instruments installed in piping to verify actual locations of connections before installation.
- C. Examine roughing-in for instruments installed in duct systems to verify actual locations of connections before installation.
- D. Prepare written report, endorsed by Installer, listing conditions detrimental to performance.

- E. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION, GENERAL

- A. Furnish and install products required to satisfy more stringent of all requirements indicated.
- B. Install products level, plumb, parallel, and perpendicular with building construction.
- C. Properly support instruments, tubing, piping, wiring, and conduit to comply with requirements indicated. Brace all products to prevent lateral movement and sway or a break in attachment when subjected to seismic loads.
- D. Fastening Hardware:
 - 1. Stillson wrenches, pliers, and other tools that cause injury to or mar surfaces of rods, nuts, and other parts are prohibited for work of assembling and tightening nuts.
 - 2. Tighten bolts and nuts firmly and uniformly. Do not overstress threads by using excessive force or oversized wrenches.
 - 3. Lubricate threads of bolts, nuts, and screws with graphite and oil before assembly.
- F. Install products in locations that are accessible and that permit calibration and maintenance from floor, equipment platforms, or catwalks. Where ladders are required for Owner's access, confirm unrestricted ladder placement is possible under occupied condition.

3.3 ELECTRICAL POWER

- A. Furnish and install electrical power to products requiring electrical connections.
- B. Furnish and install circuit breakers. Comply with requirements in Section 262816 "Enclosed Switches and Circuit Breakers."
- C. Furnish and install power wiring. Comply with requirements in Section 260519 "Low-Voltage Electrical Power Conductors and Cables."

3.4 INSTRUMENTS, GENERAL INSTALLATION REQUIREMENTS

- A. Mounting Location:
 - 1. Mount controllers and sensors on walls, as shown on mechanical drawings. Use manufacturer's mounting brackets to accommodate field mounting. Securely support and brace products to prevent vibration and movement.
- B. Mounting Height:
 - 1. Controllers to be mounted at 4' AFF and all sensors to be mounted between 5' and 6' AFF. Mounting height shall comply with codes and accessibility requirements.

3.5 CARBON-MONOXIDE MONITORING SYSTEM

- A. Install sample points in monitored area to provide accurate measurement of gas concentration.
- B. Install exposed sampling points with a finished appearance consistent with other materials in space. Submit proposed products to be installed for review and approval.
- C. Individually install each sample point to the carbon-monoxide monitoring system.
- D. Install tubing in a minimum size of NPS 3/8.
- E. Use compression fittings at connections to equipment.
- F. Support carbon-monoxide monitoring system from wall.

3.6 NITROGEN-DIOXIDE MONITORING SYSTEM

- A. Install sample points in monitored area to provide accurate measurement of gas concentration.
- B. Install exposed sampling points with a finished appearance consistent with other materials in space. Submit proposed products to be installed for review and approval.
- C. Individually install each sample point to the nitrogen-dioxide monitoring system.
- D. Install tubing in a minimum size of NPS 3/8.
- E. Use compression fittings at connections to equipment.
- F. Support nitrogen-dioxide monitoring system from wall.

3.7 IDENTIFICATION

- A. Identify system components, wiring, cabling, and terminals. Each piece of wire, cable, and tubing shall have the same designation at each end for operators to determine continuity at points of connection. Comply with requirements for identification specified in Section 260553 "Identification for Electrical Systems."
- B. Install engraved phenolic nameplate with instrument identification on face.

3.8 CHECKOUT PROCEDURES

- A. Check out installed products before continuity tests, leak tests, and calibration.
- B. Check instruments for proper location and accessibility.
- C. Check instruments for proper installation on direction of flow, elevation, orientation, insertion depth, or other applicable considerations that impact performance.

- D. Check instrument tubing for proper isolation, fittings, slope, dirt legs, drains, material, and support.

3.9 ADJUSTMENT, CALIBRATION, AND TESTING

A. Description:

1. Calibrate each instrument installed that is not factory calibrated and provided with calibration documentation.
2. Provide a written description of proposed field procedures and equipment for calibrating each type of instrument. Submit procedures before calibration and adjustment.
3. For each analog instrument, perform a three-point calibration test for both linearity and accuracy.
4. Equipment and procedures used for calibration shall comply with instrument manufacturer's written recommendations.
5. Provide diagnostic and test equipment for calibration and adjustment.
6. Field instruments and equipment used to test and calibrate installed instruments shall have an accuracy of at least twice the instrument accuracy being calibrated. For example, an installed instrument with an accuracy of 1 percent shall be checked by an instrument with an accuracy of 0.5 percent.
7. Calibrate each instrument according to instrument instruction manual supplied by manufacturer.
8. If, after calibration, indicated performance cannot be achieved, replace out-of-tolerance instruments.
9. Comply with field-testing requirements and procedures in ASHRAE Guideline 11, "Field Testing of HVAC Control Components," in the absence of specific requirements, and to supplement requirements indicated.

B. Analog Signals:

1. Check analog voltage signals using a precision voltage meter at zero, 50, and 100 percent.
2. Check analog current signals using a precision current meter at zero, 50, and 100 percent.
3. Check resistance signals for temperature sensors at zero, 50, and 100 percent of operating span using a precision-resistant source.

C. Digital Signals:

1. Check digital signals using a jumper wire.
2. Check digital signals using an ohmmeter to test for contact.

D. Meters: Check sensors at zero, 50, and 100 percent of Project design values.

E. Sensors: Check sensors at zero, 50, and 100 percent of Project design values.

F. Switches: Calibrate switches to make or break contact at set points indicated.

G. Transmitters:

1. Check and calibrate transmitters at zero, 50, and 100 percent of Project design values.

2. Calibrate resistance temperature transmitters at zero, 50, and 100 percent of span using a precision-resistance source.

3.10 MAINTENANCE SERVICE

- A. Maintenance Service: Beginning at Substantial Completion, maintenance service shall include 12 months' full maintenance by manufacturer's authorized service representative. Include quarterly preventive maintenance, repair or replacement of worn or defective components, cleaning, and adjusting as required for proper operation. Parts and supplies shall be manufacturer's authorized replacement parts and supplies.

3.11 DEMONSTRATION

- A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain instrumentation and control devices.
- B. Coordinate gas instrument demonstration video with operation and maintenance manuals and classroom instruction for use by Owner in operating, maintaining, and troubleshooting.
- C. Owner shall have right to make additional copies of video for internal use without paying royalties.

END OF SECTION 230923.16