

# BID MANUAL

2/12/2025

**PROJECT:**

**West Michigan Hispanic Chamber of  
Commerce Headquarters**

**LOCATION:**

**1111 Godfrey Ave  
Grand Rapids, MI 49507**



<b>Project:</b>	<b>West Michigan Hispanic Chamber of Commerce Headquarters</b>
<b>Client:</b>	<b>WMHCC</b>
<b>Location:</b>	<b>1111 Godfrey Ave Grand Rapids, MI 49507</b>
<b>Architect:</b>	<b>Rossetti</b>
<b>Construction Manager:</b>	<b>Erhardt Construction 606 East Fulton Ada, MI 49301</b>

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# INVITATION TO BID

6060 Fulton Street East ■ Ada, Michigan 49301 ■ P (616) 676-1222 ■ F (616) 676-1676

**Project:** West Michigan Hispanic Chamber of Commerce Headquarters  
**Client:** WMHCC  
**Location:** 1111 Godfrey Ave  
Grand Rapids, MI 49507  
**Architect:** Rossetti  
**Construction Manager:** Erhardt Construction  
606 East Fulton  
Ada, MI 49301

**Bid Contact:** Kevin Osbeck  
**Phone Number:** 616-825-2926  
**Email:** kosbeck@erhardtcc.com

Erhardt Construction, as Construction Manager for the West Michigan Hispanic Chamber of Commerce , is soliciting bid proposals for the reference project as described below:

<b>BID PACKAGE:</b>		<b>WMHCC New Headquarters</b>
<b><u>Work Categories</u></b>		
01450 - Materials Testing	07500 - Membrane Roofing	10750 - Flagpoles
01712 - Construction Staking	07700 - Metal Soffits/Canopies/Siding	14000 - Elevator
02000 - Building Demolition	07900 - Sealants & Caulking	21000 - Fire Protection
03000 - Site Concrete	08100 - Doors/Frames/Hardware <small>(Furnish Only)</small>	22000 - Plumbing
03300 - Footings/Foundations/Int Flatwork	08800 - Aluminum/Glass & Glazing	23000 - HVAC
03350 - Concrete Polishing	09200 - Metal Framing/Drywall/ACT	26000 - Electrical
03380 - Post Tension Concrete	09300 - Wall & Floor Tile	31000 - Earthwork
03450 - Precast Concrete	09640 - Wood Flooring	32100 - Asphalt Paving
04000 - Masonry	09650 - Carpet & LVT	32180 - Pickleball Court Surfacing
05000 - Structural Steel/Misc Metals	09672 - Epoxy Floor Coatings	32310 - Site Fencing
06000 - General Trades	09900 - Painting	
06200 - Millwork <small>(Furnish Only)</small>	10300 - Operable Partition	

<b>BID DUE DATE:</b>	<b>Thursday March 6 @ 11am</b>
<b>BID OPENING LOCATION:</b>	<b>Erhardt Construction</b>
<b>BID OPENING TYPE:</b>	<b>Private opening at Erhardt Construction</b>
<b>BID SECURITY REQUIRED:</b>	<b>No</b>
<b>BID SUBMISSION REQUIREMENTS:</b>	<b>Bids can be submitted electronically to Erhardt, either through email or Procore. Bid submissions are to be on the bid form provided by Erhardt. You may also include your standard quote as well.</b>

<b>RFI DEADLINE:</b>	<b>Friday February 21 @ 4pm</b>
Erhardt is hosting an RFI open house on Tuesday 2/18 at 10am at Erhardt's office if you would prefer to meet in person to review the score. You can also submit all RFI questions to Erhardt either via email or phone. DO NOT contact the architect or engineer directly.	

<b>PRE-BID MEETING:</b>	<b>Thursday February 13 @ 11am</b> <b>1111 Godfrey Ave Sw</b> <b>Grand Rapids, MI 49507</b>
Please inform Erhardt Construction if you plan to attend the walkthrough.	

<b>PLANS:</b>	Bid proposal documents are available for review at the following location:
Procure	Erhardt Website
Builders Exchange	Erhardt Construction Office

All bid proposals submitted shall remain valid for a period of sixty (60) days after the bid due date. The Owner & Erhardt Construction reserve the right to accept any bid proposal, reject any & all bid proposals, & waive any informalities.

## DEFINITIONS

1. Addenda are written or graphic instruments issued by the Architect prior to the execution of the subcontract agreement which modify or interpret a portion of the Contract Documents by additions, deletions, clarifications or corrections.
2. Bid or Bid Proposal is a complete and properly executed proposal to do the work for the sums stipulated therein, submitted in accordance with the Bid Manual.
3. Base Bid Proposal Price is as identified in the Bid Proposal Form.
4. Bidder is a person or entity who submits a Bid and who meets the requirements of the Bid Manual.
5. The Bid Manual consists of all of the documents listed and referenced in the Table of Contents.
6. Contract Documents are those documents identified as Contract Documents in the Agreement between the Owner and Erhardt Construction and include the Agreement between the Owner and Erhardt Construction, a copy of which is available upon request from Erhardt Construction, the Bid Manual, the proposed subcontract agreement between Erhardt Construction and Bidder, conditions of the subcontract (General Conditions, Supplemental Conditions and other conditions incorporated therein), Plans/Drawings, Specifications and all Addenda issued prior to the execution of a subcontract agreement between Erhardt Construction and Bidder.
7. Project Site means the construction site where the Project identified herein is located.
8. Voluntary Alternates are alternate proposals for product or other substitutions which must be clearly identified as such in the Bid Proposal.
9. The term “Work” is used as defined in the General Conditions, as modified by the supplementary General conditions.

## QUALIFICATIONS OF BIDDERS

1. Bid Proposals will be received by Erhardt Construction from pre-qualified Bidders only. Direct recipients of an Invitation to Bid from Erhardt Construction can assume that they are pre-qualified to Bid on this Project. Subcontractors who have not been previously pre-qualified by Erhardt Construction should submit their qualifications prior to submitting a Bid Proposal. Pre-qualification forms are available from Erhardt Construction’s website ([www.erhardtcc.com](http://www.erhardtcc.com) – under “Contact/Forms”), by email request to [selenbaas@erhardtcc.com](mailto:selenbaas@erhardtcc.com), or by calling (616) 676-1222. Alternative forms that provide the same information (such as AIA A-305) may be acceptable. Erhardt Construction may request Bidder to submit evidence the Bidder is qualified to fulfill the contract requirements set forth in the Contract Documents. Such evidence may include Bidders financial responsibility, availability of manpower and equipment, Bidder’s other responsibilities concurrent with work of this Project, Bidder’s safety record and any other information as required to determine whether Bidder is able to perform all contract obligations set forth in the Contract Documents.

2. Low Bidders will be asked to provide additional financial data, including balance sheets and income statements, unless Erhardt Construction has current data on file. Bidders should be prepared to provide this data upon receiving an invitation to attend post-bid interviews.

## EXAMINATION OF THE CONTRACT DOCUMENTS & THE PROJECT SITE

1. In submitting a Bid Proposal, each Bidder represents they have carefully examined and fully understand the requirements of the Contract Documents and have examined the site, familiarized themselves with the local conditions to which the work is to be performed and are fully satisfied to the accuracy of the bid packages, the Contract Documents including any Addenda. After Bid Proposals have been submitted, the Bidder shall not be allowed any extra compensation by reason of any matter or thing which Bidder did not fully inform itself prior to submitting its Bid Proposal.

## PREPARATION OF BIDS

1. Bid proposals will be received at the time & location listed in the Invitation to Bid and opened privately.
2. All Bid Proposals are to be submitted on the Bid Proposal Form provided in the Bid Manual and are to list the Project name, Work Category Number, Work Category Description and acknowledge all Addenda issued prior to the Bid Due date.
3. Each Bid Proposal shall be signed with name and title typed below signature. Where the Bidder is a corporation, the Bid Proposal must be signed with the full legal name of the corporation followed by the state of incorporation and the legal signature of an officer authorized to bind the corporation to a contract.
4. All Base Bid Proposals must incorporate all the requirements of the Contract Documents. Separate alternate proposals will be considered for product substitutions provided they are clearly identified as Voluntary Alternates in the Bid Proposal.
5. Combined Bid Proposals will be considered provided that each Bid Package/Work Category is individually quoted.
6. Bid Proposals are to include all required taxes including, but not limited to, sales and use taxes.
7. Include the following documents with the Bid Proposal:
  - A. Submit 1 copy of the Bid Proposal Form, completely filled out and signed by an authorized representative.
  - B. Submit 1 copy of your company's standard bid/quote form.

## INSURANCE

1. Subcontractor/Supplier shall provide and maintain in full force and effect during the term of the subcontract agreement for this Project, all warranty periods and other periods as specified herein, insurance policies as set forth in the Master Subcontract Agreement as modified by the Project Subcontract Agreement for this Project.
2. Subcontractors are responsible for providing Professional Liability insurance when assigned Specification sections that include design requirements.
3. The Owner, Erhardt Construction Company and the Architect are to be included as additional insureds for the policies listed above except for Workers Compensation, using forms CG 20 38 04 13 and CG 20 37 07 04 or equivalent. The umbrella policy is “following form.” Also, as required by written agreement, the policies listed above are to include a Thirty Day Cancellation Clause (10 days for non-payment), Waiver of subrogation clause and the above policies are to be primary, including umbrella, and the Owner, Erhardt Construction Company and Architects insurance coverage is non-contributory.
4. Submit all endorsements that support the Certificate of Insurance.

## WARRANTIES

1. All Warranties for this project shall be for a period of one (1) year from the date of Substantial Completion unless a longer period is stipulated elsewhere in the Contract Documents.

## PROPOSAL SUPPLEMENTS

1. Bidders shall submit 1 copy of a Bid Proposal supplement listing all sub-subcontractors, vendors and manufacturers to Erhardt Construction within 24 hours following the timely submission of Bid Proposals. If no Bid Proposal supplement form is provided, Bidders shall submit the supplement on their letterhead.

## BID VALIDITY

1. Subcontractors may withdraw Bid Proposals at any time before Bid Proposal opening, but may not resubmit them. No Bid Proposal may be withdrawn or modified after the Bid Proposal opening. All Bid Proposals shall be valid for a period of sixty (60) days after receipt of Bid Proposals.

## INTERPRETATION OF DOCUMENTS | QUESTIONS REGARDING BID DOCUMENTS

1. Should the Subcontractor find omissions or discrepancies in the Contract Documents, the Subcontractor shall notify Erhardt Construction immediately so the Design Professional may issue an Addendum.
2. Every Request for Information and all questions regarding the Contract Documents shall be made in writing on the attached Bidder's Question form, addressed and forwarded to Erhardt Construction. Replies to all questions will be issued to all Bidders of record via Addendum. Only written clarifications will be incorporated into the Contract Documents. Questions must be submitted by the RFI deadline noted on Invitation to Bid. Questions received after the deadline may not be answered. Unless modified or clarified by written notice or Addenda, the Contract Documents will remain in force.
3. No oral interpretations shall be offered to the Bidder as to the meaning of any part of the Contract Documents.

## COORDINATION OF THE PLANS | DRAWINGS & SPECIFICATIONS

1. Addenda or modifications of any kind to the Plans/Drawings and/or Specifications take precedence over the original Plans/Drawings and/or Specifications.
2. The Specification: where specifically differently than shown on the drawings, the Architect shall decide which stipulation will provide the best installation; where specified but not shown on the drawings and Architect deems installation necessary, the specification takes precedence.
3. The Working Drawings: the precedent shall be drawings of larger scale over those of smaller, figured dimensions over scaled dimensions, and noted materials over graphic indications; where installation is shown or noted, but not specified and Architect deems installation necessary, drawings take precedence.
4. When remodeling is contemplated, and noted on Plans/Drawings, all work required to execute the complete installation, whether or not completely shown, shall be by that particular Contractor involved unless otherwise noted, and the drawings shall take precedence if the work is not specifically specified for complete installation. Further, when only mechanical or electrical work is required, and "patch and match" is noted or obviously required, the Contractor(s) involved shall pay the cost of the required "patch and match". All work shall meet with approval of the Architect.
5. When a duplication of material or equipment occurs in the Plans/Drawings or Specifications and in separate prime contracts, each prime contractor shall furnish this material or equipment. Architect will decide which contract amount shall be adjusted, for not incorporating material or equipment into the project.

## PERMITS

1. Other than the general Building Permit all other permits required to perform the work will be the responsibility of the Subcontractor performing work requiring such a permit and the costs of these permits shall be included in the Bid Proposal Price.

## BASIS OF AWARD

1. Bidders shall include all labor rates, unit cost items, proposal breakdowns, and all alternates listed in the Specifications, as shown on the Plans/Drawings, as listed in the Work Category/Bid Scope descriptions, or as listed on the Bid Proposal Form. Failure to comply with any requested information may be basis for rejection of Bid Proposal.
2. In the event of a discrepancy between the written prices quoted on the Bid Proposal Form and any other figures quoted by Bidder in any conjunction with a Bid Proposal, the written prices quoted on the Bid Proposal Forms words shall take precedence and Erhardt Construction shall be entitled to rely on same. The Base Proposal Price is to include the furnishing of all labor, materials, equipment, tools, management, supervision, insurance, taxes and all other services necessary and proper for the completion of the work in accordance with all requirements of the Contract Documents except as otherwise set forth herein.
3. The Owner and Erhardt Construction reserve the right to accept any Bid Proposal, reject any and all Bid Proposals, and waive any informalities.
4. Subcontractors may be required to attend a post-bid interview at the offices of Erhardt Construction.

## CONTRACT TIME

1. Refer to the construction schedule issued in the Bid Manual for the projected start and finish dates. All Bidders shall be responsible for providing all materials, equipment and labor necessary to maintain the progress of the job in order to achieve specific dates of partial and substantial completion as noted in Erhardt Construction's Preliminary Project Schedule included in this Bid Manual.

## OWNER OCCUPANCY OF FACILITIES

1. The Owner may begin to occupy and start installation of various equipment, furnishings and/or wiring prior to the completion of the Project.



## CONTRACTOR DIVERSITY

1. Erhardt Construction is committed to enhancing the growth and development of local, minority and women owned business enterprises (M/WBE's) on all of our projects. Bidders are encouraged to form alliances with MWBE firms and to provide proportional on-site workforce diversity for their trade. Bidders are asked to demonstrate their commitment to equity, inclusion, and non-discrimination by making a good-faith effort to include meaningful participation of M/WBE's as partners, lower-tier subcontractors, and suppliers. To demonstrate the success of their efforts, bidders are required to state the percentage of M/WBE participation included in their proposals. MWBE's listed as partners or lower-tier subcontractors should be given defined responsibilities (as opposed to the leasing of labor by the hour) as a tool for the MWBE firm's development. Quotations for voluntary alternates to increase the M/WBE participation in a proposal will also be accepted. Bidders should also be prepared to describe steps taken as part of their good-faith efforts to involve M/WBE's at pre-award interviews. While no specific goals have been established for M/WBE participation, the success of bidders in all categories to include M/WBE participation in their proposals will be considered as a factor in the selection of successful bidders.

## EQUAL OPPORTUNITY

1. The Contractor and its subcontractors shall not discriminate against any employee or applicant for employment with respect to hire, tenure, terms, conditions or privileges of employment, or any matter directly or indirectly related to employment, because of race, color, religion, sex, national origin, or age.
2. The Contractor and its 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, color, religion, sex, national origin, or age.

## STATEMENT OF NON-COLLUSION

1. By submission of a Bid Proposal, each Bidder and each Bidder signing on behalf on any Bidder, certifies, and in the case of a Joint-Bid Proposal, each party thereto certifies as to its own organization, under the penalty of perjury that, to the best of its knowledge and belief: (1) the prices in the Bid Proposal have been arrived at independently without collusion, consultation, communication or agreement, for the purpose of restricting competition, as to any matter relating to such prices with any other Bidder or with any competition; (2) unless otherwise required by law, the prices which have been quoted in the Bid Proposal have not been knowingly disclosed by the Bidder prior to opening, directly or indirectly, to any other Bidder or to any competitor; and (3) no attempt has been made, or will be made, by the Bidder to induce any other person, partnership or corporation to submit a Bid Proposal for the purpose of restricting competition.

## SUBCONTRACTOR AGREEMENT

1. By submission of a bid, the Subcontractor warrants that it has fully acquainted itself with the Contract Documents relating to the work to be done.
2. The scope of each subcontract agreement is defined by the various Work Category/Bid Package descriptions as published in this Bid Manual unless otherwise modified in the subcontract agreement. The Subcontractor agrees to perform all work under this Bid Manual subject to all the terms and conditions of the Contract Documents. No other exclusions or modifications to the subcontract agreements will be acknowledged or accepted.
3. By submitting a Bid Proposal, Bidder agrees to execute Erhardt Construction's standard subcontract agreements, including but not limited to Erhardt Construction's Master Subcontract Agreement and Erhardt Construction's Project Subcontract Agreement, if applicable. The Subcontractor shall execute such agreements within (5) days following its receipt.

## INCORPORATED TERMS & CONDITIONS

1. All terms, conditions and requirements of the contract between the Owner and Erhardt Construction (a copy of which is available upon request from Erhardt), and all the contract documents incorporated or defined therein, including drawings and specifications (the "Owner Contract Documents") are incorporated herein and made a part of this Bid Manual. The Subcontractor will perform all work under this Bid Manual subject to all the terms and conditions of the Owner Contract Documents relating to such work. By submission of a bid, the Subcontractor warrants that it has fully acquainted itself with the Owner Contract Documents relating to the work to be done.

## MISCELLANEOUS

1. The Contract Documents contain the provisions required for the Project. Information obtained from an officer, agent, or employee of the Owner, Erhardt Construction or any other person shall not affect the risks or obligations assumed by the Bidder or relieve it from fulfilling any of the conditions of the Contract Documents or subcontract agreement.
2. The Contract Documents are intended to supplement and complement each other and shall, where possible, be thus interpreted. For all purposes under this Agreement, all efforts shall be taken to construe the terms of the Contract Documents and documents incorporated therein as harmonious with one another. If, however, any provisions of the Contract Documents irreconcilably conflict with one another the provision imposing the greater duty on the Subcontractor shall govern. In the event that there is an irreconcilable conflict in the Contract Documents, the order of precedence for resolving ambiguities are as follows: (1) Agreement between Contractor and the Owner, excepting the payment terms, (2) the Agreement between Contractor and Subcontractor, (3) the specifications, (4) the plans/drawings, (all other Contract Documents).
3. Subcontractor shall comply with all applicable laws, ordinances, and the rules and regulations of all governing authorities having jurisdiction over the construction of the Project.
4. Subcontractor shall comply with any special safety provisions required by Erhardt Construction, the Architect/Engineer, or the Owner.

END OF SECTION 002100

## **ALL SUBCONTRACTORS SHALL PERFORM THE WORK GENERALLY DESCRIBED BELOW AND ALL OTHER WORK AS DESCRIBED IN THE CONTRACT DOCUMENTS.**

### **Division 00 - Procurement and Contracting Requirements**

### **Division 01 - General Requirements**

### **Erhardt Construction Bid Manual**

All contractors are to comply with Erhardt's Project Safety Program which can be found on the Procore project website with the Bid Manual. In particular, all employees working on the Job Site shall adhere to **100% fall protection at all times**, including steel erection and scaffold erection/dismantling. Riding on the ball of a crane is not permitted. All other facets of the MIOSHA Construction Safety Standard Part 45 shall be followed.

## **GENERAL ITEMS**

1. Where Related Sections are referenced in Specification Sections which are part of your Bid Package, Subcontractors/Vendors are to include the necessary requirements of that section (and its Related Sections) to perform that work.
2. Subcontractors are responsible for providing Professional Liability insurance when assigned specification sections that include design requirements.
3. The general Building Permit will be provided by others. All other permits and fees required to complete the performance of the work is the responsibility of the Subcontractor.
4. Subcontractor is to bid to perform work on a minimum 5 days a week 8 hours a day basis. Erhardt Construction reserves the right to adjust working hours and direct overtime as the Subcontract allows. Upon commencing work, Subcontractor is required to work at minimum normal and usual hours (i.e. Not 4 days, 10 hours/day) unless written approval is granted by Erhardt Construction.
5. Each Subcontractor shall furnish to the Erhardt Construction a copy of their Company Safety Program prior to starting work.
6. Within two (2) weeks after award of Bid Package, Subcontractor is to submit to Erhardt Construction a detailed list of work items with durations and crew sizes for inputting into the Master Schedule. Also list with each work item what work items (by your Bid Package or other Bid Packages) must be done prior to starting your work.
7. Subcontractor shall furnish a detailed submittal schedule, coordinated with the overall project schedule, within two (2) weeks of the Notice to Proceed for Erhardt Construction approval. All submittals shall be submitted electronically only with a completed submittal transmittal form.
8. Subcontractor shall be responsible for reviewing and approving all shop drawings. This shall include stamping all drawings with Subcontractor's shop drawing approval stamp prior to submission to Construction Manager.
9. Requests for Information are to be submitted to Erhardt Construction by the subcontractor on the form provided or an approved similar form.
10. Prior to starting work, each Subcontractor shall furnish to Erhardt Construction a bound notebook containing the Material Safety Data Sheets (MSDS), including all MSDS sheets from their lower tier subcontractors. MSDS sheets will be returned to the Subcontractor following completion of its work.

11. On-Site staging and storage areas are limited. Subcontractors are hereby advised that temporary use of the site for office trailers, storage trailers and lay down areas is at the sole discretion of Erhardt Construction. Storage and delivery of materials to the Project Site must be coordinated and approved by Erhardt Construction in advance. Erhardt Construction may require Subcontractor to remove, relocate or consolidate these facilities at no additional cost.
12. Subcontractor is hereby advised that on site parking is limited. Parking areas will be designated by Erhardt Construction.
13. Temporary signs or advertisements will not be permitted without the express written consent of Erhardt Construction and the Owner.
14. Subcontractor is required to provide all layout, field engineering, surveying and verification of field dimensions, as required to complete the Work of this Subcontract. Erhardt Construction will provide two (2) base lines and one (1) benchmark.
15. Subcontractor is required to provide all traffic control, flagmen, safety barricades, fire watch, warning lights and fall protection required to complete Work of this Subcontract.
16. Subcontractor shall provide all hoisting required for the receiving, handling and installation of materials to be furnished and/or installed as Work of this Subcontract.
17. Subcontractor will be required to attend weekly foreman coordination/Lean meetings at the Project Site. Subcontractors are also required to attend the bi-weekly Progress Meetings as called or required by Erhardt Construction.
18. Each subcontractor shall perform daily cleanup of work to the dumpsters. Subcontractors shall leave work areas clean and free of all debris at the end of each day. If Subcontractor fails to comply with the requirements after 24 hours notice, Erhardt Construction will perform this requirement with all associated costs being deducted from the respective subcontract amount. Dumpsters will be provided by Erhardt Construction for all trades except the Sitework, Concrete and Masonry Subcontractors, who will furnish their own dumpster for their debris.
19. Subcontractor is responsible for protection of work in place in a manner sufficient to maintain existing condition of surrounding work. The method of protection is subject to the approval of Erhardt Construction. Erhardt Construction shall not be liable to Subcontractor for any loss or damage to Subcontractor's Work, materials, tools, equipment or supplies.
20. Each Subcontractor is responsible for Firestopping at penetrations they create through fire-resistance-rated constructions.
21. You are to locate, protect and temporarily support existing underground utilities that may be required. Repair and/or replacement of utilities damaged by your forces is your responsibility. Include all restoration work for surfaces damaged by your operations. Include all necessary restoration of irrigation and related piping where damaged by your forces. This is not limited to asphalt, sub-base, lawn, sprinkling systems.

22. Upon receipt of a request to change the Work, Subcontractor shall review each such request and provide to Erhardt Construction, in writing, a detailed proposal for adjustment of Subcontractors Price or time of completion, if appropriate, within ten (10) days. If an adjustment is requested, Subcontractor shall provide the following back-up data: lower tier subcontractor quotations, material quantities and costs, labor rates and time estimates, equipment rental rates and time estimates, and other documentation which Erhardt Construction may request. Subcontractor shall require lower tier subcontractors to provide the same supporting data. If an adjustment to the Subcontract Price cannot be agreed upon, Erhardt Construction shall have the right to order Subcontractor to carry out and record the cost of the changed Work.
23. Mark up on change work shall not exceed a combined fifteen percent (15%) (Consisting of ten percent (10%) overhead and five percent (5%) profit) for work by Subcontractor and not involving lower tiered Subcontractors. Mark up on work by lower tier Subcontractors shall be limited to five percent (5%).
24. All Warranties shall be for a period of one year from the Date of Substantial Completion unless a longer period is stipulated in the Contract Documents. Warranty is to cover parts & labor for the full duration of the warranty period.

END OF SECTION 002410

## **Work Category #01450: MATERIALS TESTING**

**ALL REQUIREMENTS OF THESE PLANS AND SPECIFICATIONS APPLY TO EACH SUBCONTRACTOR AND ITS TIERS AS APPLICABLE.**

### **Division 0 & 1 Complete**

### **Materials Testing**

1. Complete all material testing for compaction, steel, concrete, asphalt, etc. as required.
  - a. Coordinate with all necessary contractors as required to complete testing work.

## **Work Category #01712: CONSTRUCTION STAKING**

**ALL REQUIREMENTS OF THESE PLANS AND SPECIFICATIONS APPLY TO EACH SUBCONTRACTOR AND ITS TIERS AS APPLICABLE.**

### **Division 0 & 1 Complete**

### **Construction Staking**

1. Complete all building staking providing baseline elevations, site limits, etc. as required by Erhardt Construction.

## **Work Category #02000: BUILDING DEMOLITION**

**ALL REQUIREMENTS OF THESE PLANS AND SPECIFICATIONS APPLY TO EACH SUBCONTRACTOR AND ITS TIERS AS APPLICABLE.**

### **Division 0 & 1 Complete Asbestos Abatement**

### **Selective Demolition**

1. Complete all building demolition & legal disposal of items shown.
  - a. Include providing dumpsters for all demoed materials including, lights, ductwork, fixtures, etc. per Erhardt's LEED Waste Management Plan
  - b. Include all asbestos abatement & procedures relevant to removal required as noted on the asbestos abatement report.
  - c. Include backfilling of building pad as required to bring site to a flat condition. Coordinate compaction requirements with testing agency.

### **Work Category #03000: SITE CONCRETE**

**ALL REQUIREMENTS OF THESE PLANS AND SPECIFICATIONS APPLY TO EACH SUBCONTRACTOR AND ITS TIERS AS APPLICABLE.**

#### **Division 0 & 1 Complete**

#### **Concrete**

1. Furnish & install all site concrete including sidewalks, curbs, gutters, etc.
  - a. Furnish, install & remove all forming as required
  - b. Include finishes as specified
  - c. Sawcut control joints
  - d. Include all mixes as specified
  - e. Include all equipment required to set material in place including pumping, buggying, etc.
  - f. Include fine grading & final compaction of sand base (provided by others).
  - g. Include all required concrete cures & sealers.
2. Include staking & layout as relates to your work. Benchmarks & primary building lines will be provided by the Construction Manager.
3. Furnish & install all steel dowels extending from concrete work into future work by others.
4. Coordinate work with Testing Agency. Testing is excluded.
5. Provide an add alternate price for staff patio.
6. Provide an add alternate price for community plaza.

### **Work Category #03330: FOOTINGS/FOUNDATIONS/INTERIOR FLATWORK**

**ALL REQUIREMENTS OF THESE PLANS AND SPECIFICATIONS APPLY TO EACH SUBCONTRACTOR AND ITS TIERS AS APPLICABLE.**

#### **Division 0 & 1 Complete**

#### **Concrete**

1. Furnish & install all building concrete foundation work, slabs on grade, slabs on deck, toppings, etc. complete with reinforcing steel, wire mesh & all incidental accessories.
  - a. Furnish, install & remove all forming as required
  - b. Includes finishes as specified
  - c. Blow off metal decks prior to pouring slab
  - d. Sawcut control joints, form column boxouts, form for any slab depressions as required
  - e. Include all mixes as specified
  - f. Include all equipment required to set material in place including pumping, buggying, etc.
2. Include staking & layout as relates to your work. Benchmarks & primary building lines will be provided by the Construction Manager.
3. Furnish & install all steel dowels extending from concrete work into future work by others.



4. Include fine grading & final compaction of sand base (provided by others).
5. Install sleeves in walls, footings or grade beams; material & locations provided by trade requiring.
6. Include in-filling stair pan steps.
  - a. Include cleaning of stair pans after pan placement
7. Include anchor bolt settings, grouting of base plates, beam pocket settings, & other required embedments.
  - a. Embedded metals & anchor bolts are provided by others. Include receiving, unloading and/or distributing of metals built into your work.
  - b. Coordinate with precast contractor as required for installation of plates in footings.
8. Furnish & install under slab insulation as shown & required.
9. Furnish & install vapor & moisture barriers under slabs on grade.
10. Include all required concrete cures & sealers.
11. Include all temporary shoring & supports required for the safe completion of your work.
12. You are to protect all reinforcing stub outs with MIOSHA approved caps.
13. Coordinate work with Testing Agency. Testing is excluded.
14. Caulking & sealants of expansion & control joints is by others.
15. Include integral waterproofing at elevator pit.

**Work Category #03350: CONCRETE POLISHING**

**ALL REQUIREMENTS OF THESE PLANS AND SPECIFICATIONS APPLY TO EACH SUBCONTRACTOR AND ITS TIERS AS APPLICABLE.**

**Division 0 & 1 Complete****Polished Concrete**

1. Provide polished concrete floor treatment at areas noted to be polished.
  - a. Apply floor finish prior to installation of fixtures & accessories.
  - b. Provide consistent finish in all contiguous areas.
    - i. Floor finish to be a salt & pepper finish.
      1. Provide an alternate price for deep grind in lieu of salt & pepper.
2. Furnish & install all floor control joint caulking as needed & required for your system.
3. Provide an alternate price to install protective covering on polished areas after your work is complete.
4. Provide a deduct alternate for polishing at 2<sup>nd</sup> floor corridors.
5. Provide a deduct alternate for removing polishing of stair B.

**Work Category #03380: POST TENSION CONCRETE**

**ALL REQUIREMENTS OF THESE PLANS AND SPECIFICATIONS APPLY TO EACH SUBCONTRACTOR AND ITS TIERS AS APPLICABLE.**

**Division 0 & 1 Complete**

**03 00 00 Concrete**

1. Furnish & install post tension concrete slab as shown & detailed for pickleball court.
  - a. Coordinate with surfacing/netting contractor & fencing contractor as required
2. Include staking & layout as relates to your work. Benchmarks & primary building lines will be provided by the Construction Manager.
3. Include fine grading & final compaction of sand base (provided by others).
4. Include all required concrete cures & sealers.
5. Coordinate work with Testing Agency. Testing is excluded.

**Work Category #03450: PRECAST CONCRETE (Fabcon)**

**ALL REQUIREMENTS OF THESE PLANS AND SPECIFICATIONS APPLY TO EACH SUBCONTRACTOR AND ITS TIERS AS APPLICABLE.**

**Division 0 & 1 Complete**

**03 Precast Concrete**

1. Furnish & install all precast panels as shown and detailed
  - a. Include all equipment, materials, safety, labor as required for complete installation
2. Furnish all embeds for installation by concrete contractor.
  - a. Coordinate with concrete contractor as required
3. Coordinate with all applicable trades as required for installation of panels, embeds, connections, etc.

**Work Category #04000: MASONRY**

**ALL REQUIREMENTS OF THESE PLANS AND SPECIFICATIONS APPLY TO EACH SUBCONTRACTOR AND ITS TIERS AS APPLICABLE.**

**Division 0 & 1 Complete****Masonry**

1. Furnish & install all masonry work complete with CMU, brick, bond beams, grout fill, reinforcing, etc.
  - a. Include all flashing, weep holes & other accessories embedded in masonry work.
  - b. Include vertical & horizontal reinforcing including grouting as required.
  - c. Coordinate mortar color (if any) with specification requirements.
  - d. Include all hoisting as required.
2. Furnish & install block to infill existing openings in adjacent building. Coordinate with Erhardt for timing & finish requirements.
3. Include layout as relates to your work. Benchmarks & primary building lines will be provided by the Construction Manager.
4. Install embedded items in masonry work; material provided by other trades. Embedded items include setting plates, deck & or weld plates, lintels, anchor bolts, scuppers, sleeves, etc.
  - a. Include receiving, unloading, sorting, and/or distributing of metals built into masonry work.
  - b. Include all cutting, shoring, tooting & patching as required.
  - c. Weld anchors to steel where specified or required.
5. Include brick washing/final cleaning of CMU. You are responsible for protection of any previously installed materials including windows & galvanized material.
6. You are to exclude caulking of joints in masonry.
7. Coordinate work with elevator contractor for setting of doorway frames.
8. Coordinate work with opening requirements of other trades, such as duct openings, plumbing & electrical work.
9. Provide dumpsters for all debris created by your scope.
  - a. Coordinate with Erhardt for tracking material waste and disposal per LEED requirements.

## Work Category #05000: STRUCTURAL STEEL / MISCELLANEOUS METALS

**ALL REQUIREMENTS OF THESE PLANS AND SPECIFICATIONS APPLY TO EACH SUBCONTRACTOR AND ITS TIERS AS APPLICABLE.**

### Division 0 & 1 Complete

### Structural Steel Miscellaneous Metals

1. Fabricate, deliver & erect all structural steel, joists, deck & miscellaneous metal fabrications not specifically called out to be set by other trades.
  - a. Include beams for support of operable partitions.
  - b. Coordinate with plumbing/hvac contractors as required for cutting openings in metal deck.
2. Furnish to other trades all items embedded in concrete or built into masonry for installation. These items include, but are not limited to, bumper posts, lintels, anchor bolts, & overhead door frames not connected to steel framing.
  - a. Coordinate unloading with trade responsible for installation.
  - b. Includes furnishing & installation of embedments welded to your framing.
3. Furnish & install steel stair systems including handrails.
  - a. Wood handrail material to be excluded from this scope. Coordinate with General Trades contractor as required
4. Furnish & install miscellaneous steel including elevator hoist beam, access ladder, roof access ladder, elevator sill angles, etc.
  - a. Include pour stop angle at 2<sup>nd</sup> floor
  - b. Include sump grate cover at elevator pit
  - c. Include angle at exterior slab for frost slab per detail F5/A303
5. Furnish, install, maintain, & remove temporary railings at your perimeters per MIOSHA requirements.
6. Include layout as relates to your work from benchmarks & primary building lines provided by the Construction Manager.
7. Light gauge framing is by others.
8. Coordination of work with Testing Agency. Testing is by others.
9. Include engineered drawings, material, & erection for temporary bracing as required

**\*\*All employees working on the Job Site shall adhere to 100% fall protection at all times, including steel erection & scaffold erection/dismantling. Riding on the ball of a crane is not permitted. All other facets of the MIOSHA Construction Safety Standard Part 45 shall be followed.\*\***

### Work Category #06000: GENERAL TRADES (Erhardt Construction)

**ALL REQUIREMENTS OF THESE PLANS AND SPECIFICATIONS APPLY TO EACH SUBCONTRACTOR AND ITS TIERS AS APPLICABLE.**

**Division 0 & 1 Complete  
Rough Carpentry  
Interior Arch. Woodwork  
Hollow Metal Doors/Frames**

**Flush Wood Doors  
Door Hardware  
Toilet Accessories**

1. Furnish & install all wood blocking, nailers & backing as shown or required for all items including but not limited to: handrails, windows, accessories, access panels, mirrors, toilet partitions, etc.
2. Furnish & install anchor bolts & other fasteners for wood blocking as required. Coordinate with other trades. Fasteners for treated lumber are to meet the necessary corrosion resistance requirements.
3. Furnish & install toilet accessories including baby changing stations, grab bars, paper towel dispensers, soap dispensers, etc.
4. Install all HM frames & doors, wood doors, & associated hardware per door schedule.
  - a. Coordinate & take lead for keying with Architect & the Owner Representative's.
5. Install all finish carpentry & millwork items that includes, but is not limited to wood trim, paneling, PLAM countertops, custom cabinets, windowsills (*except stone*), coat racks, closet rods/shelves, handrails, etc.
  - a. Includes PLAM wall panel at lobby/café as noted on detail E8/A-403.
6. Include layout as relates to your work.
7. Provide all necessary shoring, bracing, scaffolding, etc. for your work.
8. Protect your work until final acceptance by owner.

***Coordinate furnishing and installation of furring and blocking at drywall systems with drywall bid package.***

### Work Category #06200: MILLWORK (Furnish Only)

**ALL REQUIREMENTS OF THESE PLANS AND SPECIFICATIONS APPLY TO EACH SUBCONTRACTOR AND ITS TIERS AS APPLICABLE.**

**Division 0 & 1 Complete**

**06 20 00 Millwork & Countertops**

1. Furnish all millwork including base & wall cabinets, wood handrail material, flooring, shelving, etc.
2. Furnish & install all solid surface materials including counters, backsplashes, sills as shown & detailed.

### Work Category #07500: MEMBRANE ROOFING

**ALL REQUIREMENTS OF THESE PLANS AND SPECIFICATIONS APPLY TO EACH SUBCONTRACTOR AND ITS TIERS AS APPLICABLE.**

#### Division 0 & 1 Complete

#### TPO Roofing Roof Specialties

1. Furnish & install all membrane roofing, roof insulation, protection boards, flashings, walkway mats, etc. for a complete roof system.
  - a. Include flashing of curbs & parapets.
    - i. Note details at balcony walls for coping associated with the membrane & paver systems.
    - ii. Coordinate colors as required for adjacent materials.
  - b. Coordinate tapered insulation with the roof drain locations.
  - c. Include two piece counter flashing at all areas where roof membrane turns up.
  - d. Include all rigid insulation located on back side of precast parapet walls & exterior wall framing as shown/detailed.
2. Furnish & install all caulking & sealants associated with your work.
3. Furnish & install all flashing at mechanical curbs as required.
  - a. Mechanical curbs will be furnished & installed by others.
4. Furnish & install roof hatch.
5. Furnish & install roof paver system at 2<sup>nd</sup> floor patio for a complete system.

**\*\*All employees working on the Job Site shall adhere to 100% fall protection at all times, including steel erection & scaffold erection/dismantling. Riding on the ball of a crane is not permitted. All other facets of the MIOSHA Construction Safety Standard Part 45 shall be followed.\*\***

### Work Category #07700: METAL SOFFITS/CANOPIES/SIDING

**ALL REQUIREMENTS OF THESE PLANS AND SPECIFICATIONS APPLY TO EACH SUBCONTRACTOR AND ITS TIERS AS APPLICABLE.**

#### Division 0 & 1 Complete

#### Exterior Panels

1. Furnish & install exterior wall panels including adhesives, brackets, screws, hardware, etc.
2. Furnish & install metal siding at roof screen wall.
3. Furnish & install metal panels/soffit at canopies/overhangs as shown & detailed.
  - a. Include any caulking integral to completion of your system for a water tight & complete system

- 4. Furnish & install furring strips as required for installation.
  - a. Coordinate with wall framing contractor as required.
  - b. Furnish & install spray foam insulation between exterior wall sheathing & metal panels as shown/detailed.

**Work Category #07900: CAULKING & SEALANTS**

**ALL REQUIREMENTS OF THESE PLANS AND SPECIFICATIONS APPLY TO EACH SUBCONTRACTOR AND ITS TIERS AS APPLICABLE.**

**Division 0 & 1 Complete**

**Joint Sealants**

- 1. Complete caulking of all joints between dissimilar materials except as specifically excluded.
- 2. Include caulking of concrete control/construction joints at exterior flatwork.
- 3. Include caulking at all door & window frames, countertops, millwork, plumbing fixtures & all dissimilar surfaces.
  - a. Include exterior & interior perimeters of exterior window/door frames
- 4. Exclude caulking at membrane roofing.
- 5. Firestopping of penetrations through fire-rated walls will be completed by the contractor making the penetration.
- 6. Refer to other Bid Packages for caulking & sealants to be performed by others.

**Work Category #08100: DOORS, FRAMES & FINISH HARDWARE (Furnish Only)**

**ALL REQUIREMENTS OF THESE PLANS AND SPECIFICATIONS APPLY TO EACH SUBCONTRACTOR AND ITS TIERS AS APPLICABLE.**

**Division 0 & 1 Complete  
Hollow Metal Doors/Frames**

**Flush Wood Doors  
Door Hardware**

- 1. Furnish & deliver all hollow metal frames & doors, wood doors & finish hardware.
  - a. Prep all material supplied under this bid package for specified finish hardware.
  - b. Prep frames as required for card access system.
  - c. Include all required anchors for install of frames into adjacent wall construction types.
    - i. Provide self-tapping screws for attachment of hardware to metal doors & frames.
- 2. Coordinate keying requirements with Owner & Erhardt Construction.
- 3. Coordinate with Erhardt for delivery of product. Ensure all material is clearly marked and organized for installation.

### Work Category #08800: ALUMINUM/GLASS & GLAZING

**ALL REQUIREMENTS OF THESE PLANS AND SPECIFICATIONS APPLY TO EACH SUBCONTRACTOR AND ITS TIERS AS APPLICABLE.**

**Division 0 & 1 Complete  
Aluminum Entrances & Storefronts**

**Interior & Exterior Glazing Systems  
Glass Railing Systems**

1. Furnish & install all interior & exterior storefront/curtain wall glass systems including glazing, framing, hardware, anchors, internal caulking, etc.
  - a. Include glass & glazing at all doors, borrowed lights, & side lights. Refer to door schedule for each door.
    - i. Exclude glass in doors to be installed by factory.
  - b. Include all exterior sills & trims at all areas shown & detailed.
    - i. Coordinate with metal panel contractor as required
  - c. Review door hardware schedule & prep frames as required for work to be performed by the Security contractor. Coordinate with Security contractor as required.
2. Furnish & install unframed mirrors.
  - a. Framed mirrors are to be provided by other bid packages.
3. Furnish & install shower door system at toilet 223.
4. Furnish & install glass handrail as shown/detailed at 2<sup>nd</sup> floor balcony.
  - a. Coordinate with roofing & precast contractors as required for proper installation.
5. You are to exclude final cleaning.
6. Protect your work until final acceptance by owner.

### Work Category #09200: METAL STUDS / DRYWALL / ACOUSTICAL

**ALL REQUIREMENTS OF THESE PLANS AND SPECIFICATIONS APPLY TO EACH SUBCONTRACTOR AND ITS TIERS AS APPLICABLE.**

**Division 0 & 1 Complete  
Joint Sealants  
Material Finish Schedule**

**Non-Structural Metal Framing  
Gypsum Board  
Acoustical Panel Ceilings**

1. Furnish & install all metal framing, plates, etc.
  - a. You are to provide adequate bracing/support for walls & bulkheads.
  - b. Include delegated design cost for any box headers as required.
2. Furnish & install all gypsum board, shaft wall & ceiling systems.
  - a. Provide drywall finish levels as specified unless otherwise noted.
  - b. Install control joints in drywall walls/partitions & bulkheads as required. Coordinate locations with architect.



3. Furnish & install all acoustical ceiling systems.
  - a. Provide a deduct alternate for USG Eclipse (or equal) in lieu of Armstrong Ultima
4. Furnish & install K13 spray as noted.
5. Furnish & install all building insulation including all rigid, batt & sound insulation related to your work.
6. Furnish & install firestopping between floors as shown & detailed.
7. Include layout as relates to your work from benchmarks & primary building lines provided by the Construction Manager.
8. Include fire resistive joint sealants & fire-safing of your walls per requirements.
  - a. Work excludes firestopping of mechanical & electrical penetrations.
9. Furnish & install access doors in your construction where shown on architectural plans.
10. You are to provide proper protection of adjacent finishes.
11. Provide daily & final clean-up as required by your operations.
12. Wood furring, blocking & nailers are by others. Coordinate with General Trades contractor.

## **Work Category #09300: WALL & FLOOR TILE**

**ALL REQUIREMENTS OF THESE PLANS AND SPECIFICATIONS APPLY TO EACH SUBCONTRACTOR AND ITS TIERS AS APPLICABLE.**

### **Division 0 & 1 Complete**

### **Ceramic Tiling**

1. Furnish & install all wall & floor tile as shown & detailed.
  - a. Include required reducer strips, thresholds & bases.
2. Include necessary preparation of floor & wall surfaces (grinding, patching, filling, feathering, latex, etc.).

## **Work Category #09640: WOOD FLOORING**

**ALL REQUIREMENTS OF THESE PLANS AND SPECIFICATIONS APPLY TO EACH SUBCONTRACTOR AND ITS TIERS AS APPLICABLE.**

### **Division 0 & 1 Complete**

### **Wood Flooring**

1. Furnish & install wood treads & risers at stair A.
  - a. Coordinate with general trades & steel contractor as required
  - b. Includes finishes as shown & specified

### Work Category #09650: CARPET & LVT

**ALL REQUIREMENTS OF THESE PLANS AND SPECIFICATIONS APPLY TO EACH SUBCONTRACTOR AND ITS TIERS AS APPLICABLE.**

#### Division 0 & 1 Complete Resilient Base & Accessories

#### LVT Tile Carpeting

1. Furnish & install all LVT & carpet materials.
  - a. Include all adhesives as required
2. Furnish & install required reducer strips, thresholds & bases.
3. Include necessary preparation of floor surfaces (grinding, patching, filling, feathering, latex, etc.).
4. You are to exclude traffic toppings, concrete sealers & epoxy floor paint.
5. Provide an add alternate cost to install carpet tiles in the 2<sup>nd</sup> floor corridors.

### Work Category #09672: EPOXY FLOOR COATINGS

**ALL REQUIREMENTS OF THESE PLANS AND SPECIFICATIONS APPLY TO EACH SUBCONTRACTOR AND ITS TIERS AS APPLICABLE.**

#### Division 0 & 1 Complete

#### Epoxy Floor Coating

1. Furnish & install all epoxy coatings as shown, detailed & specified.
2. Include necessary preparation of floor surfaces (grinding, patching, filling, feathering, latex, etc.).

### Work Category #09900: PAINTING

**ALL REQUIREMENTS OF THESE PLANS AND SPECIFICATIONS APPLY TO EACH SUBCONTRACTOR AND ITS TIERS AS APPLICABLE.**

#### Division 0 & 1 Complete

#### Painting

1. Furnish & install all painting, finishing, & wall coverings work as specified.
  - a. Coordinate painting with Room Finish Schedule.
  - b. Coordinate with MEP contractors as required.
  - c. HM door frames/doors are to be sprayed, NOT rolled or brushed.
    - i. Coordinate with General Trades contractor as required.

2. Properly prepare all surfaces requiring paint.
  - a. Review & approve of drywall wall finish with Erhardt prior to painting.
3. Include all protection as required for adjacent materials during finishing process.
4. You are to exclude concrete floor sealers.
5. Include touch-up of your painted surfaces, including surfaces damaged by others, prior to project final acceptance by owner.
6. Include finishing of wood handrails at main stair & 2<sup>nd</sup> floor balcony railings.
7. Include painting of exterior gas piping as required.

## **Work Category #10300: OPERABLE PARTITION**

**ALL REQUIREMENTS OF THESE PLANS AND SPECIFICATIONS APPLY TO EACH SUBCONTRACTOR AND ITS TIERS AS APPLICABLE.**

### **Division 0 & 1 Complete**

### **Operable Partition**

1. Furnish & install all operable partitions, hardware, etc. as shown.
  - a. Coordinate with steel contractor as required for prep of support steel.
  - b. Include furnishing & installation of specified wall coverings.
2. Verify floor surfaces allow proper seal at floor before starting work.
3. Wood blocking, back-up & bases are by others.
4. Coordinate with other trades as necessary for installation of brackets/rails as needed.

## **Work Category #10750: FLAGPOLES**

**ALL REQUIREMENTS OF THESE PLANS AND SPECIFICATIONS APPLY TO EACH SUBCONTRACTOR AND ITS TIERS AS APPLICABLE.**

### **Division 0 & 1 Complete**

### **Flagpoles**

1. Furnish & install all flagpoles & associated flags.
  - a. Includes excavation & foundations as required.
  - b. Coordinate with Electrical contractor as required for lighting.

### Work Category #14000: ELEVATOR

**ALL REQUIREMENTS OF THESE PLANS AND SPECIFICATIONS APPLY TO EACH SUBCONTRACTOR AND ITS TIERS AS APPLICABLE.**

#### Division 0 & 1 Complete

#### Elevators

1. Furnish & install new elevator based on basis of design:
  - a. 3,000lb capacity, machine room-less electric traction
  - b. Provide finishes as specified and shown
2. Coordinate with masonry contractor as required for door opening.

### Work Category #21000: FIRE PROTECTION

**ALL REQUIREMENTS OF THESE PLANS AND SPECIFICATIONS APPLY TO EACH SUBCONTRACTOR AND ITS TIERS AS APPLICABLE.**

#### Division 0 & 1 Complete Joint Sealants

#### Fire Suppression System

1. Furnish & install all new fire protection work as shown or specified.
  - a. Include flushing of FP main. Coordinate with sitework contractor as required.
  - b. Include fire-resistive joint sealants for your penetrations through fire-rated walls.
  - c. Coordinate layout of work with plumbing, HVAC & electrical trades so that all systems will fit in the appropriate spaces.
  - d. Include closing off of any exposed wall penetrations in open ceiling areas.
2. Furnish & install any access panels required to access your work, such as shut-off valves at the elevator shaft, etc.
3. Furnish & install flow & tamper switches.
  - a. Power will be connected by electrical trade.
4. You are to provide testing of systems to meet applicable codes & regulations.
5. Include design fees & design that is compliant to all codes associated to your work category.

### Work Category #22000: **PLUMBING**

**ALL REQUIREMENTS OF THESE PLANS AND SPECIFICATIONS APPLY TO EACH SUBCONTRACTOR AND ITS TIERS AS APPLICABLE.**

**Division 0 & 1 Complete**

**Joint Sealants  
Plumbing Complete**

1. Furnish & install all new plumbing work as shown or specified including fixtures, piping, hangers, insulation, etc.
  - a. Coordinate layout of work with the fire protection, HVAC & electrical trades so that all systems will fit in the appropriate spaces.
  - b. Coordinate with roofing contractor for installation of roof drains
  - c. Underground trenches are expected to be compacted to compaction requirements for sub grade
  - d. Include gas piping as shown /detailed
  - e. Include closing off of any exposed wall penetrations in open ceiling areas.
2. You are responsible for access panels that are needed to access your work but not shown.
  - a. Provide access panels & locations to trade involved.
3. Include fire-resistive joint sealants for your penetrations through fire-rated walls.
4. Complete all miscellaneous cutting & patching related to your work.
5. Include all testing, balancing & commissioning to ensure proper performance of the installed systems.
6. Include all permits & fees applicable to your work.

### Work Category #23000: **HVAC**

**ALL REQUIREMENTS OF THESE PLANS AND SPECIFICATIONS APPLY TO EACH SUBCONTRACTOR AND ITS TIERS AS APPLICABLE.**

**Division 0 & 1 Complete**

**Joint Sealants  
HVAC Complete**

1. Complete all heating, ventilating & air conditioning work including furnish & install new piping, ductwork, insulation, RGDs, hangers, etc.
  - a. Coordinate layout of work with the fire protection, plumbing & electrical trades so that all systems will fit in the appropriate spaces.
  - b. Include closing off of any exposed wall penetrations in open ceiling areas
2. Furnish & install all lintels required for your work but not shown.
3. Coordinate with electrical contractor for all power requirements & locations for equipment furnished & installed by this trade.
4. You are responsible for access panels that are needed to access your work but not shown.

- a. Provide access panels & locations to trade involved.
5. Include fire-resistive joint sealants for your penetrations through fire-rated walls.
6. Complete all miscellaneous cutting & patching related to your work.
7. Include all testing, balancing & commissioning to ensure proper performance of the installed systems.
8. Include all permits & fees applicable to your work.

**Work Category #26000: ELECTRICAL**

**ALL REQUIREMENTS OF THESE PLANS AND SPECIFICATIONS APPLY TO EACH SUBCONTRACTOR AND ITS TIERS AS APPLICABLE.**

**Division 0 & 1 Complete**

**Joint Sealants  
Electrical Complete**

1. Furnish & install all electrical work as shown & detailed including lightings, power distribution, fixtures, etc.
  - a. Coordinate layout of work with the fire protection, plumbing & HVAC trades so that all systems will fit in the appropriate spaces.
  - b. Include closing off of any exposed wall penetrations in open ceiling areas.
2. Provide temporary lighting as required for the project per MIOSHA requirements.
3. You are to provide power and/or hook up flow switches & tamper switches for the fire protection system.
4. Furnish & install fire alarm system as required.
5. Furnish & install raceways & rough ins for telephone, data & television systems, security & card access.
  - a. Coordinate with those contractors as required.
6. Complete all miscellaneous cutting & patching related to your work.
7. Include fire-resistive joint sealants for your penetrations through fire-rated walls.
8. You are responsible for access panels that are needed to access your work but not shown architecturally.
  - a. Provide access panels & locations to trade involved.
9. Unless called out specifically, VFD drives & disconnects will be provided with the mechanical equipment supplier, to be hooked up by this contract.
10. Include all testing & commissioning to ensure proper performance of the installed systems.
11. Include all permits & fees applicable to your work.
12. Furnish & install rough-in conduits as required for future work at pickleball court, community plaza, flagpole lighting, EV charging stations.
13. Provide an add alternate price to install lighting for flagpoles.
14. Provide an add alternate price to install lighting for pickleball court.
15. Provide an add alternate price for lighting & power at community plaza.
16. Provide an add alternate price for lighting & power at staff patio.

### Work Category #31000: **SITWORK**

**ALL REQUIREMENTS OF THESE PLANS AND SPECIFICATIONS APPLY TO EACH SUBCONTRACTOR AND ITS TIERS AS APPLICABLE.**

#### **Division 0 & 1 Complete**

#### **Earthwork Complete**

#### **Exterior Improvements (Reference Only)**

1. Provide all equipment, materials, safety & labor for all work associated with excavation, backfill, trenching, stockpiling of soil to remain on site, rough grading, sand fill, site grading and compaction.
  - a. Include protection of items to remain.
  - b. Contact Miss Dig prior to work starting and coordinate onsite utilities with appropriate contractor.
  - c. Include necessary dewatering for installation of your underground utility work and for completion of the concrete foundation work, including power service and energy consumption costs if required.
2. All earthwork required to balance the site to elevations indicated on the drawings & to blend into adjacent areas including removal from site of excess materials as required. Legal disposal. Include re-spreading of topsoil; provide new top soil as required. Fine grading to be by others.
3. Subgrade preparation & structural fill including sand and/or gravel at the following: foundations, slabs on grade, exterior paving & curbs/gutters. Proper compaction methods to be utilized.
4. Furnish & install underground sleeves for site utilities and irrigation at new walks, drives, and parking areas.
5. Furnish & install all sanitary sewer and storm sewer systems to within five foot of building structure including all piping & structures as required.
  - a. Include all parking lot, sidewalk & roadway patching associated with your excavation work.
  - b. Include required barricades, warning devices, street closing signs and flagman as required per local regulations.
6. Furnish & install new fire protection & water mains as required per code from street to 1' above finished floor (includes excavation, backfill, asphalt patching, tapping sleeve, valve, box, permits, shutdowns, & water treatment as required).
  - a. Coordinate with Fire protection contractor.
7. Furnish, install & remove a 12" thick 25' x 25' crane pad. Location TBD.
8. You are to take responsibility for dust control on site. Take appropriate measures, including application of water or chemical dust suppressant, as necessary.
  - a. Include sweeping of streets and parking lots as directed by Erhardt to keep site free of sediment and debris.
  - b. Furnish, install & maintain gravel drive off mat at Godfrey site exit

- c. Include the procurement of and payment for the soil erosion control and storm water discharge permits along with the preparation of required plans, installation, and maintenance of appropriate erosion control measures. Include removal at completion of project. Assume responsibility as storm water operator.
- 9. Resetting survey/construction stakes disturbed or destroyed by your work.
- 10. Temporary grading of site as required to allow for adequate drainage during course of construction.
- 11. Provide an add alternate price for sitework required for pickleball court.
- 12. Provide an add alternate price for sitework required for community plaza.
- 13. Provide an add alternate price for sitework required for at staff patio.
- 14. Provide an add alternate price for sitework required for neighboring parking lot.

## **Work Category #32100: ASPHALT PAVING**

**ALL REQUIREMENTS OF THESE PLANS AND SPECIFICATIONS APPLY TO EACH SUBCONTRACTOR AND ITS TIERS AS APPLICABLE.**

### **Division 0 & 1 Complete**

### **Asphalt Paving**

- 1. Furnish & install all asphalt paving & all pavement striping.
- 2. Include fine grading of top coat of asphalt.
- 3. Ensure proper drainage to all catch basins & spillways.
- 4. Provide an add alternate for paving neighboring parking lot.

## **Work Category #32180: PICKLEBALL COURT SURFACING & EQUIPMENT**

**ALL REQUIREMENTS OF THESE PLANS AND SPECIFICATIONS APPLY TO EACH SUBCONTRACTOR AND ITS TIERS AS APPLICABLE.**

### **Division 0 & 1 Complete**

### **Athletic Court Surfacing**

- 1. Furnish & install all court surfacing as shown & detailed.
  - a. Coordinate with post tension concrete contractor & fencing contractor as required.
- 2. Furnish & install pickleball equipment including posts, netting, etc.



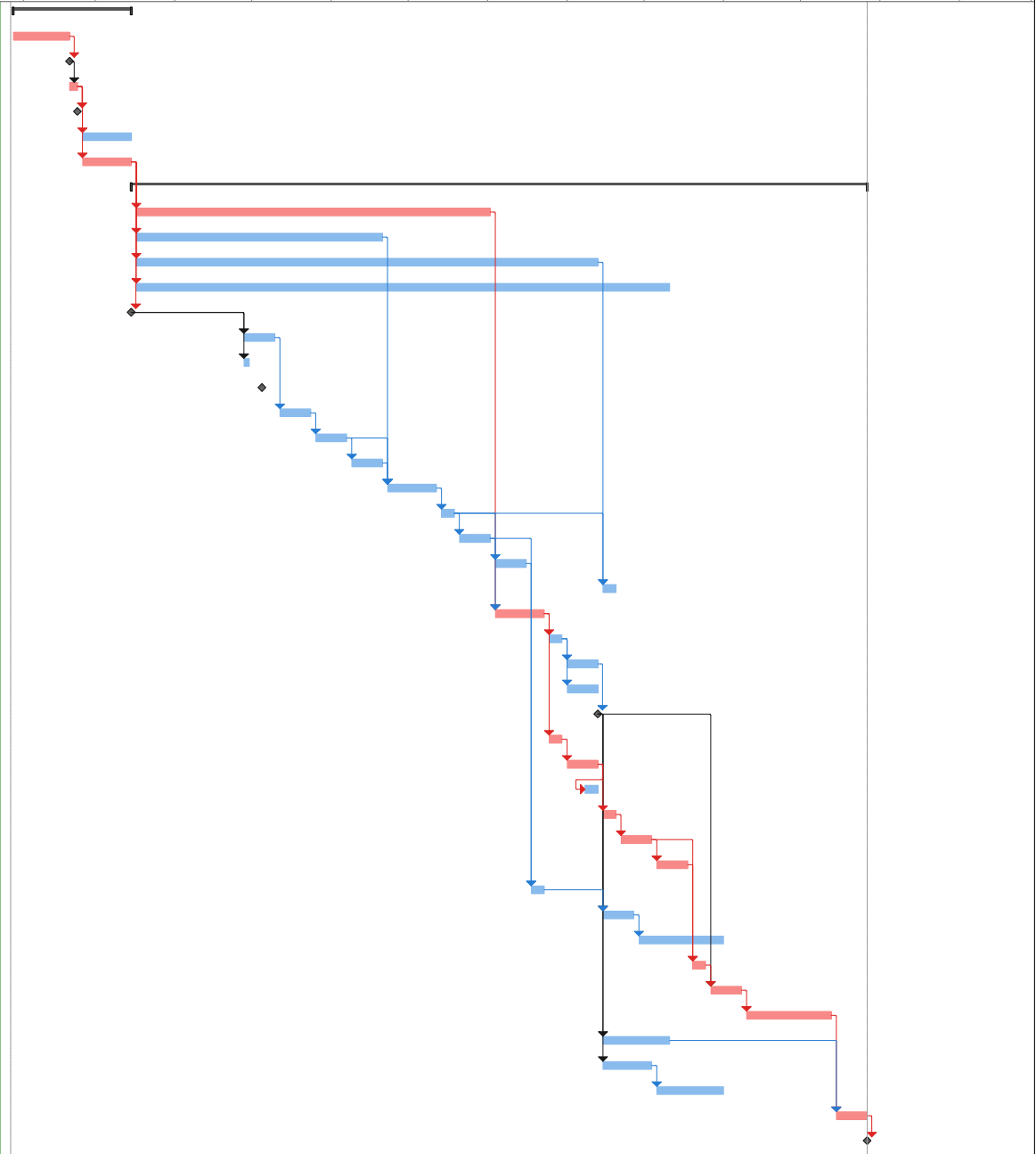
**Work Category #32310: SITE FENCING**

**ALL REQUIREMENTS OF THESE PLANS AND SPECIFICATIONS APPLY TO EACH SUBCONTRACTOR AND ITS TIERS AS APPLICABLE.**

**Division 0 & 1 Complete****Site Fencing**

1. Furnish & install site fencing as shown & detailed
  - a. Coordinate with Post Tension concrete contractor as required.

ID	Task	Task Name	Duration	Start	Finish
1		<b>Pre-Construction</b>	<b>34 days</b>	<b>Tue 1/28/25</b>	<b>Fri 3/14/25</b>
2		Bid Invite Distribution	16 days	Tue 1/28/25	Tue 2/18/25
3		Bids Due	0 days	Tue 2/18/25	Tue 2/18/25
4		Post Bids	3 days		Fri 2/21/25
5		WMH CoC Issue LOI	0 days	Fri 2/21/25	Fri 2/21/25
6		Long Lead Submittals	15 days		Fri 3/14/25
7		Owner Review / Contract Award	15 days		Fri 3/14/25
8		<b>Construction</b>	<b>205 days</b>	<b>Fri 3/14/25</b>	<b>Fri 12/26/25</b>
9		Precast Procurement	100 days		Fri 8/1/25
10		Structural Steel Procurement	70 days		Fri 6/20/25
11		Mechanical Procurement	130 days		Fri 9/12/25
12		Electrical Procurement	150 days		Fri 10/10/25
13		<b>Project Commencement</b>	<b>0 days</b>	<b>Fri 3/14/25</b>	<b>Fri 3/14/25</b>
14		Demolition	10 days		Fri 5/9/25
15		Infill Existing Building Openings	2 days		Tue 4/29/25
16		<b>GROUNDBREAKING</b>	<b>0 days</b>	<b>Mon 5/5/25</b>	<b>Mon 5/5/25</b>
17			10 days		Fri 5/23/25
18		Footings / Foundations	10 days		Fri 6/6/25
19		Stair Tower / Elevator Shaft	10 days	Mon 6/9/25	Fri 6/20/25
20		Structural Steel Frame / Decking	15 days		Fri 7/11/25
21		Slab on Metal Deck	5 days		Fri 7/18/25
22		2nd Floor Framing	10 days		Fri 8/1/25
23		2nd Floor MEP R/I	10 days	Mon 8/4/25	Fri 8/15/25
24		Set Rooftop MEP Equipment	5 days		Fri 9/19/25
25		Precast Erection	15 days	Mon 8/4/25	Fri 8/22/25
26		Main Roof Installation	5 days		Fri 8/29/25
27		Window / Door Installation	10 days	Mon 9/1/25	Fri 9/12/25
28		Exterior Canopies	10 days	Mon 9/1/25	Fri 9/12/25
29		<b>Building Enclosure</b>	<b>0 days</b>	<b>Fri 9/12/25</b>	<b>Fri 9/12/25</b>
30			5 days		Fri 8/29/25
31		Underground MEP	10 days	Mon 9/1/25	Fri 9/12/25
32		Vapor Mitigation System	5 days	Mon 9/8/25	Fri 9/12/25
33		Slab on Grade	5 days		Fri 9/19/25
34		1st Floor Framing	10 days		Fri 10/3/25
35		1st Floor MEP R/I	10 days		Fri 10/17/25
36		2nd Floor Concrete Polishing	5 days		Fri 8/22/25
37		2nd Floor Drywall	10 days		Fri 9/26/25
38		2nd Floor Interior Finishes	25 days		Fri 10/31/25
39		1st Floor Concrete Polishing	5 days		Fri 10/24/25
40		1st Floor Drywall	10 days		Fri 11/7/25
41		1st Floor Interior Finishes	25 days		Fri 12/12/25
42		Elevator Installation	20 days		Fri 10/10/25
43		Site Work	15 days		Fri 10/3/25
44		Landscaping / Specialties	20 days		Fri 10/31/25
45		Punchlist / Owner Training	10 days		Fri 12/26/25
46		Project Turnover	0 days	Fri 12/26/25	Fri 12/26/25



Project: WMH CoC DRAFT SCH  
Date: Thu 1/23/25

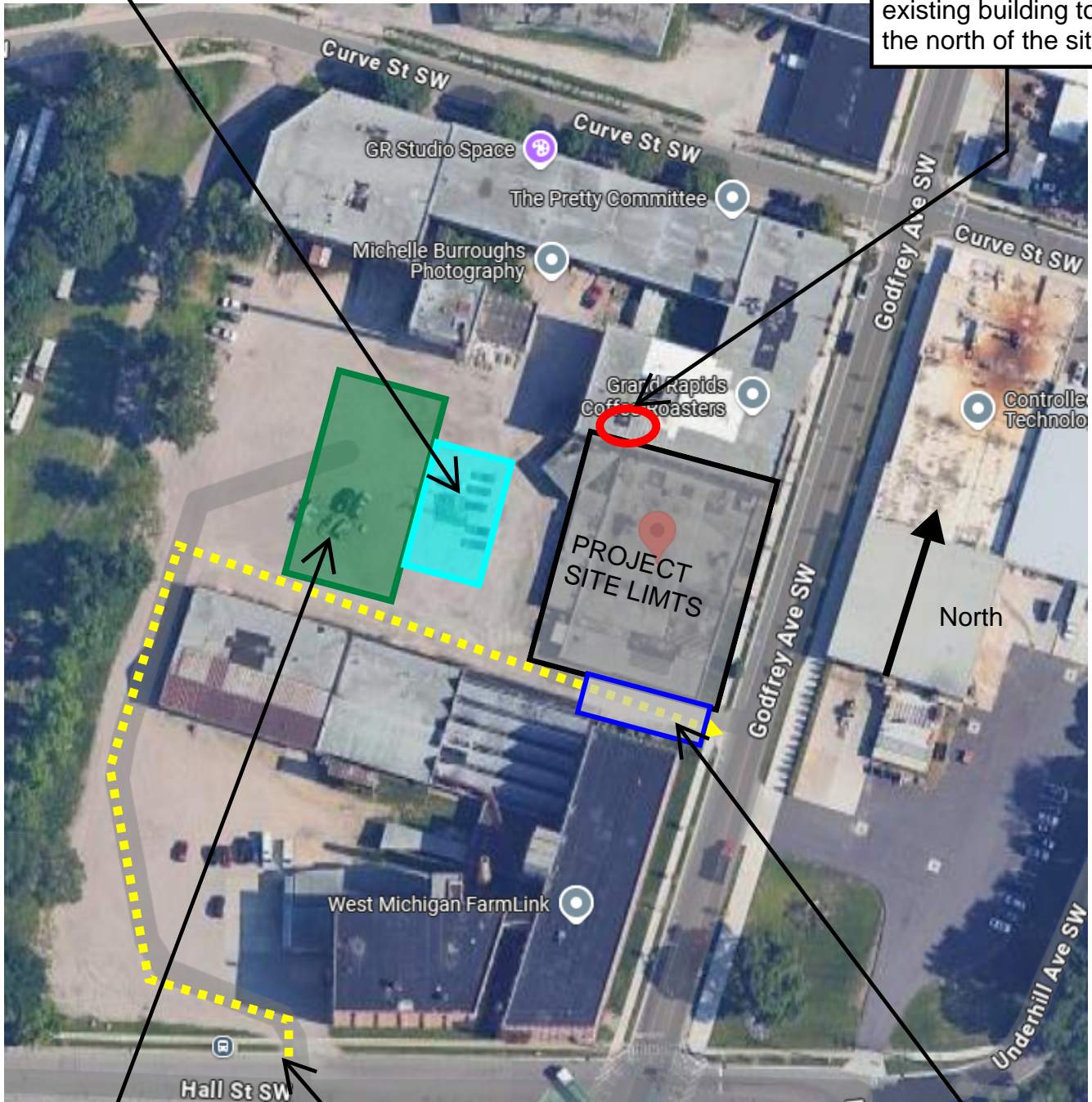
Task Split	Summary	Inactive Milestone	Duration-only	Start-only	External Milestone	Critical Split
Milestone	Project Summary	Inactive Summary	Manual Summary Rollup	Finish-only	Deadline	Progress
	Inactive Task	Manual Task	Manual Summary	External Tasks	Critical	Manual Progress

# WMHCC Site Logistics Plan

1111 Godfrey Ave SW

Dumpsters

Erhardt Construction Office, located inside existing building to the north of the site



Contractor parking

Main entry access for all construction traffic

Gravel site exit area



# BID PROPOSAL FORM

6060 Fulton Street East ■ Ada, Michigan 49301 ■ P (616) 676-1222 ■ F (616) 676-1676

**For: West Michigan Hispanic Chamber of Commerce Headquarters**

**To: Erhardt Construction  
606 East Fulton  
Ada, MI 49301**

<i>Internal Use Only</i>	
Cost Code	_____
Vendor ID	_____
Exceptions Noted?	Y N

The undersigned, having carefully examined the Bid Manual, Contract Documents and the Project Site, certifies its understanding of the work to be performed and the conditions relating to its performance. Bidder further certifies this Bid Proposal is in accordance with the requirements of the appropriate Work Category / Bid Scope identified below.

**Company Name:** \_\_\_\_\_

**Contact Person:** \_\_\_\_\_

**E-mail Address / Phone:** \_\_\_\_\_

**Work Category:** \_\_\_\_\_

**Base Bid Proposal** \_\_\_\_\_

\$ \_\_\_\_\_ Dollars

Cost for Performance Bond and Labor & Material Payment Bond:  
**(Cost, based on total bid, is NOT to be included in your Base Bid Proposal).**

\$ \_\_\_\_\_

**Provide added cost**, if any, to increase insurance coverage limits (including umbrellas) to \$5,000,000 for Commercial General Liability, \$5,000,000 for Business Automobile Liability and \$4,500,000 for Workers Compensation:

\$ \_\_\_\_\_

**Addenda:** The receipt of the following addenda is hereby acknowledged and incorporated into the Base Bid and Alternate Amounts.

Addendum No.: _____	Date: _____	Addendum No.: _____	Date: _____
Addendum No.: _____	Date: _____	Addendum No.: _____	Date: _____

**Alternates:** Not all Alternates are applicable to each work category or scope of work.

Alternate #1	_____	ADD   DEDUCT	\$ _____
Alternate #2	_____	ADD   DEDUCT	\$ _____
Alternate #3	_____	ADD   DEDUCT	\$ _____
Alternate #4	_____	ADD   DEDUCT	\$ _____

Voluntary Alternates:

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**Unit Prices:** See drawings, specifications and/or scope of work for a description of Unit Prices for each work category. Unit Prices are not applicable to all scopes of work. List the descriptions below from your bid package with the corresponding pricing.

_____	\$	/
_____	\$	/
_____	\$	/

**Breakout Pricing:** Provide breakout pricing per items listed in bid scopes

Item #1 _____	\$
Item #2 _____	\$
Item #3 _____	\$

**Lead Times:** Provide lead times for required materials

Item #1 _____	_____	wks/mo
Item #2 _____	_____	wks/mo
Item #3 _____	_____	wks/mo

**Changes in the Scope of Work:** Should there be any changes to your Scope of Work, by Bulletin or Owner/Erhardt Construction Request, please provide your billing rates for the on-site personnel. This rate is to include all small tools applicable insurances and taxes, Social Security and Medicare. Office personnel are to be part of your fee mark-up. Rates submitted on future changes of work for worker classifications not listed below will be rejected.

<u>Trade</u>	<u>Base Rate</u>	<u>Overtime Rate</u>
_____	\$ /	\$ /
_____	\$ /	\$ /
_____	\$ /	\$ /

**Mark-up on Scope of Work Changes:** Including all office overhead and fees.

Mark-up on self-performed work:	Labor _____ %	Material _____ %
Mark-up on work for subcontracted work under your contract:		_____ %

**Second Tier Subcontractors:** In addition to the above, bidder proposes to utilize the following second tier subcontractors if awarded this subcontract.

<u>Company Name</u>	<u>Address</u>	<u>Phone Number</u>	<u>Bid Amount</u>
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

### Bidders Checklist

1. All Bid Proposal Prices listed above include all applicable taxes. Y | N
2. All Work is to be completed in accordance with the Schedule. Y | N
3. Bidder agrees to hold its Bid Proposal Prices for a period of sixty (60) days. Y | N
4. Bidder has entered the exact name on the Bid Proposal Form as it wishes it to appear on the Subcontract Agreement or Purchase Order, if awarded. Y | N
5. Bidder has reviewed the Subcontract Agreement and Purchase Order Form, as applicable, and Bidder agrees to all conditions therein including insurance and bonding requirements. Y | N
6. Bidder has reviewed insurance requirements and maintains minimum coverage limits (including umbrellas) as described. Y | N
7. State your worker's compensation Experience Modification Ratio (EMR) for the current year: \_\_\_\_\_
8. If Bidder is providing design-build services, do you carry professional liability insurance with limits of at least \$1,000,000 per occurrence and \$2,000,000 annual aggregate? Y | N  
If limits are less, what are your coverage limits? \_\_\_\_\_

The undersigned does hereby declare the legal status of the bidder to be:

- \_\_\_\_\_ Individual  
\_\_\_\_\_ Partnership  
\_\_\_\_\_ Corporation incorporated under the laws of the State of \_\_\_\_\_  
\_\_\_\_\_ Joint Venture \*\*\* If you are submitting a bid as a Joint Venture include a copy of the Joint Venture Operating Agreement and use this name for all documents.  
\_\_\_\_\_

This Bid Proposal is submitted by the undersigned, who by executing the Bid Proposal, hereby represents and warrants that he/she has the actual and legal authority to submit same on behalf of the following Bidder:

**Company Name:** \_\_\_\_\_  
**By:** \_\_\_\_\_ **Date:** \_\_\_\_\_  
**Signature:** \_\_\_\_\_  
**Title:** \_\_\_\_\_  
**Address:** \_\_\_\_\_  
**City/State/Zip:** \_\_\_\_\_  
**Phone Number:** \_\_\_\_\_



## Master Subcontract Agreement

TO: &lt;&lt;Vendor name&gt;&gt;

MSA No: &lt;&lt;Vendor number&gt;&gt;

This Master Subcontract Agreement (hereinafter "AGREEMENT") is entered into this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, by and between Erhardt Construction (hereinafter called "ERHARDT" or "CONTRACTOR"), whose address is 6060 East Fulton, Ada, MI 49301 and \_\_\_\_\_ (hereinafter called "SUBCONTRACTOR"), whose address is \_\_\_\_\_

### ARTICLE 1 PURPOSE, SCOPE AND APPLICABILITY

- 1.1 ERHARDT and SUBCONTRACTOR are entering into this AGREEMENT with the intent and understanding that it will serve as a master agreement for all projects for which ERHARDT engages SUBCONTRACTOR, unless the parties expressly agree in writing to the contrary. This master agreement will avoid negotiation and execution of new, separate agreement for each project, except as identified herein. For each project on which SUBCONTRACTOR is engaged, a PROJECT SUBCONTRACT AGREEMENT, (hereinafter identified as "PSA"), will be executed by ERHARDT and SUBCONTRACTOR. The parties agree that this AGREEMENT, without further acknowledgement, signature, or agreement, will govern each project for which a PSA is issued regardless of the final amount payable to SUBCONTRACTOR on any specific project.
- 1.2 This AGREEMENT does not obligate ERHARDT to request, or SUBCONTRACTOR to perform, WORK on any specific project. ERHARDT is under no obligation to hire SUBCONTRACTOR to perform WORK on any particular project, and ERHARDT shall have no liability in the event that it does not hire SUBCONTRACTOR for any particular project. Should ERHARDT desire that SUBCONTRACTOR perform WORK on a project to which this AGREEMENT is applicable, it shall furnish a PSA to SUBCONTRACTOR. SUBCONTRACTOR shall agree to perform the WORK set forth in the PSA and be bound to all terms and conditions of the PSA by either: (1) communicating such acceptance to ERHARDT in writing, or (2) commencing performance of the WORK at the project to which the PSA relates.
- 1.3 The PSA will include terms, conditions, information and descriptions applicable to the specific project upon which SUBCONTRACTOR is to perform WORK. The PSA shall also include information regarding the name and address of OWNER and of any construction lender; however, the omission of such information shall not affect the validity of the PSA. In the event of any actual conflict, inconsistency or ambiguity between the terms and provisions of the PSA and this AGREEMENT, the PSA shall govern. However, whenever possible the documents will be construed to avoid such a conflict. ERHARDT and SUBCONTRACTOR agree that the SUBCONTRACTOR shall perform the WORK, as described herein, in accordance with the terms and conditions set forth in the SUBCONTRACT DOCUMENTS as identified herein. In the event ERHARDT does not issue a PSA, or a PSA is not fully executed, any WORK performed by SUBCONTRACTOR at the request of ERHARDT shall nonetheless be governed by this AGREEMENT.
- 1.4 This AGREEMENT, along with a project specific PSA, represents the entire and integrated agreement between the parties for a specific project. It supersedes all prior negotiations, representations, proposals, stipulations, or agreements, either written or oral, including, without limitation, SUBCONTRACTOR's bid form or proposal for that project. All prior or contemporaneous agreements to be included in this AGREEMENT are expressly identified herein. No agent or representative of either party has authority to make, and the parties shall not be bound by or liable for, any statement, representation, promise or agreement not set forth herein or in the PSA. No changes, amendments or modifications to the terms of this AGREEMENT or any PSA shall be valid unless stipulated in writing and signed by both parties.
- 1.5 The "SUBCONTRACT DOCUMENTS" consist of (1) this AGREEMENT; (2) for each project for which a PSA is issued, and as to that project only, the specifications, plans and other relevant documents for that particular project, including but not limited to the contract between OWNER and ERHARDT (hereinafter called the "PRIME CONTRACT") and any other documents referenced therein, including but not limited to the terms and conditions of the PRIME CONTRACT (general, supplementary, and other conditions), drawings, specifications, manuals, supplements, schedules, addenda issued prior to execution of PRIME CONTRACT, bulletins, RFI responses, modifications issued subsequent to the execution of the PRIME CONTRACT, whether before or after the execution of any PSA, and any other CONTRACT DOCUMENTS, if any, listed in the PRIME CONTRACT (collectively, the "CONTRACT DOCUMENTS"), excluding any confidential, proprietary, payment or retainage provisions as between Erhardt and OWNER; (3) other documents incorporated into this AGREEMENT; (4) modifications to this AGREEMENT issued after its execution; and (5) a project specific PSA relating to a specific project. These documents are as fully part of this AGREEMENT as if they were attached to this AGREEMENT and are incorporated herein.
- 1.6 For each project, but solely with regard to the project to which they relate, the CONTRACT DOCUMENTS are incorporated into this AGREEMENT by reference, and SUBCONTRACTOR shall be bound by the CONTRACT DOCUMENTS insofar as they relate in any way, directly or indirectly, to SUBCONTRACTOR or the WORK required to be performed by SUBCONTRACTOR under this AGREEMENT or any PSA. Where, in the CONTRACT DOCUMENTS, reference is made to ERHARDT, and the work or specifications therein pertains to SUBCONTRACTOR's trade, craft, or WORK, then such WORK, specifications, and related terms and conditions shall be interpreted to apply to SUBCONTRACTOR. In addition to any other rights and remedies, and without limiting same, ERHARDT will adopt and incorporate the same rights and privileges against SUBCONTRACTOR as OWNER has against ERHARDT under the terms of CONTRACT DOCUMENTS.

- 1.7 Anything mentioned in the specifications and not shown on the plans or drawings, or shown on the plans and drawings and not mentioned in the specifications, shall be deemed shown and mentioned in both.
- 1.8 For purposes of this AGREEMENT, "WORK" refers to the scope of work identified in a PSA and consists of the entire construction to be completed by SUBCONTRACTOR on that specific project. The term "Day or day" shall mean calendar day unless otherwise specifically designated. The term "AGREEMENT PRICE" shall mean the price for completion of all of SUBCONTRACTOR's WORK with regard to a particular project for which a PSA has been issued.

**ARTICLE 2 AGREEMENT PRICE**

- 2.1 AGREEMENT PRICE is firm, not subject to escalation.
- 2.2 AGREEMENT PRICE includes all applicable taxes unless otherwise set forth in a PSA.
- 2.3 ERHARDT will pay SUBCONTRACTOR the amount set forth in the PSA for the satisfactory and timely performance of the WORK identified in the PSA.
- 2.4 ERHARDT agrees to pay SUBCONTRACTOR for said WORK subject to additions and deductions made as herein provided, payable as work progresses, on estimates made and approved by ERHARDT and within ten (10) business days after ERHARDT actually receives payment from OWNER on account of Subcontractor's WORK.
- 2.5 Payment terms will be as defined in the PSA.
- 2.6 ERHARDT may withhold from any payment or retention up to 150% of the amount of any disputed item, including without limitation and not limited to amounts ERHARDT believes may be necessary to withhold to protect ERHARDT from any potential claims which may result from SUBCONTRACTOR's performance of the WORK, or from failing to furnish appropriate waivers and releases for itself or any lower tier subcontractors or suppliers.

**ARTICLE 3 SUBCONTRACTOR'S OBLIGATIONS**

- 3.1 SUBCONTRACTOR acknowledges and agrees that prior to the submission of a proposal or bid for any project it will have read all CONTRACT DOCUMENTS and will be familiar therewith. SUBCONTRACTOR agrees to comply with and perform all pre-bid obligations required by the CONTRACT DOCUMENTS that are applicable to SUBCONTRACTOR.
- 3.2 SUBCONTRACTOR agrees to obtain and pay for all permits, licenses, and official inspections made necessary by its WORK and to comply with all codes, laws, ordinances and regulations bearing on its WORK and the conduct thereof.
- 3.3 Any Masonry SUBCONTRACTOR hereby assumes responsibility for the design and installation of bracing for masonry walls in accordance with the Standard Practice for Bracing Masonry Walls under Construction (Council for Masonry Wall Bracing-Current Edition). Design of wall bracing and site inspection of braced walls will be performed by an engineer registered in the State of Michigan.
- 3.4 SUBCONTRACTOR agrees to submit six copies of required shop drawings and eight copies of all catalog cuts to ERHARDT's office.
- 3.5 Material shipments will be delivered at a time and in a sequence consistent with their scheduled installation. Material deliveries shall not arrive in advance of the scheduled delivery date without prior approval of the Project Superintendent. Where a delivery sequence has been agreed to in advance with the supplier, material shall not be provided out of sequence or in advance of scheduled dates without prior approval of the Project Superintendent. ERHARDT reserves the right to refuse delivery of the material or to back charge suppliers for the extra cost of handling or moving the material resulting from untimely deliveries.
- 3.6 All requests for payment must be received at ERHARDT's office by the 25<sup>th</sup> of the month. Requests for payment must be submitted on the current edition of AIA form G702. Payment shall be made based on percentage of work completed and approved by ERHARDT, less the aggregate of previous payments, and shall be subject to payment being made to ERHARDT by the OWNER. Proper waivers of lien, affidavits, and sworn statements listing all contracts let, to be let, and all obligations due and to become due for equipment, material, labor, and services, and any other documentation requested by ERHARDT concerning payment must be provided to ERHARDT prior to payment.
- 3.7 SUBCONTRACTOR agrees to promptly correct, without cost to OWNER or ERHARDT, any and all defects due to faulty workmanship or faulty or improper materials which may appear within the guarantee or warranty period established in the SUBCONTRACT DOCUMENTS. If no period is established in the SUBCONTRACT DOCUMENTS, the warranty shall be for a period of one year from the date of completion or acceptance of the project by the OWNER, whichever is later. This warranty shall be in addition to, and not in limitation of, any other warranty required by law or the SUBCONTRACT DOCUMENTS, or any remedy resulting from any breach thereof.
- 3.8 SUBCONTRACTOR shall personally supervise the work and have a competent foreperson or superintendent satisfactory to ERHARDT on site at all times during SUBCONTRACTOR's performance with authority to act for SUBCONTRACTOR.
- 3.9 SUBCONTRACTOR agrees to keep the building and site clean at all times from rubbish and debris caused by its WORK. If SUBCONTRACTOR fails to do so, SUBCONTRACTOR shall reimburse ERHARDT for the cost of cleaning, hauling, labor and transportation to accomplish SUBCONTRACTOR's obligations under this paragraph.
- 3.10 Shipping information (i.e. car numbers, routing, bills of lading, etc.) must be mailed to ERHARDT's office at the time shipment is made.
- 3.11 In the event of a dispute, SUBCONTRACTOR shall comply with ERHARDT's written directives and shall continue performance in accordance with Section 4.5.



**ARTICLE 4 PERFORMANCE OF WORK**

- 4.1 This AGREEMENT is issued by ERHARDT and accepted by SUBCONTRACTOR with the distinct understanding that time is of the essence and that SUBCONTRACTOR agrees to furnish materials satisfactory to ERHARDT at such time and in such manner as to not delay the construction or completion of the project in any way. In the event the project is delayed due to SUBCONTRACTOR's failure to comply with the SUBCONTRACT DOCUMENTS, CONTRACT DOCUMENTS, this AGREEMENT or a project specific PSA, and ERHARDT is compelled to take measures to complete SUBCONTRACTOR's PSA, including but not limited to purchasing materials, securing labor elsewhere and/or providing temporary enclosures, weather protection, or heat, SUBCONTRACTOR will reimburse ERHARDT for whatever loss, expense or damage sustained because of such failure.
- 4.2 SUBCONTRACTOR, at ERHARDT's request and at the time specified by ERHARDT, shall submit to ERHARDT progress, procurement, and man-hour completion schedules, satisfactory in form and content to ERHARDT, and, upon ERHARDT's acceptance of the schedules, shall perform the WORK in accordance therewith.
- 4.3 To secure performance by SUBCONTRACTOR and any funds expended by ERHARDT as identified herein, ERHARDT shall have a lien upon all materials, tools, appliances, and equipment of SUBCONTRACTOR on the premises or used in connection with said WORK.
- 4.4 SUBCONTRACTOR agrees to make changes in the WORK and to undertake additional WORK as may be authorized and directed by ERHARDT. Prior to furnishing any changed or additional WORK, SUBCONTRACTOR shall submit in writing its claim for adjustments to the contract sum and/or contract time. SUBCONTRACTOR will be compensated only if it conforms to all notice requirements, takes all steps necessary for ERHARDT to procure the approval of the OWNER for all changes and adjustments to cost and schedule, and executes with ERHARDT a PSA REVISION setting forth the changes and adjustments.
- 4.5 In the event a dispute arises between SUBCONTRACTOR and ERHARDT, SUBCONTRACTOR expressly agrees that it will continue to perform its work regardless of the nature of the dispute. To the greatest extent permitted by law, SUBCONTRACTOR waives any right to rescind or to suspend performance.

**ARTICLE 5 COMPLIANCE WITH SAFETY PROGRAMS**

- 5.1 SUBCONTRACTOR warrants that any and all WORK performed and/or equipment delivered under this subcontract shall comply with all requirements of the Occupational Safety and Health Act of 1970, as the same may be amended from time to time, including all regulations adopted pursuant to such Act, and shall comply with all requirements of any state or local government agency having jurisdiction in the location to which such equipment is to be shipped or such WORK is to be performed pursuant to this AGREEMENT. The SUBCONTRACTOR hereby agrees to release, hold harmless, and indemnify ERHARDT from and against any loss, delay, fine, action or cause of action arising out of any breach or alleged breach by SUBCONTRACTOR of this warranty.
- 5.2 It is understood and agreed that SUBCONTRACTOR will comply in every respect with safety regulations established by ERHARDT for this project, and SUBCONTRACTOR's personnel will wear protective hard hats and safe shoes, and use only safe ladders, scaffolding, tools, and other equipment.
- 5.3 Personnel refusing to adhere to MIOSHA requirements and ERHARDT job site safety rules and regulations, and personnel persisting to work in an unsafe manner must be immediately removed from the job site. SUBCONTRACTOR agrees to replace removed personnel within 24 hours.
- 5.4 Any employee of SUBCONTRACTOR involved in an accident resulting in personal injury or property damage will be subjected to a drug test taken at the expense of the SUBCONTRACTOR.

**ARTICLE 6 DELAYS**

- 6.1 SUBCONTRACTOR shall not be relieved of its duty of prompt performance because of unavailability of personnel or materials or any other cause. In the event of (1) a work stoppage by SUBCONTRACTOR, its employees, subcontractors or suppliers or employees, that in ERHARDT's judgment will cause or is likely to cause a delay, (2) SUBCONTRACTOR's refusal or neglect to supply sufficient, properly skilled workers, or materials of proper quality or quantity, (3) a stoppage or interference, by any act or omission, with the work of ERHARDT or others, or (4) a failure to perform any covenant or obligation under the SUBCONTRACT DOCUMENTS, this AGREEMENT, or a PSA, ERHARDT may terminate this AGREEMENT, or any PSA, pursuant to Article 10.

**ARTICLE 7 INDEMNITY**

- 7.1 To the fullest extent permitted by law, SUBCONTRACTOR shall defend, indemnify and save harmless the OWNER, architect, engineer, ERHARDT, and the consultants, employees and agents of any of them from and against all losses, claims, demands, payments, suits, actions, expenses, including, without limitation, attorneys' fees, recoveries and judgments of every nature and description arising out of SUBCONTRACTOR's WORK under this AGREEMENT, or any specific PSA, or by reason, in whole or in part, of any fault, act, omission or breach by SUBCONTRACTOR, its agents or employees, including but not limited to SUBCONTRACTOR's execution of the WORK, or in the guarding of it.
- 7.2 If SUBCONTRACTOR should receive permission to use any equipment of ERHARDT or the OWNER, of any nature whatsoever, including elevators, hoists, derricks, cranes, scaffolds, sidetracks, yards, or any other instruments or tools used in the construction of the specified project, it is understood and agreed that SUBCONTRACTOR assumes complete responsibility and liability for the use or operation of said equipment and will indemnify and save harmless ERHARDT and the OWNER from any damage, claim, liability costs or expense whatsoever, including, without limitation, attorneys' fees, accruing or arising in any manner, by reason of any accident of any nature to persons or property caused thereby, irrespective of who actually operates the said equipment.
- 7.3 Notwithstanding the foregoing, if any of the other SUBCONTRACT DOCUMENTS or CONTRACT DOCUMENTS impose more stringent defense, indemnity, contribution or hold harmless obligations than are set forth herein, then the more stringent provisions shall apply, and SUBCONTRACTOR shall owe the same defense, indemnity, contribution, and hold harmless obligations to ERHARDT as ERHARDT owes to OWNER.

- 7.4 The obligations of this Article shall apply notwithstanding the passive or active negligence or other fault of the indemnitees; however, obligations specified above shall not extend any claims, demands, damages, costs, or liabilities arising out of the sole negligence or willful misconduct of the entity to be indemnified, defended, or held harmless. The obligations of this Article are in no way limited or relieved by SUBCONTRACTOR having obtained insurance, by the provisions set for the in this AGREEMENT, or any PSA, or to the extent permitted by law by the provisions of any workers compensation law, regulation or arrangement.
- 7.5 In the event of water intrusion, the Subcontractor responsible for the intrusion is to immediately make the necessary repairs to stop the water infiltration. This subcontractor is to immediately replace all water damaged construction materials that are subject to mold development, including but not limited to all drywall, insulation, ceiling tile, etc. and to completely dry, within 48 hours, all other materials such as masonry block, steel, etc. and disinfect the materials to assure no mold is allowed to grow on them. The Subcontractor's liability and obligation are not limited by their insurance contract.

## ARTICLE 8 CONTRACT INSURANCE REQUIREMENTS

- 8.1 SUBCONTRACTOR shall provide and maintain in full force and effect during the term of the PSA, all warranty periods and other periods as specified herein, insurance policies providing coverages as specified below, with limits of liability not less than those shown herein except if modified by Insurance Exhibit "A":
- A. **Workers compensation and employers liability insurance.** The commercial umbrella and/or employers liability limits shall not be less than \$4,500,000 each accident for bodily injury by accident or \$4,500,000 each employee for bodily injury by disease.
  - B. **Commercial general liability (CGL)** and, if necessary, commercial umbrella insurance with a limit of not less than \$5,000,000 each occurrence. If such CGL insurance contains a general aggregate limit, it shall apply separately to this project
  - C. **Business auto liability** and, if necessary, commercial umbrella liability insurance with a limit of not less than \$5,000,000 each accident.
  - D. **Cargo Insurance:** Supplier to provide all risk cargo insurance in an amount equal to values shipped per vehicle, including naming the OWNER, Architect, and ERHARDT as additional insured.
  - E. **Installation Floater:** Unless the project is insured by a builders risk insurance policy as stated in the contract agreements, the subcontractor will provide all risk installation floater insurance for a limit not less than the amount of stored and installed material on site and name the Owner and Erhardt Construction Company as additional insured.
- 8.2 GL insurance shall be written on ISO occurrence form CG 00 01 07 98 (or a substitute form providing equivalent coverage) and shall cover liability arising from premises, operations, independent contractors, products-completed operations, personal injury and advertising injury, and liability assumed under an insured contract (including the tort liability of another assumed in a business contract).
- 8.3 There shall be no endorsement or modification of the Standard ISO CGL Form limiting the scope of coverage for liability arising from pollution, explosion, collapse or underground property damage.
- 8.4 OWNER, Architect, and ERHARDT shall be included as additional insureds under the CGL, using blanket or specific additional insured endorsement, which endorsement shall include coverage for OWNER, Architect, and ERHARDT with respect to liability arising out of the SUBCONTRACTOR's WORK, including the completed operation thereof, and which coverage shall be maintained in effect for the benefit of OWNER, Architect, and ERHARDT for a period of five (5) years following final acceptance. OWNER, Architect, and ERHARDT shall also be included as additional insureds under the commercial automobile and umbrella policies. Additional insured coverage as required in this subparagraph shall apply as primary insurance with respect to any other insurance or self-insurance programs afforded to OWNER, Architect, and ERHARDT. ERHARDT shall also be furnished a copy of the endorsement issued by the insurer adding ERHARDT, Architect, and OWNER as additional insureds or other documents as necessary to lawfully effectuate such endorsement.
- 8.5 If SUBCONTRACTOR's liability policies do not contain the standard ISO separation of insureds provision, or a substantially similar clause, they shall be endorsed to provide cross-liability coverage.
- 8.6 If SUBCONTRACTOR will be performing any operations which require additional insurance coverages, including but not limited to marine, environmental, aircraft, and/or asbestos, SUBCONTRACTOR will be required to maintain such insurance with limits and coverages satisfactory to ERHARDT.
- 8.7 SUBCONTRACTOR will be responsible for and hereby releases OWNER, Architect, and Contractor, Engineer and their respective affiliates, directors, officers, and employees and agents from all liability for loss or damage to all tools, equipment, structures, property of employees and other property of SUBCONTRACTOR, the capital cost of which is not included in the cost of the WORK. SUBCONTRACTOR will maintain all risk physical damage insurance on such property in an amount determined by the SUBCONTRACTOR.
- 8.8 SUBCONTRACTOR waives all rights, claims and causes of action, against OWNER, Architect, and ERHARDT and their agents, officers, directors and employees for recovery of damages to the extent damages are covered by the commercial general liability, business auto liability, workers compensation and employers liability, or commercial umbrella liability insurance maintained pursuant to this agreement.
- 8.9 In the event of cancellation, alteration, or material change in any of the foregoing policies, thirty (30) days advance written notice shall be provided to ERHARDT.
- 8.10 All insurance policies required shall be issued by reputable, and financially stable insurance companies with an A.M. Best Rating of A- or better, and licensed to do business where the project is located. ERHARDT may reject insurance written by any insurer it deems to be in an unsatisfactory financial condition.
- 8.11 SUBCONTRACTOR shall furnish ERHARDT with a certificate(s) of insurance prior to the start of work and another prior to final payment on the project. Certificate of Insurance is to be executed by a duly authorized representative of each insurer, showing compliance with the insurance requirements set forth above.
- 8.12 Failure of ERHARDT to demand such certificate or other evidence of full compliance with these insurance requirements or failure of ERHARDT to identify a deficiency in any certificate provided shall not be construed as a waiver of SUBCONTRACTOR's obligation to maintain such insurance.
- 8.13 ERHARDT shall have the right, but not the obligation, of prohibiting SUBCONTRACTOR or any other subcontractor from entering the project site until such certificates or other evidence that insurance has been placed in complete compliance with these requirements is received and approved by ERHARDT.

- 8.14 **Hazardous Materials.** If SUBCONTRACTOR and/or its subcontractors or suppliers, regardless of tier, perform remediation of hazardous materials or if their operations create an exposure to hazardous materials as those terms are defined in federal, state or local law, SUBCONTRACTOR and its subcontractors and suppliers must obtain a "Contractor's Pollution Liability" policy with limits not less than \$1,000,000 per occurrence and not less than \$2,000,000 aggregate for Bodily Injury, Personal Injury, and Property Damage, naming ERHARDT as an additional insured. If SUBCONTRACTOR or its subcontractors or suppliers haul hazardous material (including, without limitation, waste), the policy must extend pollution coverage to the transportation of hazardous materials or pollutants by waste hauling vehicles. If SUBCONTRACTOR is subject to the Motor Carrier ACT of 1980, the Motor Carrier Act endorsement MCS-90 must be obtained and attached to the policy.
- 8.15 **Professional Liability.** Any SUBCONTRACTOR performing work that includes any design/build work or services shall obtain a Professional Liability Insurance Policy. Design/build work includes, without limitation, design/build work with respect to mechanical, electrical, structural, plumbing, masonry (if so indicated on a PSA) and fire sprinkler systems. Evidence of coverage in the form of a Certificate of Insurance shall be provided prior to the start of the project. SUBCONTRACTOR shall obtain coverage for a minimum of three years following completion of the project, either through continued purchase of policies for such years or through purchase of an extended reporting period. If OWNER or ERHARDT elects to purchase a project design policy, SUBCONTRACTOR's policy shall be endorsed to indicate that SUBCONTRACTOR's policy shall provide coverage once the project design policy has been exhausted.

**ARTICLE 9 LIENS**

- 9.1 SUBCONTRACTOR agrees, within three (3) business days after written demand, to discharge or cause to be discharged any suit or claim on ERHARDT's bond or any lien recorded upon the property arising out of or related in any way to the work to be performed by SUBCONTRACTOR's subcontractors, laborers and/or suppliers; and, if SUBCONTRACTOR fails to do so, ERHARDT, at its sole discretion, may use whatever means necessary to remove any such suit, claim or lien; further, the SUBCONTRACTOR shall indemnify ERHARDT for any costs or fees, including attorney's fees, incurred by ERHARDT in removing or attempting to remove such suit, claim, or lien.

**ARTICLE 10 TERMINATION**

- 10.1 Should SUBCONTRACTOR at any time breach this AGREEMENT, or any PSA, fail to prosecute the WORK with promptness, diligence and efficiency, or fail to perform any of the requirements set forth herein, ERHARDT may after forty-eight (48) hours written notice, proceed as follows:
- A. Provide such materials, supplies, equipment and labor as may be necessary to complete said WORK, pay for same, and deduct the amount so paid from any money then or thereafter due SUBCONTRACTOR; and/or
  - B. Terminate the employment of SUBCONTRACTOR, enter upon the premises and take possession, for use in completing the work, of all the materials, supplies, tools, equipment and appliances of SUBCONTRACTOR and complete the WORK or have same completed by others. ERHARDT shall not be liable to SUBCONTRACTOR for any further payment until the WORK has been completed and accepted by the OWNER, payment for SUBCONTRACTOR's WORK has been received by ERHARDT from OWNER, and only to the extent that the amount of any unpaid balance to be paid to SUBCONTRACTOR exceeds the expense of ERHARDT in finishing the WORK.
- 10.2 If the amount expended by ERHARDT under 10.1.A above or the cost of completing the work under 10.1.B above exceeds the unpaid balance of the AGREEMENT PRICE, SUBCONTRACTOR shall pay ERHARDT such excess within seven (7) calendar days of issuance of invoice.
- 10.3 Should SUBCONTRACTOR at any time fail to pay for all labor, materials or supplies used by SUBCONTRACTOR in said WORK when due, ERHARDT at its option may pay for and charge same to SUBCONTRACTOR, or may, at its discretion and with the consent of SUBCONTRACTOR, pay at any time claims for labor, material and supplies used in the WORK, deducting such payment from the AGREEMENT price of SUBCONTRACTOR's WORK.
- 10.4 Should SUBCONTRACTOR default in any of the provisions of this AGREEMENT or any PSA and should ERHARDT employ an attorney to enforce any provision hereof, or to collect damages for breach of the AGREEMENT or any PSA, SUBCONTRACTOR and its surety agree to pay ERHARDT such reasonable attorneys' fees as it may expend. As against the obligations here contained, SUBCONTRACTOR and its surety waive all rights of exoneration.
- 10.5 In its sole discretion and to the extent permitted by law, ERHARDT may terminate this AGREEMENT or any PSA without cause. In the event of such a termination, SUBCONTRACTOR shall be paid only for the value of the WORK completed in connection with the project to the extent ERHARDT is paid for such WORK, subject to the provisions of this Article. In no event shall the total amount paid to SUBCONTRACTOR after termination without cause (including all prior payments) exceed the price set forth in the PSA multiplied by the percentage of completion of SUBCONTRACTOR's WORK.
- 10.6 The rights and remedies granted to ERHARDT under this Article and pursuant to the other provisions of this AGREEMENT shall be cumulative and are not intended to be in lieu of any legal right or remedy which ERHARDT may have against SUBCONTRACTOR for breach of this AGREEMENT or PSA, or default hereunder, afforded by state or federal law.
- 10.7 Should SUBCONTRACTOR fail to maintain the required insurance identified in ARTICLE 8, ERHARDT may, at its sole option, terminate SUBCONTRACTOR as set forth in this Article.

**ARTICLE 11 COMPLIANCE WITH LAWS, PERMITS, AND SAFETY PROGRAMS**

- 11.1 SUBCONTRACTOR agrees to comply with all federal, state, or local laws which may be deemed applicable, and which shall be considered as incorporated herein by reference. SUBCONTRACTOR agrees to indemnify ERHARDT for any loss or expense sustained by ERHARDT by reason of noncompliance by SUBCONTRACTOR, its employees, or agents.
- 11.2 SUBCONTRACTOR shall comply with federal, state and local laws, rules, ordinances and/or regulations governing the storage and disposal of hazardous materials. This requirement specifically includes the storage of all fuel, oil, waste oil, and other hazardous materials in appropriately sized secondary containment vessels.

**ARTICLE 12 CLAIMS**

- 12.1 If any dispute arises between ERHARDT and SUBCONTRACTOR involving performance of this WORK or any alleged change in the WORK, SUBCONTRACTOR shall timely perform the disputed WORK and shall give written notice of any claims to ERHARDT within (7) days after the occurrence of the event giving rise to such claim. SUBCONTRACTOR shall provide ERHARDT with all details, particulars and supporting documentation within thirty (30) days after the notice of claim is delivered unless ERHARDT agrees in writing to an extension of time. Failure to submit all details, particulars and documentation within the time period shall absolve ERHARDT of all obligations related thereto. Any additional claim made based upon or arising out of the same event as the initial claim will not be considered and is deemed waived.
- 12.2 Notwithstanding the foregoing, if the SUBCONTRACT DOCUMENTS contain notice provisions that are more stringent than those contained in this AGREEMENT, SUBCONTRACTOR shall comply with the provisions of the SUBCONTRACT DOCUMENTS and, in addition, shall give ERHARDT sufficient notice to comply with the provisions of the SUBCONTRACT DOCUMENTS.

**ARTICLE 13 DISPUTE RESOLUTION**

- 13.1 SUBCONTRACTOR and ERHARDT agree that in the event that ERHARDT and OWNER or another third party selects a forum for the resolution of disputes concerning SUBCONTRACTOR's WORK, SUBCONTRACTOR agrees to participate and be bound by any decision or award given in such forum. The option to arbitrate or use other alternative dispute resolution procedures is in the sole discretion of ERHARDT

**ARTICLE 14 MISCELLANEOUS PROVISIONS**

- 14.1 SUBCONTRACTOR shall not assign or transfer this AGREEMENT, or any PSA, or any part thereof, without the prior written consent of ERHARDT.
- 14.2 If any term of this AGREEMENT is held by a court of competent jurisdiction to be void or unenforceable, the remainder of the 14.2 If any term of this AGREEMENT is held by a court of competent jurisdiction to be void or unenforceable, the remainder of the AGREEMENT's terms shall remain in full force and effect and shall not be affected.
- 14.3 SUBCONTRACTOR agrees that the terms, conditions and provisions of this AGREEMENT, and any project specific PSA, to the extent they may be applicable to the WORK to be performed by SUBCONTRACTOR, will be incorporated into its subcontracts and supply contracts related to the WORK. SUBCONTRACTOR agrees that all of its subcontracts related to the WORK will require subcontractor to comply with the terms of this AGREEMENT, and any applicable PSA, including requiring the subcontractor to provide insurance covering the risks and in the amounts set forth in this AGREEMENT and any applicable PSA.
- 14.4 This AGREEMENT and any PSA shall be governed by the laws of the State of Michigan.

END OF SECTION 005200

**To:****M.S.A. No:****Ship To:****P.S.A. No:****Date:****Project:**

SUBCONTRACTOR shall furnish labor, materials, tools, equipment, and all things necessary to do and complete the Scope of Work listed below in connection with the above referenced PROJECT in accordance with Drawings *Sample language, sample language, sample language, sample language*, General Conditions and Supplementary Conditions, Agreement, Insurance Specifications, and any additional requirements attached hereto or designated herein.

**SCOPE OF WORK:** *Work Description***SPECIFICATIONS:** *Section XXXXX***CONTRACT PRICE****The Subcontractor agrees to perform the work described herein for the sum of:****Base Price** \$,000.00**Contract Price is firm, not subject to escalation.****Total for this Agreement** \$00,000.00*(X Thousand X Hundred X Dollars and 00/100)***ADDITIONAL PROVISIONS**

1. INCLUSIONS – This order specifically includes, but is not limited to, the following: *Detailed Inclusions, including additional insureds.*
2. EXCLUSIONS – This order specifically excludes *DETAILED EXCLUSIONS*
3. SPECIAL INSTRUCTIONS:
  - **SHOP DRAWINGS:** You are to submit a minimum of 10 copies of required shop drawings to our office for approval.
  - **SUBCONTRACTOR IDENTIFICATION:** You are to complete and return Exhibit 'B' with an executed copy of this Project Subcontract Agreement.
  - **NEGOTIATED SUBCONTRACTORS:** Work to be done on a time and material basis with the above amount to be used as a guaranteed maximum price, with savings to remain unbilled to the Owner. You are to provide an itemized backup with each of your monthly billings.
4. PAYMENT TERMS:

90% upon receipt of payment from Owner. 10% retainage on first 50% of contract.
5. Time is of the essence. You are to furnish labor and/or material at such times and in such manner so as to enable us to maintain job progress in accordance with our job progress schedule, dated *Month Day, YEAR* (Exhibit 'A'), which may be modified during the course of the project.
6. Questions relating to the terms of this order should be forwarded to the undersigned. All other correspondence including shop drawings, submittals, invoicing, scheduling, etc., should be addressed to *Project Manager*.
7. By executing this PROJECT SUBCONTRACTOR AGREEMENT, subcontractor/supplier acknowledges that it has reviewed all SUBCONTRACT DOCUMENTS and agrees to be bound by them. The SUBCONTRACT DOCUMENTS include, but are not limited to, 1) this PROJECT SUBCONTRACTOR AGREEMENT, 2) the subcontract documents identified in the MASTER SUBCONTRACT AGREEMENT, including the MASTER SUBCONTRACT AGREEMENT, 3) the documents referenced in the Scope of Work, and 4) the contract between the Owner and Erhardt Construction for this project, including amendments and modifications, if any.

8. This PROJECT SUBCONTRACTOR AGREEMENT between ERHARDT and SUBCONTRACTOR modifies and supplements the provisions contained in the AGREEMENT and all other SUBCONTRACT DOCUMENTS incorporated therein by reference with respect to the PROJECT identified above. Terms that are defined in the AGREEMENT shall have the same meaning in this PROJECT SUBCONTRACTOR AGREEMENT. In the event of any conflict, inconsistency or ambiguity between the terms and provisions of this PROJECT SUBCONTRACTOR AGREEMENT and any other SUBCONTRACT DOCUMENTS, this PROJECT SUBCONTRACTOR AGREEMENT shall control.

END OF SECTION 005210



PROFESSIONAL LIABILITY INSURANCE. A SUBCONTRACTOR performing any design services, including but not limited to any design/build work with respect to mechanical, electrical, structural, plumbing, masonry (if so indicated on this PSA) or fire sprinkler systems, shall obtain and maintain a Professional Liability Insurance Policy of not less than \$2,000,000 per occurrence or the limits specified in the Contract Documents, whichever is greater. Such policy shall (i) name OWNER and ERHARDT, their authorized affiliates, subsidiaries, and their respective officers, directors, and employees as additional insureds; (ii) be provided by reputable and financially responsible insurance carriers with an A.M. Best or equivalent financial minimum rating of "A-"; and (iii) require the insurer to notify ERHARDT in writing at least thirty (30) days in advance of cancellation or modification. The policy shall continue in effect for the duration of the applicable statute of limitations, or three (3) years following final payment to the ERHARDT, whichever is longer. If OWNER or ERHARDT elect to purchase a project design policy, SUBCONTRACTOR's policy shall be endorsed to indicate that SUBCONTRACTOR's policy shall provide coverage once the project design policy has been exhausted.

SUBCONTRACTOR shall require its consultants and subcontractors to maintain coverage identical to these requirements if they are performing design services for SUBCONTRACTOR. SUBCONTRACTOR shall cause its insurers and its subcontractors' insurers to issue to ERHARDT on or before the earliest of the project start date or commencement of activities on the project premises, and each policy renewal date (if the project overlaps a renewal date), certificates of insurance evidencing the insurance requirements listed herein.

To the fullest extent allowed by law, SUBCONTRACTOR agrees to defend, indemnify and hold OWNER and ERHARDT harmless from and against any claim, injury, damage, cost, expense, or liability related to, arising from or occurring in connection with the performance or non-performance of design services, or any activity associated therewith, performed by SUBCONTRACTOR or any of its consultants or subcontractors, including actual attorneys' fees, whether arising before, during, or after completion of the SUBCONTRACTOR's design services, whether or not caused in part by the active or passive negligence or other fault of a party indemnified excepting only injury to person or damage to property caused by the sole negligence of a party indemnified hereunder.

END OF SECTION 005210A

## West Michigan Hispanic Chamber of Commerce Headquarters

**1111 Godfrey Ave Grand Rapids, MI 49507**

**Job No. 4329**

Date Required By:  
Activities Effected (ID# or Desc):

ERHARDT CONSTRUCTION RFI #  
CONTRACTOR:  
ADDRESS:  
CITY/STATE/ZIP:  
SUBMITTED BY:  
PHONE NUMBER:  
EMAIL:

SUBJECT: \_\_\_\_\_  
DRAWING REF: \_\_\_\_\_  
SPEC REF: \_\_\_\_\_  
LOCATION: \_\_\_\_\_

REQUEST:

PROPOSED SOLUTION:

RESPONSE:

REVIEWED BY: \_\_\_\_\_

A/E ACKNOWLEDGE: \_\_\_\_\_



# GENERAL CONDITIONS

1. The General Conditions of the Contract for Construction (AIA Document A201, 2007), Articles 1 through 14, as published by the American Institute of Architects, are herewith made a part of the specifications.
2. Reference to the General Conditions can be made at the Architect's office, or copies may be obtained from the American Institute of Architects, 1735 New York Avenue, NW, Washington DC 20006.
3. The General Conditions are modified in certain particulars. See Supplementary General Conditions.

END OF SECTION 00700

**GENERAL DESCRIPTION OF WORK**

1. This project consists of demoing an existing 17,500sf 1-story building, associated site clearing & preparation & construction of a 2-story 12,000sf building.
2. Time is of the essence on this project, refer to the construction schedule for milestone dates. Please review the schedule to make sure your manpower or work hours include the required staffing levels to achieve the completion dates for your work as well as costs for the material

**DEFINITIONS**

1. Contractor, General Contractor or Construction Manager refers to Erhardt Construction.
2. Subcontractor refers to any firm awarded one of the Bid Packages as outlined in the “Invitation to Bid” or holds a contract with the Contractor.
3. Items noted “NIC” (not in contract), will be furnished and installed by Owner or others not part of this contract.

**CONTRACTS**

1. Construct the work of each contract under a separate lump-sum/fixed-price contract with the Contractor. Separate contracts are as outlined in the Instruction to Bidders and separate bid packages.
2. Requirements for a specific trade of contract are generally described in that portion of the specifications or drawings related to that trade or contract. Such requirements, however, may be described in other sections of the contract documents. Subcontractors will be held responsible for having carefully examined all drawings and read all divisions of the specifications and all contract documents to avoid omissions or duplications and to insure a complete job.

**BID PACKAGE SUBCONTRACTOR RESPONSIBILITIES**

1. Review shop drawings, product data and samples for Owner supplied material.
2. Receive and unload products at site; inspect for completeness or damage.
3. Handle, store, install and finish products.
4. Protect products from damage.
5. Notify Contractor and Architect/Engineer of problems with product, discrepancies, etc.
6. Repair or replace items damaged after receipt.
7. Subcontractor is to coordinate/schedule installation of Owner items with Owner.

8. Each subcontractor shall be responsible to furnish and install all required access panels for access to their work that are not shown on the drawings. See Bid Scopes for responsibility for access doors and panels shown on the drawings.
9. In our effort to provide the highest quality installations, as well as to minimize punch lists, each subcontractor will be required to perform a quality review of their work on a monthly basis utilizing the quality checklist(s) form to be provided by the Contractor. These lists must be initialed by the Contractor's Project Superintendent for confirmation. The checklist(s) are a requirement and must be treated in the same manner as the performance of all other work included in the scope of work of the Contract. Completion of the checklist(s) does not alleviate completion of the
10. Full-time on-site supervision will be required of each subcontractor, including lower-tier subcontractors, during all working hours.
11. Each subcontractor shall be responsible for all work identified in their respective Bid Package, including work identified in Related Sections, regardless of trade jurisdictions. The assignment of Work in these Additional Notes and Requirements and Bid Packages shall supersede the outline of the Specification Sections.
12. Work of this Bid Package shall be performed within the Bid Schedule, published by Contractor. The project schedule shall become part of the Contract Documents and subcontractors shall be bound to the milestone dates as indicated on the Schedule.
13. Each subcontractor is responsible for all layout required for completing the work of their respective Bid Package. Benchmarks and primary building lines will be provided by the Contractor.
14. Each subcontractor shall be responsible to review all Contract Documents, including Drawings, Specifications, Bid Packages, etc.
15. All field measurements required for fabrication of material are the responsibility of each subcontractor.
16. The Contractor shall provide all dumpsters associated with all other subcontractor's debris removal for the duration of the project.
17. Full execution of the "Bid Proposal Form".
18. Include Erhardt "Master Subcontractor Agreement" and "Project Subcontract Agreement" or "Purchase Order" requirements.

**SUBCONTRACTOR USE OF SITE AND PREMISES**

1. Construction Manager will coordinate use of site and premises during construction through substantial completion.

2. Limit use of site and premises to allow:
  - A. Owner occupancy.
  - B. Work by others and work by Owner.
  - C. Related construction activities only.
3. SMOKING IS PROHIBITED on the entire construction project site.
4. Just-in-time delivery of major materials/equipment is mandatory. On-site storage is allowed only if approval is received in advance from the Contractor.

**WORK SEQUENCE AND DATES**

1. Coordinate all sequencing equipment with Owner and Contractor.

**OWNER REQUIREMENTS**

1. Cooperate with Owner to minimize conflict and to facilitate Owner's operations. Schedule the work to accommodate this requirement.
2. During construction, access to and egress from the existing occupied facilities shall be maintained at all times.
3. Any short-term interruption of the above provisions to accommodate specific construction activities must be coordinated in advance with Contractor and Owner.
4. The Owner may begin to occupy and start installation of various equipment or furnishings and or wiring prior to the completion of the construction project.

END OF SECTION 011000

**PROJECT ALTERNATE LIST**

Alternate 1: Community Plaza including slab, lighting & power

Alternate 2: Pickleball Court including slab, fencing, surfacing, netting, lighting & power

Alternate 3: Staff Patio & Green Wall including slab, lighting, power & green wall

Alternate 4: Latino Nation Flags including flagpoles, foundations, flags & lighting

**PROCEDURES**

1. Provide the associated cost for each alternate (noting either add or deduct) on the bid form.

END OF SECTION 012300

# PRODUCT SUBSTITUTION PROCEDURES

## GENERAL

1. This Section includes the administration of substitutions and Product options.

## RELATED DOCUMENTS

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

## SUBMITTALS

1. List of all products proposed for installation:
  - A. Submit 1 electronic copy within 30 days after the Effective Date of Agreement unless otherwise indicated elsewhere in the Contract Documents.
  - B. Tabulate the list by each Specification Section.

## CONTRACTOR'S OPTIONS

1. Products specified only by reference standards or by description:
  - A. Select any Product meeting the standards or description by any Supplier unless otherwise required elsewhere in the Contract Documents.
  - B. Submit for Architect's review:
    - i. Name and address of supplier.
    - ii. Trade name.
    - iii. Model or catalog designation.
    - iv. Manufacturer's data including:
      - 1) Performance and test data.
      - 2) Compliance with reference standards.
2. Products specified by naming one or more suppliers without an "or equal" clause:
  - A. Use specified Product of one of the Suppliers named.
  - B. No substitutions.
3. Products specified by naming one or more suppliers with an "or equal" clause:
  - A. Indicates the option of selecting equivalent Products by stating "or equal" after the specified
  - B. Architect may waive some or all of the requirements specified for substitutions if, at Architect's sole discretion, the proposed equivalent Product is considered an "or equal".
  - C. If, at Architect's sole discretion, the proposed equivalent Product does not qualify as an "or equal", it will be considered as a proposed substitute and a substitution request submittal will be required.

## SUBSTITUTIONS

1. Substitutions after the effective date of agreement:
  - A. Within 30 days after the Effective Date of Agreement.
  - B. Architect will consider formal requests for substitution of Products in place of those specified unless otherwise prohibited elsewhere in the Contract Documents.
2. Substitution Request Submittals: Submit 5 copies of the request for substitution including the following:

- A. Complete data substantiating compliance of the proposed substitution with the Contract Documents.
  - B. For Products:
    - i. Names and addresses of manufacture and supplier.
    - ii. Product identification.
    - iii. Manufacturer's literature, including:
    - iv. Samples
    - v. Name and address of similar projects on which the product was used and date of installation.
  - C. For Construction Methods:
    - i. Detailed description of the proposed method.
    - ii. Drawings illustrating methods.
  - D. Itemized comparison of proposed substitution with Product or method specified.
  - E. Data relating to changes in the construction schedule.
  - F. Accurate cost data on the substitution and comparison with the Product or method specified.
  - G. Changes to the Work which would be caused by the substitution.
3. Contractor's Responsibilities: In making a request for a substitution, Contractor represents:
- A. Contractor has personally investigated the proposed Product or method and determined that it is equal or superior in all respects to that which is specified.
  - B. Contractor will provide the same guarantee for the substitution as for the Product or method specified.
  - C. Contractor will coordinate installation of the accepted substitution into the Work making such changes as may be required for the Work to be completed in all respects.
  - D. Contractor waives all claims for additional cost related to the substitution which consequently become apparent.
  - E. Cost data is complete and includes all related costs under Contractor's contract, but excludes costs under separate contracts and Architect's redesign costs.
4. Substitutions Not Considered: Substitutions will not be considered if:
- A. They are indicated or implied on Shop Drawings or Product data submittals without formal request submitted in accordance with this Section.
  - B. Acceptance will require substantial revision of the Contract Documents.

END OF SECTION 012500

**SCHEDULE OF VALUES**

1. Submit schedule on AIA Form G703.
2. Submit schedule of values in duplicate to Erhardt Construction within 15 days after Notice to Proceed.
3. Schedule of values shall list separately insurance/bond costs, overhead and profit, general condition costs, individual allowances, and itemized listing of subcontractors/suppliers work broken down as requested by Architect/Engineer and Construction Manager.

**APPLICATIONS FOR PAYMENT**

1. Submit schedule on AIA Form G703.
2. Submit a typed copy of each application on AIA Form G702/G703.
3. Submit a Sworn Statement with each AIA Pay Application.
4. Retainage: 10% on the first 50% of contract billing.
5. Invoices to be submitted to Erhardt Construction by no later than the 25th of each month. All invoices to be sent to [invoices@erhardtcc.com](mailto:invoices@erhardtcc.com).

**PERMITS, FEES & NOTICES**

1. Subcontractor(s) responsibilities shall be in accordance with Article 3.7 of the General Conditions of the Contract except as noted below.
2. Construction Manager will submit and pay for local general building construction permit. Subcontractors requiring permits and approvals in addition to the above shall submit construction documents and pay for all fees and permits.

**UNSAFE MATERIALS**

1. If any condition, event, material or substance encountered on the site results in a liability which is caused or created by the Subcontractor, the remedial duties and responsibilities required of the Construction Manager and Owner, shall be the responsibility of the Subcontractor. Subcontractor agrees to perform at its cost, the duty and responsibility required by the Construction Manager and Owner for remediation.

**WORK HOURS**

1. Normal Work Hours:
  - A. 7:30 a.m. to 4:30 p.m., Monday through Friday or as needed to complete the project scheduled. Coordinate with Construction Manager
2. Exceptions:
  - A. Work hours may be adjusted seasonally. Necessary variations from normal work hours shall occur only with the express approval of the Construction Manager.



## **PAYMENT & CONTRACT REQUIREMENTS**

### **PROTECTION OF FINISHED CONSTRUCTION**

1. The bid package subcontractors shall assume the responsibility for the protection of all finished construction under his/her contract and shall repair and restore any and all damage to his/her finished construction to its original state.

END OF SECTION 012900

**COORDINATION**

1. It shall be the full responsibility of Erhardt Construction to expedite all phases of the work and to establish and coordinate scheduling, submittals, and work of the various sections of specifications to assure efficient and orderly sequence of installation of interdependent construction elements, regardless of whether or not the Owner awards separate contracts for any trades, items of work, or equipment.
2. Verify that utility requirement characteristics of operating equipment are compatible with building utilities.
3. Coordinate space requirements and installation of mechanical and electrical work which are indicated diagrammatically on drawings. Follow routing shown for pipes, ducts, and conduit, as closely as practicable, placing runs parallel with lines of building. Utilize spaces efficiently to maximize accessibility for other installations, maintenance, and for repairs and servicing.
4. In finished areas, conceal pipes, ducts, and wiring within the construction.
5. Verify and correlate all dimensions shown on the drawings and/or shop drawings and obtain all measurements and information required for proper execution of work.
6. Each subcontractor shall examine all spaces, surfaces, and areas indicated on drawings to receive his work and that of his subcontractors. Report necessary corrections, in writing, immediately to the Architect/Engineer. Do not proceed until corrections (if any required) have been made. Commencing work signifies this subcontractor's acceptance of said spaces, surfaces, areas, and of job conditions.
7. Coordinate locations of fixtures, outlets, and other devices with finish elements and requirements of the American's with Disabilities Act (ADA).
8. When materials and finish are of such nature that it is necessary to temporarily omit certain portions of work in order to make final installation, the subcontractor whose work is involved shall omit such parts of this work or finish as are necessary until other work and/or materials have been installed and shall then return and install such omitted parts of his work.

**PROGRESS MEETINGS**

1. Schedule, attend, and administer meetings through out progress of the work at minimum of bi-monthly intervals.
2. Erhardt Construction shall preside at all progress meetings, record minutes, and distribute copies within 4 days to Owner, Architect/Engineer, and all subcontractors.
3. Erhardt Construction shall also conduct weekly coordination meetings as appropriate to the stage of construction. All foremen of trades on site will be required to attend.

END OF SECTION 013100

**GENERAL**

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

**DEFINITIONS**

1. 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.
2. 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. Services do not include contract enforcement activities performed by Architect.
3. Mockups: Full-size physical assemblies that are constructed on-site. Mockups are constructed to verify selections made under Sample submittals; to demonstrate aesthetic effects and, where indicated, 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.
  - A. Laboratory Mockups: Full-size physical assemblies constructed at testing facility to verify performance characteristics.
4. 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.
5. Product Testing: Tests and inspections that are performed by an NRTL, an NVLAP, or a testing agency qualified to conduct product testing and acceptable to authorities having jurisdiction, to establish product performance and compliance with specified requirements.

6. Source Quality-Control Testing: Tests and inspections that are performed at the source, e.g., plant, mill, factory, or shop.
7. Field Quality-Control Testing: Tests and inspections that are performed on-site for installation of the Work and for completed Work.
8. Testing Agency: An entity engaged to perform specific tests, inspections, or both. Testing laboratory shall mean the same as testing agency.
9. 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, and similar operations.
  - A. 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).
10. Experienced: When used with an entity or individual, "experienced" 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.

### **CONFLICTING REQUIREMENTS**

1. General: If compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. If drawings and/or specifications establish different or conflicting requirements comply with the most stringent of the two. Refer uncertainties and requirements that are different, but apparently equal, to Architect through the CM for a decision before proceeding, utilizing the Request for Information (RFI) process.
2. 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.

### **INFORMATIONAL SUBMITTALS**

1. 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.

**REPORTS & DOCUMENTS**

1. Test and Inspection Reports: Prepare and submit certified written reports specified in other Sections. Include the following:
  - A. Date of issue.
  - B. Project title and number.
  - C. Name, address, and telephone number of testing agency.
  - D. Dates and locations of samples and tests or inspections.
  - E. Names of individuals making tests and inspections.
  - F. Description of the Work and test and inspection method.
  - G. Identification of product and Specification Section.
  - H. Complete test or inspection data.
    - I. Test and inspection results and an interpretation of test results.
    - J. Record of temperature and weather conditions at time of sample taking and testing and
    - K. Comments or professional opinion on whether tested or inspected Work complies with the Contract Document requirements.
    - L. Name and signature of laboratory inspector.
    - M. Recommendations on retesting and re-inspecting.
2. Manufacturer's Field Reports: Prepare written information documenting tests and inspections specified in other Sections. Include the following:
  - A. Name, address, and telephone number of representative making report.
  - B. Statement on condition of substrates and their acceptability for installation of product.
  - C. Summary of installation procedures being followed, whether they comply with requirements and, if not, what corrective action was taken.
  - D. Results of operational and other tests and a statement of whether observed performance
  - E. Other required items indicated in individual Specification Sections.
3. Permits, Licenses, and Certificates: For Owner's records, 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.

**QUALITY ASSURANCE**

1. General: Qualifications paragraphs in this article establish the minimum qualification levels required; individual Specification Sections specify additional requirements.
2. 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.
3. 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.
4. Installer Qualifications: A firm or individual experienced in installing, erecting, 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.
5. 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.
6. 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.
  - A. Requirements of authorities having jurisdiction shall supersede requirements for specialists.
7. Manufacturer's 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.
8. Preconstruction Testing: Where testing agency is indicated to perform preconstruction testing for compliance with specified requirements for performance and test methods, comply with the
  - A. Contractor responsibilities include the following:
    - i. Provide test specimens representative of proposed products and construction.
    - ii. Submit specimens in a timely manner with sufficient time for testing and analyzing results to prevent delaying the Work.
    - iii. Build laboratory mockups at testing facility using personnel, products, and methods of construction indicated for the completed Work.
  - B. 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.

9. 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:
  - A. Build mockups in location and of size indicated or, if not indicated, as directed by Architect.
  - B. Notify Architect three days in advance of dates and times when mockups will be constructed.
  - C. Demonstrate the proposed range of aesthetic effects and workmanship.
  - D. Obtain Architect's approval of mockups before starting work, fabrication, or construction.
    - i. Allow three days for initial review and each re-review of each mockup.
  - E. Maintain mockups during construction in an undisturbed condition as a standard for judging the completed Work.
  - F. Demolish and remove mockups when directed unless otherwise indicated.

**QUALITY CONTROL**

1. Contractor Responsibilities: Tests and inspections not explicitly assigned to Owner are Contractor's responsibility. Perform additional quality-control activities required to verify that the Work complies with requirements, whether specified or not
  - A. Where services are indicated as Contractor's responsibility, engage a qualified testing agency to perform these quality-control services.
    - i. Contractor shall not employ same entity engaged by Owner, unless agreed to in writing by Owner.
  - B. Notify testing agencies at least 24 hours in advance of time when Work that requires testing or inspecting will be performed.
  - C. Where quality-control services are indicated as Contractor's responsibility, submit a certified written report, in duplicate, of each quality-control service.
  - D. Testing and inspecting requested by Contractor and not required by the Contract Documents are Contractor's responsibility.
  - E. Submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.
2. Manufacturer's Field Services: Where indicated, engage a manufacturer's representative to observe and inspect the Work. Manufacturer's representative's services include examination of substrates and conditions, verification of materials, inspection of completed portions of the Work, and submittal of written reports.

3. Retesting/Re-inspecting: Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and re-inspecting, for construction that replaced Work that failed to comply with the Contract Documents.
4. Testing Agency Responsibilities: Cooperate with Architect and Contractor in performance of duties. Provide qualified personnel to perform required tests and inspections.
  - A. Notify Architect and Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.
  - B. Determine the location from which test samples will be taken and in which in-situ tests are conducted.
  - C. Conduct and interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from requirements.
  - D. Submit a certified written report, in duplicate, of each test, inspection, and similar quality-control service through Contractor.
  - E. Do not release, revoke, alter, or increase the Contract Document requirements or approve or accept any portion of the Work.
  - F. Do not perform any duties of Contractor.
5. Associated Services: Cooperate with agencies 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:
  - A. Access to the Work.
  - B. Incidental labor and facilities necessary to facilitate tests and inspections.
  - C. Adequate quantities of representative samples of materials that require testing and inspecting. Assist agency in obtaining samples.
  - D. Facilities for storage and field curing of test samples.
  - E. Delivery of samples to testing agencies.
  - F. Preliminary design mix proposed for use for material mixes that require control by testing agency.
  - G. Security and protection for samples and for testing and inspecting equipment at Project site.
6. Coordination: Coordinate sequence of activities to accommodate required quality-assurance and -control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspecting.
  - A. Schedule times for tests, inspections, obtaining samples, and similar activities.



### REPAIR & PROTECTION

1. General: On completion of testing, inspecting, sample taking, and similar services, repair damaged construction and restore substrates and finishes.
  - A. 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."
2. Protect construction exposed by or for quality-control service activities.
3. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

END OF SECTION 014000

**TEMPORARY ELECTRIC**

1. The electrical trades bid package shall provide and remove at end of construction, a separate metered temporary electrical power system sufficient for total construction use. Electrical Subcontractor to provide temporary panels as required. Provide adequate sized, 480 volt to 120/240 volt, 1 phase or 120/208 volt, 3 phase, step-down transformer to serve panels.
2. After temporary facilities have been removed, the Electrical Subcontractor shall be responsible for patching surfaces and structure where temporary service equipment had been mounted.
3. Each Subcontractor shall furnish and install a temporary circuit to his own temporary office at his/her expense and shall pay for energy consumed. This circuit shall be connected to the temporary service. Air conditioning and electric resistance heating shall not be used unless approved by Erhardt Construction.
4. The Electrical Subcontractor shall provide, until substantial completion, at no cost to other Subcontractors, all wiring, switches, sockets, lamps, and similar equipment required for general temporary lighting and for small power tools. Temporary lighting shall be sufficient to enable all trades to complete their work and to enable the inspector and Architect/Engineer to check all work as it is being done. Complete temporary electrical system, including lighting, power outlets, wiring, etc., shall comply with all federal regulations as issued by the Department of Commerce and Industry Services dealing with safety and health for construction projects and any portions of state and local safety and health regulations that are more stringent. Provide a minimum of 1 outlets for small power tools for each 1,000 square feet of floor space. Circuits shall be 20 amp, single pole, 120 volt, single phase, with a maximum of 5 outlets per circuit. Ground fault protection shall be provided in accordance with Paragraph 305-6 of the National Electrical Code. Electrical Subcontractor to provide 220 volt, G.F.I. protected, temporary power for masonry operations; Electrical Subcontractor to provide power to Erhardt Construction's office facility.
5. Subcontractors requiring 120 volt, localized lighting, and single phase power shall furnish their own extension cords and lamps. The Electrical Subcontractor shall furnish wiring and lamps for general temporary lighting and power distribution only.

6. Subcontractors shall be allowed to use the service provided for general temporary lighting and fractional horsepower hand tools at no cost to them.
7. Subcontractors shall compensate the Electrical Subcontractor for wiring for construction equipment which requires circuits larger than 20 amp, 120 volt, single phase. Arrangements shall be made before this type of equipment is used.
8. Subcontractors requiring lighting or other electrical service outside of the building, other than for temporary offices, shall pay for the installation and removal or service, maintenance charges, and energy consumed. Note: Electrical resistance heating and air conditioning may not be used.
9. Subcontractors requiring services for construction equipment and testing in excess of the capacity of the temporary construction service shall make their own arrangements and pay all costs.
10. Temporary power wiring systems shall be removed after completion of the permanent electrical system and building wiring. Permanent receptacles may be used during finishing work, except this wiring shall not be used for motors larger than ½ horsepower or for welding equipment. Power for larger motors and welding equipment shall be provided by special circuits to mains of electrical panels at the expense of Subcontractors requiring them, provided that special permission is obtained from Erhardt Construction and the installation is made by the Electrical Subcontractor.
11. Cost of Temporary Electrical Energy:
  - A. The cost of electrical energy furnished by the utility and consumed for construction purposes shall be paid by Erhardt Construction unless otherwise provided herein.

**TEMPORARY LIGHTING**

1. Temporary lighting system shall be circuited and controlled so that the lighting level in each portion or floor of the building can be reduced to provide security lighting during nonworking hours and on weekends and holidays. The level of lighting for security purposes shall be in accordance with all federal, state, and local regulations. The Electrical Subcontractor shall be responsible for the control of the temporary lighting, such that the lighting is turned on at the beginning of each workday and the normal working lighting level is reduced to the security and safety lighting levels at the end of each workday.
2. Temporary lighting systems shall be relocated and maintained during and following ceiling installation or as required by sequence of construction. After the permanent ceiling mounted lighting fixtures are installed and connected to the permanent distribution system, they shall be lamped by the Electrical Subcontractor and used for construction lighting. All burned out or defective lamps and/or ballasts shall be replaced by the Electrical Subcontractor at the time of substantial completion of the project.

**TEMPORARY VENTILATION**

1. The Mechanical Subcontractor shall provide ventilation of the enclosed space for workers in accordance with state and federal occupational safety and health standards or other applicable laws. Subcontractor shall also provide ventilation of the enclosed space as required to facilitate drying of plaster, poured decks and floors, or other materials requiring ventilation in accordance with manufacturer's directions. If the permanent ventilation system is used, this Subcontractor shall assume full responsibility for maintenance of the permanent equipment and shall keep the system clean, furnish and change filters as needed, and turn the complete new heating/ventilation system over to the Owner in a clean condition when the project is completed. Permanent equipment shall not be used for temporary ventilation unless maintained and operated as follows:
  - A. Return air ducts shall not be used.
  - B. All supply air to each unit shall be filtered. New filters shall be provided at occupancy.
  - C. Filters shall be constantly checked and changed when necessary.
  - D. New filters shall be provided at occupancy.
  - E. New filters shall be provided at occupancy.
2. The use of the air conditioning system shall not be available to the Subcontractors during the construction period and shall only be operated for start-up, testing, and adjustment.

**TELEPHONE SERVICE**

1. Each Subcontractor to provide, maintain, and pay for telephone and facsimile service to field office at time or project mobilization.

**TEMPORARY WATER SERVICE**

1. The plumbing bid package Subcontractor shall supply all water required for construction activities.
2. Each individual Subcontractor shall make arrangements for temporary connections necessary to perform its scope of work.
3. Plumbing Subcontractor to furnish and install a back-flow preventer approved by public health department and utility company when connecting into existing water service. Unless otherwise provided for in the contract documents, remove back-flow preventer at completion of construction or sooner when approved by public authorities.
4. The Plumbing Subcontractor shall provide and maintain piping and a minimum of 2 remotely located hose bibs for use by all Subcontractors. Each location shall be provided with a double hose connection.
5. Each Subcontractor shall provide their own hose(s) and potable drinking water.

6. Cost for temporary water (excluding installation, maintenance, removal, permits, and fees) shall be included in the base bid and paid for by Erhardt Construction.

**TEMPORARY SANITARY FACILITIES**

1. Erhardt Construction shall provide and maintain facilities and enclosures in sufficient quantities and locations as determined by the number of workers and operations on site. Provide separate facilities for men and women.
2. When permanent facilities become available, install temporary fixtures and remove portable toilets. Just prior to occupancy, remove temporary fixtures and install permanent fixtures.
3. Maintain in clean and sanitary condition.
4. Toilet facilities in existing building shall not be available at anytime for Subcontractor use.

**BARRIERS**

1. Erhardt Construction as required by its operations, shall provide barriers or fencing to prevent unauthorized entry to construction areas, to protect existing facilities and adjacent properties from damage, and to prevent injuries.
2. Each Subcontractor shall provide barriers, railings, and kick plates as required by their operations and by safety regulations.
3. Erhardt Construction will provide barricades and covered walkways required by governing authorities for public rights-of-way and for public access to existing building.

**EXTERIOR ENCLOSURES - BY ERHARDT CONSTRUCTION****INTERIOR ENCLOSURES - BY ERHARDT CONSTRUCTION****PROTECTION OF INSTALLED WORK**

1. Each Subcontractor shall protect installed work and provide special protection where specified in individual specification sections.
2. Provide protective coverings for walls, projections, jambs, soffits, openings, ceilings, and floors.
3. Erhardt Construction shall prohibit traffic or storage upon waterproofed or roofed surfaces. When work over said areas is required, the Subcontractor requiring access shall provide and maintain plywood protection approved by the roofing and/or waterproofing Subcontractor.
4. Prohibit traffic on landscaped areas.

**SECURITY**

1. Each Subcontractor shall be responsible to provide their own security and facilities to protect his/her trailers, equipment, and work from unauthorized entry, vandalism, or theft.
2. Work with Owner to maintain security to occupied building areas.

**ACCESS ROADS AND PARKING**

1. Erhardt Construction will designate on-site parking areas. Reference Site Logistics Plan.
2. Existing drives shall be maintained for Owner use at all times.
3. The Earthwork Subcontractor shall maintain (existing) temporary roads accessing public thoroughfares to serve construction area.
4. The Earthwork Subcontractor shall re-grade as required to allow for access by all Subcontractors.
5. Erhardt Construction will provide traffic control signs including stop, speed limit, no parking, etc.
6. Existing on site paved roads shall not be used for construction traffic unless permitted, maintained, and restored as directed by Erhardt Construction.
7. Required vehicular access and selected parking areas for the continued occupancy of the existing facilities, as well as access for fire fighting and emergency equipment must be maintained at all times.
8. The Sitework Subcontractor shall provide a wheel washing station suitable to prevent mud from being carried onto such adjacent paved streets. All trucks or other vehicles leaving the site at any time shall be clean of mud and dirt clinging to the vehicle. The cleaning of the vehicle is the responsibility of the Subcontractor responsible for the vehicle.
9. Subcontractors failing to adequately clean vehicles, or otherwise causing dirt or debris to be deposited on any public street or highway, shall be held responsible for all costs in connection with the cleaning thereof, whether performed by the Subcontractor, Erhardt Construction, or at the direction of any public authority having jurisdiction. Additionally, the Subcontractor shall be fined \$250.00 per occurrence in addition to any fines imposed by authorities having jurisdiction.
10. Access Roads and Vehicles: The Sitework Subcontractor shall provide a temporary road to achieve all-weather access onto the site from public thoroughfares. The Sitework Subcontractor shall provide temporary, all-weather access to the buildings. Any Subcontractor requiring special access roads shall provide, maintain and remove such roads at no additional cost to the Sitework Subcontractor. The location of special access roads shall be approved by Erhardt Construction.
11. Erhardt Construction shall remove snow as required to allow for access by all Subcontractors.
12. Existing parking areas designed for other use during construction shall not be used for Subcontractor parking or other construction related purposes at any time.

**PROJECT CLEANING**

1. Each Subcontractor shall perform daily cleanup of work to the dumpsters. Subcontractors shall leave work areas clean and free of all debris at the end of each day. If the Subcontractor fails to comply with the requirements after 24 hours' notice, Erhardt Construction will perform this requirement with all associated costs being deducted from the respective contract amount.
2. Each Friday, each Subcontractor shall perform an overall cleanup of the entire site, including a general broom cleaning of the building. All debris and rubbish shall be removed from the site each week, or more often, as necessary.
3. On site burning or burial of debris and rubbish is prohibited. All debris and rubbish shall be disposed of in accordance with rules and regulations governing recyclable materials, hazardous materials, containers, etc. Title to debris and rubbish shall not be transferred from Subcontractor to Owner.

**PROJECT IDENTIFICATION**

1. Erhardt Construction may provide project sign of exterior grade plywood and wood frame construction, painted, to Architect/Engineer's design and colors.
2. Erhardt Construction shall erect such sign on site at a location established by Owner/Architect.
3. No other construction signs will be allowed except those required for traffic control, safety, and security or as set forth herein.

**REMOVAL OF UTILITIES, FACILITIES & CONTROLS**

1. Installing Subcontractor shall remove temporary above grade or buried utilities, equipment, temporary facilities, and materials prior to final application for payment or when directed by the Owner or Erhardt Construction.
2. Remove underground installations to a minimum depth of 2 feet below finished grade on floor.
3. Clean and repair damage caused by installation or use of temporary work.
4. Restore existing facilities used during construction to original condition. Restore permanent facilities used during construction to specified condition.



**SAFETY**

1. All trucks leaving the site with materials or loose debris shall be loaded in a manner that will prevent dropping of materials on streets, and when necessary, shall have suitable covering fastened over the load before they enter surrounding paved streets. Trucks bringing materials over paved streets to the site shall be similarly loaded and removed.
2. Each Subcontractor shall furnish to Erhardt Construction a copy of their Company Safety Program prior to starting work.
3. Project will be 100% hardhat and 100% safety glasses site.
4. Steel workers and workers in lifts will be required to be tied off 100%.
5. Clothing
  - A. Subcontractors are required to wear work clothing that will allow them to work comfortably, yet efficiently. Loose fitting or torn clothing can endanger your safety and will not be permitted. At a minimum, short sleeve shirts and long pants must be worn at all times. Heavy sole, leather work shoes must be worn; street shoes, tennis shoes, running shoes or loafers are not acceptable. Failure to comply with this requirement will result in immediate removal from job site.

END OF SECTION 015000

**GENERAL**

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

**SUMMARY**

1. Section includes general administrative and procedural requirements governing execution of the Work including, but not limited to, the following:
  - A. Layout of the Work
  - B. Installation of the Work.
  - C. Cutting and patching.
  - D. Coordination of Owner-installed products.
  - E. Progress cleaning.
  - F. Starting and adjusting.
  - G. Protection of installed construction.
2. Related Requirements:
  - A. Section 011000 "Project Requirements" for limits on use of Project site.

**QUALITY ASSURANCE**

1. Cutting and Patching: Comply with requirements for and limitations on cutting and patching of construction elements.
  - A. Structural Elements: When cutting and patching structural elements, notify Architect of locations and details of cutting and await directions from Architect before proceeding. Shore, brace, and support structural element during cutting and patching. Do not cut and patch structural elements in a manner that could change their load-carrying capacity or increase deflection.
  - B. Operational Elements: Do not cut and patch operating elements and related components in a manner that results in reducing their capacity to perform as intended or that results in increased maintenance or decreased operational life or safety.
  - C. Other Construction Elements: Do not cut and patch other construction elements or components in a manner that could change their load-carrying capacity, that results in reducing their capacity to perform as intended, or that results in increased maintenance or decreased operational life or safety.

- D. Visual Elements: Do not cut and patch construction in a manner that results in visual evidence of cutting and patching. Do not cut and patch exposed construction in a manner that would, in Architect's opinion, reduce the building's aesthetic qualities. Remove and replace construction that has been cut and patched in a visually unsatisfactory manner.

**MATERIALS**

1. In-Place Materials: Use materials for patching identical to in-place materials. For exposed surfaces, use materials that visually match in-place adjacent surfaces to the fullest extent possible.
  - A. If identical materials are unavailable or cannot be used, use materials that, when installed, will provide a match acceptable to Architect for the visual and functional performance of in-place materials.

**EXAMINATION**

1. Existing Conditions: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning sitework, investigate and verify the existence and location of underground utilities, mechanical and electrical systems, and other construction affecting the Work.
  - A. Before construction, verify the location and invert elevation at points of connection of sanitary sewer, storm sewer, and water-service piping; underground electrical services, and other utilities.
  - B. Furnish location data for work related to Project that must be performed by public utilities serving Project site.
2. Examination and Acceptance of Conditions: Before proceeding with each component of the Work, examine substrates, areas, and conditions, with Installer or Applicator present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance. Record observations.
  - A. Examine roughing-in for mechanical and electrical systems to verify actual locations of connections before equipment and fixture installation.
  - B. Examine walls, floors, and roofs for suitable conditions where products and systems are to be installed.
  - C. Verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.
3. Proceed with installation only after unsatisfactory conditions have been corrected. Proceeding with the Work indicates acceptance of surfaces and conditions.

**PREPERATION**

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

**CONSTRUCTION LAYOUT**

1. Verification: Before proceeding to lay out the Work, verify layout information shown on Drawings, in relation to the property survey and existing benchmarks. If discrepancies are discovered, notify Architect promptly.
2. Erhardt Construction shall:
  - A. Engage a land surveyor to lay out the Work using accepted surveying practices.
  - B. Establish benchmarks and control points to set lines and levels at each story of construction and elsewhere as needed to locate each element of Project.
  - C. Establish limits on use of Project site.
3. Subcontractor shall:
  - A. Establish dimensions within tolerances indicated. Do not scale Drawings to obtain required dimensions.
  - B. Inform installers of lines and levels to which they must comply.
  - C. Check the location, level and plumb, of every major element as the Work progresses.
  - D. Notify Architect when deviations from required lines and levels exceed allowable tolerances.
  - E. Close site surveys with an error of closure equal to or less than the standard established by authorities having jurisdiction.

- F. Subcontractor shall certify that elevations and locations of the work conform with the requirements of the Contract Documents.
4. Site Improvements: Locate and lay out site improvements, including pavements, grading, fill and topsoil placement, utility slopes, and rim and invert elevations.
  5. Record Log: Maintain a log of layout control work. Record deviations from required lines and levels. Include beginning and ending dates and times of surveys, weather conditions, name and duty of each survey party member, and types of instruments and tapes used. Make the log available for reference by Architect.

**FIELD ENGINEERING**

1. Reference Points: Locate existing permanent benchmarks, control points, and similar reference points before beginning the Work. Preserve and protect permanent benchmarks and control points during construction operations.

**INSTALLATION**

1. General: Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.
  - A. Make vertical work plumb and make horizontal work level.
  - B. Where space is limited, install components to maximize space available for maintenance and ease of removal for replacement.
  - C. Conceal pipes, ducts, and wiring in finished areas unless otherwise indicated.
2. Comply with manufacturer's written instructions and recommendations for installing products in applications indicated.
3. Install products at the time and under conditions that will ensure the best possible results. Maintain conditions required for product performance until Substantial Completion.
4. Conduct construction operations so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy.
5. Sequence the Work and allow adequate clearances to accommodate movement of construction items on site and placement in permanent locations.
6. Tools and Equipment: Do not use tools or equipment that produce harmful noise levels.
7. Templates: Obtain and distribute to the parties involved templates for work specified to be factory prepared and field installed. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing products to comply with indicated requirements.
8. Joints: Make joints of uniform width. Where joint locations in exposed work are not indicated, arrange joints for the best visual effect. Fit exposed connections together to form hairline joints.

9. Hazardous Materials: Use products, cleaners, and installation materials that are not considered hazardous.

**CUTTING AND PATCHING**

1. Cutting and Patching, General: Employ skilled workers to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time, and complete without delay.
  - A. Cut in-place construction to provide for installation of other components or performance of other construction, and subsequently patch as required to restore surfaces to their original condition.
2. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during installation or cutting and patching operations, by methods and with materials so as not to void existing warranties.
3. Temporary Support: Provide temporary support of work to be cut.
4. Protection: Protect in-place construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of Project that might be exposed during cutting and patching operations.
5. Adjacent Occupied Areas: Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.
6. Existing Utility Services and Mechanical/Electrical Systems: Where existing services/systems are required to be removed, relocated, or abandoned, bypass such services/systems before cutting to minimize interruption to occupied areas.
7. Cutting: Cut in-place construction by sawing, drilling, breaking, chipping, grinding, and similar operations, including excavation, using methods least likely to damage elements retained or adjoining construction. If possible, review proposed procedures with original Installer; comply with original Installer's written recommendations.
  - A. In general, use hand or small power tools designed for sawing and grinding, not hammering and chopping. Cut holes and slots neatly to minimum size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
  - B. Finished Surfaces: Cut or drill from the exposed or finished side into concealed surfaces.
  - C. Concrete and Masonry: Cut using a cutting machine, such as an abrasive saw or a diamond-core drill.
  - D. Excavating and Backfilling: Comply with requirements in applicable Sections where required by cutting and patching operations.
  - E. Mechanical and Electrical Services: Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after cutting.
  - F. Proceed with patching after construction operations requiring cutting are complete.

8. Patching: Patch construction by filling, repairing, refinishing, closing up, and similar operations following performance of other work. Patch with durable seams that are as invisible as practicable. Provide materials and comply with installation requirements specified in other Sections, where applicable.
  - A. Inspection: Where feasible, test and inspect patched areas after completion to demonstrate physical integrity of installation.
  - B. Exposed Finishes: Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will minimize evidence of patching and refinishing.
  - C. Floors and Walls: Where walls or partitions that are removed extend one finished area into another, patch and repair floor and wall surfaces in the new space. Provide an even surface of uniform finish, color, texture, and appearance. Remove in-place floor and wall coverings and replace with new materials, if necessary, to achieve uniform color and appearance.
  - D. Ceilings: Patch, repair, or rehang in-place ceilings as necessary to provide an even-plane surface of uniform appearance.
  - E. Exterior Building Enclosure: Patch components in a manner that restores enclosure to a weather tight condition and ensures thermal and moisture integrity of building enclosure.
9. Cleaning: Clean areas and spaces where cutting and patching are performed. Remove paint, mortar, oils, putty, and similar materials from adjacent finished surfaces.

**PROGRESS CLEANING**

1. General: Clean Project site and work areas daily, including common areas. Enforce requirements strictly. Dispose of materials lawfully.
  - A. Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.
  - B. Do not hold waste materials more than seven days during normal weather or three days if the temperature is expected to rise above 80 deg F (27 deg C).
  - C. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations.
2. Site: Maintain Project site free of waste materials and debris.

END OF SECTION 017300



**PART 1 - GENERAL****RELATED DOCUMENTS**

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

**SUMMARY**

1. This Section includes the instructions for and the responsibilities of each party in contract closeout.

**SUBSTANTIAL COMPLETION**

1. Contractor: When the Contractor considers that the Work or any portion of the Work is ready for its intended use, the Contractor shall submit:
  - A. Written certification to the Architect and Owner that the Work, or designated portion of the Work, is substantially complete.
  - B. A comprehensive list of items to be completed or corrected.
  - C. Request that the Architect issue a certificate of Substantial Completion.
2. Architect's Inspection: The Architect will make an inspection:
  - A. Within 10 days after receipt of certification.
  - B. Together with the Owner and Contractor.
3. Architect's Determination of Substantial Completion:
  - A. Should the Architect consider the Work or designated portion of the Work substantially complete, the following steps shall be taken:
    - i. The Contractor shall prepare and submit to the Architect a list of items to be completed or corrected as determined by the inspection.
    - ii. The Architect will prepare and deliver to the Owner:
      - 1) A tentative certificate of Substantial Completion.
      - 2) A tentative list of items to be completed or corrected before final payment.
    - iii. The Owner shall have 7 days after receipt of the tentative certificate during which to make written objection to the Architect as to any provisions of the certificate or attached list.

- iv. The Architect will, within 14 days after delivery of tentative certificate to the Owner, decide:
  - 1) Not Substantially Complete: The Architect will issue written notice to the Contractor stating reasons.
  - 2) Substantially Complete: The Architect will issue definitive certificate of Substantial Completion and a revised list of items to be corrected or completed.
- B. Should the Architect consider that the Work or designated portion of the Work is not substantially complete, the following steps shall be taken:
  - A. The Architect shall notify the Contractor in writing stating the Architect's reasons.
  - B. The Contractor shall complete the Work and send a second written notice to the Architect certifying that the Project, or designated portion of the Project, is substantially complete.
  - C. The Architect and Owner will reinspect the Work.
- 4. Division of Responsibilities:
  - A. Architect:
    - i. At the time of delivery of tentative certificate of Substantial Completion.
    - ii. Deliver to the Owner and Contractor a written recommendation as to division of responsibilities pending final payment with respect to:
      - 1) Security.
      - 2) Operation.
      - 3) Safety.
      - 4) Protection of the Work.
      - 5) Maintenance.
      - 6) Heat.
      - 7) Utilities.
      - 8) Insurance.
      - 9) Warranties
  - B. The Architect's written recommendation on division of responsibilities shall be binding on the Owner and the Contractor until final payment unless the Owner and the Contractor agree otherwise in writing and so notify the Architect prior to the Architect's issuance of a definitive certificate of Substantial Completion.

**FINAL INSPECTION**

1. Contractor Certification: Prior to final inspection, the Contractor shall submit written certification that:
  - A. The Contract Documents have been reviewed.
  - B. The Project has been inspected in compliance with the Contract Documents.
  - C. Work has been completed in accordance with the Contract Documents.
  - D. Equipment and systems have been tested in the presence of the Owner's representative
  - E. The Project is complete and ready for final inspection.
2. Architect's Inspection: The Architect will make final inspection:
  - A. Within 10 days after receipt of certification.
  - B. Together with the Owner and Contractor.
3. Architect's Determination of Final Completion:
  - A. Should the Architect consider the Work complete and ready for final payment in accordance with the requirements of the Contract Documents, the Architect shall request the Contractor to make Project closeout submittals.
  - B. Should the Architect consider the Work not complete and ready for final payment:
    - i. The Architect shall notify the Contractor in writing stating the reasons.
    - ii. Contractor:
      - 1) Take immediate steps to remedy the stated deficiencies.
      - 2) Send a second written notice to the Architect certifying that the Work is complete.
    - iii. The Architect and Owner will reinspect the Work.

**CLOSEOUT SUBMITTALS**

1. OPERATION AND MAINTENANCE DATA
  - A. All contractors performing work on the Project shall be required to provide as part of their trade division closeout documents a directory of suppliers for all products used by the contractor on the Project. The directory shall indicate the products provided and the supplier's name, telephone number, fax number and address.
  - B. The requirements of this section shall be part of the closeout requirements for the project and required as part of Final Completion, therefore no final payments to the Contractor and their subcontractors shall be made until this requirement is fulfilled along with all other project closeout requirements.

- C. Project close-out documentation such as, but not necessarily limited to, operational and maintenance records, warranties, shop drawings and technical material data, and final record drawings shall be furnished in accordance to the following minimum
    - i. One set, hard copy, of final record drawings reflecting all addenda, bulletin, field changes and other modifications made during bidding and construction. In addition to the hard copy, provide one electronic in PDF format.
    - ii. All operational and maintenance records, warranties, shop drawings and technical material data, are to be furnished electronically in PDF format.
    - iii. All electronic copies are to have fully legible text, including any illustrations, charts and diagrams.
    - iv. Require that close-out documentation submittals be coordinated with Commissioning Agent.
  - D. All attic stock is to be delivered, to the Owner, at one time along with the Architect checklist indicating all items provided.
  - E. Attic stock to be provided for floor and ceiling materials, plumbing equipment, toilet equipment, tile, filters, electrical devices and fuses and hardware. Provide stock in accordance with the schedule below.
  - F. The Architect shall, as part of the project punch list and closeout, prepare a checklist of all attic stock items required for the specific project in accordance with the schedule of requirements listed below. The checklist shall identify each item furnished and the quantity furnished.
2. EXTRA (ATTIC STOCK) MATERIALS
- A. SCHEDULE OF REQUIRED MINIMUM ATTIC STOCK COMPONENTS
    - i. All attic stock items shall be provided in original boxes or containers. Where original boxes or containers are not available, items shall be furnished in a plain cardboard box with contents and quantity therein clearly labeled on the top and one end of the box. Loose items provided will be rejected for resubmittal in accordance with the above requirements. Exceptions are carpet, walk-off mats and appliances.

**B. DIVISION 08 - OPENINGS**

- i. Hardware: One lockset of each type used; i.e. storeroom function, classroom function, cylinder type, mortise type.
- ii. For electronic hardware:
  - 1) One power supplies
  - 2) One power transfers
- iii. Hardware attic stock shall be provided ONLY in original packaging.

**C. DIVISION 09 - FINISHES**

- i. Carpet: One box of carpet tile for each color used.
- ii. Floor tile (resilient or hard): One full box of each color used.
- iii. Wall base: One full box for each color used.
- iv. Ceramic or Quarry tile base: One complete box of each color used.
- v. Ceiling tile: Two (2) boxes of each style used in building.
- vi. Paint: One full, unopened gallon of each color used. Paint can is to be labeled with color mix number, name of company from which paint was purchased with telephone number and address, project identification, location of paint, i.e. wall paint, and a dollop of paint on paint can lid.

**D. DIVISION 21 - FIRE SUPPRESSION**

- i. Sprinkler Heads: Two, but not less than any amount as may be required by code, of each type and temperature rating used.

**E. DIVISION 23 - HVAC**

- i. Filters: One complete change out for all HVAC equipment.

**F. DIVISION 26 - ELECTRICAL**

- i. Lamps: six lamps of each style or type used. For fluorescent, provide one box of each type/wattage lamp used. This includes lamps used in other systems or equipment, such as hoods, that may be installed, even if furnished by Owner, as part of the construction contract.
- ii. Light Fixture Lenses: For fixtures that use acrylic diffusing lenses, either lay-in or wrap around, provide 3 extra lenses of each style and size used. Lenses are to be packaged in a cardboard box clearly labeled indicating contents and size thereof.
- iii. Control Device Indicator Lights: 2 of each type and color used. This requirement applies to lamps within indicator lights that have readily changeable, non-soldered connections.
- iv. Exit Signs: One sign with knock outs in place.
- v. Fuses & Circuit Breakers:
  - 1) For Distribution panels, 120/208V and 277/480 for Single phase breakers, 30 amps and less:
    - a) For each panel, supply three (3) of each amperage size fuse and/or circuit breaker where there are 10 or more breakers and/or fuses of the same size in the panel.
    - b) For each panel, supply one (1) of each amperage size fuse and/or circuit breaker where there are less than 10 or more breakers and/or fuses of the same size in the panel.
- vi. All attic stock items shall be provided in original boxes or containers. Where original boxes or containers are not available, items shall be furnished in a plain cardboard box with contents and quantity therein clearly labeled on the top and one end of the box. Loose items provided will be rejected for re submittal in accordance with the above requirements.

**G. DIVISION 28- ELECTRONIC SAFETY & SECURITY**

- i. Smoke & Heat Detectors: six of each type used.
- ii. Fire Alarm Audible and Strobe Devices: 2 of each type and style used.

### 3. WARRANTY

- A. **SUBCONTRACTORS:** Once a Certificate of Substantial Completion has been received, all subcontractors are required to submit at minimum, a one-year warranty guaranteeing their work from defects caused by labor and/or materials.
  - i. Additional warranties may be requested from the manufacturer of products used on this project, under your scope & their applicable specification sections, guaranteeing the product from defects for a set period of time. These warranties will be submitted along with the general 1 year warranty at the end of this project.
- B. Warranty Submittal information is found under the Technical Specification sections.
- C. The Contractor has a right to hold any partial payment or retainage on a subcontractor until all warranties, attic stock, as-builts and O&M Manuals are submitted and approved by the Owner.

### EVIDENCE OF PAYMENTS AND RELEASE OF LIENS

#### 1. AFFIDAVITS

- A. Submit with final Application for Payment an affidavit of payment of debts and release of claims using AIA Document G706.
- B. Affidavit shall include:
  - i. The Contractor's release or waiver of lien using AIA Document G706A.
  - ii. Consent of surety of final payment using AIA Document G707.
  - iii. Separate releases or waivers of liens for Subcontractors, Suppliers and others with lien rights against property of the Owner together with a list of those parties.

#### 2. EXECUTION

- A. All submittals shall be duly executed before delivery to the Architect.

### FINAL ADJUSTMENT OF ACCOUNTS

#### 1. FINAL STATEMENT

- A. Submit a final statement of accounting, which reflects all adjustments, to the Architect. This statement shall contain the following:
  - i. Original Contract Sum
  - ii. Additions and deductions.
  - iii. Total Contract Sum as adjusted.
  - iv. Previous payments.
  - v. Sum remaining due.



**2. FINAL CHANGE ORDER**

- A. The Architect will prepare a final Change Order reflecting approved adjustments to the Contract Sum not previously made by Change Orders.

**FINAL APPLICATION FOR PAYMENT**

1. The Contractor shall submit a final Application for Payment in accordance with the requirements of the Contract Documents.
2. Disposition of Final Application for Payment:
  - A. If the final Application for Payment and the Work are acceptable in accordance with the
    - i. The Architect will, within 10 days after receipt of the Application for Payment:
      - 1) Submit to the Owner a written recommendation for payment.
      - 2) Submit to the Owner and Contractor a written notice that the Work is acceptable subject to the provisions of the General Conditions.
    - ii. The Owner will, within 30 days after receipt of the Application for Payment and the Architect's recommendation in accordance with the Contract Documents, pay to the Contractor the amount recommended.
  - B. If the Application for Payment, the Work or both are unacceptable:
    - i. The Architect will return the Application for Payment to the Contractor, indicating in writing the reasons for refusing to recommend final payment.
    - ii. The Contractor shall make the necessary corrections and resubmit the Application for Payment.
  - C. Final Completion Delayed:
    - i. Upon receipt of the Contractor's final Application for Payment and recommendation by the Architect, the Owner shall make payment of the balance due for that portion of the Work fully completed and accepted if the Architect confirms that final completion of the Work is significantly delayed through no fault of the Contractor.
    - ii. Payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of claims.
    - iii. The Contractor shall submit with the Application for Payment written consent of surety if the remaining balance to be held by the Owner for Work not fully completed or corrected is less than the retainage stipulated in the Agreement.

END OF SECTION 017700

### GENERAL

1. Section includes administrative and procedural requirements for preparing operation and maintenance manuals, including the following:
  - A. Operation and maintenance documentation directory.
  - B. Emergency manuals.
  - C. Operation manuals for systems, subsystems, and equipment.
  - D. Product maintenance manuals.
  - E. Systems and equipment maintenance manuals.

### CLOSEOUT SUBMITTALS

1. Manual Content: Operations and maintenance manual content is specified in individual Specification Sections to be reviewed at the time of Section submittals. Submit reviewed manual content formatted and organized as required by this Section.
  - A. Where applicable, clarify and update reviewed manual content to correspond to revisions and field conditions.
2. Format: Submit operations and maintenance manuals in the following format:
  - A. PDF electronic file. Assemble each manual into a composite electronically indexed file. Submit on digital media acceptable to Architect.
    - i. Name each indexed document file in composite electronic index with applicable item name. Include a complete electronically linked operation and maintenance directory.
    - ii. Enable inserted reviewer comments on draft submittals.
3. Manual Submittal: Submit each manual in final form prior to requesting inspection for Substantial Completion and at least 5 days before commencing demonstration and training. Architect will return copy with comments.
  - A. Correct or revise each manual to comply with Architect's comments. Submit copies of each corrected manual within 5 days of receipt of Architect's comments and prior to commencing demonstration and training.

### REQUIREMENTS FOR EMERGENCY, OPERATION & MAINTENANCE MANUALS

1. Directory: Prepare a single, comprehensive directory of emergency, operation, and maintenance data and materials, listing items and their location to facilitate ready access to desired information.
2. Organization: Unless otherwise indicated, organize each manual into a separate section for each system and subsystem, and a separate section for each piece of equipment not part of a system. Each manual shall contain the following materials, in the order listed:
  - A. Title page.
  - B. Table of contents.
  - C. Manual contents.

3. Title Page: Include the following information:
  - A. Subject matter included in manual.
  - B. Name and address of Project.
  - C. Name and address of Owner.
  - D. Date of submittal.
  - E. Name and contact information for Contractor.
  - F. Name and contact information for Construction Manager.
  - G. Name and contact information for Architect.
  - H. Name and contact information for Commissioning Authority.
    - I. Names and contact information for major consultants to the Architect that designed the systems contained in the manuals.
    - J. Cross-reference to related systems in other operation and maintenance manuals.
4. Table of Contents: List each product included in manual, identified by product name, indexed to the content of the volume, and cross-referenced to Specification Section number in Project Manual.
5. Manual Contents: Organize into sets of manageable size. Arrange contents alphabetically by system, subsystem, and equipment. If possible, assemble instructions for subsystems, equipment, and components of one system into a single binder.
6. Manuals, Electronic Files: Submit manuals in the form of a multiple file composite electronic PDF file for each manual type required.
  - A. Electronic Files: Use electronic files prepared by manufacturer where available. Where scanning of paper documents is required, configure scanned file for minimum readable file size.
  - B. File Names and Bookmarks: Enable bookmarking of individual documents based on file names. Name document files to correspond to system, subsystem, and equipment names used in manual directory and table of contents. Group documents for each system and subsystem into individual composite bookmarked files, then create composite manual, so that resulting bookmarks reflect the system, subsystem, and equipment names in a readily navigated file tree. Configure electronic manual to display bookmark panel on opening file.

### OPERATION MANUALS

1. Content: In addition to requirements in this Section, include operation data required in individual Specification Sections and the following information:
  - A. System, subsystem, and equipment descriptions. Use designations for systems and equipment indicated on Contract Documents.
  - B. Performance and design criteria if Contractor is delegated design responsibility.
  - C. Operating standards.
  - D. Operating procedures.
  - E. Operating logs.

- F. Wiring diagrams.
  - G. Control diagrams.
  - H. Piped system diagrams.
    - I. Precautions against improper use.
    - J. License requirements including inspection and renewal dates.
2. Descriptions: Include the following:
- A. Product name and model number. Use designations for products indicated on Contract Documents.
  - B. Manufacturer's name.
  - C. Equipment identification with serial number of each component.
  - D. Equipment function.
  - E. Operating characteristics.
  - F. Limiting conditions.
  - G. Performance curves.
  - H. Engineering data and tests.
    - I. Complete nomenclature and number of replacement parts.
3. Operating Procedures: Include the following, as applicable:
- A. Startup procedures.
  - B. Equipment or system break-in procedures.
  - C. Routine and normal operating instructions.
  - D. Regulation and control procedures.
  - E. Instructions on stopping.
  - F. Normal shutdown instructions.
  - G. Seasonal and weekend operating instructions.
  - H. Required sequences for electric or electronic systems.
    - I. Special operating instructions and procedures.
4. Systems and Equipment Controls: Describe the sequence of operation, and diagram controls as installed.
5. Piped Systems: Diagram piping as installed, and identify color-coding where required for identification.

### PRODUCT MAINTENANCE MANUALS

1. Content: Organize manual into a separate section for each product, material, and finish. Include source information, product information, maintenance procedures, repair materials and sources, and warranties and bonds, as described below.
2. Source Information: List each product included in manual, identified by product name and arranged to match manual's table of contents. For each product, list name, address, and telephone number of Installer or supplier and maintenance service agent, and cross-reference Specification Section number and title in Project Manual.
3. Product Information: Include the following, as applicable:
  - A. Product name and model number.
  - B. Manufacturer's name.
  - C. Color, pattern, and texture.
  - D. Material and chemical composition.
  - E. Reordering information for specially manufactured products.
4. Maintenance Procedures: Include manufacturer's written recommendations and the following:
  - A. Inspection procedures.
  - B. Types of cleaning agents to be used and methods of cleaning.
  - C. List of cleaning agents and methods of cleaning detrimental to product.
  - D. Schedule for routine cleaning and maintenance.
  - E. Repair instructions.
5. Repair Materials and Sources: Include lists of materials and local sources of materials and related services.
6. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.

### SYSTEMS & EQUIPMENT MAINTENANCE MANUALS

1. Content: For each system, subsystem, and piece of equipment not part of a system, include source information, manufacturers' maintenance documentation, maintenance procedures, maintenance and service schedules, spare parts list and source information, maintenance service contracts, and warranty and bond information, as described below.
1. Source Information: List each system, subsystem, and piece of equipment included in manual, identified by product name and arranged to match manual's table of contents. For each product, list name, address, and telephone number of Installer or supplier and maintenance service agent, and cross-reference Specification Section number and title in Project Manual.

2. **Manufacturers' Maintenance Documentation:** Manufacturers' maintenance documentation including the following information for each component part or piece of equipment:
  - A. Standard maintenance instructions and bulletins.
  - B. Drawings, diagrams, and instructions required for maintenance, including disassembly and component removal, replacement, and assembly.
  - C. Identification and nomenclature of parts and components.
  - D. List of items recommended to be stocked as spare parts.
3. **Maintenance Procedures:** Include the following information and items that detail essential maintenance procedures:
  - A. Test and inspection instructions.
  - B. Troubleshooting guide.
  - C. Precautions against improper maintenance.
  - D. Disassembly; component removal, repair, and replacement; and reassembly instructions.
  - E. Aligning, adjusting, and checking instructions.
  - F. Demonstration and training video recording, if available.
4. **Maintenance and Service Schedules:** Include service and lubrication requirements, list of required lubricants for equipment, and separate schedules for preventive and routine maintenance and service with standard time allotment.
5. **Spare Parts List and Source Information:** Include lists of replacement and repair parts, with parts identified and cross-referenced to manufacturers' maintenance documentation and local sources of maintenance materials and related services. **Maintenance Service Contracts:** Include copies of maintenance agreements with name and telephone number of service agent.
6. **Warranties and Bonds:** Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.

### MANUAL PREPARATION

1. **Emergency Manual:** Assemble a complete set of emergency information indicating procedures for use by emergency personnel and by Owner's operating personnel for types of emergencies indicated.
2. **Product Maintenance Manual:** Assemble a complete set of maintenance data indicating care and maintenance of each product, material, and finish incorporated into the Work.
3. **Operation and Maintenance Manuals:** Assemble a complete set of operation and maintenance data indicating operation and maintenance of each system, subsystem, and piece of equipment not part of a system.

4. **Manufacturers' Data:** Where manuals contain manufacturers' standard printed data, include only sheets pertinent to product or component installed. Mark each sheet to identify each product or component incorporated into the Work. If data include more than one item in a tabular format, identify each item using appropriate references from the Contract Documents. Identify data applicable to the Work and delete references to information not applicable.
5. **Drawings:** Prepare drawings supplementing manufacturers' printed data to illustrate the relationship of component parts of equipment and systems and to illustrate control sequence and flow diagrams. Coordinate these drawings with information contained in record Drawings to ensure correct illustration of completed installation.
  - A. Do not use original project record documents as part of operation and maintenance manuals.

END OF SECTION 017820



**GENERAL**

1. Section includes administrative and procedural requirements for project record documents, including the following:
  - A. Record Drawings.
  - B. Record Specifications.
  - C. Record Product Data.
2. Related Requirements:
3. Section 017820 "Operation and Maintenance Data" for operation and maintenance manual requirements.

**CLOSEOUT SUBMITTALS**

1. Record Drawings: Comply with the following:
  - A. Number of Copies: Submit one set(s) of marked-up record prints and a PDF electronic file of scanned record prints.
2. Record Specifications: Submit one paper copy annotated PDF electronic files of Project's Specifications, including addenda and contract modifications.
3. Record Product Data: Submit one paper copy annotated PDF electronic files and directories of each submittal.

**RECORD DRAWINGS**

1. Record Prints: Maintain one set of marked-up paper copies of the Contract Drawings and Shop Drawings, incorporating new and revised Drawings as modifications are issued.
  - A. Preparation: Mark record prints to show the actual installation where installation varies from that shown originally. Require individual or entity who obtained record data, whether individual or entity is Installer, subcontractor, or similar entity, to provide information for preparation of corresponding marked-up record prints.
    - i. Give particular attention to information on concealed elements that would be difficult to identify or measure and record later.
    - ii. Record data as soon as possible after obtaining it.
    - iii. Record and check the markup before enclosing concealed installations.
  - B. Mark the Contract Drawings and Shop Drawings completely and accurately. Use personnel proficient at recording graphic information in production of marked-up record prints.
  - C. Mark record sets with erasable, red-colored pencil. Use other colors to distinguish between changes for different categories of the Work at same location.
  - D. Note Construction Change Directive numbers, alternate numbers, Change Order numbers, and similar identification, where applicable.

2. Format: Identify and date each record Drawing; include the designation "PROJECT RECORD DRAWING" in a prominent location.
  - A. Record Prints: Organize record prints and newly prepared record Drawings into manageable sets. Bind each set with durable paper cover sheets. Include identification on cover sheets.
  - B. Format: Annotated PDF electronic file with comment function enabled.
  - C. Record Digital Data Files: Organize digital data information into separate electronic files that correspond to each sheet of the Contract Drawings. Name each file with the sheet identification. Include identification in each digital data file.
  - D. Identification: As follows:
    - i. Project name.
    - ii. Date.
    - iii. Designation "PROJECT RECORD DRAWINGS".
    - iv. Name of Architect.
    - v. Name of Contractor.

**RECORD SPECIFICATIONS**

1. Preparation: Mark Specifications to indicate the actual product installation where installation varies from that indicated in Specifications, addenda, and contract modifications.
  - A. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
  - B. Mark copy with the proprietary name and model number of products, materials, and equipment furnished, including substitutions and product options selected.
  - C. Record the name of manufacturer, supplier, Installer, and other information necessary to provide a record of selections made.
  - D. Note related Change Orders, record Product Data, and record Drawings where applicable.
2. Format: Submit record Specifications as annotated PDF electronic file.

**RECORD PRODUCT DATA**

1. Preparation: Mark Product Data to indicate the actual product installation where installation varies substantially from that indicated in Product Data submittal.
  - A. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.

- B. Include significant changes in the product delivered to Project site and changes in manufacturer's written instructions for installation.
  - C. Note related Change Orders, record Specifications, and record Drawings where applicable.
2. Format: Submit record Product Data as annotated PDF electronic file.

**RECORDING AND MAINTENANCE**

1. Recording: Maintain one copy of each submittal during the construction period for project record document purposes. Post changes and revisions to project record documents as they occur; do not wait until end of Project.
2. Maintenance of Record Documents and Samples: Store record documents and Samples in the field office apart from the Contract Documents used for construction. Do not use project record documents for construction purposes. Maintain record documents in good order and in a clean, dry, legible condition, protected from deterioration and loss. Provide access to project record documents for Architect's reference during normal working hours.

END OF SECTION 017830

**GENERAL**

1. Section includes administrative and procedural requirements for instructing Owner's personnel, including the following:
  - A. Demonstration of operation of systems, subsystems, and equipment.
  - B. Training in operation and maintenance of systems, subsystems, and equipment.
  - C. Demonstration and training video recordings.

**INFORMATIONAL SUBMITTALS**

1. Instruction Program: Submit outline of instructional program for demonstration and training, including a list of training modules and a schedule of proposed dates, times, length of instruction time, and instructors' names for each training module. Include learning objective and outline for each training module.
  - A. Indicate proposed training modules using manufacturer-produced demonstration and training video recordings for systems, equipment, and products in lieu of video recording of live instructional module.

**QUALITY ASSURANCE**

1. Facilitator Qualifications: A firm or individual experienced in training or educating maintenance personnel in a training program similar in content and extent to that indicated for this Project, and whose work has resulted in training or education with a record of successful learning performance.
2. Instructor Qualifications: A factory-authorized service representative, complying with requirements in Section 014000 "Quality Requirements," experienced in operation and maintenance procedures and training.
3. Pre-instruction Conference: Conduct conference at Project site Review methods and procedures related to demonstration and training.

**COORDINATION**

1. Coordinate instruction schedule with Owner's operations. Adjust schedule as required to minimize disrupting Owner's operations and to ensure availability of Owner's personnel.
2. Coordinate content of training modules with content of approved emergency, operation, and maintenance manuals. Do not submit instruction program until operation and maintenance data has been reviewed and approved by Architect.

**INSTRUCTION PROGRAM**

1. Program Structure: Develop an instruction program that includes individual training modules for each system and for equipment not part of a system, as required by individual Specification Sections.
2. Training Modules: Develop a learning objective and teaching outline for each module. Include a description of specific skills and knowledge that participant is expected to master. For each module, include instruction for the following as applicable to the system, equipment, or component:
  - A. Documentation: Review the following items in detail:
    - i. Emergency manuals.
    - ii. Operations manuals.
    - iii. Maintenance manuals.
    - iv. Project record documents.
    - v. Identification systems.
    - vi. Warranties and bonds.
    - vii. Maintenance service agreements and similar continuing commitments.
  - B. Emergencies: Include the following, as applicable:
    - i. Instructions on meaning of warnings, trouble indications, and error messages.
    - ii. Instructions on stopping.
    - iii. Shutdown instructions for each type of emergency.
    - iv. Operating instructions for conditions outside of normal operating limits.
    - v. Sequences for electric or electronic systems.
    - vi. Special operating instructions and procedures.
  - C. Operations: Include the following, as applicable:
    - i. Startup Procedures.
    - ii. Equipment or system break-in procedures.
    - iii. Routine and normal operation instructions.
    - iv. Regulation and control procedures.
    - v. Control sequences.
    - vi. Safety procedures.
    - vii. Instructions on stopping.
    - viii. Normal shutdown instructions.
    - ix. Operation procedures for emergencies
    - x. Operation procedures for system, subsystem, or equipment failure.
    - xi. Seasonal and weekend operating instructions.
    - xii. Required sequences for electric or electronic systems.

- xiii. Special operating instructions and procedures.
- D. Adjustments: Include the following:
  - i. Alignments.
  - ii. Checking adjustments.
  - iii. Noise and vibration adjustments.
  - iv. Economy and efficiency adjustments.
- E. Troubleshooting: Include the following:
  - i. Diagnostic instructions.
  - ii. Test and inspection procedures.
- F. Maintenance: Include the following:
  - i. Inspection procedures.
  - ii. Types of cleaning agents to be used and methods of cleaning.
  - iii. List of cleaning agents and methods of cleaning detrimental to product.
  - iv. Procedures for routine cleaning.
  - v. Procedures for preventive maintenance.
  - vi. Procedures for routine maintenance.
  - vii. Instruction on use of special tools.
- G. Repairs: Include the following:
  - i. Diagnosis instructions.
  - ii. Repair instructions
  - iii. Disassembly; component removal, repair, and replacement; and reassembly instructions.
  - iv. Instructions for identifying parts and components.
  - v. Review of spare parts needed for operation and maintenance.

**PREPARATION**

1. Assemble educational materials necessary for instruction, including documentation and training module. Assemble training modules into a training manual organized in coordination with requirements in Section 017823 "Operation and Maintenance Data."

**INSTRUCTION**

1. Facilitator: Engage a qualified facilitator to prepare instruction program and training modules, to coordinate instructors, and to coordinate between Contractor and Owner for number of participants, instruction times, and location.

2. Engage qualified instructors to instruct Owner's personnel to adjust, operate, and maintain systems, subsystems, and equipment not part of a system.
  - A. Architect will furnish an instructor to describe basis of system design, operational requirements, criteria, and regulatory requirements.
  - B. Owner will furnish an instructor to describe Owner's operational philosophy.
  - C. Owner will furnish Contractor with names and positions of participants.
2. Scheduling: Provide instruction at mutually agreed on times. For equipment that requires seasonal operation, provide similar instruction at start of each season.
  - A. Schedule training with Owner with at least seven days' advance notice.
3. Training Location and Reference Material: Conduct training on-site in the completed and fully operational facility using the actual equipment in-place. Conduct training using final operation and maintenance data submittals.

END OF SECTION 017900