ELEVATUS
ARCHITECTURE

A D D E N D U M

Project No.: 2301106
Project: WCSC Milford Elementary

Addendum No: 2
Date: 07-16-2024

TO: ALL BIDDERS OF RECORD

ADDENDUM NO. 2, to Drawings and Specifications dated 06-21-2024, for the new Milford Elementary School for the Wawasee Community School Corporation; as prepared by ELEVATUS Architecture, 111 E. Wayne Street, Suite 555, Fort Wayne, IN 46802

This ADDENDUM shall hereby be and become a part of the Contract Documents the same as if originally bound thereto.

The following clarifications, amendments, additions, revisions, changes, and modifications change the original Contract Documents only in the amount and to the extent hereinafter specified and set forth in this ADDENDUM.

Each Bidder shall acknowledge receipt of this ADDENDUM on the Bid Form.

PROJECT MANUAL:

ITEM NO. 1.00 - PROJECT MANUAL, VOLUME 1

A. See supporting Documentation from Michael Kinder & Sons for revisions to Volume 1 of the Project Manual

ITEM NO. 1.01 - PROJECT MANUAL, 00 01 10 Table of Contents

A. Refer to revised Section 00 01 10 TOC attached to this Addendum No. 2.

ITEM NO. 1.02 - PROJECT MANUAL, 06 41 10 Millwork

A. Refer to revised Section 06 41 10 attached to this Addendum No. 2.

ITEM NO. 1.03 - PROJECT MANUAL, 07 22 00 Roof and Deck Insulation

A. Refer to revised Section 07 22 00 attached to this Addendum No. 2.

ITEM NO. 1.04 - PROJECT MANUAL, 07 54 00 Fully Adhered PVC Sheet Roofing

A. Refer to revised Section 07 54 00 attached to this Addendum No. 2.

ITEM NO. 1.05 - PROJECT MANUAL, 07 92 00 Joint Sealants

A. Refer to revised Section 07 92 00 attached to this Addendum No. 2.

ITEM NO. 1.06 - PROJECT MANUAL, 08 41 13 Aluminum Framed Entrances and Storefronts

A. Refer to revised Section 08 41 13 attached to this Addendum No. 2.

ITEM NO. 1.07 - PROJECT MANUAL, 08 51 13 Aluminum Windows

A. Refer to revised Section 08 51 13 attached to this Addendum No. 2.

ITEM NO. 1.08 - PROJECT MANUAL, 08 80 00 Glazing

A. Refer to revised Section 08 80 00 attached to this Addendum No. 2.

ITEM NO. 1.09 - PROJECT MANUAL, 09 29 00 Gypsum Board

A. Refer to revised Section 09 29 00 attached to this Addendum No. 2.

ITEM NO. 1.10 - PROJECT MANUAL, 09 30 13 Tiling

A. Refer to revised Section 09 30 13 attached to this Addendum No. 2.

ITEM NO. 1.11 - PROJECT MANUAL, 09 64 66 Wood Athletic Flooring

A. Refer to revised Section 09 64 66 attached to this Addendum No. 2.

ITEM NO. 1.12 - PROJECT MANUAL, 09 67 23 Resinous Flooring

A. Refer to revised Section 09 67 23 attached to this Addendum No. 2.

ITEM NO. 1.13 - PROJECT MANUAL, 09 72 00 Wall Coverings

A. Refer to revised Section 09 72 00 attached to this Addendum No. 2.

ITEM NO. 1.14 - PROJECT MANUAL, 12 32 16 Manufactured Plastic Laminate-Clad Casework

A. Refer to revised Section 12 32 16 attached to this Addendum No. 2.

DRAWINGS:

ITEM NO. 2.01 – Plumbing/Mechanical Addendum

A. See supporting documentation

Submitted By:

Samuel R. Schaust, AIA

ELEVATUS
ARCHITECTURE

cc: ☐ File: G:\002023\2301106 WCSC Milford Elementary School\0800 Bidding\0810 Addenda\Addendum #2\2024-07-16_WCSC Milford Elementary_Addendum #2_Write-up.docx
☐ Owner:
☐ Contractor:
☐ Consultant:
☐ Consultant:

Milford Elementary School - New Building

July 16, 2024

ADDENDUM NO. 2

This addendum is issued as a supplement to the plans and specifications and shall be considered an integral part of the same.

CHANGES TO SPECIFICATIONS, VOLUME 1

Item: **2.01**
Location: Prebid Meeting
Description: Prebid Meeting Agenda/Minutes are attached and part of project bid documents, end of Volume 1.

Item: **2.02**
Location: 00 11 16 Invitation to Bid
Description: Revise 1.7 A, second sentence, to read "A Performance Bond, a separate Labor and Material Payment Bond, and Insurance in a form acceptable to Owner will be required of the successful Bidder".

Item: **2.03**
Location: Bid Form Long Lead Times Form
Description: Revised to read "These items must be submitted by the apparent low bidder within 48 hrs. of bid opening".

Item: **2.04**
Location: 00 60 00 Project Forms
Description: Added sample of subcontract agreement, Exhibit A, Exhibit C and Exhibit D.

Item: **2.05**
Location: 01 20 00 Summary of Multiple Contracts
Description: Updated TOC

Item: **2.06**
Location: 01 20 00 Summary of Multiple Contracts
Description: Retainage - At 50% completion, retainage will be reduced to 0%.

Item: **2.07**
Location: Bid Package 03a Cast in Place Concrete
Description: Cleaned up specifications on the bid package.

Item: **2.08**
Location: Bid Package 03a Cast in Place Concrete
Description: Excavation for foundations include exterior equipment pads, monument sign, flagpole, bollards, hitching rail. All spoils created by the excavation is to be removed is by this bid package.

Item: **2.09**
Location: Bid Package 03a Cast in Place Concrete
Description: Remove item 7 from Project Specific Scope

Item: **2.10**
Location: Bid Package 03a Cast in Place Concrete
Description: Combined line 6 & 7 in Supplemental Instructions.

Item: **2.11**
Location: Bid Package 03a Cast in Place Concrete
Description: Added item 23 to Project Specific Scope

Item: **2.12**
Location: Bid Package 06a General Trades
Description: Deleted Supplemental Instructions to Bidders Item 5, Item 6, Item 7 and Item 11. Also removed MKS before bid form in Line 11.

Item: **2.13**
Location: Bid Package 06a General Trades
Description: Deleted "and finished walls" on Item 24.

Item: **2.14**
Location: Bid Package 21a
Description: Bid Package 21a is added to 01 20 00 Summary of Multiple Contracts including TOC.

Item: **2.15**
Location: Bid Package 23a
Description: Fire suppression was deleted in Project Specific Scope Item 1.

Item: **2.16**
Location: Bid Package 31a Earthwork
Description: Removed Line 29, Line 30 and Line 31 from Project Specific Scope. Excavation for foundations, stoops, sidewalks, curbs, concrete paving and aprons all moved to BP 03a Concrete. Backfill, underslab stone, stone for site concrete will be the responsibility of BP 03a Concrete.

Item: **2.17**
Location: 01 23 00 Alternates
Description: Change Alternate 1 to read "State the costs to delete a payment and performance bond for this bid package equal to 100% of the contract".

Primary Engineering, Inc.
2828 Lake Ave.
Fort Wayne, Indiana 46805
260-424-0444 ph
www.primary-eng.com

MICHAEL E. LUBBEHUSEN
REGISTERED
No. PE10302397
STATE OF
INDIANA
PROFESSIONAL ENGINEER

ANDREW STEPHEN LOUDERBACK
REGISTERED
PE11700017
STATE OF
INDIANA
PROFESSIONAL ENGINEER

Addendum: **2**

Date: **7/16/2024**

Project: **Milford Elementary School**

Comm #: **23530**

The following items shall be incorporated into the specifications and drawings and are considered to be integral to the bid documents for the project. Acknowledgement of receipt of this addendum is required on the bid form.

Item #1: Drawing Sheet P-301, Enlarged Plumbing Plans

- **A.** Add Plan Note 11 for gas control valve. Refer to attached drawing revision to P-301.

Item #2: Drawing Sheet P-501, Enlarged Plumbing Plans

- **A.** Add Gas Regulator Schedule. Refer to attached drawing revision to P-501.
- **B.** Revise SK-5H faucet in Plumbing Fixture Schedule. Refer to attached drawing revision to P-501.

Item #3: Drawing Sheet M-201-A, First Floor Mechanical Plan – Unit A

- **A.** Revise exhaust grille in Gym Storage 047 and Janitor 018. Refer to attached drawing revision to M-201-A.
- **B.** Add Plan Note 15 for metal hardware cloth on HVAC openings. Refer to attached opening sizes.
- **C.** Revise OAC dimensions in Recess Storage 031. Refer to attached drawing revision.

Item #4: Drawing Sheet M-201-B, First Floor Mechanical Plan – Unit B

- **A.** Add OAC locations in Music 087. Refer to attached drawing revision to M-201-B.
- **B.** Revise supply diffuser in Storage 086. Refer to attached drawing revision to M-201-B.
- **C.** Add Plan Note 21 for metal hardware cloth on HVAC openings. Refer to attached opening sizes.
- **D.** Revise OAC dimensions in Storage 086. Refer to attached drawing revision.

Item #5: Drawing Sheet M-301, Enlarged Mechanical Plans

- **A.** Add refrigerant monitor location and associated devices. Refer to attached drawing revision to M-301.
- **B.** Add boiler room carbon monoxide sensor. Add mezzanine carbon monoxide sensor. Refer to attached drawing revision to M-301.

Item #6: Drawing Sheet M-403, Mechanical Details

A. Revise System Fill Station Detail. Refer to attached drawing revision to M-403.

Item #7: Drawing Sheet M-501, Mechanical Details

A. Apply Remarks 1 and 2 to TG-3 in Diffuser and Grille Schedule. Add EG-7. Refer to attached drawing revision to M-501.

PROJECT MANUAL

Wawasee Community School Corporation

Milford Elementary School

611 West Emeline St., Milford, IN, 46542

June 21, 2024

commission no.: 2301106

ISSUED FOR BIDS, PERMITS & CONSTRUCTION

SPECIFICATIONS Divisions 00 - 01

Volume 1 of 3

ELEVATUS
ARCHITECTURE

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NEW MILFORD ELEMENTARY SCHOOL BUILDING

NOTICE TO BIDDERS

Notice is hereby given that the Wawasee Community School Corporation and Michael Kinder & Sons, Inc, (CMc) have entered into a contract pursuant to which Michael Kinder & Sons, Inc. will be providing all of the Construction Manager as constructor (CMc) service in connection with the Milford Elementary School. Accordingly, Michael Kinder and Sons, Inc. will be receiving sealed bids from qualified contractors, as determined by Michael Kinder and Sons, Inc. in its sole and complete discretion, for the work and supply of materials for the New Milford Elementary School Building.

Milford Elementary School contractors bid will be accepted at the Wawasee Community School Corporation Administration Offices, 801 S. Sycamore Street, Syracuse, IN 46567 until 2:00 p.m. (local time) on July 25, 2024. Bids received prior to 2:00 p.m. (local time) on July 25, 2024 must be mailed and/or delivered to the Wawasee Community School Corporation Administration Offices for and on behalf of Michael Kinder and Sons, Inc. Bids will be opened and read aloud immediately after 2:00 p.m.

Bid Packages are as follows:

- Bid Package 03a Cast in Place Concrete
- Bid Package 04a Masonry
- Bid Package 05a Steel (furnish and erect)
- Bid Package 06a General Trades
- Bid Package 07a Roofing/Flashing/Sheetmetal
- Bid Package 08b Aluminum Framed Entrances and Storefronts/Aluminum Windows/Glazing
- Bid Package 09a Gyp Bd/Steel Stud Framing/APC/Acoustical Wall Trmt./Painting
- Bid Package 09b Flooring/Tiling
- Bid Package 09c Wood Athletic Flooring
- Bid Package 11a Food Service Equipment
- Bid Package 21a Fire Suppression
- Bid Package 23a Mechanical (Plumbing & HVAC)
- Bid Package 26a Electrical/Communications/Electronic Safety & Security
- Bid Package 31a Earthwork/Utilities
- Bid Package 32a Bituminous Paving (Asphalt)
- Bid Package 32b Lawns/Landscape
- Bid Package 32c Fence

A Pre-Bid Conference will be held on July 11, 2024, at 1:00 p.m. local time, at Milford Elementary School, 611 West Emeline Street, Milford, IN 46542.

All bidding and construction shall be in accordance with construction documents prepared by Elevatus Architecture and Michael Kinder and Sons, Inc., all of the terms and conditions of which are incorporated herein by reference. Bidders desiring digital access to construction and bidding documents shall email Larry Easterday of Michael Kinder and Sons, Inc. at leasterday@kindewrandsons.com to receive digital access at no costs. Bidders desiring printed documents shall pay for their own cost of printing, shipping, and handling.

Each bid shall include with such bid, a certified check or bid bond made payable to Michael Kinder and Sons, Inc. for an amount not less than five percent (5%) of the maximum bid. Should a successful bidder

withdraw its bid or fail to execute a satisfactory contract with Michael Kinder and Sons, Inc., Michael Kinder and Sons, Inc.may then declare the bid deposit or bid bond to be forfeited as liquidated damages.

Each successful bidder shall enter into a contract with Michael Kinder and Sons, Inc.

The contract will be awarded to the lowest responsive and responsible bidder complying with the conditions for bidding, provided the bid is reasonable and it is to the best interest of Michael Kinder and Sons, Inc.

Bids may be hand delivered and/or delivered by delivery service at the location listed above. Bids not reaching said location by 2:00 p.m. (local time), on July 25, 2024 will be returned unopened to the original bidder.

Michael Kinder and Sons, Inc. reserves the right to reject any and all bids or waive any or all informalities, irregularities and/or inconsistencies in, or with respect to, any or all bids.

END OF NOTICE TO BIDDERS

SECTION 00 11 16 - INVITATION TO BID

PART 1 - GENERAL

1.1 PROJECT INFORMATION

A. Notice to Bidders: Qualified bidders are invited to submit bids for Project as described in this Document according to the Instructions to Bidders.

B. Project Identification: Milford Elementary School.

1. Project Location: 611 West Emeline Street, Milford, IN 46542.

C. Owner: Wawasee Community School Corporation

1. Owner's Representative: Dr. Stephen Troyer

D. Architect: Elevatus Architecture

E. Construction Manager: Michael Kinder and Sons, Inc.

F. Project Description: Project consists of construction of a 70,000 SF new building.

G. Construction Contract: Bids will be received for the following Work:

1. See 01 21 00 Summary of Multiple Contracts

1.2 BID SUBMITTAL AND OPENING

A. Owner will receive sealed bids until the bid time and date at the location indicated below. Owner will consider bids prepared in compliance with the Instructions to Bidders issued by Owner, and delivered as follows:

1. Bid Date: July 25, 2024
2. Bid Time: 2 P.M., local time.
3. Location: Wawasee Community School Corporation Administration Offices, 801 S. Sycamore Street, Syracuse, IN 46567.

B. Bids will be thereafter publicly opened and read aloud.

1.3 BID SECURITY

A. Bid security shall be submitted with each bid in the amount of 5 percent of the bid amount. No bids may be withdrawn for a period of 60 days after opening of bids. Owner reserves the right to reject any and all bids and to waive informalities and irregularities.

1.4 PREBID CONFERENCE

A. A prebid conference for all bidders will be held at Milford Elementary School on July 11 at 1 P.M., local time. Prospective bidders are requested to attend.

1.5 DOCUMENTS

A. Printed Procurement and Contracting Documents will be available at the reprographic vendor of your choice and at your expense. Documents will be provided to prime bidders only; only complete sets of documents will be issued.

B. Online Procurement and Contracting Documents: Obtain access by contacting Larry Easterday (leasterday@kinderandsons.com) or Eastern Engineering, Builders Exchange, Dodge Room or Construct Connect.

1.6 TIME OF COMPLETION

A. Bidders shall begin the Work on receipt of the Notice to Proceed and shall complete the Work within the Contract Time.

1.7 BIDDER'S QUALIFICATIONS

A. Bidders must be properly licensed under the laws governing their respective trades and be able to obtain insurance and bonds required for the Work. A Performance Bond, a separate Labor and Material Payment Bond, and Insurance in a form acceptable to Owner will be required of the successful Bidder.

B. Preferred Subcontractors familiar with Client are as follows:

END OF SECTION 00 11 16

SECTION 00 21 13 - INSTRUCTIONS TO BIDDERS

PART 1 -

1.1 INSTRUCTIONS TO BIDDERS

A. AIA Document A701, "Instructions to Bidders," is hereby incorporated into the Procurement and Contracting Requirements by reference.

1. An electronic sample copy of AIA Document A701, "Instructions to Bidders," is available upon request to Michael Kinder and Sons, Inc.

END OF SECTION 00 21 13

DOCUMENT 002213 - SUPPLEMENTARY INSTRUCTIONS TO BIDDERS

1.1 INSTRUCTIONS TO BIDDERS

A. Instructions to Bidders for Project consist of the following:

1. AIA Document A701, "Instructions to Bidders." A copy of which is available upon request.
2. The following Supplementary Instructions to Bidders that modify and add to the requirements of the Instructions to Bidders.

1.2 SUPPLEMENTARY INSTRUCTIONS TO BIDDERS, GENERAL

A. The following supplements modify AIA Document A701, "Instructions to Bidders." Where a portion of the Instructions to Bidders is modified or deleted by these Supplementary Instructions to Bidders, unaltered portions of the Instructions to Bidders shall remain in effect.

1.3 ARTICLE 1 – DEFINITIONS

A. Delete “Agreement between the Owner and Contractor and that Agreement’s exhibits, Conditions of the Contract (General, Supplementary and other Conditions)” in second sentence. Add MKS Subcontract Agreement in it’s place.

B. Delete 1.2

1.4 ARTICLE 2 - BIDDER'S REPRESENTATIONS

A. Add Section 2.1.3.1:

1. 2.1.3.1 - The Bidder has investigated all required fees, permits, and regulatory requirements of authorities having jurisdiction and has properly included in the submitted bid the cost of such fees, permits, and requirements not otherwise indicated as provided by Owner.

B. Add Section 2.1.7:

1. 2.1.7 - The Bidder is a properly licensed Contractor according to the laws and regulations of authorities having jurisdiction and meets qualifications indicated in the Procurement and Contracting Documents.

C. Add Section 2.1.6:

1. 2.1.8 - The Bidder has incorporated into the Bid adequate sums for work performed by installers whose qualifications meet those indicated in the Procurement and Contracting Documents.

1.5 ARTICLE 3 - BIDDING DOCUMENTS

A. 3.1.2 - Delete

B. 3.2.2 - Delete “Architect” in first sentence and replace with “Construction Manager”.

C. 3.3.2.1 - Delete “Architect” in first sentence and replace with “Construction Manager”.

D. 3.3.2.1 Delete “ten” in first sentence and replace with “seven”.

E. 3.4 - Addenda:

1. 3.4.1 Add “Addenda will be distributed electronically to invited bidders and plan rooms”.

2. 3.4.4 Delete “in the Bid” and replace with “on the Bid Form”.

3. Delete Section 3.4.3 and replace with the following:

a. 3.4.3 - Addenda may be issued at any time prior to the receipt of bids.

4. Add Section 3.4.4.1:

a. 3.4.4.1 - Owner may elect to waive the requirement for acknowledging receipt of 3.4.4 Addenda as follows:

1) 3.4.4.1.1 - Information received as part of the Bid indicates that the Bid, as submitted, reflects modifications to the Procurement and Contracting Documents included in an unacknowledged Addendum.
2) 3.4.4.1.2 - Modifications to the Procurement and Contracting Documents in an unacknowledged Addendum do not, in the opinion of Owner, affect the Contract Sum or Contract Time.

1.6 ARTICLE 4 - BIDDING PROCEDURES

A. 4.1 - Preparation of Bids:

1. Add Section 4.1.1.1:

a. 4.1.1.1 - Printable electronic Bid Forms and related documents are available from the Construction Manager.

2. 4.1.5 Delete “as required by the bid form” and replace with “N/C”.

3. Add Section 4.1.9:

a. 4.1.9 - The Bid shall include unit prices when called for by the Procurement and Contracting Documents. Owner may elect to consider unit prices in the determination of award. Unit prices will be incorporated into the Contract.

4. Add Section 4.1.10:

   a. 4.1.10 - Owner may elect to disqualify a bid due to failure to submit a bid in the form requested, failure to bid requested alternates or unit prices, failure to complete entries in all blanks in the Bid Form, or inclusion by the Bidder of any alternates, conditions, limitations or provisions not called for.

5. Add Section 4.1.11:

   a. 4.1.11 - Bids shall not include sales and use taxes. Contractors shall show separately with each monthly payment application the sales and use taxes paid by them and their subcontractors in the form indicated. Reimbursement of sales and use taxes, if any, shall be applied for by Owner for the sole benefit of Owner.

B. 4.2 Bid Security

1. 4.2.1 - Bids to be a bid bond equal to 5% of total bid either by certified check or bid bond, both made payable to Michael Kinder and Sons, Inc.

2. 4.2.2 Change “Owner” to “Michael Kinder and Sons, Inc.” where shown.

3. 4.2.4 Change “Owner” to “Michael Kinder and Sons, Inc.” where shown. Add “10” to line after “beginning”.

4.

C. 4.3 - Submission of Bids:

1. 4.3.1 Add “Bids to be submitted in duplicate to location shown in 1.2 in 00 11 16 Invitation to Bid”

2. Add Section 4.3.1.2:

   a. 4.3.1.2 - Include Bidder's Contractor License Number applicable in Project jurisdiction on the face of the sealed bid envelope.

D. 4.4 - Modification or Withdrawal of Bids:

1. Add the following sections to 4.4.2:

   a. 4.4.2.1 - Such modifications to or withdrawal of a bid may only be made by persons authorized to act on behalf of the Bidder. Authorized persons are those so identified in the Bidder's corporate bylaws, specifically empowered by the Bidder's charter or similar legally binding document acceptable to Michael Kinder and Sons, Inc., or by a power of attorney, signed and dated, describing the scope and limitations of the power of attorney. Make such documentation available to Michael Kinder and Sons, Inc. at the time of seeking modifications or withdrawal of the Bid.
   b. 4.4.2.2 - Michael Kinder and Sons, Inc. will consider modifications to a bid written on the sealed bid envelope by authorized persons when such modifications comply with the following: the modification is indicated by a percent or stated amount to

be added to or deducted from the Bid; the amount of the Bid itself is not made known by the modification; a signature of the authorized person, along with the time and date of the modification, accompanies the modification. Completion of an unsealed bid form, awaiting final figures from the Bidder, does not require power of attorney due to the evidenced authorization of the Bidder implied by the circumstance of the completion and delivery of the Bid.

2. 4.4.3 Change “Architect” to “Michael Kinder and Sons, Inc.” where shown. Add “bid security will be returned to Bidder”.

E. 4.6 - Subcontractors, Suppliers, and Manufacturers List Bid Supplement:

1. Add Section 4.6:

a. 4.6 – Apparent low bidder of each bid package shall provide list of major subcontractors, suppliers, and manufacturers furnishing or installing products no later than two (2) business days following Architect's request. Include those subcontractors, suppliers, and manufacturers providing work totaling three (3) percent or more of the Bid amount. Do not change subcontractors, suppliers, and manufacturers from those submitted without approval of Architect.

1.7 ARTICLE 5 - CONSIDERATION OF BIDS

A. 5.2 - Rejection of Bids:

1. Add Section 5.2.1:

a. 5.2.1 - Michael Kinder and Sons, Inc. reserves the right to reject a bid based on Michael Kinder and Sons, Inc. and owner's evaluation of qualification information submitted following opening of bids. Michael Kinder and Sons, Inc. evaluation of the Bidder's qualifications will include: status of licensure and record of compliance with licensing requirements, record of quality of completed work, record of Project completion and ability to complete, record of financial management including financial resources available to complete Project and record of timely payment of obligations, record of Project site management including compliance with requirements of authorities having jurisdiction, record of and number of current claims and disputes and the status of their resolution, and qualifications of the Bidder's proposed Project staff and proposed subcontractors.

2. Section 5.3.1 Change “Owner” to “Michael Kinder and Sons, Inc.”.

3. Section 5.3.2 Add “and Michael Kinder and Sons, Inc.” after Owner in first sentence.

1.8 ARTICLE 6 - POSTBID INFORMATION

A. Delete 6.1

B. 6.3 - Submittals:

1. Add Section 6.3.1.4:

    a. 6.3.1.4 - Submit information requested in Sections 6.3.1.1, 6.3.1.2, and 6.3.1.3 no later than two (2) business days following Michael Kinder and Sons, Inc. request.

2. 6.3.2 Change “Architect” to “Michael Kinder and Sons, Inc.” where shown.

3. 6.3.3 Change “Architect” to “Michael Kinder and Sons, Inc.” where shown.

4. 6.3.4 Change “Architect” to “Michael Kinder and Sons, Inc.” where shown.

1.9 ARTICLE 7 - PERFORMANCE BOND AND PAYMENT BOND

A. 7.1 - Bond Requirements:

1. Add Section 7.1.1.1:

    a. 7.1.1.1 - Both a Performance Bond and a Payment Bond will be required, each in an amount equal to 100 percent of the Contract Sum.

B. 7.2 - Time of Delivery and Form of Bonds:

1. Delete the first sentence of Section 7.2.1 and insert the following:

    a. The Bidder shall deliver the required bonds to Michael Kinder and Sons, Inc. no later than (10) ten days after the date of Notice of Intent to Award and no later than the date of execution of the Contract, whichever occurs first. Michael Kinder and Sons, Inc. may deem the failure of the Bidder to deliver required bonds within the period of time allowed a default.

2. Delete Section 7.2.3 and insert the following:

    a. 7.2.3 - Bonds shall be executed and be in force on the date of the execution of the Contract.

1.10 ARTICLE 8 - FORM OF AGREEMENT BETWEEN CONSTRUCTION MANAGER AND CONTRACTOR

A. 8.1.1 – MKS Subcontract Agreement

B. Delete 8.1.2, 8.1.3, 8.1.4

C. 8.1.5 Drawings – See list at end of this section.

D. 8.1.6 Specifications - See list at end of this section.

E. 8.1.7 Addenda - See list at end of this section.

F. Delete 8.1.8

G. Delete 8.1.9

1.11 ARTICLE 9 - EXECUTION OF THE CONTRACT

A. Add Article 9:

1. 9.1.1 - Subsequent to the Notice of Intent to Award, and within 10 days after the prescribed Form of Agreement is presented to the Awardee for signature, the Awardee shall execute and deliver the Agreement to Owner through the Michael Kinder and Sons, Inc., in such number of counterparts as Owner may require.
2. 9.1.2 - Michael Kinder and Sons, Inc. may deem as a default the failure of the Awardee to execute the Contract and to supply the required bonds when the Agreement is presented for signature within the period of time allowed.
3. 9.1.3 - Unless otherwise indicated in the Procurement and Contracting Documents or the executed Agreement, the date of commencement of the Work shall be the date of the executed Agreement.
4. 9.1.4 - In the event of a default, Michael Kinder and Sons, Inc. may declare the amount of the Bid security forfeited and elect to either award the Contract to the next responsible bidder or re-advertise for bids.

END OF DOCUMENT 002213

_____ **NAME OF BIDDER**

BIDDER REMINDER LIST TO BE COMPLETED AND INCLUDED IN BID PACKAGE FOR REVIEW AT BID OPENING

	YES	NO
Have you properly and completely executed the **Bid Form**?		
Have you included the original and one copy of bid form?		
Is the **Bid Total** written in both words and figures?		
Are the **Alternate** amounts in both words and figures and noted as **Add or Deduct**? If no value, did you insert "No Change" or "N/C" on line?		
Is **PART II** of the bid form completely filled out?		
Is the Signatures Page completely filled out?		
Did you include Indiana Contractor Qualification Certification?		
Did you include Iran Investment Certification?		
Did you include unit price bid form?		
Did you include procurement lead time form?		
Is the Written **Drug Testing Plan** included?		
Did you include E Verify Affidavit?		
Did you include a payment and performance bond in your quote?		
Have you enclosed a certified check or **Bid Bond**? (Note: bond must be signed by Surety and Principal)		
If bidding **multiple packages**, a separate envelope with separate bid forms and a separate Bid Bond amount must be included for each package.		
If bidding a **Combination Bid,** a separate bid form in a separate envelope indicating on the envelope cover with packages are being combined. A combined amount bid bond is to be included in this envelope as well as any combined alternates for applicable combined bid packages.		
Have you included your company's **Financial Statement?** This can be in a separate sealed envelope.		
Will you send Contractors and Products List to the Construction Manager within **48** Hours of the Bid Opening (if apparent low bidder)?		
On the outside of the envelope containing your Bid have you indicated: • Name of project • Name of bidder • Bid package number and name. • Date and time of closing of bids		

NOTE: IF ANY OF THE REQUIRED BIDDING DOCUMENTS ARE NOT INCLUDED, DATED OR NOT PROPERLY EXECUTED, THE CONTRACTOR'S BID MAY NOT BE ACCEPTED.

CONTRACTOR'S BID FOR PUBLIC WORKS FORM NO. 96
Format (Revised 2013) (Amended for Milford Elementary School project)

MILFORD ELEMENTARY SCHOOL
BID FORM – PART I

Bidder: _____

Address: _____

Phone: _____ Estimator/Sales Person: _____

Estimator/Sales Person Email: _____

Bid Package Number: _____

Bid Package Title: _____

To: **MILFORD ELEMENTARY SCHOOL**
611 W EMELINE STREET
MILFORD, IN 46542

I have received and carefully reviewed the Contract Documents prepared and certified by:

Architect:
ELEVATUS ARCHITECTURE
111 E. WAYNE STREET SUITE 555
FORT WAYNE, IN 46802
Phone: (260) 424-9080

Construction Manager as advisor:
Michael Kinder and Sons, Inc.
6055 Innovation Blvd.
Fort Wayne, IN 46818
Phone: (260) 744-4359

In submitting this proposal, I agree to the following:

1. To hold my bid open sixty (60) days after receipt of bids.
2. To accept the provisions in the Instructions to Bidders.
3. To enter into and execute a contract in the form contained in this bid package, if awarded on the basis of this proposal, and to furnish Contract Performance, Payment, and Maintenance Bonds, if requested by Construction Manager. The cost of this bond is not included in base bid at this time.
4. To accomplish the Work in accordance with the Contract Documents.
5. To submit Certificates of Insurance for the coverage specified in the Contract Documents.

BID CONFIRMATIONS: I have examined all documents, all drawings and submit the following proposal. I have received either hard copies or via electronic format all bid documents and verify that I have reviewed all available information.

Received and include provisions for the following Addendum No. _____ Dated _____
Addendum No. _____ Dated _____
Addendum No. _____ Dated _____
Addendum No. _____ Dated _____

- Reviewed all bid packages provided in Project Manual/Bid Package Description. YES_____NO _____
- Attended Pre-Bid Conference YES _____ NO _____
- Visited the Jobsite YES _____ NO _____
- Acknowledge receipt and reviewed MKS's Subcontract and/or Purchase Order sample that was included in this bid manual and understand that edits to the contract language of the final agreement will not be allowed. Signed contract or checklist are not necessary when submitting a bid but will be required once awarded the contract.

  YES_____ NO _____
- Bidder has reviewed the Schedule provided and the intent of the schedule can be met:

  YES_____ NO _____
- Bidder has included their Written Drug Testing Plan that covers all employees of the bidder who will perform Work on the public Work project and meets or exceeds the requirements set in IC 4-13-18-5 or IC 4-13-18-6.

  YES_____ NO_____

The undersigned further agrees to furnish a bond or certified check with this Bid for an amount specified in the Notice to Bidders.

If additional units of material included in the contract are needed, the cost of units must be the same as that shown in the original contract if accepted by the governmental unit. If the bid is to be awarded on a unit basis, the itemization of the units shall be shown on a separate attachment.

The successful bidder and its Contractors, if any, shall not discriminate against or intimidate any employee, or applicant for employment, to be employed in the performance of this contract, with respect to any matter directly or indirectly related to employment because of race, religion, color, sex, national origin, or ancestry. Breach of this covenant may be regarded as a material breach of the contract.

CERTIFICATION OF USE OF UNITED STATES STEEL PRODUCTS
(if applicable)

I, the undersigned bidder, or agent as a contractor on a public Works project, understand my statutory obligation to use steel products made in the United States (I.C. 5-16-8-2). I hereby certify that I and all Contractors employed by me for this project will use U.S. steel on this project if awarded. I understand that violations hereunder may result in forfeiture of contractual payments.

ALLOWANCES: The following allowances are included in my bid as directed by my specific bid package description. List None, if not directed by specific bid package description:

$_____for _____

$_____for _____

$_____for _____

$_____for _____

BASE BID: I agree to execute the Work of the following Bid Package indicated for the lump sum amount given therein.

BID PACKAGE NUMBER: _____

BID PACKAGE DESCRIPTION: _____

DOLLAR AMOUNT: $_____

DOLLAR AMOUNT WORDS: _____

_____

COMBINATION OF BIDS: Any bidder desiring to submit a bid combining more than one bid package must first complete the separate bid package bid prior to completing the combination bid. Each combination bid must be submitted on a separate bid form and indicate on the bid form cover which packages are being combined. In addition, each separate combined bid form must include any combined alternates for the applicable combined bid packages.

COMBINATION BID PACKAGE NUMBERS: _____

BID PACKAGE DESCRIPTIONS: _____

COMBINATION DOLLAR AMOUNT: $_____

COMBINATION DOLLAR AMOUNT WORDS: _____

_____

UNSUITABLE SOILS – REMOVE AND REPLACE 2,100 CY $_____

DOLLAR AMOUNT WORDS: _____

_____

BID FORM - PART II
(For projects of $150,000 or more – IC 36-1-12-4)

These statements are to be submitted under oath by each bidder with, and as a part of, its bid. (Attach additional pages for each section as needed.)

SECTION I EXPERIENCE QUESTIONNAIRE

1. **What public Works projects has your organization completed for the period of one** (1) year prior to the date of the current bid?

Contract Amount	Class of Work	Completion Date	Name and Address of Owner

2. What public Works projects are now in process of construction by your organization?

Contract Amount	Class of Work	Completion Date	Name and Address of Owner

3. Have you ever failed to complete any Work awarded to you?_____If so, where, and why?

_____

_____

_____

4. List references from private firms for which you have performed Work.

_____

_____

_____

SECTION II PLAN AND EQUIPMENT QUESTIONNAIRE

1. Explain your plan or layout for performing proposed Work. (Examples could include a narrative of when you could begin, complete the Work, number of Workers, etc. and any other information which you believe would enable the Construction Manager to consider your bid.)

_____

_____

_____

_____

2. Please list the names and addresses of all Contractors (i.e., persons or firms outside your own firm who have performed part of the Work) that you have used on public Works projects during the past five (5) years along with a brief description of the Work done by each Contractor.

_____

_____

_____

_____

3. If you intend to sublet any portion of the Work, state the name, and addresses of each Contractor, equipment to be used by the Contractor, and whether you will require a bond. However, if you are unable to currently provide a listing, please understand a listing must be provided prior to contract approval. Until the completion of the proposed project, you are under a continuing obligation to immediately notify the Construction Manager in the event that you subsequently determine that you will use a Contractor on the proposed Work.

_____

_____

_____

_____

4. What equipment do you have available to use for the proposed Work? Any equipment used by Contractors may also be required to be listed by the Construction Manager.

_____

_____

_____

_____

5. Have you entered into contracts or received offers for all materials which substantiate the prices used in preparing your bid? If not, please explain the rationale used which corroborate the process listed.

_____

_____

_____

_____

SECTION III CONTRACTOR'S FINANCIAL STATEMENT

Attachment of bidder's financial statement is mandatory. Any bid submitted without said financial statement as required by statute shall thereby be rendered invalid. The financial statement provided hereunder to the Construction Manager must be specific enough in detail so that the Construction Manager can make a proper determination of the bidder's capability for completing the Work, if awarded.

SECTION IV CONTRACTOR NON-COLLUSION AFFIDAVIT

The undersigned bidder or agent, being duly sworn on oath, says that it has not, nor has any other member, representative, or agent of the firm, company, corporation or partnership represented by the bidder, entered into any combination, collusion or agreement with any person relative to the price to be bid by anyone at such letting nor to prevent any person from bidding nor to induce anyone to refrain from bidding, and that this bid is made without reference to any other bid and without any agreement, understanding or combination with any other person in reference to such bidding.

The undersigned bidder or agent further says that no person or persons, firms, or corporations has, have, or will receive directly or indirectly, any rebate, fee, gift, commission, or thing of value on account of such contract.

SECTION V OATH AND AFFIRMATION

I HEREBY AFFIRM UNDER THE PENALTIES OF PERJURY THAT THE FACTS AND INFORMATION CONTAINED IN THE FOREGOING BID FOR PUBLIC WORKS ARE TRUE AND CORRECT

Sole Proprietor:

IN TESTIMONY WHEREOF, the bidder has hereunto set his/her hand this_____day of _____2022.

Bidder:_____

Partnership:

IN TESTIMONY WHEREOF, the bidder has hereunto set its hand this_____day of _____2022.

Firm:_____

By:_____

Individual Names:

_____

_____

Corporation:

IN TESTIMONY WHEREOF, the bidder has hereunto set its hand this_____day of _____2022.

Corporation:_____

President:_____

Secretary:_____

(SEAL)

ACKNOWLEDGEMENT

STATE OF _____

COUNTY OF _____

Before me, a Notary Public, personally appeared the above-named

_____

Swore that the statements contained in the foregoing document are true and correct.

Subscribed and sworn to before me this_____day of_____2022

_____

Notary Public Name

My Commission Expires:_____ County of Residence: _____

ALTERNATE BIDS

I agree to execute the Work for this Bid Package indicated for the lump sum amount given therein. (MUST CIRCLE ADD or DEDUCT). Base bid amount may be increased or decreased in accordance with such of the following alternate proposals as may be selected. If there is no bid submitted for the alternate, it will be assumed that the alternate has no effect on the bidder's scope of Work.

ALTERNATE BID #1: State the cost to delete the Performance& Payment Bond to Base Bid.
ADD/DEDUCT ($ _____) _____

ALTERNATE BID #2: State the cost to delete temperature controls from your scope of work.
ADD/DEDUCT ($ _____) _____

ALTERNATE BID #3: State the cost to provide building information technology.
ADD/DEDUCT ($ _____) _____

NOTE: These items must be submitted by the apparent low bidder within 48 hrs. after bid opening. All days below refer to <u>calendar</u> days. All lead times greater than 4 weeks after receipt of LOI or contract.

1.
   Material Name/Equipment Name _____
   Shop Drawing Lead Time (calendar days) _____
   Delivery after Approved Shops received (calendar days) _____
2.
   Material Name/Equipment Name _____
   Shop Drawing Lead Time (calendar days) _____
   Delivery after Approved Shops received (calendar days) _____
3.
   Material Name/Equipment Name _____
   Shop Drawing Lead Time (calendar days) _____
   Delivery after Approved Shops received (calendar days) _____
4.
   Material Name/Equipment Name _____
   Shop Drawing Lead Time (calendar days) _____
   Delivery after Approved Shops received (calendar days) _____
5.
   Material Name/Equipment Name _____
   Shop Drawing Lead Time (calendar days) _____
   Delivery after Approved Shops received (calendar days) _____
6.
   Material Name/Equipment Name _____
   Shop Drawing Lead Time (calendar days) _____
   Delivery after Approved Shops received (calendar days) _____
7.
   Material Name/Equipment Name _____
   Shop Drawing Lead Time (calendar days) _____
   Delivery after Approved Shops received (calendar days) _____
8.
   Material Name/Equipment Name _____
   Shop Drawing Lead Time (calendar days) _____
   Delivery after Approved Shops received (calendar days) _____
9.
   Material Name/Equipment Name _____
   Shop Drawing Lead Time (calendar days) _____
   Delivery after Approved Shops received (calendar days) _____
10.
   Material Name/Equipment Name _____
   Shop Drawing Lead Time (calendar days) _____
   Delivery after Approved Shops received (calendar days) _____

INDIANA CONTRACTOR QUALIFICATION CERTIFICATION

Pursuant to Indiana Code 5-16-13, Contractor hereby certifies that he/she shall be qualified under either IC 4-13-6.4 (Qualification for State Public Works Projects) or IC 8-23-10 (Qualifications of Bidders for Contracts) prior to performing any work on Milford Elementary School public works project. Contractor further certifies that subcontractors of Contractor awarded subcontracts on a Public Works Contract in excess of $300,000 shall be qualified under the applicable statute. Contractor acknowledges that if he/she violates any of the foregoing qualification requirements, he/she shall be ineligible to bid on Public Works Contracts for such time period as the Wawasee Community School Corporation determines.

_____
Name of Company

By:_____
(Signature)

_____
(Printed Name)

Title:_____

IRAN INVESTMENT CERTIFICATION

Milford Elementary School

The undersigned contractor hereby certifies in accordance with I.C. 5-22-16.5-1 et seq., to the above mentioned school corporation, that the undersigned is not engaged in investment activities in Iran as defined in the above cited statute

_____
Signature

_____
Printed Name

BACKGROUND CHECK & DRUG TESTING - CERTIFICATE OF COMPLIANCE

This is to certify that_____(Contractor name) and all of its sub-contractors have screened and will continue to screen all employees providing services to the owner throughout the duration of the project.

A drug testing program will remain in place throughout the duration of the project.

Background check screening need only occur once at the beginning of the project, as long as the contractor and sub-contractors continually screen new hires and provide documentation of same in the form of re-submission of this form with the new date.

Background check screening shall include a minimum of the following information: local, state and national criminal history records check, sex and violent offender registry check through a website such as www.SafeHiringSolutions.com

_____(Contractor name) shall further report arrest and/or filing of criminal charges against each employee within two business days of the occurrence and the disposition of such arrest or filing of charges throughout duration of project.

Non-compliance with these requirements shall be a breach of a material term of any contract and reason for termination. Personally identifiable information obtained in the implementation of this policy shall not be released except as necessary to implement this policy or to defend a decision made pursuant to it.

_____

Authorized Signature

_____

Date

E-Verify Affidavit

Pursuant to Indiana Code 22-5-1.7, Contractor agrees and shall enroll in and verify the work eligibility status of all newly hired employees of the contractor through the E-Verify program including all new employees of lower tier subcontractors. E-Verify means the electronic verification of work authorization program of the Illegal Immigration Reform and Immigration Responsibility Act of 1996 (P.L. 104-208). Division C, Title IV, s.403(a), as amended, operated by the United States Department of Homeland Security or a successor work authorization program designated by the United States Department of Homeland Security or other federal agency authorized to verify the work authorization status of newly hired employees under the Immigration Reform and Control Act of 1986 (P.L. 99-603). Contractor is not required to verify the work eligibility status of all newly hired employees of Contractor through the E-verify program if the E-Verify program no longer exists.

The undersigned, on behalf of the Contractor, being first duly sworn, deposes and states that the Contractor does not knowingly employ an unauthorized alien. The undersigned further affirms that, prior to entering into its contract with the City, the undersigned Contractor will enroll in and agrees to verify the work eligibility status of all its newly hired employees through the E-Verify program.

_____
Name of Company

By: _____
Title

ACKNOWLEDGEMENT

STATE OF INDIANA)
) SS
COUNTY OF ALLEN)

Before me, a Notary Public, in and for said State and County, personally appeared the within named Company by Name, Title, who being first duly sworn upon his/her oath states that he/she is a duly authorized agent of the Contractor, and as such duly authorized to execute the foregoing Declaration, and acknowledged the same as his/her voluntary act and deed.

WITNESS my hand and sear this _____ day of _____, 20_____.

My Commission Expires: _____

_____
Signature of Notary Public

Resident of _____ County

_____
Printed Name

END OF SECTION 004588

00 60 00 – PROJECT FORMS

1.1 FORM OF AGREEMENT

A. The following form of Construction Manager/Contractor Agreement:

a. MKS Subcontract Agreement (attached)

B. Payment Forms:

1. Schedule of Values Form: AIA Document G703-1992 "Continuation Sheet."
2. Payment Application: AIA Document G702-1992/703-1992 "Application and Certificate for Payment and Continuation Sheet."
3. Exhibit C – Michael Kinder and Sons, Inc. Standard Lien Waivers

MKS JOB NUMBER: XX-XXX
Mark all invoices, packing slips, bills of lading, delivery tickets, and correspondence with this Job Number.

SUBCONTRACT AGREEMENT

This agreement is entered into this XX day of XXXXX in the year XXXX by and between Michael Kinder & Sons, Inc, 6055 Innovation Blvd., Fort Wayne, IN 46818, referred to in this agreement as the Contractor, and the

SUBCONTRACTOR SUBCONTRATOR NAME
SUBCONTRACTOR ADDRESS LINE 1
SUBCONTRACTOR ADDRESS LINE 2

ATTENTION: SUBCONTRACTOR CONTACT

referred to in this Agreement as the Subcontractor for services in connection with this

PROJECT NAME PROJECT NAME
PROJECT NAME
PROJECT ADDRESS
PROJECT ADDRESS

whose

OWNER is OWNER NAME
OWNER ADDRESS
OWNER ADDRESS

and whose

ARCHITECT/ ENGINEER is ARCHITECT NAME
ARCHITECT ADDRESS
ARCHITECT ADDRESS

NOTICE TO THE PARTIES SHALL BE GIVEN AT THESE ABOVE ADDRESSES

SCOPE OF WORK:

Provide the necessary labor, material, equipment, engineering and supervision to furnish and install all requirements of XXXX and all other items pertaining to this scope of work as outlined in the Contract Documents denoted below and attached.

ALL PER THE FOLLOWING EXHIBITS:

Exhibit "A" - Supplemental Conditions (consisting of 11 pages)
Exhibit "B" - List of Drawings, Specifications, and Addenda, and Alternates (consisting of X page)
Exhibit "C" - Lien Waiver Forms (consisting of 5 pages)
Exhibit "D" - Insurance Requirements and Sample Certificate (consisting of 2 pages)
Exhibit "E" - Tax Exempt Certificate (consisting of 1 page)
Exhibit "F" - Project Schedule (consisting of X page)

TOTAL LUMP SUM CONTRACT >>> $0.00

PLEASE DIRECT ALL QUESTIONS PERTAINING TO THIS PROJECT TO THE PROJECT MANAGER, XXXX

PLEASE SIGN AND ELECTRONICALLY RETURN PAGE 1 TO (CONSTRUCTION ADMIN NAME) (xxxxxx@kinderandsons.com).

Phase Code: XX-XXXX

SUBCONTRACTOR:
SUBCONTRATOR NAME
ACCEPTED:
By:_____Date:_____
Title:

CONTRACTOR:
MICHAEL KINDER AND SONS, INC.
By:_____
William A. Kinder
Vice President

Exhibit "A"
Terms and Conditions

SUPPLEMENTAL CONDITIONS:
DEFINITION OF CONTRACTOR – The term "Contractor" wherever it is used herin shall mean Michael Kinder & Sons, Inc.

1. Safety

1.1 The Subcontractor agrees that the prevention of accidents to workmen and property engaged upon or in the vicinity of the Subcontract Work is its responsibility. The Subcontractor agrees to comply with all Federal, State, Municipal and local laws, ordinances, rules, regulations, codes, standards, orders, notices and requirements concerning safety as shall be applicable to the Subcontract Work, including, among others, the Federal Occupational Safety and Health Act of 1970, as amended, and all standards, rules, regulations and orders which have been or shall be adopted or issued thereunder, and with the safety standards established during the progress of the Subcontract Work by the Contractor.

1.2 When so ordered, the Subcontractor shall stop any part of the Subcontract Work which the Contractor deems unsafe until corrective measures satisfactory to the Contractor have been taken. The Subcontractor agrees that it shall not have nor make any claim for damages arising from such stoppages. Should the Subcontractor fail to take appropriate corrective measures in a timely manner, the Contractor may do so at the cost and expense of the Subcontractor and may deduct the cost and expense thereof from any payments due or to become due to the Subcontractor. Failure on the part of the Contractor to stop unsafe practices shall in no way relieve the Subcontractor of its responsibility, therefore.

1.3 **Safety Training and Competent or Qualified Person.** Each worker sent to perform specific duties on the project will have required training and/or competency to meet all applicable Federal, State, and local regulations. Proof of training shall be submitted to the Contractor's Safety Director prior to commencement of work if requested. Tasks which require the appointment of a Qualified or Competent Person shall have credentials submitted to the Contractor's Safety Director prior to start of work.

1.4 **Subcontractor Injuries and Incidents**. Subcontractor shall notify Contractor of any incident or injury involving an employee of Subcontractor or one of its Subcontractors on the day of the injury or incident. Subcontractor shall complete an Incident Report and Investigation and submit the completed investigation to Contractor within twenty- four (24) hours of the incident or injury. Subcontractor agrees that all injuries and incidents will be investigated to determine root cause, corrective action, and preventative action to ensure similar injuries or incidents do not occur.

1.5 **Minimum Working Apparel**. Subcontractor agrees that the minimum working apparel includes hardhat meeting the current version of ANSI Standard Z89.1, safety glasses and side shields meeting the current version of ANSI Standard Z87.1, shirt with three inch or longer sleeves, long pants and durable work boots. Refer to the Safety Standard Operating Procedures Plan Personal Protection Equipment Section for more specific requirements.

1.6 **Fall Prevention**. Subcontractor shall comply with the Contractor Fall Protection Policy, which requires that no worker exposed to a fall hazard of six (6) feet or greater will work without one hundred percent (100%) fall protection. Subcontractor will take all practical measures to eliminate, prevent and control fall hazards of six (6) feet or more before resorting to a personal fall arrest system. When personal fall arrest is required, Subcontractor shall provide such proper equipment for this purpose and all necessary instruction and training in the care and use of the equipment, including refresher training. All training shall be documented and made available to Contractor upon request.

1.7 **Silica**. Subcontractor must provide action plan when workers may be exposed to silica beyond the action limit. Provide copy of written exposure control plan, name of competent person, practices to limit exposures, training practices, and medical surveillance for all affected workers

1.8 **Disciplinary Action**. Contractor may issue a written notice to individuals who are observed violating the laws, ordinances, rules, regulations, codes, standards, orders, and requirements noted under Regulatory Compliance above. Any Subcontractor or Subcontractor personnel who receive three (3) written violation notices within a one (1) year period may be removed from the Project. Individuals may be removed from the Project after one (1) written notice if Contractor determines in its discretion that the violation observed warrants such removal.

1.9 **Hazard Communication**. Subcontractor will provide Contractor with Project specific hazardous material inventory list and Safety Data Sheets (SDS) for each hazardous material Subcontractor or one of its Subcontractors will bring onto the Projectsite.

1.10 **Utility Locates.** The Subcontractor will follow the provisions of all applicable statutes and ordinances which require persons or firms doing excavation to do so only after giving notice to utility companies and obtaining information on the location of utilities (such as "one-call" systems).

1.11 **Regulatory Inspections**. If Contractor is fined by any regulatory inspection by a Federal, State, County or Municipal agency or body as a result of any act or omission of Subcontractor or one of its Subcontractors, Contractor will deduct the amount thereof and associated costs from any payments due or to become due to Subcontractor.

1.12 **Illegal Acts**. The theft, conversion, misappropriation, unauthorized removal, possession, or use of property or equipment belonging to Contractor, Owner, Subcontractor, or other worker including but not limited to, materials, tools documents, and propriety information is prohibited.

1.13 **General Safety Requirements**

- Subcontractors must observe and follow all posted safety signs.
- Any worker that is involved in an injury or loss event on the job must be drug tested at the expense of their employer and results cleared before they can continue working on the project.
- Subcontractors are expected to supply their own personal protective equipment (PPE).
- Adequate ventilation must be provided when using vapor producing materials or creating high dust levels. Subcontractor must notify Contractor twenty-four (24) hours in advance whenever work is being done that may generate any hazardous odors or dust.
- Subcontractors may not, under any circumstances, operate or disconnect any device used to control building services until permission has been obtained from the Contractor Superintendent.
- The following activities are prohibited on site and are causes for immediate dismissal: Using alcohol or illicit drugs, Fighting or horseplay, Tampering with equipment, Possession of firearms.
- Subcontractor must have a first aid/CPR-trained foreman on site whenever work is being performed.
- Subcontractor will conduct weekly employee toolbox meetings and copy Contractor with material covered and attendance record.
- *No radios or headsets, including cellular phones and earbuds, are allowed in work areas.*
- Subcontractor must submit safety plans and hazard specific work plans to Contractor prior to beginning work when requested.

- Subcontractor's equipment, tools, and personnel must comply with OSHA Safety and Health Regulations for Construction.
- No one under eighteen (18) years of age is allowed to work on or access to Contractor's jobsites.
- Subcontractor shall provide all required safety information of their sub tier subcontractors as required by Contractor or Contractor's insurance provider.
- Subcontractor must immediately correct any unsafe acts or practices brought to its attention.
- Subcontractor will have qualified operators on all equipment.
- Subcontractor will inspect all its equipment per the manufacturer's instructions daily.

The above Safety Requirement items are general in nature and not all inclusive of every situation or condition on Michael Kinder & Sons, Inc. construction projects.

2. Subcontractor Representations

2.1 The Subcontractor acknowledges receipt of all policies/procedures included in the Bid Documents. Subject to applicable law the Subcontractor further agrees to be bound by these policies/procedures as part of this Agreement. The Subcontractor represents and agrees that it has carefully examined and understands this Agreement and the other Subcontract Documents, has investigated the nature, locality and site of the Subcontract Work and the conditions and difficulties under which it is to be performed, and that it enters into this Agreement on the basis of its own examination, investigation and evaluation of all such matters and not in reliance upon any opinions or representations of the Contractor, the Owner or any of their respective officers, agents or employees.

2.2 The commencement of the Subcontract Work by the Subcontractor on the site of the Project shall constitute the legal and binding acceptance by the Subcontractor of this Agreement. For purposes of this paragraph the mobilization of equipment, delivery of materials or the performance of actual labor on the Project site, whichever occurs first, shall constitute a "commencement" of Subcontract Work by the Subcontractor. The Contractor reserves the right, however, to insist on a signed Agreement prior to the making of any payment to the Subcontractor.

3. Bonds

3.1 If required by the Contractor, a Performance Bond, and a Separate Payment Bond satisfactory to the Contractor, in its sole determination are required to be furnished in the full amount of the Subcontract Amount. If Bonds are required, they shall be furnished by a surety acceptable to the Contractor, in the full amount of the Subcontract Amount. Subcontractor must also furnish any applicable statutory bonds if required by the state in which the Project is located.

4 Subcontractor Duties

4.1 **Subcontract Work.** The Contractor retains the Subcontractor as an independent contractor, to provide all labor, materials, equipment, and services necessary or incidental to complete the part of the work which the Contractor has contracted with the Owner to provide on the Project as set forth in Scope of Work included in this Agreement, consistent with the Project Schedule and in strict accordance with and reasonably inferable from the Subcontract Documents. The Subcontractor agrees to perform such part of the work (hereafter called "Subcontract Work") for the Project under the general direction of the Contractor and subject to the final approval of the Contractor, Architect/Engineer, or other specified representative of the Owner.

4.2 **Subcontract Documents.** The Subcontract Documents include this Agreement, including all addenda, modifications, revisions, plans, drawings, specifications, details, together with all general, technical, supplementary, and special terms and conditions, any invitations for bids or information for bidders, if any, to the extent applicable, and all other documents listed in or referred to in the Subcontract Documents. The Contractor and the Subcontractor are mutually bound by the terms of this Subcontract. This Agreement and the rest of the Subcontract Documents are intended to supplement and complement each other and shall, where possible, be so interpreted. However, if any provision of this Agreement irreconcilably conflicts with a provision of the Subcontract Documents, the provision granting greater rights or remedies to the Contractor or imposing the greater duty, standard or responsibility or obligation on the Subcontractor shall govern.

4.3 **Submittals**. Subcontractor shall, at its own expense, prepare and submit to the Contractor such Shop Drawings, Samples, Models, and other submittal data for the materials to be furnished hereunder as detailed in the contract documents and as requested by Contractor, such Shop Drawings, Samples, Models and data to be approved in writing by such entities as Contractor may designate before Subcontractor proceeds under this Agreement. Such Documents shall be submitted to Contractor with reasonable promptness and in such sequence to cause no delay in the work or activities of the Contractor or other subcontractors. Any such approval of submittals or the receipt of materials and/or labor or payment therefore pursuant thereto shall in no event constitute an acceptance of such materials and/or labor and shall not limit or impair Contractor's right of inspection or rejection or any other rights or remedies to which Contractor may be entitled or relieve Subcontractor of any of its obligations and warranties hereunder. Subcontractor is responsible for reviewing Specifications prior to submitting any items verifying all Specification / Contract requirements. All submittals must be submitted electronically in .pdf format. All submittals must be submitted and approved prior to any payment to Subcontractor. All items must be submitted within 20 days of Subcontract date. All submittals must have a separate transmittal for each item and be labeled with the specification section. Any delays in material/equipment deliveries associated with delay in submission of submittal data which causes delays in the project schedule will be responsibility of Subcontractor as denoted in Section 1 of this agreement. Subcontractor may also be required to submit hard copies of submittals when requested by Contractor.

4.4 **Design Delegation.** If the Subcontract Documents (1) specifically require the Subcontractor to provide design services and (2) specify all design and performance criteria, the Subcontractor shall provide the design services necessary to satisfactorily complete the Subcontract Work. Design services provided by the Subcontractor shall be procured from licensed, design professionals (the "Designer") retained by the Subcontractor as permitted by the law of the place where the Project is located. The Designer's signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings and other submittals prepared by the Designer. Shop Drawings and other submittals related to the Subcontract Work designed or certified by the Designer, if prepared by others, shall bear the Subcontractor's and the Designer's written approvals when submitted to the Contractor. The Contractor shall be entitled to rely upon the adequacy, accuracy and completeness of the services, certifications or approvals performed by the Designer.

4.4.1 If the Designer is an independent professional, the design services shall be procured pursuant to a separate agreement between the Subcontractor and the Designer. The Subcontractor-Designer agreement shall not provide for any limitation of liability or exclusion from participation in the multiparty proceeding's requirement of Paragraph 20.6. If applicable, the Designer(s) is (are)

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The Subcontractor shall notify the Contractor in writing if it intends to change the Designer. The Subcontractor warrants the design furnished by the Designer will be in conformance with the information given and the design concept expressed in the Subcontract Documents. The Subcontractor shall not be responsible for the adequacy of the performance or design criteria required by the Subcontract Documents furnished by the Owner, Architect/Engineer or Contractor

4.4.2 The Subcontractor shall not be required to provide design services in violation of any applicable law.

4.5 **Clean Up.** The Subcontractor is responsible for its own "clean-up" and keeping the Subcontract Work areas "broom clean". If the Contractor determines the Subcontract Work area to be unsatisfactorily cleaned, the Contractor will so advise the Subcontractor. If the Subcontractor fails to commence cleaning procedures within twenty-four (24) hours and continue to clean said area to the Contractor's satisfaction, the Contractor may without further notice execute and complete such cleanup activities as the Contractor deems necessary and charge the cost to the Subcontractor or deduct such cost from payments due to the Subcontractor. The Subcontractor is responsible to clean the mud and gravel off its vehicles (including vehicles operated by its subcontractors and suppliers) prior to leaving the site. Any mud or gravel that is tracked onto the surrounding roads shall be removed immediately. The Contractor has the right to clean up surrounding roads immediately upon the Subcontractor's failure to do so, the cost of which shall be deducted from the Subcontractor's next payment. DIPOSAL OF PALLETS IS BY SUBCONTRACTOR AND NOT TO BE DISPOSED IN ONSITE DUMPSTER.

4.6 **Protection of Subcontract Work.** The Subcontractor is responsible for protection of its material, equipment, and installation until the final acceptance by the Owner and the Architect.

4.7 **Protection of the Project.** The Subcontractor shall confine operations at the Project site to areas permitted by the Contractor and shall not unreasonably encumber the Project site with materials or equipment. The Subcontractor is responsible for any damage caused to adjacent property or access roads by the Subcontractor, its subcontractors, or suppliers' responsibility during the course of the Subcontract Work.

4.8 **Supervision.** All the Subcontract Work is the sole and absolute responsibility of the Subcontractor; shall be initiated, managed, performed, and completed by qualified, competent, skilled, and reputable supervisors, administrators, mechanics, and laborers, all of which are satisfactory to the Contractor; shall be in full compliance with the Subcontract Documents including this Subcontract; and shall meet the approval and acceptance of the Contractor and the Owner or its authorized representative. Subcontractor shall not change their Superintendent or Project Manager without written approval from the Contractor.

4.9 **Deliveries.** A minimum of twenty-four (24) hours' notice is required for all deliveries to the jobsite. Notify Contractor prior to any major deliveries providing ample time for coordination. Deliveries are to be made at the place, in the quantities and at the times specified in instructions set forth herein or in other written instructions, which may from time to time be furnished by Contractor. Contractor may from time-to-time change, in writing, delivery instructions or direct that shipment or work be temporarily suspended. Subcontractor shall make no commitments for material or production arrangements in excess of the amount or in advance of the time necessary to comply with Contractor's delivery or performance instructions.

4.10 **Layout.** The Subcontractor shall take careful field measurements and verify field conditions and shall carefully compare such field measurements and conditions and other information known to the Subcontractor with the Contract Documents before the commencement of the Work. Errors, inconsistencies, or omissions shall be reported at once to the Contractor. Each Subcontractor is responsible for its own layout work.

5. Schedule

5.1 Time is of the essence. The Subcontractor shall commence the Subcontract Work under this Subcontract when notified by the Contractor and shall complete the Subcontract Work in a diligent manner in accordance with the Subcontract Documents and the Schedule of Work provided in this Agreement so that progress or completion of the Project will not be delayed and in such a manner that the Contractor, any other subcontractors, and any separate contractors of the Owner shall not be delayed or impeded in their work. The Subcontractor shall participate and cooperate in the development of schedules and other efforts to achieve timely completion of the Subcontract Work by providing information on the timing and sequence of operations to meet the Contractor's overall schedule requirements. The Subcontractor shall continuously monitor the Project Schedule including any revisions thereto, and other work on the Project to execute the Subcontract Work in accordance with the requirements of the Project Schedule. The Subcontractor agrees to be responsible for, carry out, and perform all time guarantees upon work or materials referred to in the Subcontract Documents relating to any labor performed or material furnished under this Subcontract. If Subcontractor falls behind schedule, all costs to get back on schedule will be the responsibility of the Subcontractor, including additional costs to the Contractor or other subcontractors that are directly affected by the Subcontractors delays. This includes, but not limited to, overtime, additional supervision and project management, delivery expenses, storage fees, and any other cost and expense incurred to get back on schedule. If Contractor is responsible for Liquidated Damages and Subcontractor causes delay and Liquidated Damages are charged, the costs of Liquidated Damages will be passed onto the Subcontractor. The Project Schedule is subject to change at the direction of the Contractor at no additional cost.

6. Payment

6.1 In consideration of faithful and timely performance by the Subcontractor of all the covenants and the conditions aforesaid, the Contractor agrees to pay the Subcontractor, subject to other provisions hereof, including authorized additions and deletions the "Subcontract Amount" which sum includes all applicable taxes. Payment shall only be due for the portion of the Subcontract Work completed to the satisfaction of the Contractor, the Architect, and the Owner. Within ten (10) days after receipt by the Contractor of payment from the Owner, the Contractor shall make payment in the amount and to the extent received from the Owner, less ten percent (10%) retainage. However, receipt of payment by the Contractor from the Owner for the Subcontract Work is a condition precedent to the obligation by the Contractor to pay the Subcontractor for the Subcontract Work in accordance with the preceding sentence, and payment for the Subcontract Work will be made to Subcontractor by the Contractor if and only to the extent such payment is received by the Contractor from the Owner. The Subcontractor hereby acknowledges that it relies on its own evaluation of the credit worthiness of the Owner, and not the credit worthiness of the Contractor, with respect to payment for the Subcontract Work, and expressly assumes the risk of non-payment by the Owner thereof, for any reason including, without limitation, insolvency of the Owner. Notwithstanding Subparagraph 4.2 of this Agreement, the provisions of this Section shall prevail over any conflicting provisions in the Prime Contract. Progress payment applications must be submitted by the Subcontractor each month in an amount equal to One Hundred percent (100%) of the estimated value of the labor, materials and equipment incorporated in the construction and materials and equipment suitably stored at the Project site, less the aggregate of previous payments. The Subcontractor's Affidavit and Waiver of Lien for prior payments must be properly executed by an authorized representative of the Subcontractor and returned to the Contractor prior to issuance of subsequent payments. Subcontractor must use Waiver Forms included as Exhibit "C" to this Agreement. Subcontractor will be required to provide Sub-Subcontractor and Vendor waivers for values exceeding $5,000.00. No other waiver forms other than those in Exhibit "C" will be accepted

6.3 Each payment request or invoice must be received by the Contractor by the 20th day of the month to be processed with the Contractor's payment application that month. Invoices and payment requests received that are inaccurate or without substantiation, or after said day of the month will be held until corrected and substantiated, and then processed with the following month's payment application. Subcontractor shall submit all applications electronically, in PDF format, to accounts payable at AP@kinderandsons.com.

6.4 The Subcontractor shall submit its request for partial payment conforming to the standard AIA G702/G703 billing form, with schedule of values attached thereto, representing a true and accurate estimate of the Subcontract Work completed, and materials stored during the immediately preceding month or such other immediately preceding period as directed by the Contractor. In addition, if allowed by the Subcontract Documents, all invoices and insurance certificates shall be included for all stored materials in an off-site storage area applicable to the payment request. Materials not onsite can only be billed for as stored materials, if allowed. If requested, Subcontractor shall submit copies of payrolls to document the value of work in place.

6.6 If the Contractor, in its sole discretion, deems it necessary, the Subcontractor agrees to receive each of its progress payments and final payment in the form of multiple checks issued jointly between the Subcontractor's lower tier subcontractors and major material suppliers and the Subcontractor. Lower tier subcontractors that are to receive part or all their progress payments as joint checks shall additionally submit with their Payment Requests all invoices from each lower tier subcontractor and major supplier and the net payments to be issued to each.

6.7 No partial payment, or certificate, therefore, shall constitute acceptance or approval by the Contractor of the Subcontract Work or material for which the partial payment is made. No partial payment shall constitute a waiver by the Contractor of any right to require fulfillment of all the terms of this Subcontract. Neither the final payment nor any partial payment, nor any certificate for either, shall constitute acceptance by the Contractor of defective work or improper materials or of any element of the Subcontractor's performance determined to be at variance with this Subcontract.

6.8 The Contractor shall have the right to set off any amounts the Subcontractor owes to the Contractor under this Subcontract or bylaw against the remaining balance under this Subcontract, or against any amounts due the Subcontractor under any other agreements with the Contractor.

6.9 **Final Payment.** Final payment by the Contractor to the Subcontractor shall not become due and payable to the Subcontractor until the following express conditions precedent have been met: (1) The completion of the Subcontract Work required by this Subcontract and acceptance of the Subcontract Work by the Contractor, the Owner and the Architect; (2) Final Waiver shall be provided in exchange for final payment; (3) all closeout and warranty documentation provided by the Contract has been submitted to Contractor; and (4) complete and full satisfaction of all claims, demands, disputes and obligations of the Subcontractor arising out of or related to this Subcontract, including those between the Contractor and the Subcontractor and between the Subcontractor and any third party. Should there be any such claim, lien or unsatisfied obligation, whether before or after final payment is made, the Subcontractor shall deliver payment to the Contractor an amount equal to whatever cost the Contractor and/or the Owner must pay to discharge or defend against any such claim, obligation, lien or action brought, or any judgment thereon and all costs, including legal fees and expenses and a 15% Administrative Fee, incurred in connection therewith.

7. Hazardous Materials

7.1 The Subcontractor shall at all times comply with all rules and regulations of any municipality, state or federal environmental protection, and toxic waste and hazardous substances laws, ordinances and regulations, and how they relate to the Subcontract Work, and shall be equally responsible for actions and inactions of subcontractors, sub subcontractors, and any other agents or independent contractors of the Subcontractor. The Subcontractor shall be deemed to, and shall, have included in the Subcontract Amount the containment, removal, disposal or neutralization of all toxic wastes and hazardous substances created, generated, or transported to or from the Project site in conjunction with the Subcontract Work. The Subcontractor will be responsible for identifying toxic wastes and hazardous substances generated, released, caused by or resulting from the Subcontract Work and notifying the Contractor of its presence in writing as soon as it is identified. The terms "toxic wastes" and "hazardous substances" shall have the same meaning as defined under federal environmental laws and regulations. At all times, the Subcontractor shall defend, indemnify, and hold harmless the Contractor from any and all expenses, costs, damages, suits, fines, assessments, penalties and/or causes of action, including attorney's fees through all investigations, negotiations, hearings or appeals, relating to or arising out of the Subcontractor's failure to strictly comply with the terms of this paragraph.

8. Compliance with Laws

8.1 The Subcontractor agrees to be bound by, and at its own costs comply with, all federal, state, and local laws, ordinances, and regulations (the "Laws") applicable to the Subcontract Work, including but not limited to safety, equal employment opportunity, minority business enterprise, women's business enterprise, disadvantaged business enterprise, sexual and racial harassment, and all other Laws with which the Contractor must comply.

8.2 Where prescribed by Law pursuant to direct Federal contracts or Federally-financed or aided contracts, or otherwise required by Law, the Subcontractor agrees the following clauses found in the Subcontract Documents or in the Code of Federal Regulations (CFR) are incorporated in this Subcontract and binding on Subcontractor as if written herein word for word: the clauses entitled "Equal Opportunity Clause" (41 CFR Sections 60-1.4 & 60-4.3); "Affirmative Action Obligations of Contractors and Subcontractors for Disabled Veterans of the Vietnam Era" (41 CFR Section 60-250.4); "Affirmative Action Obligations of Contractors and Subcontractors for Handicapped Workers" (41 CFR Section 60-741.1); "Contract Work Hours and Safety Standards Act-Overtime Compensation"; "Apprentices and Trainees"; "Payrolls and Basic Records"; "Compliance with Copeland Act Requirements"; "Withholding"; "Subcontracts"; "Contract Termination-Department"; "Disputes Concerning Labor Standards"; "Compliance with Davis-Bacon and Related Act Requirements"; and "Certification of Eligibility" and such other clauses as the Federal Government has required by law or contract. Subcontractor agrees to include all such clauses in any non-exempt, lower-tier subcontracts.

8.3 **Immigration Compliance.** The Subcontractor represents and warrants to the Contractor that the Subcontractor is in compliance with, and shall remain in compliance with, the provisions of the Immigration Reform and Control Act of 1986 (The "Act") and all other Federal, State, and/or local immigration statutes/ordinances, as applicable, including, but not limited to the provisions of the Act prohibiting hiring and continued employment of unauthorized aliens, requiring verification and record keeping with respect to identity and eligibility for employment and prohibiting discrimination on the basis of national origin, United States citizenship, or intending citizen status. The Subcontractor agrees to indemnify the Contractor and to hold the Contractor harmless from all liability, including liability for interest and penalties, the Contractor incurs which results from or is attributable to the Subcontractor's failure to comply with any provisions of the Act, and or applicable Federal, State, and/or local immigration statute/ordinance, including reimbursing the Contractor any monies expended by the Contractor in participating in or responding to any investigation/suit/civil or criminal immigration matter involving the Subcontractor. As it relates to immigration compliance, the Subcontractor shall be responsible for completing all required documentation in accordance with requirements put forth by the Owner, Contractor, or applicable law.

8.4 The Subcontractor shall be liable to the Contractor and the Owner for all loss, cost, and expense attributable to any acts of commission or omission by the Subcontractor, its Sub-Subcontractors at any tier, and its and their respective employees and agents resulting from the failure to comply with Laws, including, but not limited to, any fines, penalties, restitution, judgments, and other damages resulting from such acts of commission or omission.

9. Insurance

9.1 The Subcontractor agrees to procure, pay for, and maintain in full force and effect during the performance of the Subcontract all insurance required by the laws of the state in which the Subcontract Work covered by this Subcontract is being performed, and in such form and amounts as described in in this section and in Exhibit D, whichever is greater, which is attached hereto and incorporated into this Subcontract. Certificates of Insurance on The American Institute of Architect's Form G-705 or other form acceptable to Contractor and Contractor's counsel must be returned to the Contractor with signed Contract Agreement prior to commencement of the Work or receiving any payment on the project. Subcontractor is responsible for the following insurance for protection from claims that may arise out of or result from Subcontractor's operations under this Agreement, whether such operations be by Subcontractor or by any sub-subcontractor, or by anyone directly or indirectly employed by any of them, or by anyone or whose acts any of them may be liable.

(a) Worker's compensation insurance in accordance with statutory laws and with limits as provided by statute.

(b) Comprehensive general liability, including completed operations coverage for a period of three (3) years from the Project Substantial Completion date, products liability coverage (with the Contractor and Owner protected as additional insured), and contractual liability coverage, with limits of not less than (i) $1,000,000 each occurrence and $2,000,000 in the aggregate per project for bodily injury or death; and (ii)

$1,000,000 each occurrence and $2,000,000 in the aggregate per project for property damage.

(c) Automobile insurance with coverage for owned and non-owned vehicles with a combined single limit of $1,000,000 public liability and property damage.

(d) Installation Floater with a combined limit not less than $500,000.

(e) In addition, Subcontractor shall purchase an umbrella policy with minimum limits of $5,000,000 per occurrence. This policy must provide coverage over the underlying liability policies.

(f) Professional Liability with a limit not less than $1,000,000.

Unless Contractor otherwise agrees in writing, the liability policies to be maintained by Subcontractor hereunder shall name Contractor and Owner as additional named insureds. All insurance limits and minimums must be in accord with both the above and/or that noted in the Project Manual/Specifications whichever minimums are greater. All insurance is to be classified as Primary/Non-Contributory (Form #CG7061 or equivalent) and denoted accordingly on Contractor's Insurance Certificate. Subcontractor shall defend, indemnify and hold harmless Contractor and Owner and their agents and employees from and against all claims, damages, causes of action, losses and expenses, including attorney's fees, arising out of or resulting from the performance of the work, provided that such claim, damage, loss or expense (1) is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the work itself) including the loss of use resulting therefrom; and (2) is caused in whole or in part by any negligent act or omission of Subcontractor or any of Subcontractor's subcontractors, anyone directly or indirectly employed by any of them or for anyone for whose acts any of them may be liable, regardless of whether it is caused in part by a party indemnified hereunder.

9.2 **Waiver of Subrogation**. A Blanket Waiver of Subrogation clause shall be added to the general liability (Policy Form #CG7036) or equivalent; automobile liability (Policy Form #CA0444) or equivalent and worker's compensation (Policy Form #WC000313 or equivalent). The policies shall be in favor of Michael Kinder & Sons, Inc. and this clause shall apply to Michael Kinder & Sons, Inc. officers, agents, and employees, with respect to all projects during the policy term.

9.3 **Cancellation of Coverage**. Each policy of insurance shall provide notification to Contractor and Owner at least thirty (30) days prior to any cancellation or modification to reduce the insurance coverage.

9.4 **Sub-Subcontractors**. To the extent that the Subcontractor subcontracts with any other entity or individual to perform all or part of the Subcontractor's Work, the Subcontractor shall require the other Sub-Subcontractors to furnish evidence of equivalent insurance coverage, in all respects, terms and conditions as set forth herein, prior to the commencement of the Work by the Sub-Subcontractor. The Contractor and Owner shall be named as additional insured as detailed below.

9.5 **Blanket Additional Insured on General Liability and Automobile Liability**. Michael Kinder & Sons, Inc., and their affiliates, directors, employees, subsidiaries, representatives, and any other parties as required by this Contract Agreement. They must be listed as certificate holder, and the Contractor and Owner must be protected as additional insured for Ongoing Operations and Products/Completed Operations on the Subcontractor's and any Sub-Subcontractor's Commercial General Liability Policies. The coverage must be primary and non-contributory with respect to the additional insured. The Blanket Additional Insured coverage must be provided by General Liability Policy Form #CG7037 or equivalent and Automobile Liability Policy Form #CA2048 or equivalent.

9.6 The Contractor shall have no duty to the Subcontractor or to any of its insurers or their insurance agents to review any certificates or copies of insurance furnished to the Contractor or to determine whether the terms of each certificate or policy of insurance comply with the insurance-related provisions of the Subcontract. A failure of the Contractor to detect that the Subcontractor has not submitted certificates, or proper certificates, or is otherwise not in compliance with the insurance-related provisions of the Subcontract shall not be construed as a waiver or other impairment of any of the Contractor's rights under such insurance-related provisions.

9.7 If the Subcontractor fails to procure and maintain such insurance, in addition to the option of declaring the Subcontractor in default for breach of a material provision of this Subcontract, the Contractor shall have the right, but not the duty, to procure and maintain the same insurance, or other insurance that provides the Contractor with equivalent protection, and the Subcontractor shall furnish all necessary information to make effective and maintain such insurance. At the option of the Contractor, the cost of said insurance purchased by the Contractor shall be charged against and deducted from any monies then due or to become due to the Subcontractor or the Contractor shall notify the Subcontractor of the cost thereof and the Subcontractor shall promptly pay such cost.

9.8 The Subcontractor shall identify by certificate any Residential, Mold, EIFS, Silica or other major exclusions that impact the Subcontractor's ability to insure its risk. If the Project includes any Residential components or the proposed design includes EIFS systems, then the Subcontractor shall obtain appropriate endorsements acceptable to the Contractor as a condition of this Subcontract.

9.9 The Subcontractor shall at its own expense provide insurance coverage for materials stored off the site after written approval of the Contractor at the value established in the approval, and for portions of the Subcontract Work in transit until such materials are permanently incorporated into the Project. The risk of loss for material and equipment provided by this Subcontract, whether in a deliverable state or otherwise, shall remain with the Subcontractor. Any damages to the material and equipment or loss of any kind occasioned in transit shall be borne by the Subcontractor, notwithstanding the manner in which the goods are shipped or who pays the freight or other transportation costs.

10. Indemnity

10.1 **General Indemnity.** To the fullest extent allowed by law, the Subcontractor agrees to defend, indemnify, and hold harmless the Contractor to the same extent Contractor is obligated to defend, indemnify and hold harmless the Owner. In the absence of such Owner-required defense and indemnification, the Subcontractor shall defend, indemnify and hold harmless the Contractor, the Contractor's other subcontractors, the Architect/Engineer, the Owner and their agents, consultants, members and employees (the Indemnitees) from and against all claims, damages, losses and expenses, including, but not limited to, attorneys' fees, costs and expenses for bodily injury and property damage that may arise from the performance of the Subcontract Work to the extent of the negligent acts or omissions by, or the fault of, the Subcontractor, the Subcontractor's sub-subcontractors or anyone employed directly or indirectly by any of them or by anyone for whose acts or omissions any of them may be liable. The Subcontractor agrees to purchase and maintain contractual liability insurance covering its obligations in this article. These obligations shall not be interpreted to reduce or negate any other rights or obligations of indemnity otherwise existing with regard as to any party or person described in this Article.

10.2 Patents**.** The Subcontractor hereby agrees to defend, indemnify and hold harmless the Contractor and the Owner from and against any and all liability, loss or damage and to reimburse the Contractor and the Owner for any costs, including legal fees and expenses, which the Contractor and the Owner may incur because of claims or litigation on account of infringement or alleged infringement of any letters patent or patent rights by reason of the Subcontract Work, or materials, equipment or other items used by the Subcontractor in its performance.

10.3 **No Limitations.** In furtherance to, but not in limitation of the indemnity provisions in this Subcontract, the Subcontractor hereby expressly and specifically agrees that its obligation to indemnify, defend and hold harmless as provided in this Subcontract shall not in any way be affected or diminished by any statutory or constitutional immunity it enjoys from suits by its own employees or from limitations of liability or recovery under worker's compensation laws.

11. Termination for Convenience

11.1 It is understood that the basic assumption underlying the mutual obligations and responsibilities entered by the parties to this Subcontract is the continued performance with respect to the Prime Contract that exists between the Contractor and the Owner. If, for any reason, the Prime Contract is breached, rescinded, or terminated, the Contractor shall have the right to immediately terminate this Subcontract. In no event shall the Contractor be obligated to the Subcontractor for any anticipatory profits, or any damages incurred by the Subcontractor as a result of the termination of this Subcontract, unless approved and paid by the Owner. The Subcontractor agrees that the Contractor's decision or determination regarding the pro rata share of any monies received from the Owner as damages or compensation for said breach, rescission or termination of the Agreement shall be final and conclusive and that the Subcontractor shall have no claim or cause of action against the Contractor for any reason or greater amount.

11.2 The Contractor shall have the right at any time by written notice to the Subcontractor, to terminate this Subcontract without cause and require the Subcontractor to cease work. In the event of such a termination for convenience, the Subcontractor shall be entitled to payment pursuant to the terms of the Subcontract for the portion of the Subcontract Work actually completed as of the date of termination, together with reasonable costs of demobilization and such other reasonable costs as may be encountered by the Subcontractor and directly attributable to such termination provided that such amount may be reduced by all amounts for which the Subcontractor is liable or responsible. However, the Subcontractor shall only be entitled to profit on that portion of the work completed and approved for payment to the date of termination together with retainages withheld from prior payments. The Subcontractor waives any claim for loss of anticipated profits or other damages in the event the Contractor exercises this clause.

12. Failure of Performance

12.1 **Non-Conforming Subcontract Work.** The Subcontractor shall provide sufficient, safe, and proper facilities at all times for inspection by the Architect, the Owner, or the Contractor of the Subcontract Work in the field, at shops or at any other place where materials required hereunder are in course of preparation, manufacture, treatment or storage. The Subcontractor shall, within twenty four (24) hours after receiving written notice from the Contractor to that effect, proceed to remove from the site any materials condemned by the Architect, the Owner, or the Contractor, whether worked or unworked, and to take down all portions of the Subcontract Work which the Architect, the Owner or the Contractor has condemned in writing, as unsound or improper, or as in any way failing to conform to the drawings, specifications and addenda and shall take full financial responsibility for all damage caused by such removal. In the event that all or any portion of the Subcontract Work as condemned should be of such a nature, or the time available should be so limited, that in the judgment of the Architect, the Owner or the Contractor it would not be expedient to order the same replaced or corrected, the Contractor, at its option, may deduct from the payments due or to become due to the Subcontractor such amount or amounts as in the opinion of the Architect or the Owner shall represent the difference between the fair and reasonable value of the Subcontract Work so condemned and its value had it been executed in conformity with the Subcontract Documents.

12.2 **Use of Non-Conforming Materials and Remedies.** Any materials and/or labor which at any time, whether before or after delivery, payment and/or utilization in the Project, fail to conform to any descriptions, specifications, or provisions contained in this Contract Agreement, or fail to satisfy any of Subcontractor's express or implied warranties, or are shipped or delivered other than in the quantities or not at the time and place specified in Contractor's delivery instructions, or other than in containers or packages conforming to Contractor's specifications (or, in the absence of such specifications, in recognized standard containers), or which are otherwise not in conformance with this Contract Agreement shall be deemed "non-conforming materials and/or labor." If Subcontractor provides or utilizes any non-conforming materials and/or labor, Contractor, without limitation of any other right or remedy Contractor may have, may (a) require Subcontractor to repair or replace, at Contractor's option, such materials and/or labor at Subcontractor's expense; or (b) reject, in whole or in part, the materials and/or labor that are the subject of this Contract Agreement and receive credit or refund for such whole or part of the purchase price associated therewith. Non-conforming materials may be held (or returned to Subcontractor), at Subcontractor expense and risk, and shall be replaced by Subcontractor only upon the written request of the Contractor. Contractor may charge to Subcontractor all expenses of unpacking, examining, testing, repacking, storing, and reshipping of any such non-conforming materials and/or of inspecting and testing any such non-conforming labor and may also charge to Subcontractor any other incidental or consequential damages suffered by Contractor as a result thereof.

12.3 **Remedies Cumulative.** The remedies provided for in this Contract Agreement are cumulative and shall be in addition to, and not in limitation of, the rights and remedies which may be available to Contractor at law or in equity. No waiver of a breach of any provision of this Agreement shall be effective unless in writing and no such waiver shall constitute a waiver of any other breach or of the same breach at a different time. The exercise by Contractor of the rights provided herein shall not be considered as a waiver of any damages which may be incurred by Contractor or a waiver of any other rights or remedies to which Contractor might be entitled.

12.4 **Notice to Cure.** If the Subcontractor is unable, refuses or fails to supply enough properly-skilled workers, proper materials, correct non-conforming Subcontract Work, or maintain the Schedule of Work, or fails to make prompt payment to its workers, subcontractors or suppliers, or disregards laws, ordinances, rules, regulations or orders of any public authority having jurisdiction, or otherwise is guilty of a material breach of a provision of this Agreement, the Subcontractor shall be deemed in default of this Agreement. If the Subcontractor fails within three (3) business days after written notification to commence and continue satisfactory correction of the default with diligence and promptness, then the Contractor without prejudice to any other rights or remedies, shall have the right to any or all of the following remedies:

12.4.1 to supply workers, materials, equipment, and facilities as the Contractor deems necessary for the completion of the Subcontract Work or any part which the Subcontractor has failed to complete or perform after written notification, and charge the cost, including reasonable overhead, profit, attorneys' fees, costs and expenses to the Subcontractor.

12.4.2 to contract with one or more additional contractors to perform such part of the Subcontract Work as the Contractor determines will provide the most expeditious completion of the Subcontract Work, and charge the cost to the Subcontractor; and/or

12.4.3 withhold any payments due or to become due the Subcontractor pending corrective action in amounts sufficient to cover losses and compel performance to the extent required by and to the satisfaction of the Contractor.

12.4.4 terminate the Subcontractor for default by delivering written notice of such termination to the Subcontractor.

12.4.5 to charge to the Subcontractor an Administrative Fee of 15% of all costs incurred by the Contractor in exercising any of the above remedies.

In the event of an emergency affecting the safety of persons or property, the Contractor may proceed as above without notice, but the Contractor shall give the Subcontractor notice promptly after the fact as a precondition of cost recovery.

12.5 **Termination for Default.** If the Subcontractor has been terminated for default, the Contractor may take possession of the Subcontract Work, materials, tools, appliances and equipment of the Subcontractor at the Project site, and through itself or others provide labor, equipment and materials to prosecute Subcontract Work on such terms and conditions as shall be deemed by the Contractor as necessary, and shall deduct the cost, including without restriction all claims, charges, expenses, losses, costs, damages, and attorneys' fees, incurred as a result of the Subcontractor's failure to perform, from any money then due or thereafter to become due to the Subcontractor under this Agreement.

12.5.1 If the Contractor so terminates the employment of the Subcontractor, the Subcontractor shall not be entitled to any further payments under this Agreement and no sum shall be deemed due or to become due to the Subcontractor until Subcontract Work has been completed and accepted by the Owner, all Subcontract requirements have been fulfilled, and payment has been received by the Contractor from the Owner. In the event the unpaid subcontract earnings exceed the Contractor's cost of completion and all incidental costs, including administrative, legal and other professional fees, the difference shall be paid to the Subcontractor, but if such expenses exceed the subcontract earnings, the Subcontractor agrees to pay the difference to the Contractor promptly.

12.5.2 If it is determined or agreed that the Contractor wrongfully exercised any option under this Article, the Contractor shall be liable to the Subcontractor solely for the reasonable value of Subcontract Work performed by the Subcontractor prior to such action, including reasonable overhead and profit on the Subcontract Work performed, less prior payments made. Under no circumstances shall the Subcontractor be entitled to recovery of claimed lost future profits.

13. Delays

13.1 Should the progress of the Subcontract Work be delayed, obstructed or interfered with through any fault, action or failure to act by the Subcontractor or any of its officers, agents, employees, subcontractors or suppliers so as to cause any additional cost, expense, liability or damage to the Contractor or the Owner, including legal fees or expenses incurred in defending claims arising from such delay or seeking reimbursement and indemnity from the Subcontractor and its surety hereunder, the Subcontractor and its surety agree to compensate and indemnify the Contractor and the Owner against all such costs, expenses, damages and liabilities.

13.2 In addition, the Subcontractor, at the Contractor's direction and at the Subcontractor's own cost and expense, shall work such overtime as may be necessary to make up for all time lost in the completion of the Subcontract Work and in the completion of the Project due to such delay. Weather days will be made up through longer hours, Saturdays, and/or Sundays. Subcontractor fully obligated to meet the requirements of the project schedule within these constraints. If the Subcontractor fails to make up for the time lost by reason of such delay, the Contractor has the right to use other subcontractors or suppliers and to take whatever other action the Contractor deems necessary to avoid delay in the completion of the Subcontract Work and the Project, the cost of which shall be borne by the Subcontractor. In the event Subcontractor delays timely performance of the Subcontract Work or to the completion of the Project, either by its acts or omissions, and such delays result in the Contractor being charged by the Owner with actual or liquidated damages, then the Subcontractor shall reimburse the Contractor the full amount of all such damages and charges resulting from the delays caused by the Subcontractor. The Contractor may offset any such damages against the remaining balance due to the Subcontractor on the Subcontract Amount, if any.

13.3 If the commencement and/or progress of the Subcontract Work is delayed without the fault or responsibility of the Subcontractor, the time for the Subcontract Work shall be extended by Subcontract Change Order to the extent obtained by the Contractor from the Owner pursuant to the Prime Contract, and the Schedule of Work shall be revised accordingly.

14. Changes

14.1 Subcontract Changes. The Contractor and the Subcontractor agree the Contractor may make changes to the Subcontract Work, including but not limited to, additions, deletions or revisions. Any changes made to the Subcontract Work involved, or any other parts of this Agreement, shall be by a written Change Order. To the extent that any such change impacts Subcontractor's cost of or time for performance, the Subcontract Amount and Subcontract Schedule shall be equitably adjusted to compensate for such impact. Changes shall be initiated by one of the three methods outlined below, or as provided in the Prime Contract and shall be incorporated into the Subcontract by a Change Order.

14.1.1. **Request for Change Proposal.** A Request for Change Proposal (RFCP) is a written request that informs Subcontractor about a potential change in the Subcontract Work and requests a proposal for the potential change. Subcontractor shall promptly reply with such request. Subcontractor shall not implement the change or incur any costs until a Change Order is fully executed.

14.1.2. **Construction Change Directive.** A Construction Change Directive (CCD) is a written directive that instructs Subcontractor to take some immediate action in connection with the Subcontract Work. CCDs are issued when there is not time to issue a RFCO or Change Order. Subcontractor shall immediately proceed so as not to delay the progress of the Work and in accordance with the terms of the CCD. Any impact of a CCD on the Contract Price or Schedule shall be adjusted by a Change Order.

14.1.3. **Change Order Requests.** Within seven (7) calendar days after the occurrence of any event or observance of any condition that Subcontractor believes entitles Subcontractor to an adjustment in Subcontract Amount and/or Subcontract Schedule, Subcontractor shall prepare and submit a Change Order Request (COR) to Contractor. The COR shall include a detailed factual narrative, a detailed analysis showing entitlement and a detailed analysis of the proposed change to the Subcontract Amount and/or Subcontract Schedule.

14.2 **Change Orders.** A Change Order (CO) is a written instrument prepared by the Contractor and signed by the Subcontractor stating their agreement with the change in the Subcontract Work and any adjustment to the Subcontract Amount and/or Subcontract Schedule. All changes and/or additions in the Subcontract Work ordered in writing by the Contractor shall be deemed a part of the Subcontract Work and shall be performed and furnished in strict accordance with all terms and conditions of this Agreement and the Subcontract Documents, including the current Schedule of Work.

Change Orders will be used to implement approved Requests for Change Proposals, Construction Change Directives and Change Order Requests. Upon receipt of a properly documented COR or CCD, the parties shall negotiate in good faith to determine if the Subcontractor is entitled to a Change Order and, if so, the appropriate equitable adjustment. Any adjustment to the Subcontract Amount shall be established by one of the following methods:

a. mutual acceptance of an itemized lump sum, or
b. unit prices as indicated in the Subcontract Documents or as subsequently agreed to by the parties; or
c. costs determined in a manner acceptable to the parties and a mutually acceptable fixed or percentage fee; or
d. another method provided in the Subcontract Documents.

If the Parties are unable to agree on the dispositions of a COR or CCD, Contractor will either (i) issue a Notice denying Subcontractor's request or (ii) issue a unilateral Change Order setting forth the Contractor's final determination regarding the adjustments. Any cost and schedule adjustments shall be a full accord and satisfaction for all cumulative impacts of the underlying change.

14.3 The Subcontractor shall not be entitled to receive additional compensation for extra work or materials or changes of any kind except to the extent the same was ordered by the Contractor or any of its representatives. The Subcontractor shall be responsible for any costs incurred by the Contractor for changes of any kind made by the Subcontractor that increase the cost of the Work for either the Contractor or other subcontractors when the Subcontractor proceeds with such changes without a Change Order or Construction Change Directive.

14.4 Determination by Owner or Architect/Engineer. Notwithstanding any other provision, if the Subcontract Work for which the Subcontractor claims additional compensation is determined by the Owner or Architect/Engineer not to entitle the Contractor to a Change Order, additional compensation or a time extension, the Contractor shall not be liable to the Subcontractor for any additional compensation or time extension for such Subcontract Work, unless the Contractor agrees in writing to pay such additional compensation or to grant such extension.

15. Claims

15.1 A Claim is a written demand by Subcontractor seeking an adjustment in the Subcontract Amount and/or Subcontract Schedule or some other relief under the terms of the Subcontract for events other than a RFCP that has been denied in writing. Subcontractor shall provide Notice to Contractor of any potential Claim within seven (7) calendar days after the event giving rise to the Claim. Within fifteen (15) calendar days thereafter, Subcontractor shall submit a detailed factual narrative, a detailed analysis showing entitlement and a detailed analysis of the alleged change to the Subcontract Amount and/or Subcontract Schedule. Claims not timely made, in writing, by the Subcontractor shall be deemed to have been abandoned and waived. The acceptance and consideration of any claim out of time by the Contractor shall not create any precedent nor "course of dealing' between the Contractor and the Subcontractor, nor shall it waive the Contractor's right to insist on strict adherence by the Subcontractor to the contract claims procedures. If Contractor denies Subcontractor's Claim, Subcontractor may pursue the matter under Article 21 Dispute Resolution.

15.2 The Subcontractor shall not delay or suspend the Subcontract Work because of the pendency of or the denial by the Contractor of any such claim or because of the continuance of the condition out of which the claim arose but shall proceed diligently in performing the Subcontract Work while the claim is being resolved by agreement or being fully adjudicated.

15.3 In the event the Subcontractor asserts that it should receive additional compensation because of an act or omission on the Owner's part, or someone for whom the Owner is responsible, the Subcontractor shall promptly submit the claim to the Contractor in writing at least three (3) working days before the date the Contractor is required to submit such claims under the Prime Contract. If timely submitted with all documentation required by the Prime Contract, the Contractor will, on behalf of the Subcontractor, submit the same to the Owner for its consideration. Failure of the Subcontractor to submit such claims in a timely and proper manner shall result in a waiver of such claim and the Contractor is not required to submit it to the Owner, and the Subcontractor shall be bound to the same consequence which the Contractor would suffer under the Prime Contract.

15.4 The Subcontractor shall fully cooperate with the Contractor in the submission of such pass through claims, shall prepare all supporting data and do everything else necessary to properly present the claims, including payment of legal fees incurred by the Contractor to prepare, submit and negotiate or otherwise resolve such claim. Should the Owner allow and pay additional compensation to the Contractor on account of such pass through claim asserted by the Subcontractor, the Contractor will pay the same to the Subcontractor, less the Contractor's overhead, costs, expenses, legal fees and a 15% Administrative Fee.

15.5 It shall be an express condition precedent to any obligation on the part of the Contractor to make payment of any cost, reimbursement, compensation or damages to the Subcontractor hereunder that the Contractor shall first be determined to be entitled to such compensation on behalf of the Subcontractor and then receive such payment from Owner, and Subcontractor expressly acknowledges that the Contractor is not obligated or required to pursue the Subcontractor's claim against the Owner if the Contractor, in its sole discretion, after review of the Subcontractor's claim, has deemed the claim to lack merit in whole or in part.

15.6 If at any time a controversy should arise between the Contractor and the Subcontractor with respect to any matter in this Subcontract which the Contractor determines is not a claim, dispute or controversy which should involve or be asserted against the Owner, the decision of the Contractor relating to the subject of the controversy shall be followed by the Subcontractor.

16. Taxes

16.1 The Subcontract Amount includes all applicable sales, excise, transportation, unemployment compensation, social security, and any other taxes presently existing or subsequently imposed and levied and the Subcontractor agrees to pay all the above and to conform to all applicable municipal, state and federal laws in connection with such taxes. The Subcontractor further agrees to withhold taxes from the wages and salaries of all employees of the Subcontractor and pay the same in accordance with the federal and state laws and regulations pertaining thereto. The Subcontract Amount includes federal, state, and municipal taxes now levied or in force or hereafter imposed on all tangible personal property sold or transferred to the Contractor under this Subcontract and the Subcontractor agrees to pay such tax or taxes on such property, the cost of which is included in the Subcontract Amount.

17. Liens

17.1 The Subcontractor shall promptly pay when due all its project creditors, together with the project creditors of all those below it in the contractual chain.

17.2 If the Project involves private work, the Subcontractor shall keep the property and improvements free and clear of all mechanic, materialmen and similar lien claims or statements. In the event any such lien is filed, asserted, or claimed, the Subcontractor shall immediately secure its release either by paying the lien claimant, by filing a lien release bond, or by any other means permitted by law. If not so released, the Contractor may retain an amount equal to 150% of the lien or claim and may pay the claimant and offset that amount, plus any legal fees from the amount so retained. If the Project involves public work, the Subcontractor shall promptly pay and secure releases from all of its project creditors, including all those below it in the contractual chain, who are entitled to assert claims against the Contractor or its surety.

17.3 If any claim or lien is made or filed with or against the Contractor, the Owner, the Project, the Premises or the Project funds by any person claiming that the Subcontractor or any subcontractor or other person under subcontract to the Subcontractor, or any person or entity employed or engaged by the Subcontractor at any tier, has failed to make payment for any labor, services, materials, equipment, taxes or other obligations furnished or incurred in connection with the Subcontract Work, or if the Subcontractor or any subcontractor or other person under subcontract to the Subcontractor, or any person or entity employed or engaged by the Subcontractor at any tier causes damage to the Subcontract Work or any other work on the project, or if the Subcontractor fails to perform or is otherwise in default of any term or provision of this Subcontract, the Contractor shall have the right to retain from any payment then due or thereafter due an amount which the Contractor deems sufficient to (1) satisfy, discharge and/or defend against any such claim or lien, (2) make good any such nonpayment, failure, damage or default, and (3) defend, indemnify and hold harmless the Contractor and the Owner against any and all losses, damages and costs, including legal fees and expenses, incurred by either or both of them. The Contractor shall require proof that any such nonpayment, claim or lien is fully satisfied, dismissed, and discharged before any remaining retained funds will be released. The Contractor shall, in addition, have the right to apply and charge against the Subcontractor so much of the amount retained as may be required for the foregoing purposes and the Subcontractor shall pay and reimburse the Contractor and the Owner all such losses, damages, and costs incurred by them which exceed the retained funds.

18. Assignment

18.1 To the fullest extent permitted by law, the Subcontractor agrees that it shall not assign, sell, transfer, delegate or encumber any rights, duties or obligations arising under this Subcontract including, but not limited to, any right to receive payments hereunder, without the prior written consent of the Contractor in its sole discretion

and the giving of any such consent to a particular assignment shall not dispense with the necessity of such consent to any further or other assignments. In the event the Subcontractor assigns, sells, encumbers, or otherwise transfers its right to any funds due or to become due under this Subcontract as security for any loan, financing or other indebtedness ("Assignment"), notification to the Contractor of such Assignment must be sent by certified mail, return receipt requested, to the Contractor and the Assignment shall not be effective as against the Contractor until the Contractor provides its written consent to such Assignment. The Subcontractor agrees that any such Assignment shall not relieve the Subcontractor of any of its agreements, duties, responsibilities or obligations under this Subcontract and the Subcontract Documents and shall not create a contractual relationship or a third-party beneficiary relationship of any kind between the Contractor and such assignee or transferee.

19. Guarantee/Warranty

19.1 For a period equal to that imposed upon the Contractor under the Prime Contract, but in no event less than one year from the date of the Owner's final acceptance of the Subcontract Work, the Subcontractor guarantees and warrants that the Subcontract Work complies with the Subcontract Documents requirements and is free from defects in material and workmanship. The Subcontractor shall remain liable for defects in the Subcontract Work for the same period the Contractor remains liable to the Owner under the Prime Contract, or as required by law, whichever is greater. This guarantee/warranty shall include, but is not limited to, the cost of all labor, material, and related items necessary to correct any such defect, plus the cost of repairing any damage to other items which may have been caused by the defective material or workmanship. If the Subcontractor fails to begin warranty work within seventy-two (72) hours of being notified that such work is necessary, the Contractor may, at its option, perform the necessary remedial work or secure its performance by others and charge the Subcontractor with the cost thereof, plus a 15% Administrative Fee. Nothing in this paragraph shall shorten the statute of limitations on any action by the Contractor for breach of contract, negligence, or other cause of action against the Subcontractor.

20. Dispute Resolution

20.1 **Scope of Disputes Provisions.** All Claims, disputes, or other matters in question between the parties to this Subcontract which arise out of or relate to this Agreement (or the breach thereof), whether in contract or tort, (hereinafter "Dispute") shall be subject to the dispute resolutions set forth below.

20.2 **Initial Dispute Resolution/Mediation.** A Dispute which either party desires to pursue shall be set forth in a detailed written statement of claim submitted to the other party providing the specific basis upon which monetary or other relief is claimed to be due, the specific contractual provision(s) supporting the claim and an itemization of the amount claimed to be due. Following submission of the detailed statement of claim, Contractor and Subcontractor shall endeavor to settle the Dispute first through face-to-face direct discussions between corporate officers of the Contractor and Subcontractor which discussions shall be held at the Contractor's office location involved with the Project within thirty (30) calendar days of a request by either party. If the Dispute cannot be resolved through direct discussions, the parties shall participate in mediation under the Construction Industry Mediation Rules of the American Arbitration Association as a condition precedent and before recourse to any other form of binding dispute resolution. The location of the mediation shall be Allen County, Indiana, unless the parties agree on another location. Upon written notice requesting mediation provided to the other party and the American Arbitration Association, the parties agree to proceed with the mediation as scheduled by the mediator. Either party may terminate the mediation at any time after the first session, but the decision to terminate must be personally delivered to the other party and the mediator.

20.3 Binding Dispute Resolution. In the event Contractor and Subcontractor cannot resolve the Dispute through direct discussions or mediation as contemplated above, then the Dispute shall, at the sole discretion of Contractor, be decided either by submission to (a) arbitration administered by the American Arbitration Association or other arbitration tribunal mutually agreed upon by the parties; or (b) litigation subject to the exclusive jurisdiction and venue of Allen County, Indiana.

20.4 **Arbitration Election**

20.4.1 In the event Contractor exercises its exclusive right to resolve the Dispute in arbitration, such arbitration shall be conducted in accordance with the Construction Industry Arbitration Rules of the American Arbitration Association or the applicable rules of such other arbitration tribunal as the parties may mutually determine in effect at the time the arbitration is commenced as modified by the terms hereof. Any arbitration hereunder shall be held in Allen County, Indiana.

20.4.2 Should Contractor exercise its exclusive right to resolve the Dispute by arbitration, then within fourteen (14) days after Contractor gives Subcontractor notice of Contractor's election of arbitration, the parties shall use good faith efforts to select a single arbitrator mutually acceptable to both parties. If the parties are unable to select an arbitrator, then the parties will select the arbitrator(s) from a panel of experienced construction arbitrators on the American Arbitration Association's large complex case panel or a comparable panel of experienced construction arbitrators maintained by such other arbitration tribunal mutually selected by the parties then in effect. In the event the amount in Dispute exceeds $1,000,000.00, Contractor and Subcontractor agree the arbitration shall be heard by a panel of three (3) arbitrators; otherwise, the Dispute shall be heard by a single arbitrator.

20.4.3 The parties will enter into an Electronically Stored Information Agreement outlining the scope and volume for ESI discovery, which shall consider the amount and complexity of the Dispute.

20.4.4 The arbitration award shall be final and binding upon the parties, shall include attorneys' fees and costs to the prevailing party or parties, and may be entered as a judgment in any court having proper jurisdiction. In any arbitration the Arbitrator(s) shall have no power to render an award which has the effect of altering or amending or changing in any way any provisions of this Subcontract.

20.4.5 The parties stipulate and agree that the performance of this Subcontract is a transaction involving interstate commerce. Notwithstanding other provisions in the Subcontract, or choice of law provisions to the contrary, this agreement to arbitrate shall be enforced pursuant to, and governed by, the Federal Arbitration Act, 9 U. S. C. §1 et seq., which shall not be superseded or supplemented by any other arbitration act, statute, or regulation.

20.4.6 At the sole discretion of Contractor, any arbitration with Subcontractor shall be consolidated with any other arbitration proceeding relating to the work under the General Contract.

20.5 **Litigation Election.** In the event Contractor elects not to exercise its exclusive right to resolve the Dispute by arbitration, or in the event the Dispute between Contractor and Subcontractor, or any portion thereof, is found to be non-arbitrable, then the parties hereby agree that the Dispute or a portion thereof (as the case may be) shall be subject to exclusive jurisdiction and venue of Allen County, Indiana. In any such Dispute or portion thereof, which is resolved by litigation, Subcontractor expressly waives any right to trial by jury.

20.6 **Multiparty Proceeding.** To the extent permitted by Subcontract Documents, all parties necessary to resolve a claim shall be parties to the same dispute resolution proceeding. To the extent Disputes between the Contractor and the Subcontractor involve in whole or in part disputes between the Contractor and the Owner,

Disputes between the Subcontractor and the Contractor shall be decided by the same tribunal and in the same forum as disputes between the Contractor and the Owner.

20.7 **Stay of Proceedings.** (a) In the event the provisions for resolution of disputes between the Contractor and the Owner contained in the Subcontract Documents do not permit consolidation or joinder with disputes of third parties, such as the Subcontractor, resolution of any Dispute between Contractor and Subcontractor involving in whole or in part disputes between Contractor and Owner shall be stayed pending conclusion of any dispute resolution proceeding between Contractor and Owner. (b) In the event that any action is filed prior to exhaustion of remedies under the Subcontract; such action shall be stayed pending conclusion of any dispute resolution proceedings.

20.8 **Work Continuation and Payment.** Unless otherwise agreed in writing, Subcontractor shall continue the Subcontract Work and maintain the Schedule of Work during any dispute resolution proceedings. As Subcontractor continues to perform, Contractor shall continue to make payments in accordance with this Agreement.

20.9 Cost of Dispute Resolution; Attorneys' Fees.

20.9.1 The prevailing party in any Dispute arising out of or relating to this Agreement or its breach that is resolved by a dispute resolution procedure designated in the Subcontract Documents shall be entitled to recover from the other party those reasonable attorneys' fees, costs, and expenses (including expert fees and expenses) incurred by the prevailing party in connection with such dispute resolution process after direct discussions and mediation.

20.9.2 In the event the Subcontractor is awarded an amount equal to or less than the last written offer of settlement from Contractor, prior to the commencement of binding dispute resolution, Contractor shall be deemed prevailing party and be entitled to recover those reasonable attorneys' fees, costs, and expenses (including expert fees and expenses) incurred by the Contractor.

21. Miscellaneous

21.1 No one, other than the parties hereto, their successors, trustees, and assigns, shall be entitled to bring action on this Subcontract or the Performance Bond provided by the Subcontractor, it being the express intent of the parties that this Subcontract shall not be for the benefit of any third party.

21.2 Any work done by Subcontractor that falls under Contractor's agreements with the Indiana / Kentucky / Ohio Regional Council of Carpenters of the United Brotherhood of Carpenters and Joiners of America, Laborers International Union of North America State of Indiana District Council – Local #213, and Operative Plasters and Cement Masons International Association Local Area #692 – Area #101 Fort Wayne, shall be performed with proper union labor.

21.3 Any term or provision of this Subcontract which is held to be invalid or unenforceable in any jurisdiction shall, as to such jurisdiction, be ineffective to the extent of such invalidity or unenforceability without rendering invalid or unenforceable the remaining terms and provisions of this Subcontract or affecting the validity or enforceability of any of the terms or provisions of this Subcontract in any other jurisdiction.

21.4 This Subcontract, together with the documents referred to or incorporated herein by reference, constitute the complete agreement between the parties. No agent or employee of either party possesses the authority to make, and the parties shall not be bound by nor liable for, any statement, representation, promise or agreement not set forth herein. Any article, section, paragraph, or other headings contained in this Subcontract are for reference purposes and shall not affect in any way the meaning or interpretation of this Subcontract.

21.5 The terms and provisions shall extend to and be binding upon the successors, trustees and assigns of the parties hereto, and shall be governed and controlled, except as expressly provided herein or as required by the Subcontract Documents, by the laws of the State of the Project.

21.6 The Subcontractor agrees to comply with the provisions and any applicable local, state, or federal ordinance, regulation, status, or other mandate regarding affirmative action and/or minority/women's business enterprise participation.

21.7 This subcontract has not been altered in any manner from its original form as sent to the Subcontractor except for required signatures and dates, or as clearly marked and initialed by this Subcontractor. Any changes to this subcontract not initialed by the Contractor will not be binding.

21.8 Project Meetings. Subcontractor is required to attend all progress meetings when requested by Contractor, Architect, or Owner. Absence of Subcontractor at Progress Meetings when attendance is requested shall be subject to a $100.00 fine.

21.9 Equipment / Scaffolding. At no time shall subcontractor or any forces employed by or acting for, by, through or under subcontractor use any equipment or scaffolding which is owned, rented, or maintained by Contractor without prior written consent of Contractor and signed Release of Liability Waiver.

21.10 All requirements of Specification Divisions 00 and 01 apply to Subcontractor.

Attached please find your Contract Agreement that includes:

-Exhibit C - Waiver of Lien Form WITH INSTRUCTIONS.
-Exhibit D - Certificate of Insurance Requirements WITH INSURANCE COMPLIANCE CHECKLIST & SAMPLE CERTIFICATE OF INSURANCE.

Before any payments will be made on this Contract Agreement, the following items must be completed:

1. Your Subcontract Agreement **has been signed and returned to our office.** You only need to return page 1 of the agreement unless changes are made.

2. Your Certificate of Insurance has been received by our office (electronically to insurance@kinderandsons.com) and is compliant per Article 3 of Exhibit "A" and our Insurance Compliance Checklist/Sample Certificate of Insurance (Exhibit "D"). ***IF WE ALREADY HAVE A COMPLIANT, NON-EXPIRED BLANKET COI FROM YOUR COMPANY, YOU DO NOT NEED TO SUBMIT ANOTHER.***

3. All billings need to be sent to ap@kinderandsons.com. Billings must be on the AIA G702/G703 forms and include our Waiver of Lien forms (Exhibit "C"). Instructions for completing the waivers are included as part of Exhibit "C" in your Contract Agreement**. Please forward to your accounting department.**

Ensuring the above three items are correctly handled from the outset will maximize both our organizations time and efficiency.

If you have not already done so, and if required, please send your submittals to jsmith@kinderandsons.com in .pdf format labeled with proper specification section(s) and name as per project manual. (If a spec section does not exist within the project manual, please use the CSI MasterSpec numbering system.)

We look forward to working with you on this project. Should you have any questions regarding these items, feel free to contact our office. Jan Smith is the Project Manager.

Thank you.

Exhibit "C"

WAIVER OF LIEN TO DATE FOR MISSION 25

STATE OF: _____ Pay Application #:_____

COUNTY OF: _____ Invoice No.:_____

TO WHOM IT MAY CONCERN:

WHEREAS the undersigned has been employed by Michael Kinder & Sons, Inc. to furnish labor, material and equipment for the project known as Mission 25, of which Interfaith Mission Inc. is the owner.

THE undersigned, for and in consideration of _____ and _____/100 ($_____) Dollars, and other good and valuable considerations, upon the receipt whereof will be acknowledged, will hereby waive and release any and all lien or claim of, or right to lien, under the statutes of the State of Indiana, relating to mechanics' liens, with respect to and on said above-described premises, and the improvements, thereon, and on the material, fixtures, apparatus or machinery furnished, and on the moneys, funds or other considerations due or to become due from the owner, on account of all labor, services, material, fixtures, apparatus or machinery, furnished to this date by the undersigned for the above-described premises, INCLUDING EXTRAS.*

DATE _____

COMPANY NAME _____

COMPANY ADDRESS _____

CITY, STATE, ZIP _____

BY: _____

TITLE: _____

*EXTRAS INCLUDE BUT ARE NOT LIMITED TO CHANGE ORDERS, BOTH ORAL AND WRITTEN TO THE CONTRACT.

Exhibit "C"

SUBCONTRACTOR'S AFFIDAVIT FOR MISSION 25

STATE OF: _____ Pay Application #:_____

COUNTY OF: _____ Invoice No.:_____

TO WHOM IT MAY CONCERN:

That the total amount of the contract with Michael Kinder and Sons, Inc. including extras* is $_____ on which he or she has received payment of $_____ as of the notarized date below. That all waivers are true, correct and genuine and delivered unconditionally and that there is no claim either legal or equitable to defeat the validity of said waivers.

That for the purpose of said contract, the following persons, firms or corporations have been engaged to furnish, have furnished, or will furnish materials and/or labor for said project; that there are due or to become due to them respectively, the amounts set opposite their names for said materials and/or labor; that there are no other known commitments and there is nothing due or to become due to any person, firm, or corporation for labor, services, materials, fixtures, machinery, apparatus, supplies or services, other than as stated herein.

That there are no other contracts for said work outstanding, and that there is nothing due or to become due to any person for material, labor or other work of any kind done or to be done upon or in connection with said work other than below stated.

			(A)	(B)	(C)	A-B-C=
MATERIAL SUPPLIER OR SUBCONTRACTOR	PHONE NUMBER	PROVIDED	CONTRACT PRICE INCLDG EXTRAS*	PREVIOUSLY REQUESTED TO DATE	CURRENT PAYMENT DUE	BALANCE OWED
TOTAL LABOR AND MATERIAL INCLUDING EXTRAS* TO COMPLETE.						

DATE _____ COMPANY NAME: _____

BY: _____

TITLE: _____

I HERBY CERTIFY THAT THE PERSON NAMED ABOVE, APPREARED BEFORE ME THIS DAY IN PERSON AND ACKNOWLEDGED THEY SIGNED THIS DOCUMENT (INCLUDING SUPPLEMENTAL SHEETS ATTACHED HERETO) AS THEIR FREE AND VOLUNTARY ACT AND DEED FOR THE USES AND PURPOSES HEREIN STATED.

SUBSCRIBED AND SWORN TO BEFORE ME THIS _____ DAY OF _____

NOTARY PUBLIC _____

MY COMMISSION EXPIRES: _____

*EXTRAS INCLUDE BUT ARE NOT LIMITED TO CHANGE ORDERS, BOTH ORAL AND WRITTEN TO THE CONTRACT.

Subcontractor is required to provide sub-subcontractor and material supplier waivers for values exceeding $5,000.00

Exhibit "C"

SUB-SUBCONTRACTOR WAIVER OF LIEN TO DATE FOR MISSION 25

STATE OF: _____
COUNTY OF: _____

TO WHOM IT MAY CONCERN:

WHEREAS the undersigned has been employed by _____ to furnish labor, material and equipment for the project known as Mission 25, of which Interfaith Mission Inc. is the owner.

THE undersigned, for and in consideration of _____ and _____/100 ($_____) Dollars, and other good and valuable considerations, upon the receipt whereof will be acknowledged, will waive and release any and all lien or claim of, or right to lien, under the statutes of the State of Indiana, relating to mechanics' liens, with respect to and on said above-described premises, and the improvements, thereon, and on the material, fixtures, apparatus or machinery furnished, and on the moneys, funds or other considerations due or to become due from the owner, on account of all labor, services, material, fixtures, apparatus or machinery, furnished to this date by the undersigned for the above-described premises, INCLUDING EXTRAS.*

DATE _____

COMPANY NAME _____
ADDRESS _____
CITY, STATE, ZIP _____

BY: _____

TITLE: _____

*EXTRAS INCLUDE BUT ARE NOT LIMITED TO CHANGE ORDERS, BOTH ORAL AND WRITTEN TO THE CONTRACT.

SUB-SUBCONTRACTOR'S AFFIDAVIT

STATE OF: _____
COUNTY OF: _____

TO WHOM IT MAY CONCERN:

THE undersigned, (Name) _____ being duly sworn, deposes and says that he or she is (Position) _____ of (Company Name) _____ who is the contractor furnishing _____ on the building located at 615 N. Opportunity Drive Columbia City, IN, owned by Interfaith Mission Inc.

That the total amount of the contract including extras* is $_____ on which he or she has received payment of $_____ as of the notarized date below. That all waivers are true, correct and genuine and delivered unconditionally and that there is no claim either legal or equitable to defeat the validity of said waivers. That the following are the names and addresses of all parties who have furnished material or labor, or both, for said work and all parties having contracts or sub contracts for specific portions of said work or for material entering into the construction thereof and the amount due or to become due to each, and that the items mentioned include all labor and material required to complete said work according to plans and specifications.

That there are no other contracts for said work outstanding, and that there is nothing due or to become due to any person for material, labor or other work of any kind done or to be done upon or in connection with said work other than above stated.

DATE _____ SIGNATURE _____

SUBSCRIBED AND SWORN TO BEFORE ME THIS _____ DAY OF _____

NOTARY PUBLIC _____

MY COMMISSION EXPIRES: _____

Exhibit "C"

MATERIAL SUPPLIER WAIVER OF LIEN TO DATE FOR MISSION 25

STATE OF: _____
COUNTY OF: _____

TO WHOM IT MAY CONCERN:

WHEREAS the undersigned has been employed by_____ to furnish material and/or equipment for the project known as Mission 25, of which Interfaith Mission Inc. is the owner.

THE undersigned, for and in consideration of _____ and _____/100 ($_____) Dollars, and other good and valuable considerations, upon the receipt whereof will acknowledged, will waive and release any and all lien or claim of, or right to lien, under the statutes of the State of Indiana, relating to mechanics' liens, with respect to and on said above-described premises, and the improvements, thereon, and on the material, fixtures, apparatus or machinery furnished, and on the moneys, funds or other considerations due or to become due from the owner, on account of all labor, services, material, fixtures, apparatus or machinery, furnished to this date by the undersigned for the above-described premises, INCLUDING EXTRAS.*

DATE _____

COMPANY NAME _____
ADDRESS _____
CITY, STATE, ZIP _____

BY: _____

TITLE: _____

*EXTRAS INCLUDE BUT ARE NOT LIMITED TO CHANGE ORDERS, BOTH ORAL AND WRITTEN TO THE CONTRACT.

MATERIAL SUPPLIER AFFIDAVIT

STATE OF: _____
COUNTY OF: _____

TO WHOM IT MAY CONCERN:

THE undersigned, (Name) _____ being duly sworn, deposes and says that he or she is (Position) _____ of (Company Name) _____ who is the material supplier furnishing _____ for _____ (Company purchasing material) on the building located at 615 N. Opportunity Drive Columbia City, IN, owned by Interfaith Mission Inc.

That the total amount of the contract including extras* is $_____ on which he or she has received payment of $_____ as of the notarized date below. That all waivers are true, correct and genuine and delivered unconditionally and that there is no claim either legal or equitable to defeat the validity of said waivers. That the following are the names and addresses of all parties who have furnished material or labor, or both, for said work and all parties having contracts or sub contracts for specific portions of said work or for material entering into the construction thereof and the amount due or to become due to each, and that the items mentioned include all labor and material required to complete said work according to plans and specifications.
That there are no other contracts for said work outstanding, and that there is nothing due or to become due to any person for material, labor or other work of any kind done or to be done upon or in connection with said work other than above stated.

DATE _____ SIGNATURE _____

SUBSCRIBED AND SWORN TO BEFORE ME THIS _____ DAY OF _____

NOTARY PUBLIC _____

MY COMMISSION EXPIRES: _____

MICHAEL KINDER & SONS
PLAN | DESIGN | BUILD

Exhibit "D" – Insurance Compliance Checklist

The following sample Certificate of Insurance shows the requirements needed to meet the terms of the Contract Agreement with Michael Kinder & Sons, Inc.

Please submit your client's Certificate of Insurance electronically to our office, (insurance@kinderandsons.com).

Please be sure your certificate of insurance and coverage meet the following requirements:

1. General aggregate limit is on a per project basis.
2. Limits are equal to or greater than those required.
3. Installation floater is included.
4. Michael Kinder & Sons, Inc. and the project owner are protected as blanket additional insured on the General Liability Policy (per Form #CG7037 or equivalent) including ongoing operations and products/completed operations as required by contract.
5. Michael Kinder & Sons, Inc. and the project owner are protected as blanket additional insured on the Auto Liability Policy (per Form #CA2048 or equivalent).
6. All insurance is primary and non-contributory.
7. Waiver of Subrogation in favor of Michael Kinder & Sons, Inc. on the General Liability and Workers Compensation policies is included.

Should you have any questions, please contact us via phone (260.744.4359) or via email at (insurance@kinderandsons.com).

Thank you.

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 8/16/2018

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER	CONTACT NAME: Account Manager Name	
ISU Stewart, Brimner, Peters & Company 3702 Rupp Drive	PHONE (A/C, No, Ext): (260)482-6900	FAX (A/C, No): (260)482-7305
	E-MAIL ADDRESS: Account Manager email address	
Fort Wayne IN 46815	INSURER(S) AFFORDING COVERAGE	NAIC #
	INSURER A : Name of Insurance Company	
INSURED	INSURER B :	
Full Named Insured Address	INSURER C :	
	INSURER D :	
	INSURER E :	
City St Zip	INSURER F :	

COVERAGES **CERTIFICATE NUMBER:** 17/18 Sample **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	X COMMERCIAL GENERAL LIABILITY CLAIMS-MADE / X OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: POLICY / X PRO-JECT / LOC OTHER:	X	Y	123456789	XX/XX/XXXX	XX/XX/XXXX	EACH OCCURRENCE	$ 1,000,000
							DAMAGE TO RENTED PREMISES (Ea occurrence)	$ 100,000
							MED EXP (Any one person)	$ 5,000
							PERSONAL & ADV INJURY	$ 1,000,000
							GENERAL AGGREGATE	$ 2,000,000
							PRODUCTS - COMP/OP AGG	$ 2,000,000
								$
A	AUTOMOBILE LIABILITY X ANY AUTO ALL OWNED AUTOS / SCHEDULED AUTOS X HIRED AUTOS / X NON-OWNED AUTOS	X	Y	123456789	XX/XX/XXXX	XX/XX/XXXX	COMBINED SINGLE LIMIT (Ea accident)	$ 1,000,000
							BODILY INJURY (Per person)	$
							BODILY INJURY (Per accident)	$
							PROPERTY DAMAGE (Per accident)	$
							Underinsured motorist	$ 1,000,000
A	X UMBRELLA LIAB / X OCCUR EXCESS LIAB / CLAIMS-MADE DED / RETENTION $			123456789	XX/XX/XXXX	XX/XX/XXXX	EACH OCCURRENCE	$ 5,000,000
							AGGREGATE	$ 5,000,000
								$
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? Y / N: N (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	N / A	Y	123456789	XX/XX/XXXX	XX/XX/XXXX	X PER STATUTE / OTH-ER	
							E.L. EACH ACCIDENT	$ 500,000
							E.L. DISEASE - EA EMPLOYEE	$ 500,000
							E.L. DISEASE - POLICY LIMIT	$ 500,000
A	Installation Floater			123456789	XX/XX/XXXX	XX/XX/XXXX	Limit	$500,000
							Deductible	$500

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

Michael Kinder & Sons, Inc., & their affiliates, directors, employees, subsidaries, representative & any other parties as required by the GC/SubContractor contract agreement are listed as certificate holders. Per the signed contract, contractor & owner must be protected as blkt addl insureds on the GL policy incl on-going operations & prod/completed operations (Form #CG7037 or equivalent), & on the Auto Liab policy (Form CA2048 or equivalent). All insurance for subcontractors/sub-subcontractors shall be Primary & Non-Contributory. A Waiver of Subro clause in favor of Michael Kinder & Sons, Inc. shall be added to the GL, Auto and Work Comp Policies. Umbrella follows form.

CERTIFICATE HOLDER

Michael Kinder & Sons, Inc.
6055 Innovation Blvd.
Fort Wayne, IN 46818

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

Jeff Peters/AJP

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END OF SECTION 00 60 00

01 12 00 SUMMARY OF MULTIPLE CONTRACTS

1.1 SUMMARY

A. The intent of this section is to indicate the work required by the Contractors, and to provide information regarding the duties, responsibilities, and cooperation required by the Contractors, with similar requirements for their Subcontractors and Suppliers.

1.2 WORK UNDER SEPARATE CONTRACTS

A. This project has been separated into multiple bid packages. Contracts are recognized to be a major part of the Project, with work to be performed concurrently and in close coordination with the work of other Contracts.

B. The "Contract Documents", as defined in the General Conditions, include "the drawings". Although drawings are grouped and identified by classifications of the work, all Contractors shall be responsible for their work as specified herein and as indicated on all the drawings.

C. Separate Contracts will be awarded as per the "Schedule of Contract Responsibilities" following this section. Contractors shall include all work required by the specifications and drawings for each contract area defined in the schedule.

1.3 DEFINITIONS

A. The term "Provide" shall always mean "to furnish and install" unless otherwise specifically noted.

B. Items identified as "Remove and Re-use", "Remove for Re-installation", "Remove and Re-locate", or like/similar phrase, will be removed, stored, and relocated by the Contractor having the responsibility to re-install the item or material.

C. The term "Furnish" shall always mean to "supply and deliver safely and securely" to the jobsite unless specifically noted.

1.4 GENERAL REQUIREMENTS

A. The Contractor's/Supplier's bid shall be based upon the combined documents prepared by the Project Architect, Project Engineers, Project Consultants, and Construction Manager. Contractor is responsible for all work related to their work scope included in the entire set of contract documents.

B. The requirements of Divisions 0 and 1 are a part of the work of each and every Contract

area.

C. Each Bid Package/Contractor/Supplier shall reference ALL drawings, specifications, Project Manual, and Scope of work and provide complete bid/work per drawings, specifications, Project Manual, and Scope of work.

D. Bidders shall review Alternates, Unit Prices, etc. (if requested/listed/identified) and provide a response to each as it pertains to its specific bid package.

E. Each Contractor is to include escalation for labor, material, and equipment costs for the duration of the project.

F. Drawing/Detail references mentioned in a Contractor's/Supplier's specific Scope of work may not be inclusive of all of the areas in which the material, systems, etc. may be in the drawings. Drawing/Detail references mentioned in a Contractor's/Supplier's specific Scope of work are for reference only to communicate scope.

G. Notes on drawings or in specifications may assign responsibility to provide, furnish, and/or install materials in a package different than a Contractor's/Supplier's specific Scope of work. The specific Scopes of work will override any notes on Drawings and Specifications regarding responsibility of providing, furnishing, and/or installing said materials. If a material is not identified in the specific Scope of work of a Contractor/Supplier but noted on the drawings and/or in the specifications to be provided, furnished, and/or installed by a specific Contractor/Supplier, the notes on the drawings and/or specifications shall apply.

H. All Contractors/Suppliers shall be responsible for reviewing scopes of work in other bid packages and shall provide a complete scope including any and all costs pertinent to their scope of work in association with other bid packages.

I. Each Contractor/Supplier must include all items listed in the scope of work for its bid package REGARDLESS of what is written in the scopes of work for other Contractors.

J. Whether the term "sub-tier" is used or not in the scope of work applicable to a Contractor, Contractor will ensure that any and all sub-tiers (including suppliers) are bound by the Contract Documents to the same extent as Contractor as such Contract Documents a

applicable to the sub-tier's scope of work. Each Contractor is required to enforce Construction Manager project requirements onto any/all of its Sub-tiers.

K. The Construction Manager is not responsible for managing, supervising, and/or coordinating Contractor's sub-tier contractors and/or suppliers. If Construction Manager is required to manage and/or coordinate a Contractor's sub-tiers due to lack of communication, lack of coordination, lack of supervision, and/or lack of management by the Contractor, Contractor may be required to reimburse Construction Manager via a deduct change order, at the discretion of the Construction Manager.

L. Each Contractor shall provide on-site supervision of its sub-tiers anytime its sub-tier performs work on site, and such supervision shall be subject to Construction Manager's approval.

M. Contractor/Supplier will accept allocation of liquidated damages by Construction Manager that may be assessed onto Construction Manager by the Owner if applicable as a direct result of nonconformance by the Contractor/Supplier. A copy of the Owner/Prime contract can be provided to a pre-qualified bidder upon their formal request to the Construction Manager.

N. Contractor will comply with all applicable City, State, Federal codes, and quality workmanship requirements regarding materials, methods of work, and disposal of excess and waste material.

O. Where there is a conflict or discrepancy between drawings and/or drawings and specifications; Contractor shall include the costs to provide the more expensive and/or greater quantity.

P. Contractor acknowledges that the subsection 01 12 00/1.14 in the Project Manual labeled "INCLUDED BY ALL CONTRACTORS AS APPLICABLE" applies to EACH/EVERY/(ALL) bid package(s)/Contractor(s). Contractor includes all costs in its base bid to adhere to this aforementioned section of the Project Manual. If there is a discrepancy between the subsection "INCLUDED BY ALL CONTRACTORS AS APPLICABLE" and the Contractor's specific bid package scope, the Contractor's specific bid package scope shall apply and be adhered to by the Contractor at no additional cost to the project.

Q. Contractor will provide all materials, manpower, equipment, receiving, transporting, loading, unloading, rigging, hoisting, handling, storing, setting, conveying, hoisting, temporary bracing, scaffolding, working platforms, protection/safety of all materials and manpower, etc. to execute this scope of work.

R. Contractor will provide all costs for delivery, freight, and applicable sales and/or use tax to the jobsite.

S. Contractor will provide all required layout/surveying, engineering, submittals, shop drawings, etc. necessary to complete this scope of work.

1.5 ADMINISTRATIVE RESPONSIBILITIES OF THE SUBCONTRACTORS AND CONSTRUCTION MANAGER

A. The Construction Manager shall be responsible for the maintenance of the construction schedule and the general coordination of all phases of the work.

1. Each Contractor shall read the specifications and drawings for all other Contracts, including the subcontracts for fixed equipment and the like, to be incorporated and/or attached and/or built into the work, and familiarize themselves with their requirements and responsibilities, to enable the required coordination and supervision.
2. Each Contractor shall also familiarize itself with other items to be incorporated into the work, including equipment and/or work by the Construction Manager, Owner or other subcontractors.
3. Each Contractor shall cooperate with the Construction Manager in notifying it when the work is at a stage to require the services of other Contractors and shall notify the Construction Manager in the event that such other Contractors do not carry out their responsibilities in connection with such notification.

B. Each Contractor shall cooperate with, and assist, the Construction Manager in the preparation of construction progress and procedures, and schedule of product deliveries and their effect on the overall project progress and completion.

C. The Construction Manager or Owner will furnish the topographical survey, either as a part of these drawings or separately, giving the general topographical lines existing at the site and the property lines.

D. All contractors are expected to be familiar with the geotechnical report if available.

E. The Contractor for Concrete work shall verify grades, lines, levels and dimensions as shown on the drawings, and shall report and errors or inconsistencies discovered in the information furnished by the drawings, to the Architect before commencing work, and shall perform the following:

1. Establish initially and maintain all major grades, lines, levels, and benchmarks necessary and required by the work.

2. Establish bench marks at two widely separated places, and shall establish benchmarks at each floor level, giving the exact level at the floor or floors, in the event there is more than one level required as the work progresses.
3. Establish at each floor level accurate major lines sufficient for mechanical, electrical, and other trades to properly locate their work. Maintain lines until walls and other physical elements are defined. Contractors are responsible for the accuracy of the layout of their work. Each Contractor shall review and accept conditions installed by other Contractors prior to beginning their installation. If conditions are unacceptable, the Contractor shall notify the Construction Manager and Architect.

1.6 PERMITS, FEES & NOTICES

A. Contractor will provide all necessary permits, inspections, and notifications for its work that are not already specifically stated to be covered by Construction Manager.

B. Each Contractor is responsible for all permits, licenses, registrations, fees (including tap fees), inspections, and notifications required by authorities having jurisdiction and/or Owner, with exception of the General Building Permit. The General Building Permit will be acquired by Michael Kinder & Sons, Inc. as Construction Manager and copies furnished as required.

C. The Construction Manager will secure the general building permit(s) for the Owner as required by federal, state or local codes and/or ordinances. Each Contractor shall secure all other permits and licenses necessary for the proper execution and completion of its work, which are applicable at the time the bids are received. All fees to relocate utilities on Owner's property shall be included in the bid of the Contractor doing the relocation. Each Contractor shall be responsible for contacting the local governing agency for such cost information and requirements.

D. Utility Tie-ins: Shall be arranged with local utility company and all other involved parties for minimum interruption of service. Those tie-ins to the Owner's system shall be at the convenience of the Owner.

E. Shutdown of existing systems shall be limited to minimum time required and shall be scheduled with other involved parties. Unless required differently by the Owner's facility, provide minimum two days written notice of shutdown to Construction Manager and Owner.

F. Inspections of installed work shall be performed by the governing authority as arranged for by each Contractor. Work shall not be covered until approved.

G. Each Contractor shall give all notices and comply with all laws, ordinances, rules, regulations, and orders of any public authority bearing on the performance of their

work. If the Contractor observes that any of the Contract Documents are at variance therewith in any respect, they shall promptly notify the Construction Manager and Architect in writing, and any necessary changes shall be adjusted by appropriate notification. If any Contractor performs any work knowing it to be contrary to such laws, ordinances, rules, and regulations, and without such notice to the Construction Manager and Architect, they shall assume full responsibility therefor and shall bear all costs attributable thereto.

1.2 VERIFICATION OF EXISTING DIMENSIONS

C. When verification of existing dimensions is required, the Contractor requiring said verification for the construction or fabrication of its material shall be responsible for the procurement of the field information.

MILFORD ELEMENTARY SCHOOL BID PACKAGES

BID PACKAGES – SCOPE OF WORK – ALL BID PACKAGES SCOPE 8
Bid Package 03a Cast in Place Concrete 16
Bid Package 04a Masonry 19
Bid Package 05a Structural Steel Framing - Furnish and Erect 22
Bid Package 06a General Trades 24
Bid Package 07g Membrane Roofing 28
Bid Package 08d Entrances and Storefronts 30
Bid Package 09a Gyp Board Assemblies – Metal Framing – APC – Acoustic Wall Trmt. – Painting 33
Bid Package 09b Flooring & Tiling 35
Bid Package 09c Wood Athletic Flooring 37
Bid Package 11e Food Service Equipment 39
Bid Package 21a Fire Suppression Systems 41
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MILFORD ELEMENTARY SCHOOL

BID PACKAGES – SCOPE OF WORK – ALL BID PACKAGES SCOPE

****The following notes apply to EACH/EVERY/(ALL) bid package(s)/Subcontractor(s)/Supplier(s).****

GENERAL:

1. The Subcontractor's/Supplier's bid must be formulated based on the combined documents created by the Project Architect, Project Engineers, Project Consultants, and Construction Manager.
2. Each Bid Package/Subcontractor/Supplier must incorporate ALL drawings, specifications, Project Manual, and Scope of Work, and ensure comprehensive bid/work adherence to the aforementioned documents.
3. Bidders must assess Article and Alternates (if requested/listed/identified) and furnish a response to each specified alternate relevant to their specific bid package.
4. Bidders intending to submit a Combined Bid are required to initially submit separate bids for each individual Bid Package Base Bid. Combined Bids are strongly encouraged.
5. Any materials or equipment that become permanent fixtures of the facility are subject to the State Gross Retail Tax (Sales Tax). This project is TAX EXEMPT.
6. Each Subcontractor is mandated to incorporate escalation for labor and material costs for the duration of the project.
7. Each Supplier must include escalation for material costs for the duration of the project.
8. Each Subcontractor and Sub-tier entity is accountable for all permits, licenses, registrations, fees (including tap fees), inspections, and notifications requisite for its specific Bid Package mandated by authorities having jurisdiction, except for the General Building Permit. MKS, as Construction Manager, will obtain the General Building Permit and furnish copies as necessary. a. If separate General Building Permits are acquired per each building level, subs must plan to obtain their subsequent required permits similarly.
9. The term "Provide" invariably denotes "to furnish and install" unless expressly noted otherwise.
10. Items denoted as "Remove and Re-use", "Remove for Re-installation", "Remove and Re-locate", or akin phrases, will be handled by the responsible Subcontractor for removal, storage, and relocation, with the responsibility for re-installation.
11. Drawing/Detail references mentioned in a Subcontractor's/Supplier's specific Scope of Work may not encompass all areas where the material, systems, etc. may be depicted in the drawings. Such references are for illustrative purposes only.
12. Notes on drawings or in specifications may allocate responsibility to provide, furnish, and/or install materials in a package different from a Subcontractor's/Supplier's specific Scope of Work. The specific Scopes of Work supersede any notes on Drawings and Specifications regarding the responsibility of providing, furnishing, and/or installing said materials. If a material is not identified in the specific Scope of Work of a Subcontractor/Supplier but noted on the drawings and/or in the specifications to be provided, furnished, and/or installed by a specific Subcontractor/Supplier, the notes on the drawings and/or specifications shall govern.
13. All Subcontractors/Suppliers must review scopes of work in other bid packages and provide a complete scope including any and all pertinent costs associated with their scope of work in conjunction with other bid packages.
14. Each Subcontractor/Supplier must include all items listed in the scope of work for its bid package REGARDLESS of the contents of the scopes of work for other Subcontractors.
15. Whether the term "sub-tier" is used or not in the scope of work applicable to a Subcontractor, the Subcontractor shall ensure that any and all sub-tiers (including suppliers) are bound by the Contract Documents to the same extent as the Subcontractor, as applicable to the sub-tier's scope of work.

Each Subcontractor is obligated to enforce Construction Manager project requirements onto any/all of its Sub-tiers. Construction Manager is not liable for managing, supervising, and/or coordinating Subcontractor's sub-tier contractors and/or suppliers. If Construction Manager is obliged to manage and/or coordinate a Subcontractor's sub-tiers due to inadequate communication, coordination, supervision, and/or management by the Subcontractor, the Subcontractor may be liable to reimburse Construction Manager less any change order deductions. Each Subcontractor must provide on-site supervision of its sub-tiers whenever its sub-tier performs work on site, and such supervision is subject to Construction Manager's and Owner's approval.

16. Each Subcontractor/Supplier must thoroughly review the project schedule. This schedule delineates work to be performed in multiple areas simultaneously to ensure timely completion and may necessitate multiple crews. This requirement must be factored into each bid package as necessary.
17. All Subcontractors must allocate any/all necessary resources and manpower to adhere to the project schedule. The project schedule already accommodates a reasonably expected number of lost working days. No reimbursement or additional time extension will be granted to Subcontractors for the specified number of reasonably expected lost working days. All Subcontractors must factor in and acknowledge the following number of reasonably expected lost working days for the associated months: a. January – Six (6) Expected Lost Working Days, Already Included in Project Schedule b. February – Five (5) Expected Lost Working Days, Already Included in Project Schedule c. March – Three (3) Expected Lost Working Days, Already Included in Project Schedule d. April – Three (3) Expected Lost Working Days, Already Included in Project Schedule e. May - Three (3) Expected Lost Working Days, Already Included in Project Schedule f. June – Three (3) Expected Lost Working Days, Already Included in Project Schedule g. July – Three (3) Expected Lost Working Days, Already Included in Project Schedule h. August – Three (3) Expected Lost Working Days, Already Included in Project Schedule i. September – Three (3) Expected Lost Working Days, Already Included in Project Schedule j. October – Three (3) Expected Lost Working Days, Already Included in Project Schedule k. November – Four (4) Expected Lost Working Days, Already Included in Project Schedule l. December – Five (5) Expected Lost Working Days, Already Included in Project Schedule
18. The Owner retains the right to take possession of or use any completed or partially completed portions of the structure of work, notwithstanding the time for completing the entire work. Such possession or use does not constitute acceptance of the work taken over or used by the Owner. Owner's occupancy or use of such space or spaces in the building does not constitute Owner's acceptance of any Work, acceptance of materials or equipment not in accordance with the Contract Documents, nor relieve any Subcontractor from obligations to complete the work nor from responsibility for loss or damage due to or arising out of defects in, or malfunctioning of any work, material, or equipment, nor from any other unfulfilled obligations or responsibilities under the Contract.
19. Subcontractor/Supplier will accept allocation of liquidated damages by Construction Manager that may be assessed onto Construction Manager by the Owner if applicable as a direct result of nonconformance by the Subcontractor/Supplier.
20. Subcontractor/Supplier is responsible to furnish and install mocks as defined in the specifications.

COMMUNICATION:

1. The Subcontractor will ensure continuous access for both its field and office personnel to the internet and e-mail for document control and communication on a daily basis.
2. The Subcontractor must provide a notice to Owner for review and approval a minimum of seven (7) calendar days before commencing any building System Shutdown and/or Owner operational changes necessary for this Subcontractor to execute its work.
3. The On-Site Foreman for each Subcontractor and any of its Sub-tier Foremen are obligated to attend the following meetings: a. Pre-Start/Kick-Off Meetings b. All Pre-Installation Meetings c. Each Weekly Coordination/Progress Meeting (beginning minimum 4 weeks before work

commencement on site.) d. Each Daily Foremen Meeting (beginning minimum 2 days before work commencement on site.)

4. The Project Manager for each Subcontractor and any of its Sub-tier Project Managers are required to attend the following meetings: a. Pre-Start/Kick-Off Meetings b. All Pre-Installation Meetings c. Each Weekly Coordination/Progress Meeting (beginning minimum 4 weeks before work commencement on site.) d. Each Monthly Project Manager Meetings

ELECTRONIC DOCUMENT MANAGEMENT:

1. All contractors must subscribe to Procore for use on this project. The number of users is at the discretion of the contractor. Procore will be utilized for the current construction documentation, including the current set, as-builts, and punch lists. Visit www.procore.com/pricing for subscription pricing. On-site personnel are required to use this product. On-site personnel (supervisor for on-site personnel at minimum) must have an iPad for use to utilize Procore.
2. Subcontractors must provide notice and obtain prior written authorization from MKS to proceed with extra work before commencing any extra work, or they risk not being compensated for the extra work. (*Issuance on Procore does not automatically grant approval of additional costs.)

RFI's:

1. Conflicts or issues necessitating information, clarification, and/or direction for a Subcontractor/Supplier to execute its scope of work that cannot be addressed elsewhere in the Contract Documents shall be resolved via submission of an RFI by the Subcontractor/Supplier to Construction Manager. Upon recognition of the need for information, Subcontractors/Suppliers are obligated to promptly generate RFI's to Construction Manager. Construction Manager staff will not generate RFI's on behalf of the Subcontractor/Supplier. Verbal communication of a conflict or issue requiring clarification for the Subcontractor/Supplier does not constitute an RFI. RFIs must be submitted clearly and concisely via email. Each RFI must contain one (1) question. References to applicable drawings and specification sections, pictures, etc. must be included with RFIs to expedite resolutions. Subcontractors/Suppliers must provide a suggested solution and any anticipated costs with RFIs if available. Each and Every RFI must contain a DUE DATE; otherwise, each RFI will be assigned a default of 10 working days for response.
2. Upon receipt of response to an RFI, if the Subcontractor/Supplier believes that there may be a cost and/or schedule impact due to the response, the Subcontractor/Supplier must notify Construction Manager in writing within 24 hours of the potential cost and/or schedule impact (exact cost and/or schedule impact is not required to be known within 24 hour notification). Failure to notify Construction Manager in writing within 24 hours waives the Subcontractor's right to any additional costs and/or schedule extensions resulting from the RFI response.
3. All Subcontractors/Suppliers will receive all RFIs. It is the responsibility of each Subcontractor/Supplier (not Construction Manager) to thoroughly review each RFI response for information that may affect its scope of work. Each Subcontractor/Supplier is strongly encouraged to adequately staff the project to review project information in a timely manner. Failure by a Subcontractor/Supplier to review an RFI and execute its scope of work in a manner consistent with an RFI response after the RFI response is issued will result in the Subcontractor/Supplier being responsible for all costs to rectify work to align with the RFI response.
4. Each Subcontractor is responsible for maintaining their own as-built drawings (on Procore). RFI "documents" can be accessed within the Procore App; however, RFI's are not guaranteed to be posted/linked on the actual "drawings" in Procore by MKS or Others. Only new drawing sheets received (ASI's or PR's) from the design team are published onto Procore.

ALLOWANCE USAGE:

1. Allowances that are noted in each Bid Package/Subcontract/PO will be required to have full accounting review at project conclusion and any unused portion will be deducted from the subcontract/PO at conclusion of the project. Each Bid Package/Subcontractor must first notify MKS, in writing, prior to use of an Allowance in order for it to be applied to the Allowance and not applied as part of Subcontractor's/Supplier's Base Scope/Bid. Allowances may be deleted in full if it is determined the scope is not required or will be performed by others.

LOGISTICS/WORK PLANNING:

1. Each Subcontractor must ensure provision of its own work surface platforms, scaffolding, guardrails, hoisting, safety measures, etc., for the installation process of their materials/work.
2. Each Subcontractor is obligated to furnish certified rigging and signaling personnel and rig their own materials. All certified riggers must wear a RED vest for all rigging operations. Each Subcontractor is responsible for supervising and coordinating their rigging, signaling, and hoisting activities with MKS and adjacent Subcontractors. Any damage resulting from the Subcontractor's rigging and signaling is the Subcontractor's responsibility.
3. All riggers must comply with and provide proof of 1926.1425 – Training.
4. All signalers must comply with and provide proof of 1926.1428 – Training.
5. The Subcontractor is responsible for receiving, unloading, providing traffic control, rigging, hoisting, protecting, storing, etc., the work within its scope of work. The Subcontractor will provide traffic control as necessary (which may include, but is not limited to, flagmen, warning devices, signs, etc.). If a Subcontractor requires removal of a section of project fencing and/or gates for material or equipment reception, the Subcontractor is responsible for all associated costs to remove, relocate, reinstall, and ensure safety to the satisfaction of Construction Manager.
6. The Subcontractor/Supplier must facilitate any required number of deliveries and associated costs for the duration of the project. Due to site staging restrictions, not all project materials can be delivered simultaneously.
7. The Subcontractor/Supplier must fulfill any required off-site storage requirements to accommodate site access or storage restrictions.
8. On-site space for office and/or storage trailers is limited and not guaranteed. Trailer placement (office or storage) must be pre-approved by the MKS Jobsite Superintendent. Subcontractors with on-site trailers are responsible for any associated utility costs.
9. Each Subcontractor must handle the installation and removal of temporary power, telephone, and data for their project trailer/office if required by their onsite personnel.
10. Soil stockpiling on site is not permitted unless the pile is to be removed within the next business day. Bids/proposals should be calculated accordingly. Any on-site soil stockpiling agreement made after bidding is considered a favor and may result in a monetary credit request by Construction Manager to the Subcontractor.
11. Each Subcontractor requiring ladders must provide their own. There will be no assumed community ladders provided by Construction Manager.
12. A fifteen (15) feet floor space around the perimeter of each floor must be kept clear from material storage to allow work on the exterior wall.
13. All materials must be delivered and stored on wheeled pallets or carts. Storing materials on regular pallets without wheels is not acceptable. A pallet jack for non-wheeled pallets will not be acceptable. Materials must be covered/protected as needed.
14. Temporary construction openings requested by Subcontractors must be submitted to Construction Manager for evaluation of impact on cost and schedule as it affects other Subcontractors. Structural modifications, if required, must be designed by a professional engineer registered in the state where the work is performed, with all calculations submitted through Construction Manager to the Architect for record-keeping. All costs of such openings shall be borne by the Subcontractor requesting them, unless stated otherwise.

15. Construction vehicle parking is allowed only in areas identified by the Owner and Construction Manager. Parking is limited and available only on the actual site and in designated nearby areas as indicated in site logistics information. Parking permits must be obtained and paid for daily/weekly/monthly/yearly by each Subcontractor.
16. All Subcontractors/Suppliers must plan for separate mobilizations/deliveries for work affecting existing building and/or Owner operations.

QUALITY CONTROL:

1. Each Subcontractor must provide all necessary layout, surveying, etc., required to complete its scope of work, including coordinating these activities.
2. Each Subcontractor/Supplier must conduct field measuring required for fabricating materials included in its package. Field measuring must be timely and may involve multiple trips as necessary to maintain the project schedule. Costs for multiple trips for field measuring must be included in the proposal, and no reimbursement shall be made for these trips.
3. Submittals such as Shop Drawings, Product Data, and Samples shall not be considered Contract Documents, whether "reviewed" or not.
4. Installation of materials by a Subcontractor implies acceptance of the receiving substrate's condition and construction.
5. Prior to installation of products, Subcontractors and Suppliers must ensure compatibility of all materials in contact with their products. Any non-conformance must be notified to the Construction Manager in writing before installation. Installation of the product indicates waiver of warranty rights and full warranty enforcement. Correction of any deficiencies after installation will be at the Subcontractor/Supplier's expense.
6. If required by specifications or authorities, Subcontractors must provide 48 hours' notice to the Construction Manager for observation by testing/approving parties. Subcontractors are responsible for scheduling and coordinating all inspections directly with testing or approving parties. Work must not be covered up without approval, and if required, must be uncovered at the Subcontractor's expense.
7. The Subcontractor must supply and install all steel members, hangers, frames, supports, etc., necessary to complete its scope of work.
8. Installation work must comply with the rules, regulations, and codes of the American Disabilities Act. Any conflicts between plans, specs, and codes must be reported to the Construction Manager before installation.
9. Subcontractors must ensure continuous daily clean-up and housekeeping, including removal of trash, debris, and dirt generated from their activities. Construction Manager has the right to identify and correct insufficient clean-up within 24 hours, with any noncompliance clean-up being performed at the Subcontractor's expense if left unaddressed.
10. Subcontractors must furnish personnel each Friday for cleaning the building as directed by MKS when active onsite.
11. The Subcontractor must remediate areas where its trailers/offices or materials were stored if storage is required by its scope of work.
12. Subcontractors are responsible for damage to existing site paving caused by their vehicles or material deliveries, with repairs coordinated with the Construction Manager.
13. Subcontractors must maintain all roads and corridors during installation of their work within and adjacent to those areas.
14. Temporary Power and Lighting will be provided as specified, with no assumption of permanent lighting. Supplemental lighting or power required for quality finishes or special equipment must be provided by the Subcontractor.
15. Subcontractors must exercise care when marking floors, walls, or ceilings, bearing responsibility for all costs to remove any markings made on permanent structures.

16. The Subcontractor must furnish and install all wall, floor, and roof sleeves and systems necessary for watertight installations.
17. Firestopping for penetrations in fire-rated assemblies must be provided by the Firestopping Subcontractor, with coordination required from other trades for neat and uniform penetrations.
18. All Subcontractors must seal penetrations in non-rated assemblies, with pre-approved sealant, and furnish protection for their work during and after installation.
19. Subcontractors must provide protection for adjacent finishes during installation of their work.
20. Protection and security of office items, equipment, tools, and materials are the sole responsibility of the Subcontractor.
21. The Subcontractor must provide demolition and patching to a level equal to or better than similar adjacent surfaces.
22. Subcontractors must provide blocking for support of materials, equipment, or fixtures as needed, coordinating with other trades as necessary.
23. In cases where the exact location of an item is not indicated, the Architect reserves the right to determine the location in the field prior to roughing-in.
24. If exact dimensions of a product are not provided, the Architect reserves the right to determine dimensions prior to ordering or fabricating the product.
25. Subcontractors must confirm the location of miscellaneous devices before installation, obtaining approval if necessary. The Architect may direct relocation at the Subcontractor's expense if approval is not obtained.
26. Further requirements can be found in Attachment H, included in the contract.
27. 3D/BIM coordination meetings will be monitored by the Construction Manager, with Subcontractors ultimately responsible for coordination.
28. Subcontractors participating in BIM/MEPTFP coordination are responsible for ensuring coordination and correcting unacceptable conditions, regardless of signed-off drawings.
29. All Subcontractors must account for fireproofing thicknesses during coordination, adding extra where necessary.
30. Tolerance for structural deflection must be considered by all Subcontractors during coordination.
31. Light fixture depths must be accounted for by all Subcontractors during coordination, ensuring sufficient space for installation.
32. Ceiling grid thicknesses must be accounted for by all Subcontractors during coordination, with coordinated thicknesses taller than actual grid thickness to allow room for installation.
33. Fire-stopping requirements must be considered by all Subcontractors when locating wall penetrations through fire-rated assemblies.
34. MEPT or Fire Protection box outs required in concrete must be coordinated in advance, with responsibility for box out placement on the Subcontractor, not the Concrete Subcontractor.
35. MEPT or Fire Protection concrete-embedded items must be provided, located, and installed by the respective Subcontractor before concrete placement, with coordination to avoid conflicts with structural reinforcing.
36. Subcontractors must cut, clean, and flush penetrations in drywall as needed, with box outs framed by the Drywall Subcontractor as directed by the MEPT or Fire Protection Subcontractor.
37. Subcontractors must cut, clean, and flush penetrations in masonry as needed, with box outs blocked by the Masonry Subcontractor as directed by the MEPT or Fire Protection Subcontractor.
38. Subcontractors should assume that concrete foundations, floors, and walls will be poured before mobilization, except for specific shaft openings.
39. Subcontractors should assume that masonry foundations and walls will be placed before mobilization, except for specific wall openings.
40. Access doors/panels required for Subcontractor's work must be furnished and installed by the Subcontractor, prefinished from the factory.
41. Subcontractors are responsible for holes or openings left by removal of mechanical or electrical items or other equipment.

42. Subcontractors installing work related to doors must include costs for testing and inspection beyond pre-testing in their bids.
43. Forklifts are prohibited on slabs, and hand trucks must be included in the Subcontractor's base bid.
44. Subcontractors using pipe cutting or threading tools must have sand or litter boxes underneath to protect floors from oil staining.
45. All equipment used by Subcontractors must have "diapers" when operated inside the building or over concrete areas outside.
46. Subcontractors must exercise care when making markings on structures and bear responsibility for removing them.
47. Punch lists will be issued per level and area of the project, with a minimum of two punch lists per level/area in addition to those issued by Subcontractors.
48. Each Subcontractor must generate its own punch list and complete it promptly, failing which may result in deductions from the Subcontractor's contract.
49. Subcontractors must complete punch lists issued by the Construction Manager.
50. Subcontractors must complete punch lists issued by the Architect and its consultants.
51. Subcontractors must complete punch lists issued by the Owner.
52. Subcontractors must confirm completion of punch list items physically before informing the Construction Manager, with penalties for incorrectly reported items.
53. Punch list items are not considered closed without acknowledgment from the Architect, its consultants, or the Owner.
54. A commissioning agent will be hired to focus on commissioning MEPT systems, with Subcontractors required to participate and coordinate accordingly.
55. MEPT Subcontractors must fill out and follow owner paperwork/specifications for system verifications.
56. MEPT Subcontractors must assume costs to not hang/support off another Sub's work, with supports going to poured concrete deck or structural steel.

WARRANTY:

1. Each Subcontractor must provide a minimum warranty of one (1) year for their respective work, starting from the date of substantial completion of the entire project. This warranty requirement does not override any longer warranty periods specified in the project specifications. Subcontractors must include in their bids any additional funds required to extend manufacturer warranties to cover the period before substantial completion of the entire project.

SAFETY:

1. Subcontractors must carefully review the Safety Attachment included in the "Sample" Subcontract provided in the Project Manual, as it will be integrated into the Subcontract itself.
2. All Subcontractors must pay close attention to underground utilities surrounding the project site (such as water lines, gas lines, duct banks, vaults, electrical lines, etc.) concerning the loading of construction equipment (including cranes, trucks, pumps, etc.). Upon request by MKS, a Subcontractor must provide loading information (via cut sheets/manufacturer product info) and ensure any additional fill, plates, mats, etc., are provided to ensure the safety of underground utilities while operating equipment over them.
3. Except for main roadways and main walking paths, Subcontractors are responsible for removing water, snow, or any results of inclement weather in order to perform the work specified in their Bid Packages.
4. The Subcontractor is responsible for all costs associated with removing, replacing, and/or modifying any safety items (including guardrails, handrails, perimeter cables, toe boards, caution tape, red tape, orange cones, safety signage, etc.) previously installed by others that need to be removed and/or modified for the installation of the Subcontractor's work. Before removing existing safety items, the Subcontractor must notify the Construction Manager and request review and approval of the removal/modification plan.

5. Each Subcontractor must promptly begin correcting any safety deficiencies it may have caused. If a safety deficiency is not addressed by the Subcontractor within 15 minutes, the Construction Manager has the right to correct the deficiency on the Subcontractor's behalf without further notice. The costs associated with correcting the deficiency by the Construction Manager will be deducted from the Subcontractor's Contract.
6. When welding, Subcontractors must use fire retardant barriers and take measures to protect others from unintended eye exposure to welding.
7. Subcontractors are required to provide their respective employees with potable water.
8. All lifts/equipment on any building floor/level must be reviewed and pre-approved via Request for Information (RFI) by the Structural Engineer of Record.
9. The usage of Tobacco/Smoking/Vaping/Chew/E-Cig/Sunflower Seeds is strictly prohibited on site, in the parking areas, and on the Owner's property.
10. Safety Violations: MKS reserves the right to impose penalties for the following safety violations:
    a. Each Subcontractor will receive three (3) warnings for PPE violations. Additional violations will result in a $50.00 fine each.
    b. A $200.00 fine will be imposed for fall protection and excavating violations.
    c. Each Subcontractor will receive three (3) warnings for Tobacco/Smoking/Vaping/Chew/E-Cig/Sunflower Seed violations. Additional violations will result in a $50.00 fine each.
    d. Other safety violations not mentioned above will also follow the three (3) strike policy, with a $50.00 fine imposed after three warnings.
    e. These fines will be collected via deduction from the Subcontract or Purchase Order.
    f. All other MKS safety policies remain applicable.

DELEGATED DESIGN:

1. When mandated by the technical specifications or drawings outlined in the subcontractor's scope of work, the Subcontractor must furnish services or certifications by their Design Engineer. This Engineer's signature and seal must be present on drawings, calculations, specifications, certifications, shop drawings, and other submittals prepared by them. If shop drawings and other submittals related to the Work are designed or certified by this professional but prepared by others, they must obtain the written approval of the design professional before submission to the Architect. Both the Architect and Owner will depend on the completeness of the services, certifications, and approvals performed or provided by the design professional.

Bid Package 03a Cast in Place Concrete

In addition to and including the General Contract Specification Sections Complete (also known as the "Project Manual") (such as Bidding Requirements & Forms; Scope of Work Applicable to All Bid Packages; Preliminary Construction Schedule; All General & Supplementary/Special Conditions including, but not limited to, the entire Division 01 – General Requirements, Contractual Conditions, Summary of Work, and Schedule of Contract Responsibilities), this Subcontractor is Furnishing and Installing per the following Technical Scope Specific Specification Section(s) complete:

Specifications: *Unless noted otherwise, this bid package is to provide the entire scope required of each specification listed.*

Division 00-Procurement & Contracting Requirements
Division 01-General Requirements
03 30 00 Cast in Place Concrete
03 35 10 Concrete Floor Sealer
07 26 10 Underslab Vapor Retarder
32 13 13 Portland Cement Concrete Pavement

GENERAL SCOPE ITEMS:

1. Subcontractor is responsible for all work related to this work scope included in the entire set of contract documents.
2. Where there is a conflict or discrepancy between drawings and/or drawings and specifications; subcontractor shall include the costs to provide the more expensive and/or greater quantity.
3. Subcontractor acknowledges that the section in the Project Manual labeled "BID PACKAGES – SCOPE OF WORK – ALL BID PACKAGES" applies to EACH/EVERY/(ALL) bid package(s)/Subcontractor(s) including this Subcontractor specific scope of work. Subcontractor includes all costs in its base bid to adhere to this aforementioned section of the Project Manual. If there is a discrepancy between the "BID PACKAGES–SCOPE OF WORK–ALL BID PACKAGES" section and the Subcontractor's specific bid package scope, the Subcontractor's specific bid package scope shall apply and be adhered to by the Subcontractor at no additional cost to the project.
4. Subcontractor will provide all materials, manpower, equipment, receiving, transporting, loading, unloading, rigging, hoisting, handling, storing, setting, conveying, hoisting, temporary bracing, scaffolding, working platforms, protection/safety of all materials and manpower, etc. to execute this scope of work.
5. Subcontractor will provide protection of all final material and work as directed by MKS.
6. Subcontractor will provide all costs for delivery, freight, and applicable sales tax to the jobsite.
7. Subcontractor will provide all required field measuring, layout/surveying, engineering, submittals, shop drawings, etc. necessary to complete this scope of work.
8. Subcontractor is responsible for all applicable permits, licenses, registrations, and fees required by authorities having jurisdiction and/or Owner, with exception of the General Building Permit. The General Building Permit will be acquired by Construction Manager and copies provided as required.
9. Subcontractor will provide all necessary permits, fees, inspections, and notifications for its work that are not already specifically stated to be covered by Construction Manager.
10. Subcontractor will comply with all applicable City, State, Federal codes, and quality workmanship requirements regarding materials, methods of work, and disposal of excess and waste material.
11. Subcontractor includes coordination and notification for all materials testing, permits, fees, and inspections required by the specifications.
12. Subcontractor will provide multiple mobilizations as necessary to meet the project schedule.
13. Subcontractors quote is not part of the contract or scope of work documentation.
14. Subcontractor will provide all necessary barricades, safety, and warning devices for its work. If a safety barricade is removed by this subcontractor for access to its work, this Subcontractor is responsible to replace same safety barrier to its original integrity.

15. Subcontractor will provide continuous daily clean-up and housekeeping including complete removal of trash, debris, and dirt generated from its activities to a dumpster furnished by Construction Manager and its supervisors have the right to identify insufficient daily clean-up and housekeeping for correction within 24 hours of the notice (or sooner if a safety hazard), as well as performing noncompliance clean-up and housekeeping on behalf and at the expense of the subcontractor if left unaddressed after the 24-hour notice.
16. On-Site Subcontractor supervision is required when any work of this subcontract is being performed on site. Supervisor of work is required to attend weekly job progress meetings to report on scope of work, make decisions related to cost and schedule, and to be accountable to other Subcontractors on the project.
17. Subcontractor will provide submittals for review as needed/required including shop drawings, product data, color samples, etc.
18. Subcontractor will provide electronic closeout documents as needed/required.
19. Subcontractor will provide as-built documentation in accordance with the specifications. (As-built's must be documented and submitted on a minimum monthly basis.)
20. Subcontractor will supply attic stock as indicated in the specifications.
21. The Subcontractor will provide all final testing, training, and commissioning for its scope of work (as/if training is applicable).

Supplemental Instructions to this Bid Package:

This bid package shall include, but shall not necessarily be limited to, the following scope of work:

1. This bid package is responsible for the labor, materials, supervision, taxes, insurance, equipment, placing, hoisting, scaffolding, protection, transportation, permits (MKS to provide general permit), licenses/registrations, fees necessary to complete this scope of work.
2. This bid package is responsible for requesting inspections from the building department, city right of way, as required for concrete foundations and concrete paving.
3. This bid package is responsible for layout of all cast in place concrete. MKS will provide benchmark and one control point.
4. This bid package is responsible for furnishing all forms, concrete, bracing, form release compounds, cure and seal compounds, tools and equipment required for a complete foundation and slab package.
5. This bid package is responsible for all rigid insulation boards on the foundation walls as denoted on the contract documents.
6. This bid package is responsible for all equipment, material and labor necessary to grout column bases as denoted on the contract documents.
7. This bid package will provide multiple mobilizations as necessary to meet the project schedule.
8. This bid package will provide all necessary barricades, safety, and warning devices for its work. If a safety barricade is removed by this bid package for access to its work, this bid package is responsible to replace same safety barrier to its original integrity.
9. On-Site Subcontractor supervision is required when any work of this subcontract is being performed on site. Supervisor of work is required to attend weekly job progress meetings to report on scope of work, make decisions related to cost and schedule, and to be accountable to other Subcontractors on the project.
10. Any spoils created by this bid package are to be removed offsite by this bid package and legally disposed of.
11. This bid package is responsible to complete MKS bid form including all alternates as applicable.
12. See attached Supplemental Conditions "Exhibit A", "Exhibit C", and "Exhibit D" which will be part of the Contract Agreement between MKS and this work package.

PROJECT SPECIFIC SCOPE:

1. This bid package to include all labor and material as it applies to the concrete scope of work including but not limited to; footers, foundations, stoops, slab on grade, slab on deck, sidewalks and concrete paving.

2. Foundation excavation is by by this bid package including stoops.
3. Any damage to subgrade caused by the activities of the bid package are to be repaired by the bid package.
4. This bid package is responsible for furnishing and placing underslab stone, under sidewalk stone and all foundation backfill stone.
5. This bid package is responsible for forming all spread footers and foundation walls including chiller and generator foundations. No earth forming in base bid.
6. This bid package is responsible for furnishing and placing reinforcement bars in concrete work by this bid package. This includes masonry dowels in foundation wall. This bid package is to coordinate with Bid package 04a for layout of masonry dowels.
7. This bid package is responsible for setting anchor bolts for structural columns. Anchor bolts will be provided by Bid Package 05a.
8. This bid package is responsible for verifying elevations of recessed slabs.
9. This bid package is responsible for furnishing and installing the 15 mil vapor barrier under interior slab on grade.
10. This bid package is responsible for placing and finishing of all concrete required on the project.
11. This bid package is responsible for furnishing and applying concrete floor sealers, densifiers and hardeners as denoted on the contract documents.
12. This bid package is responsible for forming and placing concrete for the chiller pad.
13. This bid package is responsible for forming and placing concrete for the generator pad.
14. This bid package is responsible for forming and placing concrete for the housekeeping pads on the mezzanine level.
15. This bid package is responsible for forming and placing concrete for the monument sign.
16. This bid package is responsible for excavation, placing concrete for the flagpole base. Haul off spoils and dispose of offsite.
17. This bid package is responsible for placing all bollards in concrete foundations and fill with concrete.
18. This bid package is responsible for furnishing and installing the hitching rail (Detail 20/C6.0).
19. This bid package is responsible for furnishing and installing the bicycle racks (NOte 26/Civil Layout).
20. Foundations for dumpster enclosure posts and fence posts are by Bid Package 32c.
21. Bid package 32a is responsible for excavation, forming and placing 6” concrete curbs and curb/gutter.
22. This bid package is responsible for all charges and fees for protection of the concrete during the winter months. This includes blanketing.
23. This bid package is responsible for excavation, forming and placing equipment pads for XFMR, chiller and generator including backfill, all stone and removal of spoils.

Bid Package 04a Masonry

In addition to and including the General Contract Specification Sections Complete (also known as the "Project Manual") (such as Bidding Requirements & Forms; Scope of Work Applicable to All Bid Packages; Preliminary Construction Schedule; All General & Supplementary/Special Conditions including, but not limited to, the entire Division 01 – General Requirements, Contractual Conditions, Summary of Work, and Schedule of Contract Responsibilities), this Subcontractor is Furnishing and Installing per the following Technical Scope Specific Specification Section(s) complete:

Specifications: *Unless noted otherwise, this bid package is to provide the entire scope required of each specification listed.*

Division 00 Procurement and Contracting Requirements
Division 01 General Requirements
03 41 00 Architectural Precast Concrete Sills
04 05 13 Mortar
04 05 16 Masonry Grout
04 05 23 Masonry Accessories
04 22 00 Unit Masonry
04 72 00 Cast Stone Masonry
07 21 00 Building Insulation (Cavity insulation board)

GENERAL SCOPE ITEMS:

1. Subcontractor is responsible for all work related to this work scope included in the entire set of contract documents.
2. Where there is a conflict or discrepancy between drawings and/or drawings and specifications; subcontractor shall include the costs to provide the more expensive and/or greater quantity.
3. Subcontractor acknowledges that the section in the Project Manual labeled "BID PACKAGES – SCOPE OF WORK – ALL BID PACKAGES" applies to EACH/EVERY/(ALL) bid package(s)/Subcontractor(s) including this Subcontractor specific scope of work. Subcontractor includes all costs in its base bid to adhere to this aforementioned section of the Project Manual. If there is a discrepancy between the "BID PACKAGES–SCOPE OF WORK–ALL BID PACKAGES" section and the Subcontractor's specific bid package scope, the Subcontractor's specific bid package scope shall apply and be adhered to by the Subcontractor at no additional cost to the project.
4. Subcontractor will provide all materials, manpower, equipment, receiving, transporting, loading, unloading, rigging, hoisting, handling, storing, setting, conveying, hoisting, temporary bracing, scaffolding, working platforms, protection/safety of all materials and manpower, etc. to execute this scope of work.
5. Subcontractor will provide protection of all final material and work as directed by MKS.
6. Subcontractor will provide all costs for delivery, freight, and applicable sales tax to the jobsite.
7. Subcontractor will provide all required field measuring, layout/surveying, engineering, submittals, shop drawings, etc. necessary to complete this scope of work.
8. Subcontractor is responsible for all applicable permits, licenses, registrations, and fees required by authorities having jurisdiction and/or Owner, with exception of the General Building Permit. The General Building Permit will be acquired by Construction Manager and copies provided as required.
9. Subcontractor will provide all necessary permits, fees, inspections, and notifications for its work that are not already specifically stated to be covered by Construction Manager.
10. Subcontractor will comply with all applicable City, State, Federal codes, and quality workmanship requirements regarding materials, methods of work, and disposal of excess and waste material.
11. Subcontractor includes coordination and notification for all materials testing, permits, fees, and inspections required by the specifications.
12. Subcontractor will provide multiple mobilizations as necessary to meet the project schedule.
13. Subcontractors quote is not part of the contract or scope of work documentation.

14. Subcontractor will provide all necessary barricades, safety, and warning devices for its work. If a safety barricade is removed by this subcontractor for access to its work, this Subcontractor is responsible to replace same safety barrier to its original integrity.
15. Subcontractor will provide continuous daily clean-up and housekeeping including complete removal of trash, debris, and dirt generated from its activities to a dumpster furnished by Construction Manager and its supervisors have the right to identify insufficient daily clean-up and housekeeping for correction within 24 hours of the notice (or sooner if a safety hazard), as well as performing noncompliance clean-up and housekeeping on behalf and at the expense of the subcontractor if left unaddressed after the 24-hour notice.
16. On-Site Subcontractor supervision is required when any work of this subcontract is being performed on site. Supervisor of work is required to attend weekly job progress meetings to report on scope of work, make decisions related to cost and schedule, and to be accountable to other Subcontractors on the project.
17. Subcontractor will provide submittals for review as needed/required including shop drawings, product data, color samples, etc.
18. Subcontractor will provide electronic closeout documents as needed/required.
19. Subcontractor will provide as-built documentation in accordance with the specifications. (As-built's must be documented and submitted on a minimum monthly basis.)
20. Subcontractor will supply attic stock as indicated in the specifications.
21. The Subcontractor will provide all final testing, training, and commissioning for its scope of work (as/if training is applicable).

Supplemental Instructions to this Bid Package:

1. This bid package shall include, but shall not be necessarily limited to, the following scope of work:
2. This bid package is responsible for the labor, materials, supervision, taxes, insurance, equipment, placing, hoisting, scaffolding, protection, transportation, permits (MKS to provide general permit) licenses, fees necessary to complete this scope of work.
3. Where there is a conflict or discrepancy between drawings and/or drawings and specifications; this bid package shall include the costs to provide the more expensive and/or greater quantity.
4. This bid package will provide submittals for review as needed/required including shop drawings, product data, color samples, etc. including mock ups.
5. All debris generated by this bid package to be removed to the dumpster by this bid package daily.
6. This bid package is responsible for all layout of masonry elements on the project as denoted on the contract documents.
7. All grout associated with the masonry will be the responsibility of this work package.
8. This bid package is responsible for submitting control joint locations for review prior to commencing work.
9. This bid package is responsible for temporary support / temporary shoring as required to ensure adequate structural capacity.
10. This bid package is responsible for coordination of all rough openings with materials supplied by others.
11. This bid package is responsible to verify elevations with MKS for plumb, level, and square prior to commencing work and coordinate details of windows, doors, rough openings, etc. including checking adjacent work and informing MKS of any issues or concerns to ensure and A+ installation.
12. Storefront / Curtain wall dimensions must be held based on framed openings / shop drawings as windows will need to be released for fabrication prior to masonry being complete.
13. This bid package is responsible for repairing / re-grading of subgrade / site from any damage caused by this bid package.
14. This bid package is responsible for cleaning the masonry and protecting adjacent materials from the cleaning agents.
15. Dumpsters for this work will be provided by Bid Package 06a General Trades.
16. This bid package is to provide their own lifting equipment including lulls, boom lifts and crane.
17. This contractor is responsible for completing the bid form including all alternates as applicable.

18. See attached Supplemental Conditions “Exhibit A”, “Exhibit C”, and “Exhibit D” which will be part of the Contract Agreement between owner and this work package.

Project Specific Scope

1. This bid package is responsible for furnishing and installing all masonry materials and labor necessary to complete the CMU wall construction, brick veneer, precast sills and stone cladding as denoted on the contract documents.
2. This bid package will provide all materials, manpower, equipment, receiving, transporting, loading, unloading, rigging, hoisting, handling, storing, setting, conveying, hoisting, temporary bracing, scaffolding, working platforms, protection/safety of all materials and manpower, etc. to execute this scope of work.
3. This bid package will provide all required field measuring, layout/surveying, engineering, submittals, shop drawings, etc. necessary to complete this scope of work.
4. This bid package will comply with all applicable City, State, Federal codes, and quality workmanship requirements regarding materials, methods of work, and disposal of excess and waste material.
5. This bid package will include coordination and notification for all materials testing, permits, fees, and inspections required by the specifications.
6. This bid package will provide multiple mobilizations as necessary to meet the project schedule.
7. This bid package will provide all necessary barricades, safety, and warning devices for its work. If a safety barricade is removed by this subcontractor for access to its work, this bid package is responsible to replace same safety barrier to its original integrity.
8. This bid package to include onsite supervision when any work of this subcontract is being performed on site. Supervisor of work is required to attend weekly job progress meetings to report on scope of work, make decisions related to cost and schedule, and to be accountable to other Subcontractors on the project.
9. Bid Package 03a will furnish and install masonry dowels during the foundation pours. This bid package is to include layout for dowels before wall pours. BP 03a will coordinate.
10. This bid package is responsible for the through wall flashing, end dams, weeps, etc. for a complete weather tight system.
11. This bid package is responsible for furnishing and installing the injectable masonry foam insulation where shown on the contract documents.
12. This bid package is responsible for furnishing and installing rigid insulation in masonry wall cavities.
13. This bid package is responsible for furnishing and installing all masonry accessories including reinforcing bar for a full and complete installation.
14. This bid package is responsible for installing lintels.
15. This bid package shall include wet sawing of all masonry.
16. This bid package shall include winter conditions as needed per the schedule.
17. This bid package is responsible for protection of wall during weather events.
18. This bid package to include dust management for all masonry work.
19. This bid package to include cleaning of all masonry items.
20. This bid package to include mixing station in location as coordinated with MKS.
21. This bid package to include temp power for all mixing and saws as required to complete this scope of work.

Bid Package 05a Structural Steel Framing - Furnish and Erect

Specifications: *Unless noted otherwise, this bid package is to provide the entire scope required of each specification listed.*

Division 00-Procurement & Contracting Requirements
Division 01-General Requirements
05 05 19 Post Installed Anchors (as required for attaching steel members)
05 12 00 Structural Steel Framing
05 21 00 Steel Joist Framing
05 31 00 Steel Deck
05 50 00 Metal Fabrications
05 51 00 Metal Pan Stairs
05 52 00 Handrails and Railings

GENERAL SCOPE ITEMS:

1. Subcontractor is responsible for all work related to this work scope included in the entire set of contract documents.
2. Where there is a conflict or discrepancy between drawings and/or drawings and specifications; subcontractor shall include the costs to provide the more expensive and/or greater quantity.
3. Subcontractor acknowledges that the section in the Project Manual labeled "BID PACKAGES – SCOPE OF WORK – ALL BID PACKAGES" applies to EACH/EVERY/(ALL) bid package(s)/Subcontractor(s) including this Subcontractor specific scope of work. Subcontractor includes all costs in its base bid to adhere to this aforementioned section of the Project Manual. If there is a discrepancy between the "BID PACKAGES–SCOPE OF WORK–ALL BID PACKAGES" section and the Subcontractor's specific bid package scope, the Subcontractor's specific bid package scope shall apply and be adhered to by the Subcontractor at no additional cost to the project.
4. Subcontractor will provide all materials, manpower, equipment, receiving, transporting, loading, unloading, rigging, hoisting, handling, storing, setting, conveying, hoisting, temporary bracing, scaffolding, working platforms, protection/safety of all materials and manpower, etc. to execute this scope of work.
5. Subcontractor will provide protection of all final material and work as directed by MKS.
6. Subcontractor will provide all costs for delivery, freight, and applicable sales tax to the jobsite.
7. Subcontractor will provide all required field measuring, layout/surveying, engineering, submittals, shop drawings, etc. necessary to complete this scope of work.
8. Subcontractor is responsible for all applicable permits, licenses, registrations, and fees required by authorities having jurisdiction and/or Owner, with exception of the General Building Permit. The General Building Permit will be acquired by Construction Manager and copies provided as required.
9. Subcontractor will provide all necessary permits, fees, inspections, and notifications for its work that are not already specifically stated to be covered by Construction Manager.
10. Subcontractor will comply with all applicable City, State, Federal codes, and quality workmanship requirements regarding materials, methods of work, and disposal of excess and waste material.
11. Subcontractor includes coordination and notification for all materials testing, permits, fees, and inspections required by the specifications.
12. Subcontractor will provide multiple mobilizations as necessary to meet the project schedule.
13. Subcontractors quote is not part of the contract or scope of work documentation.
14. Subcontractor will provide all necessary barricades, safety, and warning devices for its work. If a safety barricade is removed by this subcontractor for access to its work, this Subcontractor is responsible to replace same safety barrier to its original integrity.
15. Subcontractor will provide continuous daily clean-up and housekeeping including complete removal of trash, debris, and dirt generated from its activities to a dumpster furnished by Construction Manager and its supervisors have the right to identify insufficient daily clean-up and housekeeping for correction within 24 hours of the notice (or sooner if a safety hazard), as well as performing noncompliance clean-

up and housekeeping on behalf and at the expense of the subcontractor if left unaddressed after the 24-hour notice.

16. On-Site Subcontractor supervision is required when any work of this subcontract is being performed on site. Supervisor of work is required to attend weekly job progress meetings to report on scope of work, make decisions related to cost and schedule, and to be accountable to other Subcontractors on the project.
17. Subcontractor will provide submittals for review as needed/required including shop drawings, product data, color samples, etc.
18. Subcontractor will provide electronic closeout documents as needed/required.
19. Subcontractor will provide as-built documentation in accordance with the specifications. (As-built's must be documented and submitted on a minimum monthly basis.)
20. Subcontractor will supply attic stock as indicated in the specifications.
21. The Subcontractor will provide all final testing, training, and commissioning for its scope of work (as/if training is applicable).

Supplemental Instructions to this Bid Package:

This bid package shall include, but shall not necessarily be limited to, the following scope of work:

1. This bid package is responsible for the labor, materials, supervision, taxes, insurance, equipment, placing, hoisting, scaffolding, protection, transportation, permits (MKS to provide general permit), licenses/registrations, fees necessary to complete this scope of work.
2. This bid package is responsible for submitting complete shop drawings in .pdf format for all steel and accessories that are supplied by this contractor.
3. This bid package shall supply all anchor bolts, bearing plates, embedded plates, lintels, and miscellaneous steel items that are embedded into concrete or masonry.
4. This bid package is responsible for furnishing all required anchors and epoxy for installation of all items provided by this work package.
5. All masonry lintels and bearing plates to be hot-dipped galvanized regardless of plans.
6. This bid package is responsible for fire safety while welding onsite.
7. This bid package will provide multiple mobilizations as necessary to meet the project schedule.
8. This bid package is responsible to complete MKS bid form including all alternates as applicable.
9. See attached Supplemental Conditions "Exhibit A", "Exhibit C", and "Exhibit D" which will be part of the Contract Agreement between MKS and this work package.

Project Specific Scope

1. This bid work package is responsible for furnishing and erecting all structural steel and all metal fabrications as denoted on the contract documents.
2. Metal fabrications including but not limited to bearing plates, bent plates, leveling plates, connection steel, reinforcing steel, roof frames, floor frames, kickers, edge angles, girts, lintels, bollards.
3. Lintels and bollards will be set by others.
4. This bid package is responsible for welding #4 bar to HSS per 25/S402. Bar and connector are furnished by this package.
5. This bid package is responsible for erection of all steel supplied under this package.

Bid Package 06a General Trades

Specifications: *Unless noted otherwise, this bid package is to provide the entire scope required of each specification listed.*

Division 00 Procurement and Contracting Requirements
Division 01 General Requirements
Temporary Site Construction – Field Engineering
02 41 19 Building Demolition (salvaging Owner architectural items only)
05 05 19 Post Installed Anchors (as it relates to this scope of work)
06 10 00 Rough Carpentry
06 20 00 Finish Carpentry
06 41 10 Millwork
07 14 13 Pedestrian Grade Waterproofing
07 21 00 Building Insulation
07 27 29 Air Barrier
07 42 10 Cladding Support System
07 42 13 Preformed Wall Panels
07 42 93 Soffit Panels
07 46 43 Composite Building Panels
07 62 00 Flashing and Sheet Metal (stainless at coiling door jamb)
07 92 00 Joint Sealants
08 11 00 Steel Doors and Frames
08 14 16 Wood Doors
08 31 13 Access Doors and Frames
08 33 13 Coiling Counter Doors
08 71 00 Door Hardware
Division 10 Specialties – All Sections
11 66 23 Gymnasium Equipment
11 68 44 Scoreboards
Division 12 Furnishings – All Sections

GENERAL SCOPE ITEMS:

1. Subcontractor is responsible for all work related to this work scope included in the entire set of contract documents.
2. Where there is a conflict or discrepancy between drawings and/or drawings and specifications; subcontractor shall include the costs to provide the more expensive and/or greater quantity.
3. Subcontractor acknowledges that the section in the Project Manual labeled "BID PACKAGES – SCOPE OF WORK – ALL BID PACKAGES" applies to EACH/EVERY/(ALL) bid package(s)/Subcontractor(s) including this Subcontractor specific scope of work. Subcontractor includes all costs in its base bid to adhere to this aforementioned section of the Project Manual. If there is a discrepancy between the "BID PACKAGES–SCOPE OF WORK–ALL BID PACKAGES" section and the Subcontractor's specific bid package scope, the Subcontractor's specific bid package scope shall apply and be adhered to by the Subcontractor at no additional cost to the project.
4. Subcontractor will provide all materials, manpower, equipment, receiving, transporting, loading, unloading, rigging, hoisting, handling, storing, setting, conveying, hoisting, temporary bracing, scaffolding, working platforms, protection/safety of all materials and manpower, etc. to execute this scope of work.
5. Subcontractor will provide protection of all final material and work as directed by MKS.

6. Subcontractor will provide all costs for delivery, freight, and applicable sales tax to the jobsite.
7. Subcontractor will provide all required field measuring, layout/surveying, engineering, submittals, shop drawings, etc. necessary to complete this scope of work.
8. Subcontractor is responsible for all applicable permits, licenses, registrations, and fees required by authorities having jurisdiction and/or Owner, with exception of the General Building Permit. The General Building Permit will be acquired by Construction Manager and copies provided as required.
9. Subcontractor will provide all necessary permits, fees, inspections, and notifications for its work that are not already specifically stated to be covered by Construction Manager.
10. Subcontractor will comply with all applicable City, State, Federal codes, and quality workmanship requirements regarding materials, methods of work, and disposal of excess and waste material.
11. Subcontractor includes coordination and notification for all materials testing, permits, fees, and inspections required by the specifications.
12. Subcontractor will provide multiple mobilizations as necessary to meet the project schedule.
13. Subcontractors quote is not part of the contract or scope of work documentation.
14. Subcontractor will provide all necessary barricades, safety, and warning devices for its work. If a safety barricade is removed by this subcontractor for access to its work, this Subcontractor is responsible to replace same safety barrier to its original integrity.
15. Subcontractor will provide continuous daily clean-up and housekeeping including complete removal of trash, debris, and dirt generated from its activities to a dumpster furnished by Construction Manager and its supervisors have the right to identify insufficient daily clean-up and housekeeping for correction within 24 hours of the notice (or sooner if a safety hazard), as well as performing noncompliance clean-up and housekeeping on behalf and at the expense of the subcontractor if left unaddressed after the 24-hour notice.
16. On-Site Subcontractor supervision is required when any work of this subcontract is being performed on site. Supervisor of work is required to attend weekly job progress meetings to report on scope of work, make decisions related to cost and schedule, and to be accountable to other Subcontractors on the project.
17. Subcontractor will provide submittals for review as needed/required including shop drawings, product data, color samples, etc.
18. Subcontractor will provide electronic closeout documents as needed/required.
19. Subcontractor will provide as-built documentation in accordance with the specifications. (As-built's must be documented and submitted on a minimum monthly basis.)
20. Subcontractor will supply attic stock as indicated in the specifications.
21. The Subcontractor will provide all final testing, training, and commissioning for its scope of work (as/if training is applicable).

Supplemental Instructions to this Bid Package:

This bid package shall include, but shall not be necessarily limited to, the following scope of work:

1. This bid package is responsible for the labor, materials, supervision, taxes, insurance, equipment, placing, hoisting, scaffolding, protection, transportation, permits (MKS to provide general permit) licenses, fees necessary to complete this scope of work.
2. All spoils generated by this bid package to be removed from the property by this bid package.
3. This bid package is responsible to provide one control point and benchmark for layout by other bid packages.
4. This bid package is responsible for all layout, both line and grade, for work by this bid package.
5. This bid package is responsible for coordinating the work covered in this bid package and coordinating work in BP 21a, BP 23a and BP 26a.
6. This bid package is responsible to provide one all terrain Lull Telehandler and operator at standby, 5,000 lb. capacity and 50' reach for the duration of the project. For unloading this packages work.
7. This bid package is responsible for furnishing two laborers every Friday for general cleanup.
8. This bid package is to include an allowance of $ 100,000.00 for use during construction.
9. This contractor is responsible for completing the bid form including all alternates as applicable.
10. See attached Supplemental Conditions "Exhibit A", "Exhibit C", and "Exhibit D" which will be part of the Contract Agreement between MKS and this work package.

Project Specific Scope

1. This bid package is responsible for temporary dust partitions as required.
2. This bid package is responsible for temporary plywood/reinforced visqueen partitions in window openings and plywood partition at doors in perimeter walls and maintenance as required.
3. This bid package is responsible for removing architectural items from existing building that the owner wants to salvage. All material to be stored in weatherproof storage for the duration of the project.
4. This bid package is responsible for unloading all material deliveries for work associated with this bid package.
5. This bid package is responsible for furnishing and installing all blocking as shown on the drawings including but not limited to plywood on vertical roof surfaces. Any blocking that is required but not shown on the drawings is the responsibility of the bid package requiring the blocking.
6. Blocking in the steel stud framed walls for casework is by this bid package.
7. This bid package is responsible for furnishing and installing all custom millwork items including countertops, hardware, shelves, etc.
8. This bid package is responsible for furnishing and installing the pedestrian grade waterproofing including all preparation work required.
9. This bid package is responsible for furnishing and installing building insulation. Bid Package 04a will furnish and install rigid insulation in wall cavity behind masonry veneer only.
10. This bid package is responsible for furnishing and installing the air barrier coatings as denoted. Include protection of in place finishes.

11. This bid package is responsible for testing noted in 07 27 29 Air Barrier Coatings.
12. The bid package is responsible for furnishing and installing the cladding support system behind preformed wall panels.
13. This bid package is responsible for furnishing and installing the soffit panels.
14. This bid package is responsible for furnishing and installing composite building panels.
15. This bid package is responsible for furnishing and installing the stainless steel base in the kitchen.
16. This bid package is responsible for furnishing and installing joint sealants. Joints to caulk are HM frames in drywall partitions, countertops, base cabinets to wall, upper cabinets to wall, interior control joints, exterior control joints.
17. This bid package is responsible for all joint sealants related to soffit panels, MCM panels and preformed wall panels.
18. This bid package is responsible for furnishing and installing all door frames, hardware, and door slabs (wood and hollow metal).
19. Woods doors to be prefinished and pre glazed at the factory.
20. Hollow metal doors will be glazed by Bid Package 08b Aluminum Framed Storefronts Aluminum Windows Glazing.
21. This bid package is responsible for furnishing and installing access doors only where shown on the contract documents.
22. This bid package is responsible for furnishing and installing the overhead coiling door including controls and control wiring. Bid Package 26a Electrical will provide raceways for control wiring and power to the motor.
23. This bid package is responsible for furnishing and installing the transition metal cover over wood floor/adjacent floor finish at openings (gap in floor finishes).
24. This bid package is responsible for removal of all protective material on finished floors.
25. This bid package is responsible for all Division 10 work, furnishing and installation, as denoted on the contract documents.
26. This bid package is responsible for providing permits required for building signs and monument sign.
27. This bid package is responsible for furnishing and installing the gymnasium equipment as denoted on the contract documents.
28. This bid package is responsible for furnishing and installing the scoreboards as denoted on the contract documents.
29. This bid package is responsible for all Division 12 work, furnishing and installation as denoted on the contract documents.

Bid Package 07a Membrane Roofing

Specifications: *Unless noted otherwise, this bid package is to provide the entire scope required of each specification listed.*

Division 00-Procurement & Contracting Requirements
Division 01-General Requirements
07 22 00 Roof and Deck Insulation
07 54 00 Fully Adhered PVC Sheet Roofing
07 62 00 Flashing and Sheet Metal (for roofing work)
07 92 00 Joint Sealants (as related to this scope)

GENERAL SCOPE ITEMS:

1. Subcontractor is responsible for all work related to this work scope included in the entire set of contract documents.
2. Where there is a conflict or discrepancy between drawings and/or drawings and specifications; subcontractor shall include the costs to provide the more expensive and/or greater quantity.
3. Subcontractor acknowledges that the section in the Project Manual labeled "BID PACKAGES – SCOPE OF WORK – ALL BID PACKAGES" applies to EACH/EVERY/(ALL) bid package(s)/Subcontractor(s) including this Subcontractor specific scope of work. Subcontractor includes all costs in its base bid to adhere to this aforementioned section of the Project Manual. If there is a discrepancy between the "BID PACKAGES–SCOPE OF WORK–ALL BID PACKAGES" section and the Subcontractor's specific bid package scope, the Subcontractor's specific bid package scope shall apply and be adhered to by the Subcontractor at no additional cost to the project.
4. Subcontractor will provide all materials, manpower, equipment, receiving, transporting, loading, unloading, rigging, hoisting, handling, storing, setting, conveying, hoisting, temporary bracing, scaffolding, working platforms, protection/safety of all materials and manpower, etc. to execute this scope of work.
5. Subcontractor will provide protection of all final material and work as directed by MKS.
6. Subcontractor will provide all costs for delivery, freight, and applicable sales tax to the jobsite.
7. Subcontractor will provide all required field measuring, layout/surveying, engineering, submittals, shop drawings, etc. necessary to complete this scope of work.
8. Subcontractor is responsible for all applicable permits, licenses, registrations, and fees required by authorities having jurisdiction and/or Owner, with exception of the General Building Permit. The General Building Permit will be acquired by Construction Manager and copies provided as required.
9. Subcontractor will provide all necessary permits, fees, inspections, and notifications for its work that are not already specifically stated to be covered by Construction Manager.
10. Subcontractor will comply with all applicable City, State, Federal codes, and quality workmanship requirements regarding materials, methods of work, and disposal of excess and waste material.
11. Subcontractor includes coordination and notification for all materials testing, permits, fees, and inspections required by the specifications.
12. Subcontractor will provide multiple mobilizations as necessary to meet the project schedule.
13. Subcontractors quote is not part of the contract or scope of work documentation.
14. Subcontractor will provide all necessary barricades, safety, and warning devices for its work. If a safety barricade is removed by this subcontractor for access to its work, this Subcontractor is responsible to replace same safety barrier to its original integrity.
15. Subcontractor will provide continuous daily clean-up and housekeeping including complete removal of trash, debris, and dirt generated from its activities to a dumpster furnished by Construction Manager and its supervisors have the right to identify insufficient daily clean-up and housekeeping for correction within 24 hours of the notice (or sooner if a safety hazard), as well as performing noncompliance clean-up and housekeeping on behalf and at the expense of the subcontractor if left unaddressed after the 24-hour notice.
16. On-Site Subcontractor supervision is required when any work of this subcontract is being performed on site. Supervisor of work is required to attend weekly job progress meetings to report on scope of work, make decisions related to cost and schedule, and to be accountable to other Subcontractors on the project.

17. Subcontractor will provide submittals for review as needed/required including shop drawings, product data, color samples, etc.
18. Subcontractor will provide electronic closeout documents as needed/required.
19. Subcontractor will provide as-built documentation in accordance with the specifications. (As-built's must be documented and submitted on a minimum monthly basis.)
20. Subcontractor will supply attic stock as indicated in the specifications.
21. The Subcontractor will provide all final testing, training, and commissioning for its scope of work (as/if training is applicable).

Supplemental Instructions to this Bid Package:

This bid package shall include, but shall not necessarily be limited to, the following scope of work:

1. This bid package is responsible for the labor, materials, supervision, taxes, insurance, equipment, placing, hoisting, scaffolding, protection, transportation, permits (MKS to provide general permit) licenses, fees necessary to complete this scope of work.
2. All layout required for roofing and associated sheet metal work shall be by this bid package.
3. All wood blocking shown on the plans will be by others. Any wood blocking that is not shown but required for a complete installation is by this bid package.
4. This bid package is responsible for any protection required for façade during roofing work.
5. This bid package will provide all necessary barricades, safety, and warning devices for its work. If a safety barricade is removed by this subcontractor for access to its work, this bid package is responsible to replace same safety barrier to its original integrity.
6. On-site supervision is required when any work of this subcontract is being performed on site. Supervisor of work is required to attend weekly job progress meetings to report on scope of work, make decisions related to cost and schedule, and to be accountable to other subcontractors on the project.
7. A competent person observing or 100% tie-off will be required for all roofing work as required by OSHA.
8. A site specific fall protection plan is required to be submitted to MKS.
9. This bid package is responsible to complete MKS bid form including all alternates as applicable.
10. See attached Supplemental Conditions "Exhibit A", "Exhibit C", and "Exhibit D" which will be part of the Contract Agreement between MKS and this work package.

Project Specific Scope

1. This bid package is responsible for furnishing and installing all requirements of the flat roof system, as denoted on the drawings and in the specifications, including but not limited to all rigid insulation, roofing materials, cover boards, vapor barriers, flashings, coping, sealant, gutters, downspouts, scuppers, splash blocks, and sheet metal associated with creating a complete, watertight roof system.
2. All sheet metal, including flashing, counter flashing, coping along with the required sealant, shall be the responsibility of this bid package.
3. This bid package is responsible for furnishing and installing walkway pads as denoted on the contract documents.
4. This bid package is responsible for flashing all MEP penetrations through the PVC membrane.
5. This bid package to supply and install all required items for a full and complete roof installation

Bid Package 08a Entrances and Storefronts

Specifications: *Unless noted otherwise, this bid package is to provide the entire scope required of each specification listed.*

Division 00-Procurement & Contracting Requirements
Division 01-General Requirements
05 05 19 Post Installed Anchors (as related to this scope)
07 92 00 Joint Sealants (as related to this scope)
08 41 13 Aluminum Framed Entrances and Storefronts
08 51 13 Aluminum Windows
08 71 13 Automatic Door Operators
08 80 00 Glazing

GENERAL SCOPE ITEMS:

1. Subcontractor is responsible for all work related to this work scope included in the entire set of contract documents.
2. Where there is a conflict or discrepancy between drawings and/or drawings and specifications; subcontractor shall include the costs to provide the more expensive and/or greater quantity.
3. Subcontractor acknowledges that the section in the Project Manual labeled "BID PACKAGES – SCOPE OF WORK – ALL BID PACKAGES" applies to EACH/EVERY/(ALL) bid package(s)/Subcontractor(s) including this Subcontractor specific scope of work. Subcontractor includes all costs in its base bid to adhere to this aforementioned section of the Project Manual. If there is a discrepancy between the "BID PACKAGES–SCOPE OF WORK–ALL BID PACKAGES" section and the Subcontractor's specific bid package scope, the Subcontractor's specific bid package scope shall apply and be adhered to by the Subcontractor at no additional cost to the project.
4. Subcontractor will provide all materials, manpower, equipment, receiving, transporting, loading, unloading, rigging, hoisting, handling, storing, setting, conveying, hoisting, temporary bracing, scaffolding, working platforms, protection/safety of all materials and manpower, etc. to execute this scope of work.
5. Subcontractor will provide protection of all final material and work as directed by MKS.
6. Subcontractor will provide all costs for delivery, freight, and applicable sales tax to the jobsite.
7. Subcontractor will provide all required field measuring, layout/surveying, engineering, submittals, shop drawings, etc. necessary to complete this scope of work.
8. Subcontractor is responsible for all applicable permits, licenses, registrations, and fees required by authorities having jurisdiction and/or Owner, with exception of the General Building Permit. The General Building Permit will be acquired by Construction Manager and copies provided as required.
9. Subcontractor will provide all necessary permits, fees, inspections, and notifications for its work that are not already specifically stated to be covered by Construction Manager.
10. Subcontractor will comply with all applicable City, State, Federal codes, and quality workmanship requirements regarding materials, methods of work, and disposal of excess and waste material.
11. Subcontractor includes coordination and notification for all materials testing, permits, fees, and inspections required by the specifications.
12. Subcontractor will provide multiple mobilizations as necessary to meet the project schedule.
13. Subcontractors quote is not part of the contract or scope of work documentation.
14. Subcontractor will provide all necessary barricades, safety, and warning devices for its work. If a safety barricade is removed by this subcontractor for access to its work, this Subcontractor is responsible to replace same safety barrier to its original integrity.
15. Subcontractor will provide continuous daily clean-up and housekeeping including complete removal of trash, debris, and dirt generated from its activities to a dumpster furnished by Construction Manager and its supervisors have the right to identify insufficient daily clean-up and housekeeping for correction within 24 hours of the notice (or sooner if a safety hazard), as well as performing noncompliance clean-up and housekeeping on behalf and at the expense of the subcontractor if left unaddressed after the 24-hour notice.
16. On-Site Subcontractor supervision is required when any work of this subcontract is being performed on site. Supervisor of work is required to attend weekly job progress meetings to report on scope of work, make decisions related to cost and schedule, and to be accountable to other Subcontractors on the project.

17. Subcontractor will provide submittals for review as needed/required including shop drawings, product data, color samples, etc.
18. Subcontractor will provide electronic closeout documents as needed/required.
19. Subcontractor will provide as-built documentation in accordance with the specifications. (As-built's must be documented and submitted on a minimum monthly basis.)
20. Subcontractor will supply attic stock as indicated in the specifications.
21. The Subcontractor will provide all final testing, training, and commissioning for its scope of work (as/if training is applicable).

Supplemental Instructions to this Bid Package:

This bid package shall include, but shall not necessarily be limited to, the following scope of work:

1. This bid package is responsible for the labor, materials, supervision, taxes, insurance, equipment, placing, hoisting, scaffolding, protection, transportation, permits (MKS to provide general permit), licenses/registrations, fees necessary to complete this scope of work.
2. This bid package is responsible for visiting site and taking field measurements of new openings. This contractor will be responsible for participating in onsite meetings to ensure window systems work with proposed details and finishes.
3. This bid package is to remove temporary barricade in openings and place in dumpster.
4. This bid package is responsible for glazing all HM doors and HM window frames, rated or non-rated, as denoted on the contract documents.
5. Caulking/sealant of windows, storefronts, all glass storefront, (interior to finished drywall, as required for weather tightness, and exterior to finished façade material) is by this bid package.
6. Wood doors will be glazed at the factory by others.
7. This bid package is responsible for flashing /caulking around storefronts, windows as denoted in the contract documents.
8. Door hardware (except operators and controls) will be supplied by BP 06a General Trades. Installation of hardware on aluminum or glass doors is by this bid package.
9. This bid package is responsible for temporary barricading all openings that are left open beyond 2 weeks after the opening is prepped / completed ready for installation.
10. This contractor is responsible for completing the MKS bid form including all alternates as applicable.
11. See attached Supplemental Conditions "Exhibit A", "Exhibit C", and "Exhibit D" which will be part of the Contract Agreement between MKS and this work package.

Project Specific Scope

1. This bid package is responsible for all labor, materials and equipment necessary to complete the aluminum entrances, storefronts, entry hardware(install), aluminum windows and glazing as spelled out in the contract documents.
2. This bid package is responsible for door operators. Bid Package 26a will provide raceways and power to the operator. This bid package is responsible for controls and control wiring.
3. Provide and install all curtainwall and storefront, framing, doors, glass and glazing per contract documents.
4. Includes all interior and exterior caulking of this bid package material for a complete weather-tight installation.
5. Includes all aluminum head and sill flashing for a complete water-tight system.
6. Includes all break metal trims and flashing and sub-flashing for a complete water-tight system.
7. Includes all aluminum doors and frames including glazing within doors.
8. Includes all structural framing, anchors, clips, fasteners, for a complete system in accordance with the delegated engineering requirements within the specs.
9. Install hardware for Aluminum Storefront doors, hardware furnished by bid package doors/frames hardware.
10. Include all weatherstripping and thresholds for Aluminum storefront doors and frames.
11. Initiate and provide coordination with electrician or others to run conduit in all frame system to provide power to electrified door hardware, automatic door operators or card readers.

12. Provide all necessary clips, fasteners, closures, gaskets, sealants, flashings and accessories required for a complete system.
13. Review substrate and add any additional wood blocking, shims or support as required to support storefront and window system. Installation of all glass stops with all required fasteners is this subcontractor's responsibility.
14. Provide break metal end caps where walls butt into storefront mullions or glass.
15. Provide all break metal required for a complete and finished system.
16. Provide clean storefront and curtainwalls upon completion for review and punch list by Owner.
17. Include final cleaning prior to Owner Occupancy as well.
18. Provide and install the glazing of all hollow metal window frames and door side lights. (Glazing of wood doors by bid package doors/frames/hardware
19. Includes three lines of sealant on curtain wall assemblies and two lines of sealant on storefront assemblies. Bead #1 from exterior veneer to window, bead #2 from envelope framing (IE: CMU or metal studs) to window, bead #3 from finished interior surface to window.
20. Includes installing door hardware on all aluminum frames and doors.
21. Includes all spray foam insulation with your sheet metal wraps.
22. Includes all window head flashings
23. A minimum of two coordination meetings are required prior to fabrication of aluminum frames. This bid package shall approve door and hardware shop drawings prior to submission to Architect.
24. This Contractor to final clean glass and frames at completion of project.
25. Includes rigid insulation and break metal within aluminum framing for a complete installation.
26. All flashings to be prefinished to match adjacent aluminum frame color.
27. Include supply and installation of all windows per drawings and specifications. Including all required flashing and caulking for a weathertight system.
28. Include all mirrors with mounting hardware as required

Bid Package 09a Gyp Board Assemblies – Metal Framing – APC – Acoustic Wall Trmt. – Painting

Specifications: *Unless noted otherwise, this bid package is to provide the entire scope required of each specification listed.*

Division 00-Procurement & Contracting Requirements
Division 01-General Requirements
05 05 19 Post Installed Anchors (as related to this scope)
05 40 00 Cold Formed Metal Framing
09 29 00 Gypsum Board
09 50 00 Integrated Ceiling Assemblies
09 51 13 Acoustical Panel Ceilings
09 80 00 Acoustical Wall Treatment
09 91 00 Painting

GENERAL SCOPE ITEMS:

1. Subcontractor is responsible for all work related to this work scope included in the entire set of contract documents.
2. Where there is a conflict or discrepancy between drawings and/or drawings and specifications; subcontractor shall include the costs to provide the more expensive and/or greater quantity.
3. Subcontractor acknowledges that the section in the Project Manual labeled "BID PACKAGES – SCOPE OF WORK – ALL BID PACKAGES" applies to EACH/EVERY/(ALL) bid package(s)/Subcontractor(s) including this Subcontractor specific scope of work. Subcontractor includes all costs in its base bid to adhere to this aforementioned section of the Project Manual. If there is a discrepancy between the "BID PACKAGES–SCOPE OF WORK–ALL BID PACKAGES" section and the Subcontractor's specific bid package scope, the Subcontractor's specific bid package scope shall apply and be adhered to by the Subcontractor at no additional cost to the project.
4. Subcontractor will provide all materials, manpower, equipment, receiving, transporting, loading, unloading, rigging, hoisting, handling, storing, setting, conveying, hoisting, temporary bracing, scaffolding, working platforms, protection/safety of all materials and manpower, etc. to execute this scope of work.
5. Subcontractor will provide protection of all final material and work as directed by MKS.
6. Subcontractor will provide all costs for delivery, freight, and applicable sales tax to the jobsite.
7. Subcontractor will provide all required field measuring, layout/surveying, engineering, submittals, shop drawings, etc. necessary to complete this scope of work.
8. Subcontractor is responsible for all applicable permits, licenses, registrations, and fees required by authorities having jurisdiction and/or Owner, with exception of the General Building Permit. The General Building Permit will be acquired by Construction Manager and copies provided as required.
9. Subcontractor will provide all necessary permits, fees, inspections, and notifications for its work that are not already specifically stated to be covered by Construction Manager.
10. Subcontractor will comply with all applicable City, State, Federal codes, and quality workmanship requirements regarding materials, methods of work, and disposal of excess and waste material.
11. Subcontractor includes coordination and notification for all materials testing, permits, fees, and inspections required by the specifications.
12. Subcontractor will provide multiple mobilizations as necessary to meet the project schedule.
13. Subcontractors quote is not part of the contract or scope of work documentation.
14. Subcontractor will provide all necessary barricades, safety, and warning devices for its work. If a safety barricade is removed by this subcontractor for access to its work, this Subcontractor is responsible to replace same safety barrier to its original integrity.
15. Subcontractor will provide continuous daily clean-up and housekeeping including complete removal of trash, debris, and dirt generated from its activities to a dumpster furnished by Construction Manager and its supervisors have the right to identify insufficient daily clean-up and housekeeping for correction within 24 hours of the notice (or sooner if a safety hazard), as well as performing noncompliance clean-up and housekeeping on behalf and at the expense of the subcontractor if left unaddressed after the 24-hour notice.

16. On-Site Subcontractor supervision is required when any work of this subcontract is being performed on site. Supervisor of work is required to attend weekly job progress meetings to report on scope of work, make decisions related to cost and schedule, and to be accountable to other Subcontractors on the project.
17. Subcontractor will provide submittals for review as needed/required including shop drawings, product data, color samples, etc.
18. Subcontractor will provide electronic closeout documents as needed/required.
19. Subcontractor will provide as-built documentation in accordance with the specifications. (As-built's must be documented and submitted on a minimum monthly basis.)
20. Subcontractor will supply attic stock as indicated in the specifications.
21. The Subcontractor will provide all final testing, training, and commissioning for its scope of work (as/if training is applicable).

Supplemental Instructions to this Bid Package:

This bid package shall include, but shall not necessarily be limited to, the following scope of work:

1. This bid package is responsible for the labor, materials, supervision, taxes, insurance, equipment, placing, hoisting, scaffolding, protection, transportation, permits (MKS to provide general permit)' licenses/registrations, fees necessary to complete this scope of work.
2. This bid package to furnish and install moisture resistant drywall at all wet walls.
3. This bid package to submit for AE approval Control joint locations prior to commencing work.
4. Wood blocking will be by others.
5. This bid package is responsible for the fire rated assemblies associated with this work package shown on the life safety drawing.
6. This bid package is responsible for the drywall expansion joints at 25'-0" on center typical in walls and ceilings.
7. This bid package is responsible for protection of in place finishes while painting.
8. This bid package is to review civil drawings, MEP pages for painting notes.
9. This bid package is responsible for providing all maintenance stock and replacement stock material per the specifications. Only use replacement stock material for punch list damage.
10. This bid package is responsible to complete MKS bid form including all alternates as applicable.
11. See attached Supplemental Conditions "Exhibit A", "Exhibit C", and "Exhibit D" which will be part of the Contract Agreement between MKS and this work package.

Project Specific Scope

1. This bid package is responsible for all labor, materials and equipment necessary or incidental to complete the gypsum board assemblies, drywall beads, cold formed framing and nonstructural metal framing as denoted in the contract documents.
2. This bid package is responsible for the sealant at gypsum board assemblies as denoted in the contract documents.
3. This bid package is responsible for furnishing and installing all acoustical panel ceiling systems.
4. This bid package is responsible for furnishing and installing the Acoustibuilt ceiling system.
5. This bid package is responsible for furnishing and installing the Autex Acoustics panels.
6. This bid package is responsible for furnishing and installing the digital wallcoverings.
7. This bid package is responsible for furnishing and installing all acoustical wall treatments.
8. This bid package is responsible for furnishing and installing Axiom trim where shown on the documents.
9. This bid package is responsible for furnishing and installing acoustic ceiling baffle where shown on the documents.
10. This bid package is responsible for all drywall finishing as required for the project.
11. This bid package is responsible for all painting and high performance coatings.
12. All 'UL' rated assemblies must be constructed as such.
13. Includes all corner beads, trims and control joints, and drywall accessories at all new drywall.
14. Includes metal hat channel framing over Concrete/CMU walls.

Bid Package 09b Flooring & Tiling

Specifications: *Unless noted otherwise, this bid package is to provide the entire scope required of each specification listed.*

Division 00 Procurement and Contracting Requirements
Division 01 General Requirements
07 92 00 Joint Sealants
09 30 13 Tiling
09 65 16 Resilient Sheet Flooring
09 65 19 Resilient Flooring
09 67 23 Resinous Floor
09 68 13 Carpeting

GENERAL SCOPE ITEMS:

1. Subcontractor is responsible for all work related to this work scope included in the entire set of contract documents.
2. Where there is a conflict or discrepancy between drawings and/or drawings and specifications; subcontractor shall include the costs to provide the more expensive and/or greater quantity.
3. Subcontractor acknowledges that the section in the Project Manual labeled "BID PACKAGES – SCOPE OF WORK – ALL BID PACKAGES" applies to EACH/EVERY/(ALL) bid package(s)/Subcontractor(s) including this Subcontractor specific scope of work. Subcontractor includes all costs in its base bid to adhere to this aforementioned section of the Project Manual. If there is a discrepancy between the "BID PACKAGES–SCOPE OF WORK–ALL BID PACKAGES" section and the Subcontractor's specific bid package scope, the Subcontractor's specific bid package scope shall apply and be adhered to by the Subcontractor at no additional cost to the project.
4. Subcontractor will provide all materials, manpower, equipment, receiving, transporting, loading, unloading, rigging, hoisting, handling, storing, setting, conveying, hoisting, temporary bracing, scaffolding, working platforms, protection/safety of all materials and manpower, etc. to execute this scope of work.
5. Subcontractor will provide protection of all final material and work as directed by MKS.
6. Subcontractor will provide all costs for delivery, freight, and applicable sales tax to the jobsite.
7. Subcontractor will provide all required field measuring, layout/surveying, engineering, submittals, shop drawings, etc. necessary to complete this scope of work.
8. Subcontractor is responsible for all applicable permits, licenses, registrations, and fees required by authorities having jurisdiction and/or Owner, with exception of the General Building Permit. The General Building Permit will be acquired by Construction Manager and copies provided as required.
9. Subcontractor will provide all necessary permits, fees, inspections, and notifications for its work that are not already specifically stated to be covered by Construction Manager.
10. Subcontractor will comply with all applicable City, State, Federal codes, and quality workmanship requirements regarding materials, methods of work, and disposal of excess and waste material.
11. Subcontractor includes coordination and notification for all materials testing, permits, fees, and inspections required by the specifications.
12. Subcontractor will provide multiple mobilizations as necessary to meet the project schedule.
13. Subcontractors quote is not part of the contract or scope of work documentation.
14. Subcontractor will provide all necessary barricades, safety, and warning devices for its work. If a safety barricade is removed by this subcontractor for access to its work, this Subcontractor is responsible to replace same safety barrier to its original integrity.
15. Subcontractor will provide continuous daily clean-up and housekeeping including complete removal of trash, debris, and dirt generated from its activities to a dumpster furnished by Construction Manager and its supervisors have the right to identify insufficient daily clean-up and housekeeping for correction within 24 hours of the notice (or sooner if a safety hazard), as well as performing noncompliance clean-up and housekeeping on behalf and at the expense of the subcontractor if left unaddressed after the 24-hour notice.

16. On-Site Subcontractor supervision is required when any work of this subcontract is being performed on site. Supervisor of work is required to attend weekly job progress meetings to report on scope of work, make decisions related to cost and schedule, and to be accountable to other Subcontractors on the project.
17. Subcontractor will provide submittals for review as needed/required including shop drawings, product data, color samples, etc.
18. Subcontractor will provide electronic closeout documents as needed/required.
19. Subcontractor will provide as-built documentation in accordance with the specifications. (As-built's must be documented and submitted on a minimum monthly basis.)
20. Subcontractor will supply attic stock as indicated in the specifications.
21. The Subcontractor will provide all final testing, training, and commissioning for its scope of work (as/if training is applicable).

Supplemental Instructions to this Bid Package:

This bid package shall include, but shall not necessarily be limited to, the following scope of work:

1. This bid package is responsible for the labor, materials, supervision, taxes, insurance, equipment, placing, hoisting, scaffolding, protection, transportation, permits (MKS to provide general permit), licenses/registrations, fees necessary to complete this scope of work.
2. This bid package is responsible for all materials, including transition strips, Schluter trims, adhesives, and accessories that are required for the complete installation of the flooring systems for this bid package.
3. This bid package is responsible for all minor patchwork that is required for the new flooring.
4. This bid package shall be responsible for minor clean-up and prep work in acceptance of the substrate for which the flooring is to be installed. If there are any questionable areas, they should be brought to MKS' attention prior to commencing work.
5. This bid package will be required to sweep all floor and wall areas before the installation of their flooring system.
6. This bid package is responsible to notify MKS in writing if layout must be amended/changed from what is shown on the construction documents prior to commencing work.
7. This bid package is responsible for scheduling all pre installation meetings at the jobsite as denoted in the contract documents.
8. This bid package must submit expansion joint/control joint locations for MKS review prior to commencing work.
9. This bid package is responsible for final protection of installed product per specifications. Removal of protection material is by others.
10. This bid package is responsible for furnishing extra 5% attic stock of each product. This material is not to be used for repair of punch list items.
11. This contractor is responsible for completing the MKS bid form including all alternates as applicable.
12. See attached Supplemental Conditions "Exhibit A", "Exhibit C", and "Exhibit D" which will be part of the Contract Agreement between MKS and this work package.

Project Specific Scope

1. This bid package is responsible for furnishing and installing the ceramic tiling as denoted on the contract documents including all grout.
2. Backer board for wall tile will be furnished and installed by BP 09a.
3. This bid package is responsible for furnishing and installing all resilient flooring and resilient wall base.
4. This bid package will include grout/adhesive that is acceptable to use given the moisture content of the concrete at the time of installation.
5. This bid package will be responsible for taking moisture readings of the concrete before installation.
6. This bid package is responsible for furnishing and installing the resinous floor and wall base coatings.
7. This bid package is responsible for all floor and wall preparation for installation of the resinous floor.
8. This bid package is responsible for sawcutting resinous floor above sawcuts in the slab.
9. This bid package is responsible for furnishing and installing joint sealants in the resinous floor sawcuts.
10. This bid package is responsible for furnishing and installing all tile carpeting.

Bid Package 09c Wood Athletic Flooring

Specifications: *Unless noted otherwise, this bid package is to provide the entire scope required of each specification listed.*

Division 00 Procurement and Contracting Requirements
Division 01 General Requirements
07 92 00 Joint Sealants
09 64 66 Wood Athletic Flooring

GENERAL SCOPE ITEMS:

1. Subcontractor is responsible for all work related to this work scope included in the entire set of contract documents.
2. Where there is a conflict or discrepancy between drawings and/or drawings and specifications; subcontractor shall include the costs to provide the more expensive and/or greater quantity.
3. Subcontractor acknowledges that the section in the Project Manual labeled "BID PACKAGES – SCOPE OF WORK – ALL BID PACKAGES" applies to EACH/EVERY/(ALL) bid package(s)/Subcontractor(s) including this Subcontractor specific scope of work. Subcontractor includes all costs in its base bid to adhere to this aforementioned section of the Project Manual. If there is a discrepancy between the "BID PACKAGES–SCOPE OF WORK–ALL BID PACKAGES" section and the Subcontractor's specific bid package scope, the Subcontractor's specific bid package scope shall apply and be adhered to by the Subcontractor at no additional cost to the project.
4. Subcontractor will provide all materials, manpower, equipment, receiving, transporting, loading, unloading, rigging, hoisting, handling, storing, setting, conveying, hoisting, temporary bracing, scaffolding, working platforms, protection/safety of all materials and manpower, etc. to execute this scope of work.
5. Subcontractor will provide protection of all final material and work as directed by MKS.
6. Subcontractor will provide all costs for delivery, freight, and applicable sales tax to the jobsite.
7. Subcontractor will provide all required field measuring, layout/surveying, engineering, submittals, shop drawings, etc. necessary to complete this scope of work.
8. Subcontractor is responsible for all applicable permits, licenses, registrations, and fees required by authorities having jurisdiction and/or Owner, with exception of the General Building Permit. The General Building Permit will be acquired by Construction Manager and copies provided as required.
9. Subcontractor will provide all necessary permits, fees, inspections, and notifications for its work that are not already specifically stated to be covered by Construction Manager.
10. Subcontractor will comply with all applicable City, State, Federal codes, and quality workmanship requirements regarding materials, methods of work, and disposal of excess and waste material.
11. Subcontractor includes coordination and notification for all materials testing, permits, fees, and inspections required by the specifications.
12. Subcontractor will provide multiple mobilizations as necessary to meet the project schedule.
13. Subcontractors quote is not part of the contract or scope of work documentation.
14. Subcontractor will provide all necessary barricades, safety, and warning devices for its work. If a safety barricade is removed by this subcontractor for access to its work, this Subcontractor is responsible to replace same safety barrier to its original integrity.
15. Subcontractor will provide continuous daily clean-up and housekeeping including complete removal of trash, debris, and dirt generated from its activities to a dumpster furnished by Construction Manager and its supervisors have the right to identify insufficient daily clean-up and housekeeping for correction within 24 hours of the notice (or sooner if a safety hazard), as well as performing noncompliance clean-up and housekeeping on behalf and at the expense of the subcontractor if left unaddressed after the 24-hour notice.
16. On-Site Subcontractor supervision is required when any work of this subcontract is being performed on site. Supervisor of work is required to attend weekly job progress meetings to report on scope of work, make decisions related to cost and schedule, and to be accountable to other Subcontractors on the project.
17. Subcontractor will provide submittals for review as needed/required including shop drawings, product data, color samples, etc.

18. Subcontractor will provide electronic closeout documents as needed/required.
19. Subcontractor will provide as-built documentation in accordance with the specifications. (As-built's must be documented and submitted on a minimum monthly basis.)
20. Subcontractor will supply attic stock as indicated in the specifications.
21. The Subcontractor will provide all final testing, training, and commissioning for its scope of work (as/if training is applicable).

Supplemental Instructions to this Bid Package:

This bid package shall include, but shall not necessarily be limited to, the following scope of work:

1. This bid package is responsible for the labor, materials, supervision, taxes, insurance, equipment, placing, hoisting, scaffolding, protection, transportation, permits (MKS to provide general permit), licenses/registrations, fees necessary to complete this scope of work.
2. This bid package is responsible for all materials, adhesives, and accessories that are required for the complete installation of the wood athletic flooring systems.
3. This bid package shall be responsible for minor clean-up and prep work in acceptance of the substrate for which the flooring is to be installed. If there are any questionable areas, they should be brought to MKS' attention prior to commencing work.
4. This bid package will be required to sweep all floor and wall areas before the installation of their flooring system.
5. This bid package is responsible to notify MKS in writing if layout must be amended/changed from what is shown on the construction documents prior to commencing work.
6. This bid package must submit expansion joint/control joint locations for MKS review prior to commencing work.
7. This bid package is responsible for final protection of installed product per specifications. Removal of protection material is by others.
8. This bid package is responsible for furnishing extra 5% attic stock of each product. This material is not to be used for repair of punch list items.
9. This contractor is responsible for completing the MKS bid form including all alternates as applicable.
10. See attached Supplemental Conditions "Exhibit A", "Exhibit C", and "Exhibit D" which will be part of the Contract Agreement between MKS and this work package.

Project Specific Scope

1. This bid package is responsible for furnishing and installing the wood athletic flooring as denoted on the contract documents including all grout.
2. This bid package will include grout/adhesive that is acceptable to use given the moisture content of the concrete at the time of installation.
3. This bid package is responsible for the vented wall base on the walls above the wood athletic flooring.
4. This bid package is responsible for sanding, vacuuming, sealers, game line paint, logos, stains required for the wood athletic flooring.
5. This bid package is responsible for supply and install of adhesive that is applicable to the moisture content of the concrete slab at the time of installation.
6. This bid package is responsible for taking moisture readings of the concrete prior to installation.

Bid Package 11e Food Service Equipment

Specifications: *Unless noted otherwise, this bid package is to provide the entire scope required of each specification listed.*

Division 00-Procurement & Contracting Requirements
Division 01-General Requirements
07 92 00 Joint Sealants
11 20 00 Food Service Equipment

Division 01-General Requirements

GENERAL SCOPE ITEMS:

1. Subcontractor is responsible for all work related to this work scope included in the entire set of contract documents.
2. Where there is a conflict or discrepancy between drawings and/or drawings and specifications; subcontractor shall include the costs to provide the more expensive and/or greater quantity.
3. Subcontractor acknowledges that the section in the Project Manual labeled "BID PACKAGES – SCOPE OF WORK – ALL BID PACKAGES" applies to EACH/EVERY/(ALL) bid package(s)/Subcontractor(s) including this Subcontractor specific scope of work. Subcontractor includes all costs in its base bid to adhere to this aforementioned section of the Project Manual. If there is a discrepancy between the "BID PACKAGES–SCOPE OF WORK–ALL BID PACKAGES" section and the Subcontractor's specific bid package scope, the Subcontractor's specific bid package scope shall apply and be adhered to by the Subcontractor at no additional cost to the project.
4. Subcontractor will provide all materials, manpower, equipment, receiving, transporting, loading, unloading, rigging, hoisting, handling, storing, setting, conveying, hoisting, temporary bracing, scaffolding, working platforms, protection/safety of all materials and manpower, etc. to execute this scope of work.
5. Subcontractor will provide protection of all final material and work as directed by MKS.
6. Subcontractor will provide all costs for delivery, freight, and applicable sales tax to the jobsite.
7. Subcontractor will provide all required field measuring, layout/surveying, engineering, submittals, shop drawings, etc. necessary to complete this scope of work.
8. Subcontractor is responsible for all applicable permits, licenses, registrations, and fees required by authorities having jurisdiction and/or Owner, with exception of the General Building Permit. The General Building Permit will be acquired by Construction Manager and copies provided as required.
9. Subcontractor will provide all necessary permits, fees, inspections, and notifications for its work that are not already specifically stated to be covered by Construction Manager.
10. Subcontractor will comply with all applicable City, State, Federal codes, and quality workmanship requirements regarding materials, methods of work, and disposal of excess and waste material.
11. Subcontractor includes coordination and notification for all materials testing, permits, fees, and inspections required by the specifications.
12. Subcontractor will provide multiple mobilizations as necessary to meet the project schedule.
13. Subcontractors quote is not part of the contract or scope of work documentation.
14. Subcontractor will provide all necessary barricades, safety, and warning devices for its work. If a safety barricade is removed by this subcontractor for access to its work, this Subcontractor is responsible to replace same safety barrier to its original integrity.
15. Subcontractor will provide continuous daily clean-up and housekeeping including complete removal of trash, debris, and dirt generated from its activities to a dumpster furnished by Construction Manager and its supervisors have the right to identify insufficient daily clean-up and housekeeping for correction within 24 hours of the notice (or sooner if a safety hazard), as well as performing noncompliance clean-up and housekeeping on behalf and at the expense of the subcontractor if left unaddressed after the 24-hour notice.
16. On-Site Subcontractor supervision is required when any work of this subcontract is being performed on site. Supervisor of work is required to attend weekly job progress meetings to report on scope of work, make decisions related to cost and schedule, and to be accountable to other Subcontractors on the project.
17. Subcontractor will provide submittals for review as needed/required including shop drawings, product data, color samples, etc.

18. Subcontractor will provide electronic closeout documents as needed/required.
19. Subcontractor will provide as-built documentation in accordance with the specifications. (As-built's must be documented and submitted on a minimum monthly basis.)
20. Subcontractor will supply attic stock as indicated in the specifications.
21. The Subcontractor will provide all final testing, training, and commissioning for its scope of work (as/if training is applicable).

Supplemental Instructions to this Bid Package:

This bid package shall include, but shall not necessarily be limited to, the following scope of work:

1. This bid package is responsible for the labor, materials, supervision, taxes, insurance, equipment, placing, hoisting, scaffolding, protection, transportation, permits (MKS to provide general permit), licenses/registrations, fees necessary to complete this scope of work.
2. Shop drawings are due within 15 calendar days of notice to proceed.
3. This bid package is responsible for all unloading and unpacking all equipment. This bid package is to place all discarded packaging materials in dumpster provided by others at the end of each day onsite.
4. This bid package is to coordinate all mechanical requirements with BP 23a.
5. This bid package is to coordinate all electrical requirements with BP 26a.
6. This bid package is responsible for completing the MKS bid form including all alternates as applicable.
7. See attached Supplemental Conditions "Exhibit A", "Exhibit C", and "Exhibit D" which will be part of the Contract Agreement between MKS and this work package.

Project Specific Scope

1. This bid package is responsible for furnishing and installing all food service equipment as denoted on contract documents.
2. This bid package is responsible for the supply of all items required for a full and complete installation of this scope.
3. This bid package is responsible for caulking associated with the food service equipment.
4. Post construction cleaning is by this bid package.
5. This bid package is responsible for scheduling training and demonstration meetings.

Bid Package 21a Fire Suppression Systems

In addition to and including the General Contract Specification Sections Complete (also known as the "Project Manual") (such as Bidding Requirements & Forms; Scope of Work Applicable to All Bid Packages; Preliminary Construction Schedule; All General & Supplementary/Special Conditions including, but not limited to, the entire Division 01 - General Requirements, Contractual Conditions, Summary of Work, and Schedule of Contract Responsibilities), this Subcontractor is Furnishing and Installing per the following Technical Scope Specific Specification Section(s) complete:

Specifications: *Unless noted otherwise, this bid package is to provide the entire scope required of each specification listed.*

Division 00 Procurement and Contracting Requirements
Division 01 General Requirements
05 05 19 Post Installed Anchors
Division 21 All Sections

GENERAL SCOPE ITEMS:

1. Subcontractor is responsible for all work related to this work scope included in the entire set of contract documents.
2. Where there is a conflict or discrepancy between drawings and/or drawings and specifications; subcontractor shall include the costs to provide the more expensive and/or greater quantity.
3. Subcontractor acknowledges that the section in the Project Manual labeled "BID PACKAGES – SCOPE OF WORK – ALL BID PACKAGES" applies to EACH/EVERY/(ALL) bid package(s)/Subcontractor(s) including this Subcontractor specific scope of work. Subcontractor includes all costs in its base bid to adhere to this aforementioned section of the Project Manual. If there is a discrepancy between the "BID PACKAGES–SCOPE OF WORK–ALL BID PACKAGES" section and the Subcontractor's specific bid package scope, the Subcontractor's specific bid package scope shall apply and be adhered to by the Subcontractor at no additional cost to the project.
4. Subcontractor will provide all materials, manpower, equipment, receiving, transporting, loading, unloading, rigging, hoisting, handling, storing, setting, conveying, hoisting, temporary bracing, scaffolding, working platforms, protection/safety of all materials and manpower, etc. to execute this scope of work.
5. Subcontractor will provide protection of all final material and work as directed by MKS.
6. Subcontractor will provide all costs for delivery, freight, and applicable sales tax to the jobsite.
7. Subcontractor will provide all required field measuring, layout/surveying, engineering, submittals, shop drawings, etc. necessary to complete this scope of work.
8. Subcontractor is responsible for all applicable permits, licenses, registrations, and fees required by authorities having jurisdiction and/or Owner, with exception of the General Building Permit. The General Building Permit will be acquired by Construction Manager and copies provided as required.
9. Subcontractor will provide all necessary permits, fees, inspections, and notifications for its work that are not already specifically stated to be covered by Construction Manager.
10. Subcontractor will comply with all applicable City, State, Federal codes, and quality workmanship requirements regarding materials, methods of work, and disposal of excess and waste material.
11. Subcontractor includes coordination and notification for all materials testing, permits, fees, and inspections required by the specifications.

12. Subcontractor will provide multiple mobilizations as necessary to meet the project schedule.
13. Subcontractors quote is not part of the contract or scope of work documentation.
14. Subcontractor will provide all necessary barricades, safety, and warning devices for its work. If a safety barricade is removed by this subcontractor for access to its work, this Subcontractor is responsible to replace same safety barrier to its original integrity.
15. Subcontractor will provide continuous daily clean-up and housekeeping including complete removal of trash, debris, and dirt generated from its activities to a dumpster furnished by Construction Manager and its supervisors have the right to identify insufficient daily clean-up and housekeeping for correction within 24 hours of the notice (or sooner if a safety hazard), as well as performing noncompliance clean-up and housekeeping on behalf and at the expense of the subcontractor if left unaddressed after the 24-hour notice.
16. On-Site Subcontractor supervision is required when any work of this subcontract is being performed on site. Supervisor of work is required to attend weekly job progress meetings to report on scope of work, make decisions related to cost and schedule, and to be accountable to other Subcontractors on the project.
17. Subcontractor will provide submittals for review as needed/required including shop drawings, product data, color samples, etc.
18. Subcontractor will provide electronic closeout documents as needed/required.
19. Subcontractor will provide as-built documentation in accordance with the specifications. (As-built's must be documented and submitted on a minimum monthly basis.)
20. Subcontractor will supply attic stock as indicated in the specifications.
21. The Subcontractor will provide all final testing, training, and commissioning for its scope of work (as/if training is applicable).

Supplemental Instructions to this Bid Package:

This bid package shall include, but shall not necessarily be limited to, the following scope of work:

1. This bid package is responsible for the labor, materials, supervision, taxes, insurance, equipment, placing, hoisting, scaffolding, protection, transportation, permits (MKS to provide general permit) licenses, fees necessary to complete this scope of work.
2. This bid package is required to obtain all required permits and fees that are required to complete their scope of work that is not covered underneath the general building permit.
3. This bid package is responsible for all layout of the fire suppression system.
4. If access doors are required for the installation and service of equipment and systems and are not specifically shown on architectural drawings, it will be the responsibility of this bid package to furnish and install as required.
5. This work package is required to supply coordination drawings with bottom of pipe elevations.
6. Any required piping or equipment identification for the fire suppression scope is by this bid package.
7. This bid package includes all protection of your work.
8. Any spoils created by this bid package are to be removed offsite by this bid package.
9. This bid package is responsible for completing the bid form including all alternates as applicable.
10. See attached Supplemental Conditions "Exhibit A", "Exhibit C", and "Exhibit D" which will be part of the Contract Agreement between MKS and this work package.

Supplemental Instructions to this Work Package:

This bid package shall include, but shall not necessarily be limited to, the following scope of work:

1. This bid package is responsible for the labor, materials, supervision, taxes, insurance, equipment, placing, hoisting, scaffolding, protection, transportation, permits (MKS to provide general permit) licenses, fees necessary to complete this scope of work.
2. This bid package is responsible for State submission and approvals for Fire Protection work.
3. This bid package is required to supply coordination drawings with bottom of pipe elevations. This will be used to ensure Fire Protection, HVAC and Electrical coordination.
4. 6” water supply will enter building through slab where denoted on contract documents. This bid package will commence installation at flange 12” above slab.
5. This bid package is responsible for furnishing and installing the backflow preventer for the fire suppression system.
6. This bid package is responsible to complete MKS bid form including all alternates as applicable.
7. See attached Supplemental Conditions “Exhibit A”, “Exhibit C”, and “Exhibit D” which will be part of the Contract Agreement between MKS and this work package.

Project Specific Scope

8. This bid package is responsible for labor and materials to complete the fire protection installation including risers, nitrogen system and fire department connections as denoted on the contract documents.

Bid Package 23a Plumbing and HVAC Systems

In addition to and including the General Contract Specification Sections Complete (also known as the "Project Manual") (such as Bidding Requirements & Forms; Scope of Work Applicable to All Bid Packages; Preliminary Construction Schedule; All General & Supplementary/Special Conditions including, but not limited to, the entire Division 01 - General Requirements, Contractual Conditions, Summary of Work, and Schedule of Contract Responsibilities), this Subcontractor is Furnishing and Installing per the following Technical Scope Specific Specification Section(s) complete:

SPECIFICATION SECTIONS *(All as it pertains to this bid package)*

Division 00 Procurement and Contracting Requirements
Division 01 General Requirements
05 05 19 Post Installed Anchors (as related to this scope)
08 91 19 Fixed Louvers
Division 22 Plumbing – All Sections
Division 23 HVAC – All Sections

GENERAL SCOPE ITEMS:

22. Subcontractor is responsible for all work related to this work scope included in the entire set of contract documents.
23. Where there is a conflict or discrepancy between drawings and/or drawings and specifications; subcontractor shall include the costs to provide the more expensive and/or greater quantity.
24. Subcontractor acknowledges that the section in the Project Manual labeled "BID PACKAGES – SCOPE OF WORK – ALL BID PACKAGES" applies to EACH/EVERY/(ALL) bid package(s)/Subcontractor(s) including this Subcontractor specific scope of work. Subcontractor includes all costs in its base bid to adhere to this aforementioned section of the Project Manual. If there is a discrepancy between the "BID PACKAGES–SCOPE OF WORK–ALL BID PACKAGES" section and the Subcontractor's specific bid package scope, the Subcontractor's specific bid package scope shall apply and be adhered to by the Subcontractor at no additional cost to the project.
25. Subcontractor will provide all materials, manpower, equipment, receiving, transporting, loading, unloading, rigging, hoisting, handling, storing, setting, conveying, hoisting, temporary bracing, scaffolding, working platforms, protection/safety of all materials and manpower, etc. to execute this scope of work.
26. Subcontractor will provide protection of all final material and work as directed by MKS.
27. Subcontractor will provide all costs for delivery, freight, and applicable sales tax to the jobsite.
28. Subcontractor will provide all required field measuring, layout/surveying, engineering, submittals, shop drawings, etc. necessary to complete this scope of work.
29. Subcontractor is responsible for all applicable permits, licenses, registrations, and fees required by authorities having jurisdiction and/or Owner, with exception of the General Building Permit. The General Building Permit will be acquired by Construction Manager and copies provided as required.
30. Subcontractor will provide all necessary permits, fees, inspections, and notifications for its work that are not already specifically stated to be covered by Construction Manager.

31. Subcontractor will comply with all applicable City, State, Federal codes, and quality workmanship requirements regarding materials, methods of work, and disposal of excess and waste material.
32. Subcontractor includes coordination and notification for all materials testing, permits, fees, and inspections required by the specifications.
33. Subcontractor will provide multiple mobilizations as necessary to meet the project schedule.
34. Subcontractors quote is not part of the contract or scope of work documentation.
35. Subcontractor will provide all necessary barricades, safety, and warning devices for its work. If a safety barricade is removed by this subcontractor for access to its work, this Subcontractor is responsible to replace same safety barrier to its original integrity.
36. Subcontractor will provide continuous daily clean-up and housekeeping including complete removal of trash, debris, and dirt generated from its activities to a dumpster furnished by Construction Manager and its supervisors have the right to identify insufficient daily clean-up and housekeeping for correction within 24 hours of the notice (or sooner if a safety hazard), as well as performing noncompliance clean-up and housekeeping on behalf and at the expense of the subcontractor if left unaddressed after the 24-hour notice.
37. On-Site Subcontractor supervision is required when any work of this subcontract is being performed on site. Supervisor of work is required to attend weekly job progress meetings to report on scope of work, make decisions related to cost and schedule, and to be accountable to other Subcontractors on the project.
38. Subcontractor will provide submittals for review as needed/required including shop drawings, product data, color samples, etc.
39. Subcontractor will provide electronic closeout documents as needed/required.
40. Subcontractor will provide as-built documentation in accordance with the specifications. (As-built's must be documented and submitted on a minimum monthly basis.)
41. Subcontractor will supply attic stock as indicated in the specifications.
42. The Subcontractor will provide all final testing, training, and commissioning for its scope of work (as/if training is applicable).

Supplemental Instructions to this Bid Package:

This bid package shall include, but shall not necessarily be limited to, the following scope of work:

11. This bid package is responsible for the labor, materials, supervision, taxes, insurance, equipment, placing, hoisting, scaffolding, protection, transportation, permits (MKS to provide general permit) licenses, fees necessary to complete this scope of work.
12. This bid package is required to obtain all required permits and fees that are required to complete their scope of work that is not covered underneath the general building permit.
13. This bid package is responsible for all layout of plumbing and HVAC work including the chiller.
14. This bid package is responsible for all excavation, backfill, cutting, and patching that is required for installation of plumbing and HVAC systems.
15. If access doors are required for the installation and service of equipment and systems and are not specifically shown on architectural drawings, it will be the responsibility of this bid package to furnish and install as required.
16. This bid package is responsible for the complete installation of all sheet metal that is related to all mechanical systems, in its entirety.
17. This bid package is responsible for all insulation related to their scope of work & as required by the plans and specifications.
18. This bid package is responsible for the complete balancing of all air / water systems.

19. This work package is required to supply coordination drawings with bottom of duct elevations. This will be used to ensure electrical coordination.
20. Any required piping or equipment identification for the mechanical scope is by this bid package.
21. This bid package is responsible to caulk all plumbing fixtures to dissimilar materials. All caulk joints shall be professional looking in quality.
22. This bid package includes all protection of your work.
23. Any spoils created by this bid package are to be removed offsite by this bid package.
24. This bid package is responsible for completing the bid form including all alternates as applicable.
25. See attached Supplemental Conditions "Exhibit A", "Exhibit C", and "Exhibit D" which will be part of the Contract Agreement between MKS and this work package.

Project Specific Scope

1. This bid package is responsible for the complete plumbing and HVAC systems as denoted on the contract documents.
2. This bid package is responsible for furnishing variable frequency drives for turnover to Bid Package 26a for installation.
3. This bid package is responsible for the HVAC control system by Automated Logic Corporation. See alternates for breakout pricing for controls.
4. This bid package is responsible for coordinating all roof penetrations with Bid Package 07g at pre installation meeting.
5. This bid package includes all layout and coordination of wall openings and penetrations prior to the actual wall construction so the respective trade can incorporate the construction of this hole or penetration within the construction of their wall system. Failure to properly locate wall/floor/ceiling/roof/foundation wall openings in timely manner will result in backcharge to this Bid Package.
6. This bid package is responsible for furnishing and installing fixed louvers.
7. This bid package includes all labels, tags, equipment identification, etc. within this scope of work.
8. This bid package includes complete sanitary waste and vent system, including to 5' outside of building lines, connections, inspections, floor drains, clean outs, etc. Excavation and backfill is included.
9. This bid package includes all flushing, cleaning, testing, inspections, and certifications for this scope of work.
10. This bid package includes shop fabricated sheet metal assemblies and includes installation of sheet metal assemblies to maintain clean sheet metal assemblies free from all dirt, dust, and debris, during installation of your work and progression of the project. Includes complete sheet metal distribution system including ductwork, insulation, supports, fire dampers (if required), transitions, diffusers, registers, grilles, duct accessories, hydronic piping, etc. for a complete system. All ducts to be installed per SMACNA standards.
11. Coordinate shutdown, tie-in, valving associated with utility tie-ins, ie chilled water, water, etc. with MKS.
12. This bid package includes all intermediate and final testing, balancing, and adjusting. Balancing to be performed by third party and written report submitted to MKS.
13. This bid package to include additional (4 month) warranty for each air moving equipment if turned on and used during construction with warranty extending to time of owner occupancy.

14. This bid package includes (2) sets of temporary construction filters for all air moving equipment once the systems are put into operation. Cleaning of all air system components including coils, fans, diffusers and grilles is required to put the system in a new condition prior to building turnover (cleaning includes surfaces where accessible). This needs to be documented via inspection and sign-off by the Construction Manager.
15. This bid package includes (2) sets of final filters: (1) set prior to final system testing, and (1) set prior to owner turn over. This needs to be documented via inspection and sign-off by the Construction Manager.
16. This bid package includes all commissioning and associated documentation, coordination, and corrections during the commissioning phase of the project schedule.
17. This bid package includes all acoustical sealants for penetrations by this bid package within sound wall assemblies.
18. Housekeeping pads and chiller pad by Bid Package 03a Concrete. Layout is by this Bid Package.
19. This bid package includes layout of penetrations in concrete foundations and masonry walls.
20. Building pad stone base will be installed by Bid Package 03a prior to underground MEP. This bid package is responsible for restoration of stone base for their work.
21. Coordinating with Electrical Bid Package the exact electrical requirements of Mechanical equipment before the Electrical Contractor begins installation of the electrical conduits.
22. This Subcontractor is responsible for witnessing all pours with mechanical/plumbing penetrations/embeds/drains. This Subcontractor is responsible for making certain that all embedded items are plumb and at accurate elevations (this responsibility does not lie on other contractors.). This Subcontractor shall provide drains that are adjustable or means to adjust post concrete placement.
23. This Subcontractor will provide (including maintenance and removal) temporary roof drains and floor drains as decking is installed. In all cases the roof and floor drains shall be tied into the storm sewer as the roof and floors progress. If required, the plumbing contractor shall use temporary pvc piping (not corrugated tile) and hose to route drainage from building. In no case shall roof and floor drainage be allowed to dump into building interior. If temporary hoses are used, hoses shall be the same diameter as roof drain outlets and shall be installed to discharge water beyond existing building walls and scaffolds. Route all temporary hoses so as not to impact exterior wall construction. Include removal and disposal of hoses as they are replaced by permanent drain connection. Coordinate locations with Contractor.
24. This bid package includes testing for pressure, flow, and bacteria test of water lines. (Bacteria test of water line shall be by qualified 3rd party testing consultant hired by this Subcontractor.) This testing also includes testing for E.coli and Legionella.
25. This bid package is allowed (1) jobsite trailer on site if needed. Utility connections costs are to be included by this bid package. Jobsite trailer location determined by MKS's Jobsite Superintendent.

Bid Package 26a Electrical

In addition to and including the General Contract Specification Sections Complete (also known as the "Project Manual") (such as Bidding Requirements & Forms; Scope of Work Applicable to All Bid Packages; Preliminary Construction Schedule; All General & Supplementary/Special Conditions including, but not limited to, the entire Division 01 - General Requirements, Contractual Conditions, Summary of Work, and Schedule of Contract Responsibilities), this Subcontractor is Furnishing and Installing per the following Technical Scope Specific Specification Section(s) complete:

Specifications: *Unless noted otherwise, this bid package is to provide the entire scope required of each specification listed.*

Division 00 Procurement and Contracting Requirements
Division 01 General Requirements
05 05 19 Post Installed Anchors
Division 26 Electrical – All Sections
Division 27 Communications – All Sections
28 46 21.11 Addressable Fire Alarm

GENERAL SCOPE ITEMS:

1. Subcontractor is responsible for all work related to this work scope included in the entire set of contract documents.
2. Where there is a conflict or discrepancy between drawings and/or drawings and specifications; subcontractor shall include the costs to provide the more expensive and/or greater quantity.
3. Subcontractor acknowledges that the section in the Project Manual labeled "BID PACKAGES – SCOPE OF WORK – ALL BID PACKAGES" applies to EACH/EVERY/(ALL) bid package(s)/Subcontractor(s) including this Subcontractor specific scope of work. Subcontractor includes all costs in its base bid to adhere to this aforementioned section of the Project Manual. If there is a discrepancy between the "BID PACKAGES–SCOPE OF WORK–ALL BID PACKAGES" section and the Subcontractor's specific bid package scope, the Subcontractor's specific bid package scope shall apply and be adhered to by the Subcontractor at no additional cost to the project.
4. Subcontractor will provide all materials, manpower, equipment, receiving, transporting, loading, unloading, rigging, hoisting, handling, storing, setting, conveying, hoisting, temporary bracing, scaffolding, working platforms, protection/safety of all materials and manpower, etc. to execute this scope of work.
5. Subcontractor will provide protection of all final material and work as directed by MKS.
6. Subcontractor will provide all costs for delivery, freight, and applicable sales tax to the jobsite. Project is tax exempt.
7. Subcontractor will provide all required field measuring, layout/surveying, engineering, submittals, shop drawings, etc. necessary to complete this scope of work.
8. Subcontractor is responsible for all applicable permits, licenses, registrations, and fees required by authorities having jurisdiction and/or Owner, with exception of the General Building Permit. The General Building Permit will be acquired by Construction Manager and copies provided as required.
9. Subcontractor will provide all necessary permits, fees, inspections, and notifications for its work that are not already specifically stated to be covered by Construction Manager.
10. Subcontractor will comply with all applicable City, State, Federal codes, and quality workmanship requirements regarding materials, methods of work, and disposal of excess and waste material.

11. Subcontractor includes coordination and notification for all materials testing, permits, fees, and inspections required by the specifications.
12. Subcontractor will provide multiple mobilizations as necessary to meet the project schedule.
13. Subcontractors quote is not part of the contract or scope of work documentation.
14. Subcontractor will provide all necessary barricades, safety, and warning devices for its work. If a safety barricade is removed by this subcontractor for access to its work, this Subcontractor is responsible to replace same safety barrier to its original integrity.
15. Subcontractor will provide continuous daily clean-up and housekeeping including complete removal of trash, debris, and dirt generated from its activities to a dumpster furnished by Construction Manager and its supervisors have the right to identify insufficient daily clean-up and housekeeping for correction within 24 hours of the notice (or sooner if a safety hazard), as well as performing noncompliance clean-up and housekeeping on behalf and at the expense of the subcontractor if left unaddressed after the 24-hour notice.
16. On-Site Subcontractor supervision is required when any work of this subcontract is being performed on site. Supervisor of work is required to attend weekly job progress meetings to report on scope of work, make decisions related to cost and schedule, and to be accountable to other Subcontractors on the project.
17. Subcontractor will provide submittals for review as needed/required including shop drawings, product data, color samples, etc.
18. Subcontractor will provide electronic closeout documents as needed/required.
19. Subcontractor will provide as-built documentation in accordance with the specifications. (As-built's must be documented and submitted on a minimum monthly basis.)
20. Subcontractor will supply attic stock as indicated in the specifications.
21. The Subcontractor will provide all final testing, training, and commissioning for its scope of work (as/if training is applicable).

Supplemental Instructions to this Bid Package:

This bid package shall include, but shall not necessarily be limited to, the following scope of work:

1. This bid package is responsible for the labor, materials, supervision, taxes, insurance, equipment, placing, hoisting, scaffolding, protection, transportation, permits (MKS to provide general permit) licenses, fees necessary to complete this scope of work.
2. All excavation and backfill required for this work package shall be performed by this work package. Backfill must be properly compacted to avoid settlement.
3. This bid package is responsible for all temporary lighting that is required for the project, including setting of a new temporary service for the construction of the building. Temporary power should be provided so that extension cord length inside or outside the building does not exceed 100'. Temporary lighting should be provided at a minimum of 60w / 100SF. Lighting and power feeds shall be on separate circuits. All power shall be GFI protected via a GFI outlet or GFI breaker. Include removal of all after completion.
4. 220-volt power shall be available within the temporary panels. The contractor requesting 220v power will pay for termination within the panel.
5. The owner will pay for the power consumption.
6. This bid package is responsible for supplying temporary power to MKS project office trailer. Power to any other trailers is not part of the project.
7. This bid package is responsible for all layout associated with the electrical scope of work.
8. This bid package is responsible for coordinating power and data locations with furniture layouts prior to rough-in. Locations will likely change from what is currently shown.

9. This bid package is required to coordinate with Owner on owner supplied utilities and equipment.
10. This bid package is responsible for light pole bases.
11. This bid package is responsible for all trenching/excavation/backfill required for electrical work.
12. Any spoils created by this bid package are to be removed offsite by this bid package.
13. This bid package is responsible for all labeling and marking related to equipment, piping, cabling, etc. as denoted in specification sections noted above.
14. This bid package is responsible for including all extra materials (maintenance stock) as denoted on the contract documents.
15. If this bid package requires an access panel in a wall or ceiling and it is not shown on the documents, it is the responsibility of this bid package to furnish and install the access panel.
16. This bid package includes 100% impalement protection for any conduits 3” in diameter or smaller stubbed up in height lower than 4’-0” above working surfaces.
17. This bid package includes hookup of temporary power to 1 MKS jobsite trailer.
18. This bid package is allowed (1) jobsite trailer on site if needed. Utility connections costs are to be included by this bid package. Jobsite trailer location determined by MKS Jobsite Superintendent.
19. This bid package is responsible for completing the bid form including all alternates as applicable.
20. See attached Supplemental Conditions “Exhibit A”, “Exhibit C”, and “Exhibit D” which will be part of the Contract Agreement between MKS and this work package.

Project Specific Scope

1. This bid package is responsible for the complete installation of all electrical systems, including site electrical work, generator as denoted on the contract documents.
2. This bid package is responsible for furnishing and installing a complete addressable fire alarm system.
3. This bid package is responsible to coordinate conduit routes with masonry contractor as walls are laid up.
4. Housekeeping pads and generator pad by Bid Package 03a Concrete. Layout, excavation and backfill are by this Bid Package.
5. This bid package includes all layout and coordination of wall openings and penetrations prior to the actual wall construction so the respective trade can incorporate the construction of this hole or penetration within the construction of their wall system. Failure to properly locate wall/floor/ceiling/roof/foundation wall openings in timely manner will result in backcharge to this Bid Package.
6. This bid package includes all foundations sleeves and systems for a watertight installation.
7. This bid package includes all watertight site handholes and manholes inclusive of all excavation and backfilling for your scope of work.
8. This bid package includes all final electrical connections to equipment and items provided by others.
9. Building pad stone base will be installed by others prior to underground MEP. This bid package is responsible for restoration of stone base for their work.
10. This bid package is responsible for raceways for access control, electric door hardware, ADA actuators, coiling door, data, AV, cameras, security.
11. This bid package is responsible to bring power to access control equipment. All low voltage for access control is by access control vendor.
12. This bid package is responsible to bring power to auto door operators. Low voltage for controls are by others.

13. This bid package is responsible to bring power to the coiling door. Control wiring and controls are by others.
14. This bid package is responsible to fuel generator for testing. Fuel tank must be 100% full at turnover to owner.

Bid Backage 31a Earthwork – Utilities – Structure Demolition

In addition to and including the General Contract Specification Sections Complete (also known as the "Project Manual") (such as Bidding Requirements & Forms; Scope of Work Applicable to All Bid Packages; Preliminary Construction Schedule; All General & Supplementary/Special Conditions including, but not limited to, the entire Division 01 - General Requirements, Contractual Conditions, Summary of Work, and Schedule of Contract Responsibilities), this Subcontractor is Furnishing and Installing per the following Technical Scope Specific Specification Section(s) complete:

Specifications: *Unless noted otherwise, this bid package is to provide the entire scope required of each specification listed.*

Division 00 Procurement and Contracting Requirements
Division 01 General Requirements
02 41 19 Building Demolition
31 00 00 Control of Site Work
31 10 00 Site Demolition
31 20 00 Site Earthwork
31 30 00 Soil Erosion and Sediment Control
33 05 00 Site Utility Piping
33 11 16 Site Water Distribution
33 31 14 Sanitary Sewer System
33 41 00 Storm Drainage System

GENERAL SCOPE ITEMS:

1. Subcontractor is responsible for all work related to this work scope included in the entire set of contract documents.
2. Where there is a conflict or discrepancy between drawings and/or drawings and specifications; subcontractor shall include the costs to provide the more expensive and/or greater quantity.
3. Subcontractor acknowledges that the section in the Project Manual labeled "BID PACKAGES – SCOPE OF WORK – ALL BID PACKAGES" applies to EACH/EVERY/(ALL) bid package(s)/Subcontractor(s) including this Subcontractor specific scope of work. Subcontractor includes all costs in its base bid to adhere to this aforementioned section of the Project Manual. If there is a discrepancy between the "BID PACKAGES–SCOPE OF WORK–ALL BID PACKAGES" section and the Subcontractor's specific bid package scope, the Subcontractor's specific bid package scope shall apply and be adhered to by the Subcontractor at no additional cost to the project.
4. Subcontractor will provide all materials, manpower, equipment, receiving, transporting, loading, unloading, rigging, hoisting, handling, storing, setting, conveying, hoisting, temporary bracing, scaffolding, working platforms, protection/safety of all materials and manpower, etc. to execute this scope of work.
5. Subcontractor will provide protection of all final material and work as directed by MKS.
6. Subcontractor will provide all costs for delivery, freight, and applicable sales tax to the jobsite. Project is tax exempt.
7. Subcontractor will provide all required field measuring, layout/surveying, engineering, submittals, shop drawings, etc. necessary to complete this scope of work.
8. Subcontractor is responsible for all applicable permits, licenses, registrations, and fees required by authorities having jurisdiction and/or Owner, with exception of the General Building Permit. The General Building Permit will be acquired by Construction Manager and copies provided as required.

9. Subcontractor will provide all necessary permits, fees, inspections, and notifications for its work that are not already specifically stated to be covered by Construction Manager.
10. Subcontractor will comply with all applicable City, State, Federal codes, and quality workmanship requirements regarding materials, methods of work, and disposal of excess and waste material.
11. Subcontractor includes coordination and notification for all materials testing, permits, fees, and inspections required by the specifications.
12. Subcontractor will provide multiple mobilizations as necessary to meet the project schedule.
13. Subcontractors quote is not part of the contract or scope of work documentation.
14. Subcontractor will provide all necessary barricades, safety, and warning devices for its work. If a safety barricade is removed by this subcontractor for access to its work, this Subcontractor is responsible to replace same safety barrier to its original integrity.
15. Subcontractor will provide continuous daily clean-up and housekeeping including complete removal of trash, debris, and dirt generated from its activities to a dumpster furnished by Construction Manager and its supervisors have the right to identify insufficient daily clean-up and housekeeping for correction within 24 hours of the notice (or sooner if a safety hazard), as well as performing noncompliance clean-up and housekeeping on behalf and at the expense of the subcontractor if left unaddressed after the 24-hour notice.
16. On-Site Subcontractor supervision is required when any work of this subcontract is being performed on site. Supervisor of work is required to attend weekly job progress meetings to report on scope of work, make decisions related to cost and schedule, and to be accountable to other Subcontractors on the project.
17. Subcontractor will provide submittals for review as needed/required including shop drawings, product data, color samples, etc.
18. Subcontractor will provide electronic closeout documents as needed/required.
19. Subcontractor will provide as-built documentation in accordance with the specifications. (As-built's must be documented and submitted on a minimum monthly basis.)
20. Subcontractor will supply attic stock as indicated in the specifications.
21. The Subcontractor will provide all final testing, training, and commissioning for its scope of work (as/if training is applicable).

Supplemental Instructions to this Bid Package:

This bid package shall include, but shall not necessarily be limited to, the following scope of work:

1. This bid package is responsible for the labor, materials, supervision, taxes, insurance, equipment, placing, hoisting, scaffolding, protection, transportation, permits (MKS to provide general permit), licenses/registrations, fees necessary to complete this scope of work.
2. This bid package is responsible for visiting site to review existing conditions.
3. Prior to commencing any work on site, this bid package shall contact all utility companies for locating and flagging all existing utilities within the project boundaries. Any damage to existing utilities or structures is the responsibility of this contractor.
4. All work to comply with O.S.H.A., City and State rules and regulations.
5. This bid package is responsible for all maintenance of traffic (barricading, road closures, sidewalk closures, etc) associated with this work.
6. This bid package is responsible for maintaining weeds and cutting grass during duration of the project until project is seeded and landscaped.
7. This bid package is responsible for all requirements of Rule 5 including state and local requirements (as required) throughout the duration of the project.

8. This bid package is responsible for routine, end of day inspection/maintenance checks of all erosion and sediment control measures.
9. This bid package is responsible for stabilizing disturbed areas with protective measures as soon as possible after the land has been disturbed. Temporary seeding, mulching and/or erosion control blankets are protective measures.
10. All erosion control signage is by this bid package.
11. This bid package is responsible to maintain positive drainage for the building footprint until the building is turned over to the owner. This may require temporary measures to ensure drainage.
12. This bid package to include temporary protection from construction activities for trees that remain.
13. This bid package is responsible for testing/inspections required by the authorities having jurisdiction for this scope of work.
14. This bid package is responsible for sweeping the site and public roads through the duration of this contractor's onsite presence.
15. This bid package is responsible to protect existing utilities and equipment while working adjacent to them.
16. This bid package is responsible for all soil compaction requirements for backfilling per the plans and specifications and to coordinate with geotechnical engineer. The costs for soil testing will be by owner. Testing agent is required to be onsite to test sub-grades and fill operations. See Soil borings.
17. All work associated for cut, fill and compaction of sub-grade (stone) for all sidewalks, curbs, concrete paving, equipment pads, building slabs shall be the responsibility of this bid package. All sub-grades must be prepared to +/- 0.1'. Any excess spoils generated by this work to be removed from the jobsite by this bid package.
18. This bid package is responsible to remove rocks (larger than 1" diameter) and debris as required & fine grade topsoil.
19. Stone for sidewalks, concrete paving, building slabs is the responsibility of this bid package.
20. This bid package shall ensure handicap stalls are no greater than 2.0% in any direction for ADA compliancy.
21. This bid package is responsible for the saw-cutting any asphalt or concrete for installation of utilities, building, or asphalt work.
22. This bid package is responsible to protect open excavations daily.
23. This bid package is responsible for dewatering. This work package is to devise plan to ensure prepared sub-grades have positive drainage with no ponding.
24. All layout required for establishing sewer locations, building pads, concrete paving locations, etc. for both line and grade will be by this bid package. Any layout done by others that is removed or destroyed by this contractor and required to be redone will be this contractor's responsibility.
25. This bid package is responsible for the entire stormwater system.
26. This bid package is responsible for the entire sanitary sewer system to within 5' outside of building foundation.
27. Material and workmanship shall comply with the Koskiosko County and City of Milford Standards and Specifications.
28. Record all existing utilities lines encountered and removed as well as new lines installed (As-Builts).
29. This bid package is responsible for As-Built drawings upon completion of work.
30. This bid package is responsible for completing the bid form including all alternates and unit pricing as applicable.

31. See attached Supplemental Conditions “Exhibit A”, “Exhibit C”, and “Exhibit D” which will be part of the Contract Agreement between MKS and this work package.

Project Specific Scope

1. If temporary fence needs removed for work by this bid package, coordinate removal with Construction Manager.
2. This bid package is responsible for removal of temporary stone lot.
3. Snow removal for construction site is by this bid package.
4. This bid package is responsible for all civil demolition as denoted on the contract documents including all utilities.
5. This bid package is responsible for all utility locates within the project limits either by 811 or private locating service.
6. This bid package is responsible for abandoning the existing well. Work to be completed by a licensed well driller.
7. Playground demolition is by the owner.
8. Confirm limits of parking lot demolition with Construction Manager so as to keep disruption of school activities to a minimum.
9. All cleared material becomes property of this contractor, except for material indicated to be salvaged by Owner.
10. This bid package is responsible for Phase 2 structure demolition as denoted on the contract documents.
11. Asbestos remediation will be by others.
12. This bid package is responsible for Phase 2 civil demolition.
13. This bid package is responsible for disconnection of all utilities and meters, if applicable, and coordination with utility companies, Owner, and MKS.
14. This bid package is responsible for Filling of any foundations, utility trenches and depressions exposed during demolition with proper fill material. Verify compaction by ordering a certified compaction test performed by testing company approved by Owner.
15. MKS or owner will hire and pay for this testing agent.
16. This bid package is responsible for protection of existing buildings during Phase 1, utility structures, pavement, concrete, existing utilities, trees, benchmarks, etc. NOT noted for removal during this phase of work.
    a. Phase 2 civil demolition is to be completed along with Phase 2 structure demolition.
17. This bid package is responsible for the sawcutting and demolition of all sidewalks.
18. At completion of demolition and removal, completely clean site, leave free of debris/rubbish and ready for excavation, grading, etc.
19. This bid package is responsible to strip all stone from under curbs, pavement, sidewalks and remove from jobsite.
20. This bid package is to include in base bid, removal of 2,100 CY of unsuitable soils and replacing with granular fill. CY based on inplace soils, no excavation swell. Geotech engineer to measure quantities. Breakout value on line provided on bid form. Overage and underage to be based on unit price calculated from value/2,100 CY.
21. This bid package is responsible for all coordination and work with utility to remove and reset power poles.
22. This bid package is responsible for all road cuts for utility tie ins and coordinating patching of asphalt with BP 32a and patching and new concrete with BP 03a.
23. This Contractor is responsible for the following utility connections:

24. Water: Excavate at the location of the tap. Furnish and install tap. Backfill at the location of the tap. This contractor is responsible for all fees, costs, permits associated with performing this utility tap.
25. Sanitary: Excavate at the location of the tap. Furnish and install tap. Backfill at the location of the tap. This contractor is responsible for all fees, costs, permits associated with performing this utility tap.
26. Storm: Excavate at the location of the tap. Furnish and install tap. Backfill at the location of the tap. This contractor is responsible for all fees, costs, permits associated with performing this utility tap.
27. Furnish and install all meters (if applicable) for Water, Sanitary, Storm utilities.
28. This bid package is responsible to bring the water piping inside of the foundation and stubbed up 12” from finish floor. Fire service pipe to include flange for connection by fire suppression package.
29. This bid package is responsible for building foundation excavation and backfill including stoops.
30. This bid package is responsible for excavation and stone for sidewalks, curbs, concrete paving and aprons.
31. This bid package to include furnishing and installing the stone base materials under sidewalks, stoops, concrete slab, concrete pavement.
32. Any stockpiling of topsoil will need to be stockpiled offsite at a location of the bidder’s choice.
33. All spoils created by this bid package are to be removed offsite and legally disposed of.
34. Includes dust control throughout the duration of the project.
35. Includes locating, documenting, and open-air exposure of all existing public and private underground utilities in conformance with MKS policy.
36. Includes certified surveying or engineering services as necessary for closeout and local final approvals including, but not limited to, a certified as-built stormwater drawing.

Bid Package 32a Asphalt Paving

In addition to and including the General Contract Specification Sections Complete (also known as the "Project Manual") (such as Bidding Requirements & Forms; Scope of Work Applicable to All Bid Packages; Preliminary Construction Schedule; All General & Supplementary/Special Conditions including, but not limited to, the entire Division 01 - General Requirements, Contractual Conditions, Summary of Work, and Schedule of Contract Responsibilities), this Subcontractor is Furnishing and Installing per the following Technical Scope Specific Specification Section(s) complete:

Specifications: *Unless noted otherwise, this bid package is to provide the entire scope required of each specification listed.*

Division 00 Procurement and Contracting Requirements
Division 01 General Requirements
311216 Bituminous Concrete Paving

GENERAL SCOPE ITEMS:

1. Subcontractor is responsible for all work related to this work scope included in the entire set of contract documents.
2. Where there is a conflict or discrepancy between drawings and/or drawings and specifications; subcontractor shall include the costs to provide the more expensive and/or greater quantity.
3. Subcontractor acknowledges that the section in the Project Manual labeled "BID PACKAGES – SCOPE OF WORK – ALL BID PACKAGES" applies to EACH/EVERY/(ALL) bid package(s)/Subcontractor(s) including this Subcontractor specific scope of work. Subcontractor includes all costs in its base bid to adhere to this aforementioned section of the Project Manual. If there is a discrepancy between the "BID PACKAGES–SCOPE OF WORK–ALL BID PACKAGES" section and the Subcontractor's specific bid package scope, the Subcontractor's specific bid package scope shall apply and be adhered to by the Subcontractor at no additional cost to the project.
4. Subcontractor will provide all materials, manpower, equipment, receiving, transporting, loading, unloading, rigging, hoisting, handling, storing, setting, conveying, hoisting, temporary bracing, scaffolding, working platforms, protection/safety of all materials and manpower, etc. to execute this scope of work.
5. Subcontractor will provide protection of all final material and work as directed by MKS.
6. Subcontractor will provide all costs for delivery, freight, and applicable sales tax to the jobsite.
7. Subcontractor will provide all required field measuring, layout/surveying, engineering, submittals, shop drawings, etc. necessary to complete this scope of work.
8. Subcontractor is responsible for all applicable permits, licenses, registrations, and fees required by authorities having jurisdiction and/or Owner, with exception of the General Building Permit. The General Building Permit will be acquired by Construction Manager and copies provided as required.
9. Subcontractor will provide all necessary permits, fees, inspections, and notifications for its work that are not already specifically stated to be covered by Construction Manager.
10. Subcontractor will comply with all applicable City, State, Federal codes, and quality workmanship requirements regarding materials, methods of work, and disposal of excess and waste material.
11. Subcontractor includes coordination and notification for all materials testing, permits, fees, and inspections required by the specifications.
12. Subcontractor will provide multiple mobilizations as necessary to meet the project schedule.

13. Subcontractors quote is not part of the contract or scope of work documentation.
14. Subcontractor will provide all necessary barricades, safety, and warning devices for its work. If a safety barricade is removed by this subcontractor for access to its work, this Subcontractor is responsible to replace same safety barrier to its original integrity.
15. Subcontractor will provide continuous daily clean-up and housekeeping including complete removal of trash, debris, and dirt generated from its activities to a dumpster furnished by Construction Manager and its supervisors have the right to identify insufficient daily clean-up and housekeeping for correction within 24 hours of the notice (or sooner if a safety hazard), as well as performing noncompliance clean-up and housekeeping on behalf and at the expense of the subcontractor if left unaddressed after the 24-hour notice.
16. On-Site Subcontractor supervision is required when any work of this subcontract is being performed on site. Supervisor of work is required to attend weekly job progress meetings to report on scope of work, make decisions related to cost and schedule, and to be accountable to other Subcontractors on the project.
17. Subcontractor will provide submittals for review as needed/required including shop drawings, product data, color samples, etc.
18. Subcontractor will provide electronic closeout documents as needed/required.
19. Subcontractor will provide as-built documentation in accordance with the specifications.

Supplemental Instructions to this Bid Package:

This bid package shall include, but shall not necessarily be limited to, the following scope of work:

1. This bid package is responsible for the labor, materials, supervision, taxes, insurance, equipment, placing, hoisting, scaffolding, protection, transportation, permits (MKS to provide general permit) licenses/registrations, fees necessary to complete this scope of work.
2. This bid package is responsible to provide all layout for asphalt paving.
3. If at all required, this bid package is to include barricades that may be required for this work.
4. This bid package is responsible for completing the bid form including all alternates and unit pricing as applicable.
5. See attached Supplemental Conditions “Exhibit A,” “Exhibit C,” and “Exhibit D” which will be part of the Contract Agreement between MKS and this work package.

Project Specific Scope

6. This bid package is responsible for furnishing and placing the compacted stone aggregate under the asphalt paving.
7. This bid package has total responsibility for the installation of the asphalt paving – including binder course and surface course as denoted on the contract documents.
8. This bid package Includes “proof-rolling” of subgrade and coordination with the geotechnical engineer prior to placement of stone subgrade below the asphalt pavement.
9. This bid package is responsible to saw-cut clean transition at all tie-ins to ensure a straight transition into existing asphalt or site concrete. Remove any debris created from sawcutting offsite.
10. This bid package includes pavement markings
11. Exterior pavements are to meet current ADA requirements for access to the new building.
12. This bid package includes all parking lot signage and post, including but not limited to handicap signs, directional signs, stop signs, etc.
13. This bid package includes all parking bumpers.
14. This bid package to include stand up curbs (Detail 21/C6.0) and curb gutter (Detail 7/C6.0).

15. This bid package includes removal and relocating horse and buggy signage to final location.
16. This bid package will be responsible for any street cleaning of debris that may be created by their scope of work.
17. If this bid package creates spoils from this work, this bid package is responsible to remove the spoils from the jobsite and legally dispose of.

Bid Package 32b Lawns & Landscaping

In addition to and including the General Contract Specification Sections Complete (also known as the "Project Manual") (such as Bidding Requirements & Forms; Scope of Work Applicable to All Bid Packages; Preliminary Construction Schedule; All General & Supplementary/Special Conditions including, but not limited to, the entire Division 01 - General Requirements, Contractual Conditions, Summary of Work, and Schedule of Contract Responsibilities), this Subcontractor is Furnishing and Installing per the following Technical Scope Specific Specification Section(s) complete:

Specifications: *Unless noted otherwise, this bid package is to provide the entire scope required of each specification listed.*

Division 00 Procurement and Contracting Requirements
Division 01 General Requirements
32 92 00 Lawns and Grasses
32 93 00 Landscaping

GENERAL SCOPE ITEMS:

20. Subcontractor is responsible for all work related to this work scope included in the entire set of contract documents.
21. Where there is a conflict or discrepancy between drawings and/or drawings and specifications; subcontractor shall include the costs to provide the more expensive and/or greater quantity.
22. Subcontractor acknowledges that the section in the Project Manual labeled "BID PACKAGES – SCOPE OF WORK – ALL BID PACKAGES" applies to EACH/EVERY/(ALL) bid package(s)/Subcontractor(s) including this Subcontractor specific scope of work. Subcontractor includes all costs in its base bid to adhere to this aforementioned section of the Project Manual. If there is a discrepancy between the "BID PACKAGES–SCOPE OF WORK–ALL BID PACKAGES" section and the Subcontractor's specific bid package scope, the Subcontractor's specific bid package scope shall apply and be adhered to by the Subcontractor at no additional cost to the project.
23. Subcontractor will provide all materials, manpower, equipment, receiving, transporting, loading, unloading, rigging, hoisting, handling, storing, setting, conveying, hoisting, temporary bracing, scaffolding, working platforms, protection/safety of all materials and manpower, etc. to execute this scope of work.
24. Subcontractor will provide protection of all final material and work as directed by MKS.
25. Subcontractor will provide all costs for delivery, freight, and applicable sales tax to the jobsite.
26. Subcontractor will provide all required field measuring, layout/surveying, engineering, submittals, shop drawings, etc. necessary to complete this scope of work.
27. Subcontractor is responsible for all applicable permits, licenses, registrations, and fees required by authorities having jurisdiction and/or Owner, with exception of the General Building Permit. The General Building Permit will be acquired by Construction Manager and copies provided as required.
28. Subcontractor will provide all necessary permits, fees, inspections, and notifications for its work that are not already specifically stated to be covered by Construction Manager.
29. Subcontractor will comply with all applicable City, State, Federal codes, and quality workmanship requirements regarding materials, methods of work, and disposal of excess and waste material.
30. Subcontractor includes coordination and notification for all materials testing, permits, fees, and inspections required by the specifications.

31. Subcontractor will provide multiple mobilizations as necessary to meet the project schedule.
32. Subcontractors quote is not part of the contract or scope of work documentation.
33. Subcontractor will provide all necessary barricades, safety, and warning devices for its work. If a safety barricade is removed by this subcontractor for access to its work, this Subcontractor is responsible to replace same safety barrier to its original integrity.
34. Subcontractor will provide continuous daily clean-up and housekeeping including complete removal of trash, debris, and dirt generated from its activities to a dumpster furnished by Construction Manager and its supervisors have the right to identify insufficient daily clean-up and housekeeping for correction within 24 hours of the notice (or sooner if a safety hazard), as well as performing noncompliance clean-up and housekeeping on behalf and at the expense of the subcontractor if left unaddressed after the 24-hour notice.
35. On-Site Subcontractor supervision is required when any work of this subcontract is being performed on site. Supervisor of work is required to attend weekly job progress meetings to report on scope of work, make decisions related to cost and schedule, and to be accountable to other Subcontractors on the project.
36. Subcontractor will provide submittals for review as needed/required including shop drawings, product data, color samples, etc.
37. Subcontractor will provide electronic closeout documents as needed/required.
38. Subcontractor will provide as-built documentation in accordance with the specifications.

Supplemental Instructions to this Bid Package:

This bid package shall include, but shall not necessarily be limited to, the following scope of work:

18. This bid package is responsible for the labor, materials, supervision, taxes, insurance, equipment, placing, hoisting, scaffolding, protection, transportation, permits (MKS to provide general permit) licenses/registrations, fees necessary to complete this scope of work.
19. This bid package is responsible to provide all layout for all landscaping.
20. This bid package is to provide a soil analysis of stockpiled topsoil including a fertilizer recommendation for planting material.
21. If at all required, this bid package is to include barricades that may be required for this work.
22. This bid package is responsible for completing the bid form including all alternates and unit pricing as applicable.
23. See attached Supplemental Conditions “Exhibit A,” “Exhibit C,” and “Exhibit D” which will be part of the Contract Agreement between MKS and this work package.

Project Specific Scope

24. This bid package is responsible for fine grading top soil placed by BP 31a.
25. Bid Package 31a will remove rocks and debris larger than 1” in diameter. This bid package is to remove all rocks and debris that are smaller.
26. This bid package is responsible for furnishing and installing all seeding as denoted on the contract documents.
27. This bid package is responsible for furnishing and installing all landscaping as denoted on the contract documents.
28. This bid package is responsible for furnishing and installing all landscaping accessory material as denoted on the contract documents.
29. This bid package is responsible for furnishing and installing the gravel mow strip as denoted on the contract documents.

30. This bid package is responsible for maintenance of seeding and landscaping as denoted on the contract documents.
31. This bid package is responsible for brooming pavement daily while onsite.
32. If this bid package creates spoils from this work, this bid package is responsible to remove the spoils from the jobsite and legally dispose of.

Bid Package 32c Fences & Gates

In addition to and including the General Contract Specification Sections Complete (also known as the "Project Manual") (such as Bidding Requirements & Forms; Scope of Work Applicable to All Bid Packages; Preliminary Construction Schedule; All General & Supplementary/Special Conditions including, but not limited to, the entire Division 01 - General Requirements, Contractual Conditions, Summary of Work, and Schedule of Contract Responsibilities), this Subcontractor is Furnishing and Installing per the following Technical Scope Specific Specification Section(s) complete:

Specifications: *Unless noted otherwise, this bid package is to provide the entire scope required of each specification listed.*

Division 00 Procurement and Contracting Requirements
Division 01 General Requirements
32 31 00 Fences and Gates

GENERAL SCOPE ITEMS:

1. Subcontractor is responsible for all work related to this work scope included in the entire set of contract documents.
2. Where there is a conflict or discrepancy between drawings and/or drawings and specifications; subcontractor shall include the costs to provide the more expensive and/or greater quantity.
3. Subcontractor acknowledges that the section in the Project Manual labeled "BID PACKAGES – SCOPE OF WORK – ALL BID PACKAGES" applies to EACH/EVERY/(ALL) bid package(s)/Subcontractor(s) including this Subcontractor specific scope of work. Subcontractor includes all costs in its base bid to adhere to this aforementioned section of the Project Manual. If there is a discrepancy between the "BID PACKAGES–SCOPE OF WORK–ALL BID PACKAGES" section and the Subcontractor's specific bid package scope, the Subcontractor's specific bid package scope shall apply and be adhered to by the Subcontractor at no additional cost to the project.
4. Subcontractor will provide all materials, manpower, equipment, receiving, transporting, loading, unloading, rigging, hoisting, handling, storing, setting, conveying, hoisting, temporary bracing, scaffolding, working platforms, protection/safety of all materials and manpower, etc. to execute this scope of work.
5. Subcontractor will provide protection of all final material and work as directed by MKS.
6. Subcontractor will provide all costs for delivery, freight, and applicable sales tax to the jobsite.
7. Subcontractor will provide all required field measuring, layout/surveying, engineering, submittals, shop drawings, etc. necessary to complete this scope of work.
8. Subcontractor is responsible for all applicable permits, licenses, registrations, and fees required by authorities having jurisdiction and/or Owner, with exception of the General Building Permit. The General Building Permit will be acquired by Construction Manager and copies provided as required.
9. Subcontractor will provide all necessary permits, fees, inspections, and notifications for its work that are not already specifically stated to be covered by Construction Manager.
10. Subcontractor will comply with all applicable City, State, Federal codes, and quality workmanship requirements regarding materials, methods of work, and disposal of excess and waste material.
11. Subcontractor includes coordination and notification for all materials testing, permits, fees, and inspections required by the specifications.
12. Subcontractor will provide multiple mobilizations as necessary to meet the project schedule.

13. Subcontractors quote is not part of the contract or scope of work documentation.
14. Subcontractor will provide all necessary barricades, safety, and warning devices for its work. If a safety barricade is removed by this subcontractor for access to its work, this Subcontractor is responsible to replace same safety barrier to its original integrity.
15. Subcontractor will provide continuous daily clean-up and housekeeping including complete removal of trash, debris, and dirt generated from its activities to a dumpster furnished by Construction Manager and its supervisors have the right to identify insufficient daily clean-up and housekeeping for correction within 24 hours of the notice (or sooner if a safety hazard), as well as performing noncompliance clean-up and housekeeping on behalf and at the expense of the subcontractor if left unaddressed after the 24-hour notice.
16. On-Site Subcontractor supervision is required when any work of this subcontract is being performed on site. Supervisor of work is required to attend weekly job progress meetings to report on scope of work, make decisions related to cost and schedule, and to be accountable to other Subcontractors on the project.
17. Subcontractor will provide submittals for review as needed/required including shop drawings, product data, color samples, etc.
18. Subcontractor will provide electronic closeout documents as needed/required.
19. Subcontractor will provide as-built documentation in accordance with the specifications.

Supplemental Instructions to this Bid Package:

This bid package shall include, but shall not necessarily be limited to, the following scope of work:

33. This bid package is responsible for the labor, materials, supervision, taxes, insurance, equipment, placing, hoisting, scaffolding, protection, transportation, permits (MKS to provide general permit) licenses/registrations, fees necessary to complete this scope of work.
34. This bid package is responsible to provide all layout for fence.
35. If at all required, this bid package is to include barricades that may be required for this work.
36. This bid package is responsible for completing the bid form including all alternates and unit pricing as applicable.
37. See attached Supplemental Conditions “Exhibit A,” “Exhibit C,” and “Exhibit D” which will be part of the Contract Agreement between MKS and this work package.

Project Specific Scope

38. This bid package is responsible for furnishing and installing all fencing as denoted on the contract documents.
39. If this bid package creates spoils from this work, this bid package is responsible to remove the spoils from the jobsite and legally dispose of.

General Notes

Each bid package is responsible for the below items.

1. PROJECT SITE WILL BE 100% HI-VIS, HARDHAT, & SAFETY GLASSES. ALL CONTRACTORS ARE RESPONSIBLE TO PROVIDE HI-VIS, HARDHATS & SAFETY GLASSES TO THEIR EMPLOYEES.
2. Each successful Prime Contractor is required to submit background checks for all onsite tradesman and supervisory personnel, including office staff that will be onsite. Include all lower tier contractors under contract to the Prime. Turn over background checks to MKS.
3. Personal Protective Equipment:
    a. Subcontractors are required to wear hardhats.
    b. Suitable work boots.
    c. High visibility vest, shirt, sweatshirt, etc. throughout the project.
    d. Long pants must be worn.
    e. Shorts sleeves (4 inches) are permitted.
    f. Shirts with sleeves must be worn and shall not have obscene, offensive, distasteful, or harassing slogans. Determination of what constitutes obscene, offensive, distasteful, and harassing is solely up to the discretion of the owner, and MKS.
    g. Eye protection / safety glasses or side shields
4. All interactions with staff must be conducted professionally. Adherence to safety procedures outlined in each subcontractor's contract is mandatory throughout the project. Operators of lifts or equipment must be certified and carry their certification cards at all times. A trained competent person must be present on-site when performing work requiring such expertise as per OSHA regulations. Profanity or offensive language will not be tolerated.
5. Subcontractors are responsible for enforcing disciplinary measures among their employees. Superintendents and foremen are required to caution employees against safety breaches and terminate those who refuse to adhere. Serious and deliberate violations may warrant instant dismissal from the project, encompassing on-site tobacco usage, possession of alcohol, firearms, or illicit substances, engaging in altercations, tampering with emergency equipment, or disregarding fall protection protocols.
6. Compliance with MKS Fall Protection guidelines is mandatory whenever employees are exposed to falls exceeding six (6) feet. Failure to comply will result in immediate expulsion from the worksite.
7. Daily removal of debris, particularly combustible scraps, is mandatory.
8. Prompt reporting and documentation of all incidents are obligatory. Project foremen must report each incident immediately to the MKS site supervisor and respective safety personnel. Documentation should be completed on the day of the incident and includes injuries, property damage, theft, or non-compliance with stated rules and code of conduct.
9. AM/FM radios, CD players, MP3 players, personal entertainment devices, or similar items are prohibited on the construction site.
10. Construction vehicles must park in designated areas only. Unauthorized parking may result in towing.
11. Use of the Site: Limit use of the premises to work in areas indicated. Confine operations to areas within contract limits indicated. Do not disturb portions of the site beyond the areas in which the Work is indicated.
    a. Owner Occupancy: Allow for Owner occupancy.
    b. Driveways and Entrances: Keep driveways and entrances outside of construction limits, serving the premises, clear and available to the Owner, the Owner’s employees, and emergency vehicles at all times. Do not use these areas for parking or storage of materials.

Schedule deliveries to minimize space and time requirements for storage of materials and equipment on site.

c. Construction personnel are prohibited from using owner facilities such as restrooms or breakrooms. Any person found breaking this rule will be asked to leave the site and not return.

12. Use of the Existing Building: Maintain the existing building in a weathertight condition throughout the construction period. Repair damage caused by construction operations. Take all precautions necessary to protect the building and its occupants during the construction period.
13. Owners Right to Maintain Operations
    a. During the course of this Project, normal and customary functions and operations must be maintained. The Contract Documents are intended to define a strict separation between the school activities of students and staff from the activities of the construction project.
    b. The Construction Manager, Architect, and Owner will not tolerate any visible or audible actions initiated or responded to by any employees of Contractors on this Project toward any students, teachers, or staff members at the school system. Violators shall be promptly removed from the site.
    c. The Owner intends to instruct students, teachers, and staff to refrain from communications with Contractor's personnel working on this Project. All communication with Owner and staff shall be through the Construction Manager.
    d. Contractors must expend their best effort toward protection of the health, safety, and welfare of occupants on the Owner's property during the course of construction on this Project.
    e. Contractors and Subcontractors shall be subject to such rules and regulations for the conduct of the Work as the Owner may establish. Employees shall be properly and completely clothed while working. Bare torsos, legs and feet will not be allowed.
    f. Possession or consumption of alcoholic beverages or drugs, tobacco or other noxious behavior on the site is strictly prohibited. Violators shall be promptly removed from the site. Smoking is not permitted on school property or within school buildings.
14. The Work shall be performed in accordance with the health, safety and environmental regulations of the authorities having jurisdiction and all federal, state, and local laws.
15. Evidence of participation in apprenticeship training programs applicable to the work to be performed on the project in accordance with Indiana Code 5-16-13-12.
16. A signed affidavit affirming that the contractor, regardless of tier, is enrolled in and verifies work eligibility status of all hired employees of the contractor through the E-Verify program and does not knowingly employ an unauthorized alien, in accordance with Indiana Code 22-5-1.7
17. A copy of a written plan for employee drug testing that: (i) covers all employees of the bidder who will perform work on the public works project; and (ii) meets, or exceeds, the requirements set forth in Indiana Code 4-13-18-5 or Indiana Code 4-13-18-6.
18. All contractors regardless of tier, providing over $50,000.00 of the contract amount must also be pre-qualified through the Indiana Department of Administration (IDOA) Public works Certification Boards. Certification status and application information can be found at https://www.in.gov/idoa/2485.htm.
19. Each bid package is required to understand and adhere to the project schedule, phasing plans and logistic plans.
20. Where bid documents reference the term "General Contractor" change to "Construction Manager"(CM).
21. Each bid package to include all mobilizations and demobilizations required for performance of the Work.

22. A single prime contract will be awarded as per the " Multiple Contract Summary". Contractors shall include Work required by the Specifications and Drawings for each contract area defined in the Schedule.
23. The contract will be MKS standard Subcontractor Agreement. A copy is available upon request.
24. Each bid package shall provide protection of existing and new work by others during his operations. The costs associated with repair and/or replacement of materials damaged by his work operations will be the responsibility of the bid package that damaged. Each bid package shall provide adequate protection to all areas of existing finishes to remain during any operations performed under their scope of work.
25. Although specifications are allocated to respective bid packages each bid package must read and understand all contract documents assigned to the other trades.
26. Each bid package includes all work, including coordination with related work performed under other contracts, to result in a functional system or product.
27. Each Bid Package will perform all work in coordination with other trades and the CM.
28. Use of motor oil or machine oil on or above slab will not be permitted. All lifts are required to be fitted with lift diapers to contain any oil leaks from the equipment. Diapers should be inspected periodically during each day of use.
29. Each Contractor utilizing a pipe cutting or threading tool shall have a sand box or litter box directly under said tool to protect floor from oil staining. CM reserves the right to immediately dispose of any threading/cutting tool on the project site that is being used without stated boxes underneath.
30. Clean-up is a Safety Priority. Accordingly, daily clean-up, i.e., broom clean, consistently organized and neatly stacked materials, and daily removal of trash to CM provided dumpsters by each Bid Package is required. No tolerance will be allowed for failure to comply. CM shall issue one verbal request to the Subcontractor's Foreman. If corrective action is needed, and if not corrected immediately or as requested, CM will provide manpower to properly clean the Prime Contractor's area(s) and shall issue a deductive CO for the labor and material cost, plus 15% Administrative Fee.
31. Each bid package is required to give minimum 72 hours written notice prior to any disruption in utilities, roadway, or any other activity that would interrupt the normal operations of the Owner's facilities and shall receive written acknowledgement from CM before undertaking any such work.
32. Each bid package must coordinate deliveries in advance with CM project staff on a daily basis. Due to site security, logistics, space limitations, and Owner operations, deliveries that come directly to the site without prior knowledge or proper authorization will be rejected. Any deliveries that block traffic or pose any safety concern whatsoever shall require flagmen provided by responsible bid package. Deliveries must be received and unloaded by each bid package. CM will not provide labor or equipment to unload deliveries from subcontractors.
33. Each bid package is responsible for obtaining written approval from CM prior to proceeding with any extra work. If written approval is not received, payment for extra work will not be approved.
34. All bidders are responsible to review and ensure compliance with timeline issued for bidding and construction. Weather (eg. Rainout) days will be made up through longer hours, Saturdays, or Sunday. Each Prime Contractor is fully obligated to meet the requirements of the project schedule within these constraints.
35. When a bid package is to supply materials that will be installed by another bid package, the bid package supplying materials shall be responsible for submitting lay-out and product shop drawings to comply with project schedule.
36. Detailed notes provided for each bid package are provided for clarification purposes and do not represent a complete listing of scope of work. Bidders are responsible for the work assigned in the bid packages, specification and on the drawings.

37. Any access panels not shown on drawings but required by a bid package will be borne by said bid package.
38. Any wood or metal blocking required by a bid package that is not specifically shown on the drawings will be the responsibility of the said bid package.
39. Bid packages are to remove stickers, labels, clean and provide protection over finished products.
40. All submittals must be submitted per the specifications and in accordance with the project schedule.
41. All bidders must agree to terms and conditions of MKS subcontract agreement as defined in the specifications.
42. Building is not to be used for material storage. All materials are to be stored in trailers or off site until needed for installation. Preferably materials should be delivered just in time for installation in accord with the project schedule. See logistics plan for laydown areas.
43. Punch list Work – Upon delivery of a "Completion List" by CM and later a punch list by the Architect, Engineer, and Owner each bid package shall provide a "Punch list Crew" as required to address open items and shall staff the crew with sufficient manpower of persons to complete all Punch list items within 5 days. Subcontractor to provide sufficient manpower that does not take away from other work required by the Project Schedule. Once in the Punch list Phase, CM will hold weekly punch list meetings and require the Subcontractors punch list crew lead employee to attend, update progress, and coordinate with other trades as needed.
44. All closeout documentation is required to be submitted within 30 days of substantial completion. Final payments will not be made until all closeout documentation is received.
45. If temporary roof protection is not in place, each contractor accessing or traversing the roof is responsible for protection of the roof membrane. Contractors will be held liable for any damages resulting from failure to protect.
46. See Logistics Plan for staging areas.
47. Food and beverage consumption will be permitted in contractor provided break trailers or employees vehicles.
48. The project worksite is TOBACCO FREE! The use of tobacco, smoking, chewing, vaping, E-cig and sunflower seeds on the site will not be permitted. Anyone who violates will be removed from the project.
49. Project is tax exempt.

Exhibit A Terms and Conditions

SUPPLEMENTAL CONDITIONS:

DEFINITION OF CONTRACTOR – The term "Contractor" wherever it is used herein shall mean Michael Kinder & Sons, Inc.

1. Safety

1.1 The Subcontractor agrees that the prevention of accidents to workmen and property engaged upon or in the vicinity of the Subcontract Work is its responsibility. The Subcontractor agrees to comply with all Federal, State, Municipal and local laws, ordinances, rules, regulations, codes, standards, orders, notices and requirements concerning safety as shall be applicable to the Subcontract Work, including, among others, the Federal Occupational Safety and Health Act of 1970, as amended, and all standards, rules, regulations and orders which have been or shall be adopted or issued thereunder, and with the safety standards established during the progress of the Subcontract Work by the Contractor.

1.2 When so ordered, the Subcontractor shall stop any part of the Subcontract Work which the Contractor deems unsafe until corrective measures satisfactory to the Contractor have been taken. The Subcontractor agrees that it shall not have nor make any claim for damages arising from such stoppages. Should the Subcontractor fail to take appropriate corrective measures in a timely manner, the Contractor may do so at the cost and expense of the Subcontractor and may deduct the cost and expense thereof from any payments due or to become due to the Subcontractor. Failure on the part of the Contractor to stop unsafe practices shall in no way relieve the Subcontractor of its responsibility therefore.

1.3 **Safety Training and Competent or Qualified Person.** Each worker sent to perform specific duties on the project will have required training and/or competency to meet all applicable Federal, State, and local regulations. Proof of training shall be submitted to the Contractor's Safety Director prior to commencement of work if requested. Tasks which require the appointment of a Qualified or Competent Person shall have credentials submitted to the Contractor's Safety Director prior to start of work.

1.4 **Subcontractor Injuries and Incidents**. Subcontractor shall notify Contractor of any incident or injury involving an employee of Subcontractor or one of its Subcontractors on the day of the injury or incident. Subcontractor shall complete an Incident Report and Investigation and submit the completed investigation to Contractor within twenty- four (24) hours of the incident or injury. Subcontractor agrees that all injuries and incidents will be investigated to determine root cause, corrective action, and preventative action to ensure similar injuries or incidents do not occur.

1.5 **Minimum Working Apparel**. Subcontractor agrees that the minimum working apparel includes hardhat meeting the current version of ANSI Standard Z89.1, safety glasses and side shields meeting the current version of ANSI Standard Z87.1, shirt with three inch or longer sleeves, long pants and durable work boots. Refer to the Safety Standard Operating Procedures Plan Personal Protection Equipment Section for more specific requirements.

1.6 **Fall Prevention**. Subcontractor shall comply with the Contractor Fall Protection Policy, which requires that no worker exposed to a fall hazard of six (6) feet or greater will work without one hundred percent (100%) fall protection. Subcontractor will take all practical measures to eliminate, prevent and control fall hazards of six (6) feet or more before resorting to a personal fall arrest system. When personal fall arrest is required, Subcontractor shall provide such proper equipment for this purpose and all necessary instruction and training in the care and use of the equipment, including refresher training. All training shall be documented and made available to Contractor upon request.

1.7 **Silica**. Subcontractor must provide action plan when workers may be exposed to silica beyond the action limit. Provide copy of written exposure control plan, name of competent person, practices to limit exposures, training practices, and medical surveillance for all affected workers

1.8 **Disciplinary Action**. Contractor may issue a written notice to individuals who are observed violating the laws, ordinances, rules, regulations, codes, standards, orders, and requirements noted under Regulatory Compliance above. Any Subcontractor or Subcontractor personnel who receive three (3) written violation notices within a one (1) year period may be removed from the Project. Individuals may be removed from the Project after one (1) written notice if Contractor determines in its discretion that the violation observed warrants such removal.

1.9 **Hazard Communication**. Subcontractor will provide Contractor with Project specific hazardous material inventory list and Safety Data Sheets (SDS) for each hazardous material Subcontractor or one of its Subcontractors will bring onto the Projectsite.

1.10 **Utility Locates.** The Subcontractor will follow the provisions of all applicable statutes and ordinances which require persons or firms doing excavation to do so only after giving notice to utility companies and obtaining information on the location of utilities (such as "one-call" systems).

1.11 **Regulatory Inspections**. If Contractor is fined by any regulatory inspection by a Federal, State, County or Municipal agency or body as a result of any act or omission of Subcontractor or one of its Subcontractors, Contractor will deduct the amount thereof and associated costs from any payments due or to become due to Subcontractor.

1.12 **Illegal Acts**. The theft, conversion, misappropriation, unauthorized removal, possession, or use of property or equipment belonging to Contractor, Owner, Subcontractor, or other worker including but not limited to, materials, tools documents, and propriety information is prohibited.

1.13 **General Safety Requirements**

- Subcontractors must observe and follow all posted safety signs.
- Any worker that is involved in an injury or loss event on the job must be drug tested at the expense of their employer and results cleared before they can continue working on the project.
- Subcontractors are expected to supply their own personal protective equipment (PPE).
- Adequate ventilation must be provided when using vapor producing materials or creating high dust levels. Subcontractor must notify Contractor twenty-four (24) hours in advance whenever work is being done that may generate any hazardous odors or dust.
- Subcontractors may not, under any circumstances, operate or disconnect any device used to control building services until permission has been obtained from the Contractor Superintendent.
- The following activities are prohibited on site and are causes for immediate dismissal: Using alcohol or illicit drugs, Fighting or horseplay, Tampering with equipment, Possession of firearms.

- Subcontractor must have a first aid/CPR-trained foreman on site whenever work is being performed.
- Subcontractor will conduct weekly employee toolbox meetings and copy Contractor with material covered and attendance record.
- *No radios or headsets, including cellular phones and earbuds, are allowed in work areas.*
- Subcontractor must submit safety plans and hazard specific work plans to Contractor prior to beginning work when requested.
- Subcontractor's equipment, tools, and personnel must comply with OSHA Safety and Health Regulations for Construction.
- No one under eighteen (18) years of age is allowed to work on or access to Contractor's jobsites.
- Subcontractor shall provide all required safety information of their sub tier subcontractors as required by Contractor or Contractor's insurance provider.
- Subcontractor must immediately correct any unsafe acts or practices brought to its attention.
- Subcontractor will have qualified operators on allequipment.
- Subcontractor will inspect all its equipment per the manufacturer's instructions daily.

The above Safety Requirement items are general in nature and not all inclusive of every situation or condition on Michael Kinder & Sons, Inc. construction projects.

2. Subcontractor Representations

2.1 The Subcontractor acknowledges receipt of all policies/procedures included in the Bid Documents. Subject to applicable law the Subcontractor further agrees to be bound by these policies/procedures as part of this Agreement. The Subcontractor represents and agrees that it has carefully examined and understands this Agreement and the other Subcontract Documents, has investigated the nature, locality and site of the Subcontract Work and the conditions and difficulties under which it is to be performed, and that it enters into this Agreement on the basis of its own examination, investigation and evaluation of all such matters and not in reliance upon any opinions or representations of the Contractor, the Owner or any of their respective officers, agents or employees.

2.2 The commencement of the Subcontract Work by the Subcontractor on the site of the Project shall constitute the legal and binding acceptance by the Subcontractor of this Agreement. For purposes of this paragraph the mobilization of equipment, delivery of materials or the performance of actual labor on the Project site, whichever occurs first, shall constitute a "commencement" of Subcontract Work by the Subcontractor. The Contractor reserves the right, however, to insist on a signed Agreement prior to the making of any payment to the Subcontractor.

3. Bonds

3.1 If required by the Contractor, a Performance Bond and a Separate Payment Bond satisfactory to the Contractor, in its sole determination are required to be furnished in the full amount of the Subcontract Amount. If Bonds are required, they shall be furnished by a surety acceptable to the Contractor, in the full amount of the Subcontract Amount. Subcontractor must also furnish any applicable statutory bonds if required by the state in which the Project is located.

4 Subcontractor Duties

4.1 **Subcontract Work.** The Contractor retains the Subcontractor as an independent contractor, to provide all labor, materials, equipment, and services necessary or incidental to complete the part of the work which the Contractor has contracted with the Owner to provide on the Project as set forth in Scope of Work included in this Agreement, consistent with the Project Schedule and in strict accordance with and reasonably inferable from the Subcontract Documents. The Subcontractor agrees to perform such part of the work (hereafter called "Subcontract Work") for the Project under the general direction of the Contractor and subject to the final approval of the Contractor, Architect/Engineer, or other specified representative of the Owner.

4.2 **Subcontract Documents.** The Subcontract Documents include this Agreement, Agreement between the Owner and the Contractor ("Prime Contract"), including all addenda, modifications, revisions, plans, drawings, specifications, details, together with all general, technical, supplementary and special terms and conditions, any invitations for bids or information for bidders, if any, to the extent applicable, and all other documents listed in or referred to by the Prime Contract. The Contractor and the Subcontractor are mutually bound by the terms of this Subcontract. To the extent the terms of the Prime Contract apply to the work of the Subcontractor, then the Contractor assumes toward the Subcontractor all the obligations, rights, duties and redress that the Owner under the Prime Contract assumes toward the Contractor. In the identical way, the Subcontractor assumes toward the Contractor all the same obligations, rights, duties and redress that the Contractor assumes toward the Owner and Architect/Engineer under the Prime Contract. This Agreement and the rest of the Subcontract Documents are intended to supplement and complement each other and shall, where possible, be so interpreted. However, if any provision of this Agreement irreconcilably conflicts with a provision of the Subcontract Documents, the provision granting greater rights or remedies to the Contractor or imposing the greater duty, standard or responsibility or obligation on the Subcontractor shall govern.

4.3 **Submittals**. Subcontractor shall, at its own expense, prepare and submit to the Contractor such Shop Drawings, Samples, Models and other submittal data for the materials to be furnished hereunder as detailed in the contract documents and as requested by Contractor, such Shop Drawings, Samples, Models and data to be approved in writing by such entities as Contractor may designate before Subcontractor proceeds under this Agreement. Such Documents shall be submitted to Contractor with reasonable promptness and in such sequence to cause no delay in the work or activities of the Contractor or other subcontractors. Any such approval of submittals or the receipt of materials and/or labor or payment therefore pursuant thereto shall in no event constitute an acceptance of such materials and/or labor and shall not limit or impair Contractor's right of inspection or rejection or any other rights or remedies to which Contractor may be entitled or relieve Subcontractor of any of its obligations and warranties hereunder. Subcontractor is responsible for reviewing Specifications prior to submitting any items verifying all Specification / Contract requirements. All submittals must be submitted electronically in .pdf format. All submittals must be submitted and approved prior to any payment to Subcontractor. All items must be submitted within 20 days of Subcontract date. All submittals must have a separate transmittal for each item and be labeled with the specification section. Any delays in material/equipment deliveries associated with delay in submission of submittal data which causes delays in the project schedule will be responsibility of Subcontractor as denoted in Section 1 of this agreement. Subcontractor may also be required to submit hard copies of submittals when requested by Contractor.

4.4 **Design Delegation.** If the Subcontract Documents (1) specifically require the Subcontractor to provide design services and (2) specify all design and performance criteria, the Subcontractor shall provide the design services necessary to satisfactorily complete the Subcontract Work. Design services provided by the Subcontractor shall be procured from licensed, design professionals (the "Designer") retained by the Subcontractor as permitted by the law of the place where the Project is located. The Designer's signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings and other submittals prepared by the Designer. Shop Drawings and other submittals related to the Subcontract Work designed or

certified by the Designer, if prepared by others, shall bear the Subcontractor's and the Designer's written approvals when submitted to the Contractor. The Contractor shall be entitled to rely upon the adequacy, accuracy and completeness of the services, certifications or approvals performed by the Designer.

4.4.1 If the Designer is an independent professional, the design services shall be procured pursuant to a separate agreement between the Subcontractor and the Designer. The Subcontractor-Designer agreement shall not provide for any limitation of liability or exclusion from participation in the multiparty proceedings requirement of Paragraph 20.6. If applicable, the Designer(s) is (are)

The Subcontractor shall notify the Contractor in writing if it intends to change the Designer. The Subcontractor warrants the design furnished by the Designer will be in conformance with the information given and the design concept expressed in the Subcontract Documents. The Subcontractor shall not be responsible for the adequacy of the performance or design criteria required by the Subcontract Documents furnished by the Owner, Architect/Engineer or Contractor

4.4.2 The Subcontractor shall not be required to provide design services in violation of any applicable law.

4.5 **Clean Up.** The Subcontractor is responsible for its own “clean-up” and keeping the Subcontract Work areas “broom clean”. If the Contractor determines the Subcontract Work area to be unsatisfactorily cleaned, the Contractor will so advise the Subcontractor. If the Subcontractor fails to commence cleaning procedures within twenty four (24) hours and continue to clean said area to the Contractor's satisfaction, the Contractor may without further notice execute and complete such clean up activities as the Contractor deems necessary and charge the cost to the Subcontractor or deduct such cost from payments due to the Subcontractor. The Subcontractor is responsible to clean the mud and gravel off its vehicles (including vehicles operated by its subcontractors and suppliers) prior to leaving the site. Any mud or gravel that is tracked onto the surrounding roads shall be removed immediately. The Contractor has the right to clean up surrounding roads immediately upon the Subcontractor’s failure to do so, the cost of which shall be deducted from the Subcontractor’s next payment.

4.6 **Protection of Subcontract Work.** The Subcontractor is responsible for protection of its material, equipment, and installation until the final acceptance by the Owner and the Architect.

4.7 **Protection of the Project.** The Subcontractor shall confine operations at the Project site to areas permitted by the Contractor and shall not unreasonably encumber the Project site with materials or equipment. The Subcontractor is responsible for any damage caused to adjacent property or access roads by the Subcontractor, its subcontractors, or suppliers during the course of the Subcontract Work.

4.8 **Supervision.** All of the Subcontract Work is the sole and absolute responsibility of the Subcontractor; shall be initiated, managed, performed and completed by qualified, competent, skilled and reputable supervisors, administrators, mechanics and laborers, all of which are satisfactory to the Contractor; shall be in full compliance with the Subcontract Documents including this Subcontract; and shall meet the approval and acceptance of the Contractor and the Owner or its authorized representative. Subcontractor shall not change their Superintendent or Project Manager without written approval from the Contractor.

4.9 **Deliveries.** A minimum of twenty-four (24) hours notice is required for all deliveries to the jobsite. Notify Contractor prior to any major deliveries providing ample time for coordination. Deliveries are to be made at the place, in the quantities and at the times specified in instructions set forth herein or in other written instructions, which may from time to time be furnished by Contractor. Contractor may from time to time change, in writing, delivery instructions or direct that shipment or work be temporarily suspended. Subcontractor shall make no commitments for material or production arrangements in excess of the amount or in advance of the time necessary to comply with Contractor’s delivery or performance instructions.

4.10 **Layout.** The Subcontractor shall take careful field measurements and verify field conditions and shall carefully compare such field measurements and conditions and other information known to the Subcontractor with the Contract Documents before the commencement of the Work. Errors, inconsistencies, or omissions shall be reported at once to the Contractor. Each Subcontractor is responsible for its own layout work.

5. Schedule

5.1 Time is of the essence. The Subcontractor shall commence the Subcontract Work under this Subcontract when notified by the Contractor and shall complete the Subcontract Work in a diligent manner in accordance with the Subcontract Documents and the Schedule of Work provided in this Agreement so that progress or completion of the Project will not be delayed and in such a manner that the Contractor, any other subcontractors, and any separate contractors of the Owner shall not be delayed or impeded in their work. The Subcontractor shall participate and cooperate in the development of schedules and other efforts to achieve timely completion of the Subcontract Work by providing information on the timing and sequence of operations so as to meet the Contractor’s overall schedule requirements. The Subcontractor shall continuously monitor the Project Schedule including any revisions thereto, and other work on the Project so as to execute the Subcontract Work in accordance with the requirements of the Project Schedule. The Subcontractor agrees to be responsible for, carry out, and perform all time guarantees upon work or materials referred to in the Subcontract Documents relating to any labor performed or material furnished under this Subcontract. If Subcontractor falls behind schedule, all costs to get back on schedule will be the responsibility of the Subcontractor, including additional costs to the Contractor or other subcontractors that are directly affected by the Subcontractors delays. This includes, but not limited to, overtime, additional supervision and project management, delivery expenses, storage fees, and any other cost and expense incurred in an effort to get back on schedule. If Contractor is responsible for Liquidated Damages and Subcontractor causes delay and Liquidated Damages are charged, the costs of Liquidated Damages will be passed onto the Subcontractor. The Project Schedule is subject to change at the direction of the Contractor at no additional cost.

6. Payment

6.1 In consideration of faithful and timely performance by the Subcontractor of all the covenants and the conditions aforesaid, the Contractor agrees to pay the Subcontractor, subject to other provisions hereof, including authorized additions and deletions the “Subcontract Amount” which sum includes all applicable taxes. Payment shall only be due for the portion of the Subcontract Work actually completed to the satisfaction of the Contractor, the Architect and the Owner. Within ten (10) days after receipt by the Contractor of payment from the Owner, the Contractor shall make payment in the amount and to the extent received from the Owner, less ten percent (10%) retainage. However, receipt of payment by the Contractor from the Owner for the Subcontract Work is a condition precedent to the obligation by the Contractor to pay the Subcontractor for the Subcontract Work in accordance with the preceding sentence, and payment for the Subcontract Work will be made to Subcontractor by the Contractor if and only to the extent such payment is received by the Contractor from the Owner. The Subcontractor hereby acknowledges that it relies on its own evaluation of the credit worthiness of the Owner, and not the credit worthiness of the Contractor, with respect to payment for the Subcontract Work, and expressly assumes the risk of non-payment by the Owner thereof, for any reason including, without limitation, insolvency of the Owner. Notwithstanding Subparagraph

4.2 of this Agreement, the provisions of this Section shall prevail over any conflicting provisions in the Prime Contract. Progress payment applications must be submitted by the Subcontractor each month in an amount equal to One Hundred percent (100%) of the estimated value of the labor, materials and equipment incorporated in the construction and materials and equipment suitably stored at the Project site, less the aggregate of previous payments. The Subcontractor's Affidavit and Waiver of Lien for prior payments must be properly executed by an authorized representative of the Subcontractor and returned to the Contractor prior to issuance of subsequent payments. Subcontractor must use Waiver Forms included as Exhibit "C" to this Agreement. Subcontractor will be required to provide Sub-Subcontractor and Vendor waivers for values exceeding $5,000.00. No other waiver forms other than those in Exhibit "C" will be accepted.

6.3 Each payment request or invoice must be received by the Contractor by the 20th day of the month to be processed with the Contractor's payment application that month. Invoices and payment requests received that are inaccurate or without substantiation, or after said day of the month will be held until corrected and substantiated, and then processed with the following month's payment application. Subcontractor shall submit all applications electronically, in PDF format, to accounts payable at AP@kinderandsons.com.

6.4 The Subcontractor shall submit its request for partial payment conforming to the standard AIA G702/G703 billing form, with schedule of values attached thereto, representing a true and accurate estimate of the Subcontract Work completed, and materials stored during the immediately preceding month or such other immediately preceding period as directed by the Contractor. In addition, if allowed by the Subcontract Documents, all invoices and insurance certificates shall be included for all stored materials in an off-site storage area applicable to the payment request. Materials not onsite can only be billed for as stored materials, if allowed. If requested, Subcontractor shall submit copies of payrolls to document the value of work in place.

6.6 If the Contractor, in its sole discretion, deems it necessary, the Subcontractor agrees to receive each of its progress payments and final payment in the form of multiple checks issued jointly between the Subcontractor's lower tier subcontractors and major material suppliers and the Subcontractor. Lower tier subcontractors that are to receive part or all of their progress payments as joint checks shall additionally submit with their Payment Requests all invoices from each lower tier subcontractor and major supplier and the net payments to be issued to each.

6.7 No partial payment, or certificate, therefore, shall constitute acceptance or approval by the Contractor of the Subcontract Work or material for which the partial payment is made. No partial payment shall constitute a waiver by the Contractor of any right to require fulfillment of all the terms of this Subcontract. Neither the final payment nor any partial payment, nor any certificate for either, shall constitute acceptance by the Contractor of defective work or improper materials or of any element of the Subcontractor's performance determined to be at variance with this Subcontract.

6.8 The Contractor shall have the right to set off any amounts the Subcontractor owes to the Contractor under this Subcontract or bylaw against the remaining balance under this Subcontract, or against any amounts due the Subcontractor under any other agreements with the Contractor.

6.9 **Final Payment.** Final payment by the Contractor to the Subcontractor shall not become due and payable to the Subcontractor until the following express conditions precedent have been met: (1) The completion of the Subcontract Work required by this Subcontract and acceptance of the Subcontract Work by the Contractor, the Owner and the Architect; (2) Final Waiver shall be provided in exchange for final payment; (3) all closeout and warranty documentation provided by the Contract has been submitted to Contractor; and (4) complete and full satisfaction of all claims, demands, disputes and obligations of the Subcontractor arising out of or related to this Subcontract, including those between the Contractor and the Subcontractor and between the Subcontractor and any third party. Should there be any such claim, lien or unsatisfied obligation, whether before or after final payment is made, the Subcontractor shall deliver payment to the Contractor an amount equal to whatever cost the Contractor and/or the Owner must pay to discharge or defend against any such claim, obligation, lien or action brought, or any judgment thereon and all costs, including legal fees and expenses and a 15% Administrative Fee, incurred in connection therewith.

7. Hazardous Materials

7.1 The Subcontractor shall at all times comply with all rules and regulations of any municipality, state or federal environmental protection, and toxic waste and hazardous substances laws, ordinances and regulations, and how they relate to the Subcontract Work, and shall be equally responsible for actions and inactions of subcontractors, sub subcontractors, and any other agents or independent contractors of the Subcontractor. The Subcontractor shall be deemed to, and shall, have included in the Subcontract Amount the containment, removal, disposal or neutralization of all toxic wastes and hazardous substances created, generated, or transported to or from the Project site in conjunction with the Subcontract Work. The Subcontractor will be responsible for identifying toxic wastes and hazardous substances generated, released, caused by or resulting from the Subcontract Work and notifying the Contractor of its presence in writing as soon as it is identified. The terms "toxic wastes" and "hazardous substances" shall have the same meaning as defined under federal environmental laws and regulations. At all times, the Subcontractor shall defend, indemnify, and hold harmless the Contractor from any and all expenses, costs, damages, suits, fines, assessments, penalties and/or causes of action, including attorney's fees through all investigations, negotiations, hearings or appeals, relating to or arising out of the Subcontractor's failure to strictly comply with the terms of this paragraph.

8. Compliance with Laws

8.1 The Subcontractor agrees to be bound by, and at its own costs comply with, all federal, state, and local laws, ordinances, and regulations (the "Laws") applicable to the Subcontract Work, including but not limited to safety, equal employment opportunity, minority business enterprise, women's business enterprise, disadvantaged business enterprise, sexual and racial harassment, and all other Laws with which the Contractor must comply.

8.2 Where prescribed by Law pursuant to direct Federal contracts or Federally-financed or aided contracts, or otherwise required by Law, the Subcontractor agrees the following clauses found in the Subcontract Documents or in the Code of Federal Regulations (CFR) are incorporated in this Subcontract and binding on Subcontractor as if written herein word for word: the clauses entitled "Equal Opportunity Clause" (41 CFR Sections 60-1.4 & 60-4.3); "Affirmative Action Obligations of Contractors and Subcontractors for Disabled Veterans of the Vietnam Era" (41 CFR Section 60-250.4); "Affirmative Action Obligations of Contractors and Subcontractors for Handicapped Workers" (41 CFR Section 60-741.1); "Contract Work Hours and Safety Standards Act-Overtime Compensation"; "Apprentices and Trainees"; "Payrolls and Basic Records"; "Compliance with Copeland Act Requirements"; "Withholding"; "Subcontracts"; "Contract Termination-Department"; "Disputes Concerning Labor Standards"; "Compliance with Davis-Bacon and Related Act Requirements"; and "Certification of Eligibility" and such other clauses as the Federal Government has required by law or contract. Subcontractor agrees to include all such clauses in any non-exempt, lower-tier subcontracts.

8.3 **Immigration Compliance.** The Subcontractor represents and warrants to the Contractor that the Subcontractor is in compliance with, and shall remain in compliance with, the provisions of the Immigration Reform and Control Act of 1986 (The "Act") and all other Federal, State, and/or local immigration statutes/ordinances, as applicable, including, but not limited to the provisions of the Act prohibiting hiring and continued employment of unauthorized

aliens, requiring verification and record keeping with respect to identity and eligibility for employment and prohibiting discrimination on the basis of national origin, United States citizenship, or intending citizen status. The Subcontractor agrees to indemnify the Contractor and to hold the Contractor harmless from all liability, including liability for interest and penalties, the Contractor incurs which results from or is attributable to the Subcontractor's failure to comply with any provisions of the Act, and or applicable Federal, State, and/or local immigration statute/ordinance, including reimbursing the Contractor any monies expended by the Contractor in participating in or responding to any investigation/suit/civil or criminal immigration matter involving the Subcontractor. As it relates to immigration compliance, the Subcontractor shall be responsible for completing any and all required documentation in accordance with requirements put forth by the Owner, Contractor or applicable law.

8.4 The Subcontractor shall be liable to the Contractor and the Owner for all loss, cost and expense attributable to any acts of commission or omission by the Subcontractor, its Sub-Subcontractors at any tier, and its and their respective employees and agents resulting from the failure to comply with Laws, including, but not limited to, any fines, penalties, restitution, judgments, and other damages resulting from such acts of commission or omission.

9. Insurance

9.1 The Subcontractor agrees to procure, pay for, and maintain in full force and effect during the course of the performance of the Subcontract all insurance required by the laws of the state in which the Subcontract Work covered by this Subcontract is being performed, and in such form and amounts as described in in this section and in Exhibit D, whichever is greater, which is attached hereto and incorporated into this Subcontract. Certificates of Insurance on The American Institute of Architect's Form G-705 or other form acceptable to Contractor and Contractor's counsel must be returned to the Contractor with signed Contract Agreement prior to commencement of the Work or receiving any payment on the project. Subcontractor is responsible for the following insurance for protection from claims that may arise out of or result from Subcontractor's operations under this Agreement, whether such operations be by Subcontractor or by any sub-subcontractor, or by anyone directly or indirectly employed by any of them, or by anyone or whose acts any of them may be liable.

(a) Worker's compensation insurance in accordance with statutory laws and with limits as provided by statute.
(b) Comprehensive general liability, including completed operations coverage for a period of three (3) years from the Project Substantial Completion date, products liability coverage (with the Contractor and Owner protected as additional insured), and contractual liability coverage, with limits of not less than
(i) $1,000,000 each occurrence and $2,000,000 in the aggregate per project for bodily injury or death; and (ii) $1,000,000 each occurrence and $2,000,000 in the aggregate per project for property damage.
(c) Automobile insurance with coverage for owned and non-owned vehicles with a combined single limit of $1,000,000 public liability and property damage.
(d) Installation Floater with a combined limit not less than $500,000.
(e) In addition, Subcontractor shall purchase an umbrella policy with minimum limits of $5,000,000 per occurrence. This policy must provide coverage over the underlying liability policies.
(f) Professional Liability with a limit not less than $1,000,000.

Unless Contractor otherwise agrees in writing, the liability policies to be maintained by Subcontractor hereunder shall name Contractor and Owner as additional named insureds. All insurance limits and minimums must be in accord with both the above and/or that noted in the Project Manual/Specifications whichever minimums are greater. All insurance is to be classified as Primary/Non-Contributory (Form #CG7061 or equivalent) and denoted accordingly on Contractor's Insurance Certificate. Subcontractor shall defend, indemnify and hold harmless Contractor and Owner and their agents and employees from and against all claims, damages, causes of action, losses and expenses, including attorney's fees, arising out of or resulting from the performance of the work, provided that such claim, damage, loss or expense (1) is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the work itself) including the loss of use resulting therefrom; and (2) is caused in whole or in part by any negligent act or omission of Subcontractor or any of Subcontractor's subcontractors, anyone directly or indirectly employed by any of them or for anyone for whose acts any of them may be liable, regardless of whether it is caused in part by a party indemnified hereunder.

9.2 **Waiver of Subrogation**. A Blanket Waiver of Subrogation clause shall be added to the general liability (Policy Form #CG7036) or equivalent; automobile liability (Policy Form #CA0444) or equivalent and worker's compensation (Policy Form #WC000313 or equivalent). The policies shall be in favor of Michael Kinder & Sons, Inc. and this clause shall apply to Michael Kinder & Sons, Inc. officers, agents and employees, with respect to all projects during the policy term.

9.3 **Cancellation of Coverage**. Each policy of insurance shall provide notification to Contractor and Owner at least thirty (30) days prior to any cancellation or modification to reduce the insurance coverage.

9.4 **Sub-Subcontractors**. To the extent that the Subcontractor subcontracts with any other entity or individual to perform all or part of the Subcontractor's Work, the Subcontractor shall require the other Sub-Subcontractors to furnish evidence of equivalent insurance coverage, in all respects, terms and conditions as set forth herein, prior to the commencement of the Work by the Sub-Subcontractor. The Contractor and Owner shall be named as additional insured as detailed below.

9.5 **Blanket Additional Insured on General Liability and Automobile Liability**. Michael Kinder & Sons, Inc., and their affiliates, directors, employees, subsidiaries, representatives, and any other parties as required by this Contract Agreement. They must be listed as certificate holder, and the Contractor and Owner must be protected as additional insured for Ongoing Operations and Products/Completed Operations on the Subcontractor's and any Sub-Subcontractor's Commercial General Liability Policies. The coverage must be primary and non-contributory with respect to the additional insured. The Blanket Additional Insured coverage must be provided by General Liability Policy Form #CG7037 or equivalent and Automobile Liability Policy Form #CA2048 or equivalent.

9.6 The Contractor shall have no duty to the Subcontractor or to any of its insurers or their insurance agents to review any certificates or copies of insurance furnished to the Contractor or to determine whether the terms of each certificate or policy of insurance comply with the insurance-related provisions of the Subcontract. A failure of the Contractor to detect that the Subcontractor has not submitted certificates, or proper certificates, or is otherwise not in compliance with the insurance-related provisions of the Subcontract shall not be construed as a waiver or other impairment of any of the Contractor's rights under such insurance-related provisions.

9.7 If the Subcontractor fails to procure and maintain such insurance, in addition to the option of declaring the Subcontractor in default for breach of a material provision of this Subcontract, the Contractor shall have the right, but not the duty, to procure and maintain the same insurance, or other

insurance that provides the Contractor with equivalent protection, and the Subcontractor shall furnish all necessary information to make effective and maintain such insurance. At the option of the Contractor, the cost of said insurance purchased by the Contractor shall be charged against and deducted from any monies then due or to become due to the Subcontractor or the Contractor shall notify the Subcontractor of the cost thereof and the Subcontractor shall promptly pay such cost.

9.8 The Subcontractor shall identify by certificate any Residential, Mold, EIFS, Silica or other major exclusions that impact the Subcontractor's ability to insure its risk. If the Project includes any Residential components or the proposed design includes EIFS systems, then the Subcontractor shall obtain appropriate endorsements acceptable to the Contractor as a condition of this Subcontract.

9.9 The Subcontractor shall at its own expense provide insurance coverage for materials stored off the site after written approval of the Contractor at the value established in the approval, and also for portions of the Subcontract Work in transit until such materials are permanently incorporated into the Project. The risk of loss for material and equipment provided by this Subcontract, whether in a deliverable state or otherwise, shall remain with the Subcontractor. Any damages to the material and equipment or loss of any kind occasioned in transit shall be borne by the Subcontractor, notwithstanding the manner in which the goods are shipped or who pays the freight or other transportation costs.

10. Indemnity

10.1 **General Indemnity.** To the fullest extent allowed by law, the Subcontractor agrees to defend, indemnify and hold harmless the Contractor to the same extent Contractor is obligated to defend, indemnify and hold harmless the Owner. In the absence of such Owner-required defense and indemnification, the Subcontractor shall defend, indemnify and hold harmless the Contractor, the Contractor's other subcontractors, the Architect/Engineer, the Owner and their agents, consultants, members and employees (the Indemnitees) from and against all claims, damages, losses and expenses, including, but not limited to, attorneys' fees, costs and expenses for bodily injury and property damage that may arise from the performance of the Subcontract Work to the extent of the negligent acts or omissions by, or the fault of, the Subcontractor, the Subcontractor's sub-subcontractors or anyone employed directly or indirectly by any of them or by anyone for whose acts or omissions any of them may be liable. The Subcontractor agrees to purchase and maintain contractual liability insurance covering its obligations in this article. These obligations shall not be interpreted to reduce or negate any other rights or obligations of indemnity otherwise existing with regard as to any party or person described in this Article.

10.2 **Patents.** The Subcontractor hereby agrees to defend, indemnify and hold harmless the Contractor and the Owner from and against any and all liability, loss or damage and to reimburse the Contractor and the Owner for any costs, including legal fees and expenses, which the Contractor and the Owner may incur because of claims or litigation on account of infringement or alleged infringement of any letters patent or patent rights by reason of the Subcontract Work, or materials, equipment or other items used by the Subcontractor in its performance.

10.3 **No Limitations.** In furtherance to, but not in limitation of the indemnity provisions in this Subcontract, the Subcontractor hereby expressly and specifically agrees that its obligation to indemnify, defend and hold harmless as provided in this Subcontract shall not in any way be affected or diminished by any statutory or constitutional immunity it enjoys from suits by its own employees or from limitations of liability or recovery under worker's compensation laws.

11. Termination for Convenience

11.1 It is understood that the basic assumption underlying the mutual obligations and responsibilities entered into by the parties to this Subcontract is the continued performance with respect to the Prime Contract that exists between the Contractor and the Owner. If, for any reason, the Prime Contract is breached, rescinded, or terminated, the Contractor shall have the right to immediately terminate this Subcontract. In no event shall the Contractor be obligated to the Subcontractor for any anticipatory profits or any damages incurred by the Subcontractor as a result of the termination of this Subcontract, unless approved and paid by the Owner. The Subcontractor agrees that the Contractor's decision or determination regarding the pro rata share of any monies received from the Owner as damages or compensation for said breach, rescission or termination of the Agreement shall be final and conclusive and that the Subcontractor shall have no claim or cause of action against the Contractor for any reason or greater amount.

11.2 The Contractor shall have the right at any time by written notice to the Subcontractor, to terminate this Subcontract without cause and require the Subcontractor to cease work. In the event of such a termination for convenience, the Subcontractor shall be entitled to payment pursuant to the terms of the Subcontract for the portion of the Subcontract Work actually completed as of the date of termination, together with reasonable costs of demobilization and such other reasonable costs as may be encountered by the Subcontractor and directly attributable to such termination provided that such amount may be reduced by all amounts for which the Subcontractor is liable or responsible. However, the Subcontractor shall only be entitled to profit on that portion of the work actually completed and approved for payment to the date of termination together with retainages withheld from prior payments. The Subcontractor waives any claim for loss of anticipated profits or other damages in the event the Contractor exercises this clause.

12. Failure of Performance

12.1 **Non-Conforming Subcontract Work.** The Subcontractor shall provide sufficient, safe, and proper facilities at all times for inspection by the Architect, the Owner or the Contractor of the Subcontract Work in the field, at shops or at any other place where materials required hereunder are in course of preparation, manufacture, treatment or storage. The Subcontractor shall, within twenty four (24) hours after receiving written notice from the Contractor to that effect, proceed to remove from the site any materials condemned by the Architect, the Owner, or the Contractor, whether worked or unworked, and to take down all portions of the Subcontract Work which the Architect, the Owner or the Contractor has condemned in writing, as unsound or improper, or as in any way failing to conform to the drawings, specifications and addenda and shall take full financial responsibility for all damage caused by such removal. In the event that all or any portion of the Subcontract Work as condemned should be of such a nature, or the time available should be so limited, that in the judgment of the Architect, the Owner or the Contractor it would not be expedient to order the same replaced or corrected, the Contractor, at its option, may deduct from the payments due or to become due to the Subcontractor such amount or amounts as in the opinion of the Architect or the Owner shall represent the difference between the fair and reasonable value of the Subcontract Work so condemned and its value had it been executed in conformity with the Subcontract Documents.

12.2 **Use of Non-Conforming Materials and Remedies.** Any materials and/or labor which at any time, whether before or after delivery, payment and/or utilization in the Project, fail to conform to any descriptions, specifications, or provisions contained in this Contract Agreement, or fail to satisfy any of Subcontractor's express or implied warranties, or are shipped or delivered other than in the quantities or not at the time and place specified in Contractor's delivery instructions, or other than in containers or packages conforming to Contractor's specifications (or, in the absence of such specifications, in recognized standard containers), or which are otherwise not in conformance with this Contract Agreement shall be deemed "non-conforming materials and/or labor." If Subcontractor provides or utilizes any non-conforming materials and/or labor, Contractor, without limitation of

any other right or remedy Contractor may have, may (a) require Subcontractor to repair or replace, at Contractor's option, such materials and/or labor at Subcontractor's expense; or (b) reject, in whole or in part, the materials and/or labor that are the subject of this Contract Agreement and receive credit or refund for such whole or part of the purchase price associated therewith. Non-conforming materials may be held (or returned to Subcontractor), at Subcontractor expense and risk, and shall be replaced by Subcontractor only upon the written request of the Contractor. Contractor may charge to Subcontractor all expenses of unpacking, examining, testing, repacking, storing and reshipping of any such non-conforming materials and/or of inspecting and testing any such non-conforming labor and may also charge to Subcontractor any other incidental or consequential damages suffered by Contractor as a result thereof.

12.3 **Remedies Cumulative.** The remedies provided for in this Contract Agreement are cumulative and shall be in addition to, and not in limitation of, the rights and remedies which may be available to Contractor at law or in equity. No waiver of a breach of any provision of this Agreement shall be effective unless in writing and no such waiver shall constitute a waiver of any other breach or of the same breach at a different time. The exercise by Contractor of the rights provided herein shall not be considered as a waiver of any damages which may be incurred by Contractor or a waiver of any other rights or remedies to which Contractor might be entitled.

12.4 **Notice to Cure.** If the Subcontractor is unable, refuses or fails to supply enough properly-skilled workers, proper materials, correct non-conforming Subcontract Work, or maintain the Schedule of Work, or fails to make prompt payment to its workers, subcontractors or suppliers, or disregards laws, ordinances, rules, regulations or orders of any public authority having jurisdiction, or otherwise is guilty of a material breach of a provision of this Agreement, the Subcontractor shall be deemed in default of this Agreement. If the Subcontractor fails within three (3) business days after written notification to commence and continue satisfactory correction of the default with diligence and promptness, then the Contractor without prejudice to any other rights or remedies, shall have the right to any or all of the following remedies:

12.4.1 to supply workers, materials, equipment and facilities as the Contractor deems necessary for the completion of the Subcontract Work or any part which the Subcontractor has failed to complete or perform after written notification, and charge the cost, including reasonable overhead, profit, attorneys' fees, costs and expenses to the Subcontractor;

12.4.2 to contract with one or more additional contractors to perform such part of the Subcontract Work as the Contractor determines will provide the most expeditious completion of the Subcontract Work, and charge the cost to the Subcontractor; and/or

12.4.3 withhold any payments due or to become due the Subcontractor pending corrective action in amounts sufficient to cover losses and compel performance to the extent required by and to the satisfaction of the Contractor.

12.4.4 terminate the Subcontractor for default by delivering written notice of such termination to the Subcontractor.

12.4.5 to charge to the Subcontractor an Administrative Fee of 15% of all costs incurred by the Contractor in exercising any of the above remedies.

In the event of an emergency affecting the safety of persons or property, the Contractor may proceed as above without notice, but the Contractor shall give the Subcontractor notice promptly after the fact as a precondition of cost recovery.

12.3 **Termination for Default.** If the Subcontractor has been terminated for default, the Contractor may take possession of the Subcontract Work, materials, tools, appliances and equipment of the Subcontractor at the Project site, and through itself or others provide labor, equipment and materials to prosecute Subcontract Work on such terms and conditions as shall be deemed by the Contractor as necessary, and shall deduct the cost, including without restriction all claims, charges, expenses, losses, costs, damages, and attorneys' fees, incurred as a result of the Subcontractor's failure to perform, from any money then due or thereafter to become due to the Subcontractor under this Agreement.

12.3.1 If the Contractor so terminates the employment of the Subcontractor, the Subcontractor shall not be entitled to any further payments under this Agreement and no sum shall be deemed due or to become due to the Subcontractor until Subcontract Work has been completed and accepted by the Owner, all Subcontract requirements have been fulfilled, and payment has been received by the Contractor from the Owner. In the event the unpaid subcontract earnings exceed the Contractor's cost of completion and any and all incidental costs, including administrative, legal and other professional fees, the difference shall be paid to the Subcontractor, but if such expenses exceed the subcontract earnings, the Subcontractor agrees to pay the difference to the Contractor promptly.

12.3.2 If it is determined or agreed that the Contractor wrongfully exercised any option under this Article, the Contractor shall be liable to the Subcontractor solely for the reasonable value of Subcontract Work performed by the Subcontractor prior to such action, including reasonable overhead and profit on the Subcontract Work performed, less prior payments made. Under no circumstances shall the Subcontractor be entitled to recovery of claimed lost future profits.

13. Delays

13.1 Should the progress of the Subcontract Work be delayed, obstructed or interfered with through any fault, action or failure to act by the Subcontractor or any of its officers, agents, employees, subcontractors or suppliers so as to cause any additional cost, expense, liability or damage to the Contractor or the Owner, including legal fees or expenses incurred in defending claims arising from such delay or seeking reimbursement and indemnity from the Subcontractor and its surety hereunder, the Subcontractor and its surety agree to compensate and indemnify the Contractor and the Owner against all such costs, expenses, damages and liabilities.

13.2 In addition, the Subcontractor, at the Contractor's direction and at the Subcontractor's own cost and expense, shall work such overtime as may be necessary to make up for all time lost in the completion of the Subcontract Work and in the completion of the Project due to such delay. Weather days will be made up through longer hours, Saturdays, and/or Sundays. Subcontractor fully obligated to meet the requirements of the project schedule within these constraints. If the Subcontractor fails to make up for the time lost by reason of such delay, the Contractor has the right to use other subcontractors or suppliers and to take whatever other action the Contractor deems necessary to avoid delay in the completion of the Subcontract Work and the Project, the cost of which shall be borne by the Subcontractor. In the event Subcontractor delays timely performance of the Subcontract Work or to the completion of the Project, either by its acts or omissions, and such delays result in the Contractor being charged by the Owner with actual or liquidated damages, then the Subcontractor shall reimburse the Contractor the full amount of all such damages and charges resulting from the delays caused by the Subcontractor. The Contractor may offset any such damages against the remaining balance due to the Subcontractor on the Subcontract Amount, if any.

13.3 If the commencement and/or progress of the Subcontract Work is delayed without the fault or responsibility of the Subcontractor, the time for the Subcontract Work shall be extended by Subcontract Change Order to the extent obtained by the Contractor from the Owner pursuant to the Prime Contract, and the Schedule of Work shall be revised accordingly.

14. Changes

14.1 Subcontract Changes. The Contractor and the Subcontractor agree the Contractor may make changes to the Subcontract Work, including but not limited to; additions, deletions or revisions. Any changes made to the Subcontract Work involved, or any other parts of this Agreement, shall be by a written Change Order. To the extent that any such change impacts Subcontractor's cost of or time for performance, the Subcontract Amount and Subcontract Schedule shall be equitably adjusted to compensate for such impact. Changes shall be initiated by one of the three methods outlined below, or as provided in the Prime Contract and shall be incorporated into the Subcontract by a Change Order.

14.1.1. **Request for Change Proposal.** A Request for Change Proposal (RFCP) is a written request that informs Subcontractor about a potential change in the Subcontract Work and requests a proposal for the potential change. Subcontractor shall promptly reply with such request. Subcontractor shall not implement the change or incur any costs until a Change Order is fully executed.

14.1.2. **Construction Change Directive.** A Construction Change Directive (CCD) is a written directive that instructs Subcontractor to take some immediate action in connection with the Subcontract Work. CCDs are issued when there is not time to issue a RFCO or Change Order. Subcontractor shall immediately proceed so as not to delay the progress of the Work and in accordance with the terms of the CCD. Any impact of a CCD on the Contract Price or Schedule shall be adjusted by a Change Order.

14.1.3. **Change Order Requests.** Within seven (7) calendar days after the occurrence of any event or observance of any condition that Subcontractor believes entitles Subcontractor to an adjustment in Subcontract Amount and/or Subcontract Schedule, Subcontractor shall prepare and submit a Change Order Request (COR) to Contractor. The COR shall include a detailed factual narrative, a detailed analysis showing entitlement and a detailed analysis of the proposed change to the Subcontract Amount and/or Subcontract Schedule.

14.2 **Change Orders.** A Change Order (CO) is a written instrument prepared by the Contractor and signed by the Subcontractor stating their agreement with the change in the Subcontract Work and any adjustment to the Subcontract Amount and/or Subcontract Schedule. All changes and/or additions in the Subcontract Work ordered in writing by the Contractor shall be deemed a part of the Subcontract Work and shall be performed and furnished in strict accordance with all terms and conditions of this Agreement and the Subcontract Documents, including the current Schedule of Work.

Change Orders will be used to implement approved Requests for Change Proposals, Construction Change Directives and Change Order Requests. Upon receipt of a properly documented COR or CCD, the parties shall negotiate in good faith to determine if the Subcontractor is entitled to a Change Order and, if so, the appropriate equitable adjustment. Any adjustment to the Subcontract Amount shall be established by one of the following methods:

a. mutual acceptance of an itemized lump sum, or
b. unit prices as indicated in the Subcontract Documents or as subsequently agreed to by the parties; or
c. costs determined in a manner acceptable to the parties and a mutually acceptable fixed or percentage fee; or
d. another method provided in the Subcontract Documents.

If the Parties are unable to agree on the dispositions of a COR or CCD, Contractor will either (i) issue a Notice denying Subcontractor's request or (ii) issue a unilateral Change Order setting forth the Contractor's final determination regarding the adjustments. Any cost and schedule adjustments shall be a full accord and satisfaction for all cumulative impacts of the underlying change.

14.3 The Subcontractor shall not be entitled to receive additional compensation for extra work or materials or changes of any kind except to the extent the same was ordered by the Contractor or any of its representatives. The Subcontractor shall be responsible for any costs incurred by the Contractor for changes of any kind made by the Subcontractor that increase the cost of the Work for either the Contractor or other subcontractors when the Subcontractor proceeds with such changes without a Change Order or Construction Change Directive.

14.4 Determination by Owner or Architect/Engineer. Notwithstanding any other provision, if the Subcontract Work for which the Subcontractor claims additional compensation is determined by the Owner or Architect/Engineer not to entitle the Contractor to a Change Order, additional compensation or a time extension, the Contractor shall not be liable to the Subcontractor for any additional compensation or time extension for such Subcontract Work, unless the Contractor agrees in writing to pay such additional compensation or to grant such extension.

15. Claims

15.1 A Claim is a written demand by Subcontractor seeking an adjustment in the Subcontract Amount and/or Subcontract Schedule or some other relief under the terms of the Subcontract for events other than a RFCP that has been denied in writing. Subcontractor shall provide Notice to Contractor of any potential Claim within seven (7) calendar days after the event giving rise to the Claim. Within fifteen (15) calendar days thereafter, Subcontractor shall submit a detailed factual narrative, a detailed analysis showing entitlement and a detailed analysis of the alleged change to the Subcontract Amount and/or Subcontract Schedule. Claims not timely made, in writing, by the Subcontractor shall be deemed to have been abandoned and waived. The acceptance and consideration of any claim out of time by the Contractor shall not create any precedent nor "course of dealing' between the Contractor and the Subcontractor, nor shall it waive the Contractor's right to insist on strict adherence by the Subcontractor to the contract claims procedures. If Contractor denies Subcontractor's Claim, Subcontractor may pursue the matter under Article 21 Dispute Resolution.

15.2 The Subcontractor shall not delay or suspend the Subcontract Work because of the pendency of or the denial by the Contractor of any such claim or because of the continuance of the condition out of which the claim arose, but shall proceed diligently in performing the Subcontract Work while the claim is being resolved by agreement or being fully adjudicated.

15.3 In the event the Subcontractor asserts that it should receive additional compensation because of an act or omission on the Owner's part, or someone for whom the Owner is responsible, the Subcontractor shall promptly submit the claim to the Contractor in writing at least three (3) working days before the date the Contractor is required to submit such claims under the Prime Contract. If timely submitted with all documentation required by the Prime Contract, the Contractor will, on behalf of the Subcontractor, submit the same to the Owner for its consideration. Failure of the Subcontractor to submit such claims in a timely and proper manner shall result in a waiver of such claim and the Contractor is not required to submit it to the Owner, and the Subcontractor shall be bound to the same consequence which the Contractor would suffer under the Prime Contract.

15.4 The Subcontractor shall fully cooperate with the Contractor in the submission of such pass through claims, shall prepare all supporting data and do everything else necessary to properly present the claims, including payment of legal fees incurred by the Contractor to prepare, submit and negotiate or otherwise resolve such claim. Should the Owner allow and pay additional compensation to the Contractor on account of such pass through claim asserted by the Subcontractor, the Contractor will pay the same to the Subcontractor, less the Contractor's overhead, costs, expenses, legal fees and a 15% Administrative Fee.

15.5 It shall be an express condition precedent to any obligation on the part of the Contractor to make payment of any cost, reimbursement, compensation or damages to the Subcontractor hereunder that the Contractor shall first be determined to be entitled to such compensation on behalf of the Subcontractor and then receive such payment from Owner, and Subcontractor expressly acknowledges that the Contractor is not obligated or required to pursue the Subcontractor's claim against the Owner if the Contractor, in its sole discretion, after review of the Subcontractor's claim, has deemed the claim to lack merit in whole or in part.

15.6 If at any time a controversy should arise between the Contractor and the Subcontractor with respect to any matter in this Subcontract which the Contractor determines is not a claim, dispute or controversy which should involve or be asserted against the Owner, the decision of the Contractor relating to the subject of the controversy shall be followed by the Subcontractor.

16. Taxes

16.1 The Subcontract Amount includes all applicable sales, excise, transportation, unemployment compensation, social security, and any other taxes presently existing or subsequently imposed and levied and the Subcontractor agrees to pay all of the above and to conform to all applicable municipal, state and federal laws in connection with such taxes. The Subcontractor further agrees to withhold taxes from the wages and salaries of all employees of the Subcontractor and pay the same in accordance with the federal and state laws and regulations pertaining thereto. The Subcontract Amount includes federal, state, and municipal taxes now levied or in force or hereafter imposed on any and all tangible personal property sold or transferred to the Contractor under this Subcontract and the Subcontractor agrees to pay such tax or taxes on such property, the cost of which is included in the Subcontract Amount.

17. Liens

17.1 The Subcontractor shall promptly pay when due all its project creditors, together with the project creditors of all those below it in the contractual chain.

17.2 If the Project involves private work, the Subcontractor shall keep the property and improvements free and clear of all mechanic, materialmen and similar lien claims or statements. In the event any such lien is filed, asserted, or claimed, the Subcontractor shall immediately secure its release either by paying the lien claimant, by filing a lien release bond, or by any other means permitted by law. If not so released, the Contractor may retain an amount equal to 150% of the lien or claim and may pay the claimant and offset that amount, plus any legal fees from the amount so retained. If the Project involves public work, the Subcontractor shall promptly pay and secure releases from all of its project creditors, including all those below it in the contractual chain, who are entitled to assert claims against the Contractor or its surety.

17.3 If any claim or lien is made or filed with or against the Contractor, the Owner, the Project, the Premises or the Project funds by any person claiming that the Subcontractor or any subcontractor or other person under subcontract to the Subcontractor, or any person or entity employed or engaged by the Subcontractor at any tier, has failed to make payment for any labor, services, materials, equipment, taxes or other obligations furnished or incurred in connection with the Subcontract Work, or if the Subcontractor or any subcontractor or other person under subcontract to the Subcontractor, or any person or entity employed or engaged by the Subcontractor at any tier causes damage to the Subcontract Work or any other work on the project, or if the Subcontractor fails to perform or is otherwise in default of any term or provision of this Subcontract, the Contractor shall have the right to retain from any payment then due or thereafter due an amount which the Contractor deems sufficient to (1) satisfy, discharge and/or defend against any such claim or lien, (2) make good any such nonpayment, failure, damage or default, and (3) defend, indemnify and hold harmless the Contractor and the Owner against any and all losses, damages and costs, including legal fees and expenses, incurred by either or both of them. The Contractor shall require proof that any such nonpayment, claim or lien is fully satisfied, dismissed, and discharged before any remaining retained funds will be released. The Contractor shall, in addition, have the right to apply and charge against the Subcontractor so much of the amount retained as may be required for the foregoing purposes and the Subcontractor shall pay and reimburse the Contractor and the Owner all such losses, damages, and costs incurred by them which exceed the retained funds.

18. Assignment

18.1 To the fullest extent permitted by law, the Subcontractor agrees that it shall not assign, sell, transfer, delegate or encumber any rights, duties or obligations arising under this Subcontract including, but not limited to, any right to receive payments hereunder, without the prior written consent of the Contractor in its sole discretion and the giving of any such consent to a particular assignment shall not dispense with the necessity of such consent to any further or other assignments. In the event the Subcontractor assigns, sells, encumbers, or otherwise transfers its right to any funds due or to become due under this Subcontract as security for any loan, financing or other indebtedness ("Assignment"), notification to the Contractor of such Assignment must be sent by certified mail, return receipt requested, to the Contractor and the Assignment shall not be effective as against the Contractor until the Contractor provides its written consent to such Assignment. The Subcontractor agrees that any such Assignment shall not relieve the Subcontractor of any of its agreements, duties, responsibilities or obligations under this Subcontract and the Subcontract Documents and shall not create a contractual relationship or a third party beneficiary relationship of any kind between the Contractor and such assignee or transferee.

19. Guarantee/Warranty

19.1 For a period equal to that imposed upon the Contractor under the Prime Contract, but in no event less than one year from the date of the Owner's final acceptance of the Subcontract Work, the Subcontractor guarantees and warrants that the Subcontract Work complies with the Subcontract Documents requirements and is free from defects in material and workmanship. The Subcontractor shall remain liable for defects in the Subcontract Work for the same period the Contractor remains liable to the Owner under the Prime Contract, or as required by law, whichever is greater. This guarantee/warranty shall include, but is not limited to, the cost of all labor, material, and related items necessary to correct any such defect, plus the cost of repairing any damage to other items which may have been caused by the defective material or workmanship. If the Subcontractor fails to begin warranty work within seventy-two (72) hours of being notified that such work is necessary, the Contractor may, at its option, perform the necessary remedial work or secure its performance by others and charge the Subcontractor with the cost thereof, plus a 15% Administrative Fee. Nothing in this paragraph shall shorten the statute of limitations on any action by the Contractor for breach of contract, negligence, or other cause of action against the Subcontractor.

20. Dispute Resolution

20.1 **Scope of Disputes Provisions.** All Claims, disputes, or other matters in question between the parties to this Subcontract which arise out of or relate to this Agreement (or the breach thereof), whether in contract or tort, (hereinafter "Dispute") shall be subject to the dispute resolutions set forth below.

20.2 **Initial Dispute Resolution/Mediation.** A Dispute which either party desires to pursue shall be set forth in a detailed written statement of claim submitted to the other party providing the specific basis upon which monetary or other relief is claimed to be due, the specific contractual provision(s) supporting the claim and an itemization of the amount claimed to be due. Following submission of the detailed statement of claim, Contractor and Subcontractor shall endeavor to settle the Dispute first through face to face direct discussions between corporate officers of the Contractor and Subcontractor which discussions shall be held at the Contractor's office location involved with the Project within thirty (30) calendar days of a request by either party. If the Dispute cannot be resolved through direct discussions, the parties shall participate in mediation under the Construction Industry Mediation Rules of the American Arbitration Association as a condition precedent and before recourse to any other form of binding dispute resolution. The location of the mediation shall be Allen County, Indiana, unless the parties agree on another location. Upon written notice requesting mediation provided to the other party and the American Arbitration Association, the parties agree to proceed with the mediation as scheduled by the mediator. Either party may terminate the mediation at any time after the first session, but the decision to terminate must be personally delivered to the other party and the mediator.

20.3 Binding Dispute Resolution. In the event Contractor and Subcontractor cannot resolve the Dispute through direct discussions or mediation as contemplated above, then the Dispute shall, at the sole discretion of Contractor, be decided either by submission to (a) arbitration administered by the American Arbitration Association or other arbitration tribunal mutually agreed upon by the parties; or (b) litigation subject to the exclusive jurisdiction and venue of Allen County, Indiana.

20.4 **Arbitration Election**

20.4.1 In the event Contractor exercises its exclusive right to resolve the Dispute in arbitration, such arbitration shall be conducted in accordance with the Construction Industry Arbitration Rules of the American Arbitration Association or the applicable rules of such other arbitration tribunal as the parties may mutually determine in effect at the time the arbitration is commenced as modified by the terms hereof. Any arbitration hereunder shall be held in Allen County, Indiana.

20.4.2 Should Contractor exercise its exclusive right to resolve the Dispute by arbitration, then within fourteen (14) days after Contractor gives Subcontractor notice of Contractor's election of arbitration, the parties shall use good faith efforts to select a single arbitrator mutually acceptable to both parties. If the parties are unable to select an arbitrator, then the parties will select the arbitrator(s) from a panel of experienced construction arbitrators on the American Arbitration Association's large complex case panel or a comparable panel of experienced construction arbitrators maintained by such other arbitration tribunal mutually selected by the parties then in effect. In the event the amount in Dispute exceeds $1,000,000.00, Contractor and Subcontractor agree the arbitration shall be heard by a panel of three (3) arbitrators; otherwise, the Dispute shall be heard by a single arbitrator.

20.4.3 The parties will enter into an Electronically Stored Information Agreement outlining the scope and volume for ESI discovery, which shall take into account the amount and complexity of the Dispute.

20.4.4 The arbitration award shall be final and binding upon the parties, shall include attorneys' fees and costs to the prevailing party or parties, and may be entered as a judgment in any court having proper jurisdiction. In any arbitration the Arbitrator(s) shall have no power to render an award which has the effect of altering or amending or changing in any way any provisions of this Subcontract.

20.4.5 The parties stipulate and agree that the performance of this Subcontract is a transaction involving interstate commerce. Notwithstanding other provisions in the Subcontract, or choice of law provisions to the contrary, this agreement to arbitrate shall be enforced pursuant to, and governed by, the Federal Arbitration Act, 9 U. S. C. §1 et seq., which shall not be superseded or supplemented by any other arbitration act, statute, or regulation.

20.4.6 At the sole discretion of Contractor, any arbitration with Subcontractor shall be consolidated with any other arbitration proceeding relating to the work under the General Contract.

20.5 **Litigation Election.** In the event Contractor elects not to exercise its exclusive right to resolve the Dispute by arbitration, or in the event the Dispute between Contractor and Subcontractor, or any portion thereof, is found to be non-arbitrable, then the parties hereby agree that the Dispute or a portion thereof (as the case may be) shall be subject to exclusive jurisdiction and venue of Allen County, Indiana. In any such Dispute or portion thereof which is resolved by litigation, Subcontractor expressly waives any right to trial by jury.

20.6 **Multiparty Proceeding.** To the extent permitted by Subcontract Documents, all parties necessary to resolve a claim shall be parties to the same dispute resolution proceeding. To the extent Disputes between the Contractor and the Subcontractor involve in whole or in part disputes between the Contractor and the Owner, Disputes between the Subcontractor and the Contractor shall be decided by the same tribunal and in the same forum as disputes between the Contractor and the Owner.

20.7 **Stay of Proceedings.** (a) In the event the provisions for resolution of disputes between the Contractor and the Owner contained in the Subcontract Documents do not permit consolidation or joinder with disputes of third parties, such as the Subcontractor, resolution of any Dispute between Contractor and Subcontractor involving in whole or in part disputes between Contractor and Owner shall be stayed pending conclusion of any dispute resolution proceeding between Contractor and Owner. (b) In the event that any action is filed prior to exhaustion of remedies under the Subcontract; such action shall be stayed pending conclusion of any dispute resolution proceedings.

20.8 **Work Continuation and Payment.** Unless otherwise agreed in writing, Subcontractor shall continue the Subcontract Work and maintain the Schedule of Work during any dispute resolution proceedings. As Subcontractor continues to perform, Contractor shall continue to make payments in accordance with this Agreement.

20.9 Cost of Dispute Resolution; Attorneys' Fees. The cost of any mediation proceeding shall be shared equally by the parties participating.

20.9.1 The prevailing party in any Dispute arising out of or relating to this Agreement or its breach that is resolved by a dispute resolution procedure designated in the Subcontract Documents shall be entitled to recover from the other party those reasonable attorneys' fees,

costs and expenses (including expert fees and expenses) incurred by the prevailing party in connection with such dispute resolution process after direct discussions and mediation.

20.9.2 In the event the Subcontractor is awarded an amount equal to or less than the last written offer of settlement from Contractor, prior to the commencement of binding dispute resolution, Contractor shall be deemed prevailing party and be entitled to recover those reasonable attorneys' fees, costs and expenses (including expert fees and expenses) incurred by the Contractor.

21. Miscellaneous

21.1 No one, other than the parties hereto, their successors, trustees and assigns, shall be entitled to bring action on this Subcontract or the Performance Bond provided by the Subcontractor, it being the express intent of the parties that this Subcontract shall not be for the benefit of any third party.

21.2 Any term or provision of this Subcontract which is held to be invalid or unenforceable in any jurisdiction shall, as to such jurisdiction, be ineffective to the extent of such invalidity or unenforceability without rendering invalid or unenforceable the remaining terms and provisions of this Subcontract or affecting the validity or enforceability of any of the terms or provisions of this Subcontract in any other jurisdiction.

21.3 This Subcontract, together with the documents referred to or incorporated herein by reference, constitute the complete agreement between the parties. No agent or employee of either party possesses the authority to make, and the parties shall not be bound by nor liable for, any statement, representation, promise or agreement not set forth herein. Any article, section, paragraph, or other headings contained in this Subcontract are for reference purposes and shall not affect in any way the meaning or interpretation of this Subcontract.

21.4 The terms and provisions shall extend to and be binding upon the successors, trustees and assigns of the parties hereto, and shall be governed and controlled, except as expressly provided herein or as required by the Subcontract Documents, by the laws of the State of the Project.

21.5 The Subcontractor agrees to comply with the provisions and any applicable local, state, or federal ordinance, regulation, status, or other mandate regarding affirmative action and/or minority/women's business enterprise participation.

21.6 This subcontract has not been altered in any manner from its original form as sent to the Subcontractor except for required signatures and dates, or as clearly marked and initialed by this Subcontractor. Any changes to this subcontract not initialed by the Contractor will not be binding.

21.7 Project Meetings. Subcontractor is required to attend all progress meetings when requested by Contractor, Architect, or Owner. Absence of Subcontractor at Progress Meetings when attendance is requested shall be subject to a $100.00 fine.

21.8 Equipment / Scaffolding. At no time shall subcontractor or any forces employed by or acting for, by, through or under subcontractor use any equipment or scaffolding which is owned, rented, or maintained by Contractor without prior written consent of Contractor and signed Release of Liability Waiver.

21.9 All requirements of Specification Divisions 00 and 01 apply to Subcontractor.

Waiver of Lien to Date Sample

STATE OF: _____ Pay Application #:_____

COUNTY OF: _____ Invoice No.:_____

TO WHOM IT MAY CONCERN:

WHEREAS the undersigned has been employed by Michael Kinder & Sons, Inc. to furnish labor, material and equipment for the project known XXX is the owner.

THE undersigned, for and in consideration of _____ and _____/100 ($_____) Dollars, and other good and valuable considerations, upon the receipt whereof will be acknowledged, will hereby waive and release any and all lien or claim of, or right to lien, under the statutes of the State of Indiana, relating to mechanics' liens, with respect to and on said above-described premises, and the improvements, thereon, and on the material, fixtures, apparatus or machinery furnished, and on the moneys, funds or other considerations due or to become due from the owner, on account of all labor, services, material, fixtures, apparatus or machinery, furnished to this date by the undersigned for the above-described premises, INCLUDING EXTRAS.*

DATE _____

COMPANY NAME _____

COMPANY ADDRESS _____

CITY, STATE, ZIP _____

BY: _____

TITLE: _____

*EXTRAS INCLUDE BUT ARE NOT LIMITED TO CHANGE ORDERS, BOTH ORAL AND WRITTEN TO THE CONTRACT.

Subcontractor's Affidavit Sample

STATE OF: _____ Pay Application #:_____
COUNTY OF: _____ Invoice No.:_____

TO WHOM IT MAY CONCERN:

That the total amount of the contract with Michael Kinder and Sons, Inc. including extras* is $_____ on which he or she has received payment of $_____ as of the notarized date below. That all waivers are true, correct and genuine and delivered unconditionally and that there is no claim either legal or equitable to defeat the validity of said waivers.

That for the purpose of said contract, the following persons, firms or corporations have been engaged to furnish, have furnished, or will furnish materials and/or labor for said project; that there are due or to become due to them respectively, the amounts set opposite their names for said materials and/or labor; that there are no other known commitments and there is nothing due or to become due to any person, firm, or corporation for labor, services, materials, fixtures, machinery, apparatus, supplies or services, other than as stated herein.

That there are no other contracts for said work outstanding, and that there is nothing due or to become due to any person for material, labor or other work of any kind done or to be done upon or in connection with said work other than below stated.

			(A)	(B)	(C)	A-B-C=
MATERIAL SUPPLIER OR SUBCONTRACTOR	PHONE NUMBER	PROVIDED	CONTRACT PRICE INCLDG EXTRAS*	PREVIOUSLY REQUESTED TO DATE	CURRENT PAYMENT DUE	BALANCE OWED
TOTAL LABOR AND MATERIAL INCLUDING EXTRAS* TO COMPLETE.						

DATE _____

COMPANY NAME _____
COMPANY ADDRESS _____
CITY, STATE, ZIP _____
BY: _____
TITLE: _____

I HERBY CERTIFY THAT THE PERSON NAMED ABOVE, APPREARED BEFORE ME THIS DAY IN PERSON AND ACKNOWLEDGED THEY SIGNED THIS DOCUMENT (INCLUDING SUPPLEMENTAL SHEETS ATTACHED HERETO) AS THEIR FREE AND VOLUNTARY ACT AND DEED FOR THE USES AND PURPOSES HEREIN STATED.

SUBSCRIBED AND SWORN TO BEFORE ME THIS _____ DAY OF _____

NOTARY PUBLIC _____

MY COMMISSION EXPIRES: _____

*EXTRAS INCLUDE BUT ARE NOT LIMITED TO CHANGE ORDERS, BOTH ORAL AND WRITTEN TO THE CONTRACT.

Subcontractor is required to provide sub-subcontractor and material supplier waivers for values exceeding $5,000.00

Sub-Subcontractor Waiver of Lien to Date Sample

STATE OF: _____ Pay Application #:_____
COUNTY OF: _____ Invoice No.:_____

TO WHOM IT MAY CONCERN:

WHEREAS the undersigned has been employed by _____ to furnish labor, material and equipment for the project known as Huhtamaki Restroom Renovation of which XXX is the owner.

THE undersigned, for and in consideration of _____ and _____/100 ($_____) Dollars, and other good and valuable considerations, upon the receipt whereof will be acknowledged, will waive and release any and all lien or claim of, or right to lien, under the statutes of the State of Indiana, relating to mechanics' liens, with respect to and on said above-described premises, and the improvements, thereon, and on the material, fixtures, apparatus or machinery furnished, and on the moneys, funds or other considerations due or to become due from the owner, on account of all labor, services, material, fixtures, apparatus or machinery, furnished to this date by the undersigned for the above-described premises, INCLUDING EXTRAS.*

DATE _____

COMPANY NAME _____
COMPANY ADDRESS _____
CITY, STATE, ZIP _____
BY: _____
TITLE: _____

*EXTRAS INCLUDE BUT ARE NOT LIMITED TO CHANGE ORDERS, BOTH ORAL AND WRITTEN TO THE CONTRACT.

Sub-Subcontractor's Affidavit Sample

STATE OF: _____
COUNTY OF: _____

TO WHOM IT MAY CONCERN:

THE undersigned, (Name) _____ being duly sworn, deposes and says that he or she is (Position) _____ of (Company Name) _____ who is the contractor furnishing _____ on the building located at XXX, owned by XXX.

That the total amount of the contract including extras* is $_____ on which he or she has received payment of $_____ as of the notarized date below. That all waivers are true, correct and genuine and delivered unconditionally and that there is no claim either legal or equitable to defeat the validity of said waivers. That the following are the names and addresses of all parties who have furnished material or labor, or both, for said work and all parties having contracts or sub contracts for specific portions of said work or for material entering into the construction thereof and the amount due or to become due to each, and that the items mentioned include all labor and material required to complete said work according to plans and specifications.

That there are no other contracts for said work outstanding, and that there is nothing due or to become due to any person for material, labor or other work of any kind done or to be done upon or in connection with said work other than above stated.

DATE _____ SIGNATURE _____

SUBSCRIBED AND SWORN TO BEFORE ME THIS _____ DAY OF _____
NOTARY PUBLIC _____
MY COMMISSION EXPIRES: _____

Material Supplier Waiver of Lien to Date Sample

STATE OF: _____ Pay Application #:_____
COUNTY OF: _____ Invoice No.:_____

TO WHOM IT MAY CONCERN:

WHEREAS the undersigned has been employed by_____ to furnish material and/or equipment for the project known as XXX is the owner.

THE undersigned, for and in consideration of _____ and _____/100 ($_____) Dollars, and other good and valuable considerations, upon the receipt whereof will acknowledged, will waive and release any and all lien or claim of, or right to lien, under the statutes of the State of Indiana, relating to mechanics' liens, with respect to and on said above-described premises, and the improvements, thereon, and on the material, fixtures, apparatus or machinery furnished, and on the moneys, funds or other considerations due or to become due from the owner, on account of all labor, services, material, fixtures, apparatus or machinery, furnished to this date by the undersigned for the above-described premises, INCLUDING EXTRAS.*

DATE _____

COMPANY NAME _____
COMPANY ADDRESS _____
CITY, STATE, ZIP _____
BY: _____
TITLE: _____

*EXTRAS INCLUDE BUT ARE NOT LIMITED TO CHANGE ORDERS, BOTH ORAL AND WRITTEN TO THE CONTRACT

Material Supplier Affidavit Sample

STATE OF: _____

TO WHOM IT MAY CONCERN:

THE undersigned, (Name) _____ being duly sworn, deposes and says that he or she is (Position) _____ of (Company Name) _____ who is the material supplier furnishing _____ for _____ (Company purchasing material) on the building located at XXX, owned by XXX.

That the total amount of the contract including extras* is $_____ on which he or she has received payment of $_____ as of the notarized date below. That all waivers are true, correct and genuine and delivered unconditionally and that there is no claim either legal or equitable to defeat the validity of said waivers. That the following are the names and addresses of all parties who have furnished material or labor, or both, for said work and all parties having contracts or sub contracts for specific portions of said work or for material entering into the construction thereof and the amount due or to become due to each, and that the items mentioned include all labor and material required to complete said work according to plans and specifications.
That there are no other contracts for said work outstanding, and that there is nothing due or to become due to any person for material, labor or other work of any kind done or to be done upon or in connection with said work other than above stated.

DATE _____ SIGNATURE _____

SUBSCRIBED AND SWORN TO BEFORE ME THIS _____ DAY OF _____
NOTARY PUBLIC _____
MY COMMISSION EXPIRES: _____

Exhibit D Insurance Compliance Checklist

The following sample Certificate of Insurance shows the requirements needed to meet the terms of the Contract Agreement with Michael Kinder & Sons, Inc.

Please submit your client's Certificate of Insurance electronically to our office.

Please be sure your certificate of insurance and coverage meet the following requirements:

1. General aggregate limit is on a per project basis.
2. Limits are equal to or greater than those required.
3. Installation floater is included.
4. Michael Kinder & Sons, Inc. and the project owner are protected as blanket additional insured on the General Liability Policy (per Form #CG7037 or equivalent) including ongoing operations and products/completed operations as required by contract.
5. Michael Kinder & Sons, Inc. and the project owner are protected as blanket additional insured on the Auto Liability Policy (per Form #CA2048 or equivalent).
6. All insurance is primary and non-contributory.
7. Waiver of Subrogation in favor of Michael Kinder & Sons, Inc. on the General Liability and Workers Compensation policies is included.

Should you have any questions, please contact the project manager at out office. (260) 744-4359

Thank you.

ACORD

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY) 8/16/2018

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER
ISU Stewart, Brimner, Peters & Company
3702 Rupp Drive
Fort Wayne IN 46815

CONTACT NAME: Account Manager Name
PHONE (A/C, No, Ext): (260)482-6900 FAX (A/C, No): (260)482-7305
E-MAIL ADDRESS: Account Manager email address

INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER A : Name of Insurance Company	
INSURER B :	
INSURER C :	
INSURER D :	
INSURER E :	
INSURER F :	

INSURED
Full Named Insured
Address
City St Zip

COVERAGES CERTIFICATE NUMBER: 17/18 Sample REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	X COMMERCIAL GENERAL LIABILITY CLAIMS-MADE X OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: POLICY X PRO-JECT LOC OTHER:	X	Y	123456789	XX/XX/XXXX	XX/XX/XXXX	EACH OCCURRENCE	$ 1,000,000
							DAMAGE TO RENTED PREMISES (Ea occurrence)	$ 100,000
							MED EXP (Any one person)	$ 5,000
							PERSONAL & ADV INJURY	$ 1,000,000
							GENERAL AGGREGATE	$ 2,000,000
							PRODUCTS - COMP/OP AGG	$ 2,000,000
								$
A	AUTOMOBILE LIABILITY X ANY AUTO ALL OWNED AUTOS SCHEDULED AUTOS X HIRED AUTOS X NON-OWNED AUTOS	X	Y	123456789	XX/XX/XXXX	XX/XX/XXXX	COMBINED SINGLE LIMIT (Ea accident)	$ 1,000,000
							BODILY INJURY (Per person)	$
							BODILY INJURY (Per accident)	$
							PROPERTY DAMAGE (Per accident)	$
							Underinsured motorist	$ 1,000,000
A	X UMBRELLA LIAB X OCCUR EXCESS LIAB CLAIMS-MADE DED RETENTION $			123456789	XX/XX/XXXX	XX/XX/XXXX	EACH OCCURRENCE	$ 5,000,000
							AGGREGATE	$ 5,000,000
								$
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? Y / N N (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	N / A	Y	123456789	XX/XX/XXXX	XX/XX/XXXX	X PER STATUTE OTH-ER	
							E.L. EACH ACCIDENT	$ 500,000
							E.L. DISEASE - EA EMPLOYEE	$ 500,000
							E.L. DISEASE - POLICY LIMIT	$ 500,000
A	Installation Floater			123456789	XX/XX/XXXX	XX/XX/XXXX	Limit	$500,000
							Deductible	$500

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

Michael Kinder & Sons, Inc., & their affiliates, directors, employees, subsidaries, representative & any other parties as required by the GC/SubContractor contract agreement are listed as certificate holders. Per the signed contract, contractor & owner must be protected as blkt addl insureds on the GL policy incl on-going operations & prod/completed operations (Form #CG7037 or equivalent), & on the Auto Liab policy (Form CA2048 or equivalent). All insurance for subcontractors/sub-subcontractors shall be Primary & Non-Contributory. A Waiver of Subro clause in favor of Michael Kinder & Sons, Inc. shall be added to the GL, Auto and Work Comp Policies. Umbrella follows form.

CERTIFICATE HOLDER

wboyer@kinderandsons.com

Michael Kinder & Sons, Inc.
5206 Decatur Road
Fort Wayne, IN 46806

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

Jeff Peters/AJP

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ACORD 25 (2014/01)
INS025 (201401)

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END OF SECTION 01 12 00

SECTION 01 22 00 - UNIT PRICES

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes administrative and procedural requirements for unit prices.

B. Related Requirements:

1. Section 01 21 00 "Allowances" for procedures for using unit prices to adjust quantity allowances.

1.2 DEFINITIONS

A. Unit price is an amount incorporated into the Agreement, applicable during the duration of the Work as a price per unit of measurement for materials, equipment, or services, or a portion of the Work, added to or deducted from the Contract Sum by appropriate modification, if the scope of Work or estimated quantities of Work required by the Contract Documents are increased or decreased.

1.3 PROCEDURES

A. Unit prices include all necessary material, plus cost for delivery, installation, insurance, overhead, and profit.

B. Measurement and Payment: See individual Specification Sections for work that requires establishment of unit prices. Methods of measurement and payment for unit prices are specified in those Sections.

C. Owner reserves the right to reject Contractor's measurement of work-in-place that involves use of established unit prices and to have this work measured, at Owner's expense, by an independent surveyor acceptable to Contractor.

D. List of Unit Prices: A schedule of unit prices is included in Part 3. Specification Sections referenced in the schedule contain requirements for materials described under each unit price.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 SCHEDULE OF UNIT PRICES

UNIT PRICE BIDS: Following unit costs are to be submitted by the bidder as part of its bid to be included in future potential agreement with intent to utilize these costs for potential future changes as applicable on the project. Each unit cost item is intended to be applicable only to itself. **Each unit cost item is to be all inclusive and therefore, include all overhead & profit. No additional mark-up will be allowed for potential future changes on these unit cost items (if utilized).** If an item does not apply to bidder, bidder is to mark "N/A" or "Not-Applicable."

UNIT PRICE # 1A – Unsuitable Soil Excavation: Unit price shall include removing unsuitable soil material and placing unsuitable soils off site. Unit of measurement shall be in place soils, no excavation swell.

Unit Price: $/CY: _____

UNIT PRICE # 1B – Unsuitable Aggregate Excavation: Unit price shall include removing unsuitable aggregate material and placing unsuitable aggregate off site. Unit of measurement shall be in place soils, no excavation swell.

Unit Price: $/CY: _____

UNIT PRICE # 2 – Import Engineered Fill: Unit price shall include soil fill replacement from offsite. Price shall include placing in lifts and compacting.

Unit Price: $/CY: _____

UNIT PRICE # 3 – Import Engineered Fill: Unit price shall include importing and compacting #73 Aggregate.

Unit Price: $/CY: _____

UNIT PRICE # 4 – Import Engineered Fill: Unit price shall include importing and compacting #53 Aggregate.

Unit Price: $/CY: _____

UNIT PRICE # 5 – Import Engineered Fill: Unit price shall include importing and compacting #2 Aggregate.

Unit Price: $/CY: _____

UNIT PRICE # 6 – Import Engineered Fill: Unit price shall include importing and compacting #1 Aggregate.

Unit Price: $/CY: _____

UNIT PRICE # 7 – Geogrid: Unit price shall include providing and installing BX 1300 Geogrid in $/SY price – based on minimum 50 SY area.

Unit Price: $/CY: _____

UNIT PRICE # 8 – Small Quantity Asphalt Repair: Unit price shall include place & compact stone aggregate + light duty pavement section – based on minimum 15 SY area.

Unit Price: $/CY: _____

END OF SECTION 01 22 00

01 23 00 - ALTERNATES

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes administrative and procedural requirements for alternates.

1.2 DEFINITIONS

A. Alternate: An amount proposed by bidders and stated on Bid Form for certain work defined in Bidding Requirements that may be added to or deducted from Base Bid amount if Owner decides to accept a corresponding change either in quantity of construction to be completed or in products, materials, equipment, systems, or installation methods described in Contract Documents.
   1. The cost or credit for each alternate is net addition to or deduction from Contract Sum to incorporate alternate into Work. No other adjustments are made to Contract Sum.
   2. Alternates described in this Section are part of Work only if enumerated in Agreement.

1.3 PROCEDURES

A. Coordination: Modify or adjust affected adjacent work as necessary to completely integrate work of alternate into Project.
   1. Include as part of each alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether or not indicated as part of alternate.

B. Notification: Immediately following award of Contract, notify each entity involved, in writing, of status of each alternate. Indicate if alternates have been accepted, rejected, or deferred for later consideration. Include a complete description of negotiated modifications to alternates.

C. Execute accepted alternates under same conditions as other work of Contract.

D. Schedule: A Schedule of Alternates is included at end of this Section. Specification Sections referenced in schedule contain requirements for materials necessary to achieve work described under each alternate.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 SCHEDULE OF ALTERNATES

A. Alternate No. 1: State the costs to provide a payment and performance bond for this bid package.

B. Alternate No. 2: State the costs to delete temperature controls from your scope of work.

C. Alternate No. 3: State the costs to add building information technology (BIM) to bp 05A, BP 21a, BP 23a and BP 26a.

END OF SECTION 01 23 00

SECTION 01 25 00 - SUBSTITUTION PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section includes administrative and procedural requirements for substitutions.

B. Related Requirements:

1. Section 01 60 00 "Products, Materials, and Equipment" for requirements for submitting comparable product submittals for products by listed manufacturers.

1.3 DEFINITIONS

A. Substitutions: Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents.

1. Substitutions for Cause: Changes proposed by Contractor that are required due to changed Project conditions, such as unavailability of product, regulatory changes, or unavailability of required warranty terms.
2. Substitutions for Convenience: Changes proposed by Contractor or Owner that are not required to meet other Project requirements but may offer advantage to Contractor or Owner.

1.4 ACTION SUBMITTALS

A. Substitution Requests: Submit documentation identifying product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles at least ten (10) days prior to bid due date.

1. Substitution Request Form: Use form that is Use form that is provided herein.
2. Documentation: Show compliance with requirements for substitutions and the following, as applicable:

a. Statement indicating why specified product or fabrication or installation method cannot be provided, if applicable.
b. Coordination of information, including a list of changes or revisions needed to other parts of the Work and to construction performed by Owner and separate contractors that will be necessary to accommodate proposed substitution.
c. Detailed comparison of significant qualities of proposed substitutions with those of the Work specified. Include annotated copy of applicable Specification Section. Significant qualities may include attributes, such as performance, weight, size, durability, visual effect, sustainable design characteristics, warranties, and specific features and requirements indicated. Indicate deviations, if any, from the Work specified.
d. Product Data, including drawings and descriptions of products and fabrication and installation procedures.

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e. Samples, where applicable or requested.
f. Certificates and qualification data, where applicable or requested.
g. List of similar installations for completed projects, with project names and addresses as well as names and addresses of architects and owners.
h. Material test reports from a qualified testing agency, indicating and interpreting test results for compliance with requirements indicated.
i. Detailed comparison of Contractor's construction schedule using proposed substitutions with products specified for the Work, including effect on the overall Contract Time. If specified product or method of construction cannot be provided within the Contract Time, include letter from manufacturer, on manufacturer's letterhead, stating date of receipt of purchase order, lack of availability, or delays in delivery.
j. Cost information, including a proposal of change, if any, in the Contract Sum.
k. Contractor's certification that proposed substitution complies with requirements in the Contract Documents, except as indicated in substitution request, is compatible with related materials and is appropriate for applications indicated.
l. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.

3. Architect's Action: If necessary, Architect will request additional information or documentation for evaluation within seven (7) days of receipt of a request for substitution. Architect will notify Contractor of acceptance or rejection of proposed substitution within (7) seven days of receipt of request,

a. Forms of Acceptance: Change Order, Construction Change Directive, or Architect's Supplemental Instructions for minor changes in the Work.
b. Use product specified if Architect does not issue a decision on use of a proposed substitution within time allocated.

1.5 QUALITY ASSURANCE

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

1.6 PROCEDURES

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

1.7 SUBSTITUTIONS

A. Substitutions for Cause: Submit requests for substitution immediately on discovery of need for change, but not later than 15 days prior to time required for preparation and review of related submittals.

1. Conditions: Architect will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Architect will return requests without action, except to record noncompliance with these requirements:

a. Requested substitution is consistent with the Contract Documents and will produce indicated results.
b. Substitution request is fully documented and properly submitted.
c. Requested substitution will not adversely affect Contractor's construction schedule.
d. Requested substitution has received necessary approvals of authorities having jurisdiction.

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e. Requested substitution is compatible with other portions of the Work.
f. Requested substitution has been coordinated with other portions of the Work.
g. Requested substitution provides specified warranty.
h. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.

B. Substitutions for Convenience: Not allowed.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

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SECTION 01 25 13 - SUBSTITUTION REQUEST FORM

SUBSTITUTION REQUEST FORM

Request for product substitution shall be submitted to the CMc, who then will forward to the Architect, no later than ten (10) days prior to bid due date. Requests received after this time will not be considered.

Project: Date:

We hereby submit, under transmittal letter of _____, for your review, request for Product Substitution of the _____ in lieu of specified material for the above project.

Section Article Specified Material

Attached is complete technical data of the Product Substitution Request, highlighted or underlined for easy reading, including laboratory test, as necessary, in duplicate.
Included is complete information on changes to the Construction Documents required by the proposed Product Substitution Request for its proper installation.

1.1 The Contractor, under whose transmittal this information is sent, has reviewed the Product Substitution Request and agrees it is applicable to this project in the location described and agrees to warrant/guarantee the use of the Product Substitution in the same manner he would the Specified Product.

_____Yes _____No If not, Explain _____

1.2 Does the Product Substitution Request affect dimensions shown on the Drawings in ANY way? If so, how?

1.3 Does the undersigned have the approval of the Manufacturer/Supplier to pay for any changes to the building design, including engineering and detailing jousts, caused by the requested Product Substitution? If so, to what extent?

1.4 What effect does the Product Substitution acceptance have on other trades?

None _____ Don't Know _____ As follows _____

1.5 Differences between proposed Product Substitution and the Specified Product? Be Specific. (ASTM No., Size, Gage, Material, Color Availability, Construction, Etc.). Use reverse side as required.

1.6 Manufacturer's guarantees and warranties of the Product Substitution and the Specified Item are:

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_____Same _____ Different (Explain) _____

1.7 What is the cost differential of the Product Substitution in comparison to the Specified Product?

_____Same _____ Less Expensive by $_____

More Expensive by $_____

Criteria For Submission:

1. Must be submitted no later than 10 days prior to bid due date, completely filled out correctly.
2. Must be sent with bidders' (general contractors) letterhead expressing desire to use.

   A. Must be scanned and emailed directly to the Architect (no faxes accepted), with return email address.

The undersigned (Contractor) states that the function, appearance, and quality of the Product Substitution are equivalent or superior to the Specified Item. In addition, the Contractor assumes all responsibility for any impact and/or delay the review and evaluation of the alternate product may cause. The approval of the Product in no way relieves the Contractor of responsibility to conform to the requirements of the Contract documents.

Approved substitutions will be listed in the Addenda. Approved by any other manner will not be acceptable.

Submitted By: For Use By Architect:

_____ _____ Received Too Late
Signature

_____ Not Accepted

_____ _____ Approved As Noted
Firm

_____ For Bidding Only, Final Approval Subject to Submittal Data in Accordance Requirements of Specifications.

Date:_____By: _____

END OF SECTION

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SECTION 01 31 13 - PROJECT COORDINATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. This Section specifies administrative and supervisory requirements necessary for Project coordination including, but not necessarily limited to:

1. Coordination.
2. Administrative and supervisory personnel.
3. General installation provisions.
4. Cleaning and protection.

B. Progress meetings, coordination meetings and pre-installation conferences are included in Section 01 31 19, Project Meetings.

C. Requirements for the Construction Manager's Construction Schedule are included in Section 01 33 00, Submittals.

1.3 COORDINATION

A. Coordination: Constuction Manager will coordinate construction activities included under all Sections of these Specifications to assure efficient and orderly installation of each part of the Work. Coordinate construction operations included under different Sections of the Specifications that are dependent upon each other for proper installation, connection, and operation.

1. Where installation of one part of the Work is dependent on installation of other components, either before or after its own installation, schedule construction activities in the sequence required to obtain the best results.
2. Where availability of space is limited, coordinate installation of different components to assure maximum accessibility for required maintenance, service and repair.
3. Make adequate provisions to accommodate items scheduled for later installation.

B. Where necessary, Construction Manager will prepare memoranda for distribution to each party involved outlining special procedures required for coordination. Include such items as required notices, reports, and attendance at meetings.

C. Administrative Procedures: Construction Manager will coordinate scheduling and timing of required administrative procedures with other construction activities to avoid conflicts and ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:

1. Preparation of schedules.
2. Installation and removal of temporary facilities.
3. Delivery and processing of submittals.
4. Progress meetings.
5. Project Close-out activities.

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D. Conservation: Construction Manager will coordinate construction activities to ensure that operations are carried out with consideration given to conservation of energy, water, and materials.

1.4 SUBMITTALS

A. Coordination Drawings: Each Contractor or the Construction Manager will prepare and submit coordination Drawings where close and careful coordination is required for installation of products and materials fabricated off-site by separate entities, and where limited space availability necessitates maximum utilization of space for efficient installation of different components, and as may be directed or requested by the Architect.

1. Show the interrelationship of components shown on separate Shop Drawings.
2. Indicate required installation sequences.
3. Comply with requirements contained in Section 01 33 00, Submittals.
4. Coordination Drawings are to be submitted and are required for the following items:

a. All above ceiling construction including HVAC, FP, Plumbing and Electrical Work.
b. All below-slab construction including Plumbing, Electrical and Security Electronics.
c. Refer to Section 01 31 19 project Meetings for additional requirements.

B. Staff Names: Within 15 days of Notice to Proceed or signing of Agreement, submit a list of the Contractor's principal staff assignments, including the Superintendent and other personnel in attendance at the site; identify individuals, their duties and responsibilities; list their addresses and telephone numbers.

PRODUCTS (Not Applicable)

PART 2 - EXECUTION

2.1 GENERAL INSTALLATION PROVISIONS

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

B. Manufacturer's Instructions: Comply with manufacturer's installation instructions and recommendations, to the extent that those instructions and recommendations are more explicit or stringent than requirements contained in Contract Documents.

C. Inspect materials or equipment immediately upon delivery and again prior to installation. Reject damaged and defective items.

D. Provide attachment and connection devices and methods necessary for securing Work. Secure Work true to line and level. Allow for expansion and building movement.

E. Visual Effects: Provide uniform joint widths in exposed Work. Arrange joints in exposed Work to obtain the best visual effect. Refer questionable choices to the Architect for final decision.

F. Recheck measurements and dimensions, before starting each installation.

G. Install each component during weather conditions and Project status that will ensure the best possible results. Isolate each part of the completed construction from incompatible material as necessary to prevent deterioration.

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

I. Mounting Heights: Where mounting heights are not indicated, install individual components at standard mounting heights recognized within the industry for the particular application indicated. Refer questionable mounting height decisions to the Architect for final decision.

2.2 CLEANING AND PROTECTION

A. During handling and installation, clean and protect construction in progress and adjoining materials in place. Apply protective covering where required to ensure protection from damage or deterioration before or at Substantial Completion.

B. Clean and maintain completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.

C. Limiting Exposures: Supervise construction activities to ensure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period. Where applicable, such exposures include, but are not limited to, the following:

1. Excessive static or dynamic loading.
2. Excessive internal or external pressures.
3. Excessively high or low temperatures.
4. Thermal shock.
5. Excessively high or low humidity.
6. Air contamination or pollution.
7. Water or ice.
8. Solvents.
9. Chemicals.
10. Light.
11. Radiation.
12. Puncture.
13. Abrasion.
14. Heavy traffic.
15. Soiling, staining and corrosion.
16. Bacteria.
17. Rodent and insect infestation.
18. Combustion.
19. Electrical current.
20. High speed operation,
21. Improper lubrication,
22. Unusual wear or other misuse.
23. Contact between incompatible materials.
24. Destructive testing.
25. Misalignment.
26. Excessive weathering.
27. Unprotected storage.
28. Improper shipping or handling.
29. Theft.
30. Vandalism.
31. Mold.
32. Mildew.

D. Refer to Section 01 74 13 for additional construction cleaning requirements.

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END OF SECTION

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SECTION 01 31 19 - PROJECT MEETINGS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and General Provisions of the Contract, including General and Supplementary Conditions and other Division-1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section specifies administrative and procedural requirements for project meetings including but not limited to:

1. Pre-Construction Meeting
2. Pre-Installation Meetings
3. Coordination Meetings.
4. Progress Meetings.

B. Construction schedules are specified in Section 01 33 00 Submittals.

1.3 PRE-CONSTRUCTION MEETING

A. The Construction Manager will schedule a pre-construction meeting and organizational meeting at the Project site or other designated location no later than 15 days after execution of the Agreement and prior to commencement of construction activities. Conduct the meeting to review responsibilities and personnel assignments.

B. Attendees: The Owner, Architect and their consultants, the Contractor and its superintendent, subcontractors, manufacturers, suppliers and other concerned parties shall each be represented at the meeting by persons familiar with and authorized to conclude matters relating to the Work.

C. Agenda: Discuss items of significance that could affect progress including such topics as:

1. Tentative construction schedule.
2. Critical Work sequencing.
3. Designation of responsible personnel.
4. Procedures for processing field decisions and Change Orders.
5. Procedures for processing Applications for Payment.
6. Distribution of Contract Documents.
7. Submittal of Shop Drawings, Product Data and Samples.
8. Preparation of record documents.
9. Use of the premises.
10. Owner's requirements.

11. Office, Work and storage areas.
12. Equipment deliveries and priorities.
13. Safety procedures.
14. First aid.
15. Security.
16. Housekeeping.
17. Working hours.
18. Review Site Map of work areas, storage, parking, etc…

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1.4 PRE-INSTALLATION MEETINGS

A. The Construction Manager will conduct a pre-installation meeting at the site before each construction activity that requires coordination with other construction or as specified in the technical specifications herein. The Installer and representatives of manufacturers and fabricators involved in or affected by the installation, and its coordination or integration with other materials and installations that have preceded or will follow, shall attend the meeting. Advise the Architect of scheduled meeting dates.

1. Review the progress of other construction activities and preparations for the particular activity under consideration at each pre-installation meeting, including requirements for:

a. Contract Documents.
b. Options.
c. Related Change Orders.
d. Purchases
e. Deliveries.
f. Shop Drawings, Product Data and quality control Samples.
g. Possible conflicts.
h. Compatibility problems.
i. Time schedules.
j. Weather limitations.
k. Manufacturer's recommendations.
l. Compatibility of materials.
m. Acceptability of substrates.
n. Temporary facilities.
o. Space and access limitations.
p. Governing regulations.
q. Safety.
r. Inspection and testing requirements.
s. Required performance results.
t. Recording requirements.
u. Protection.

B. Record significant discussions and agreements and disagreements of each meeting, along with the approved schedule. Distribute the record of the meeting to everyone concerned, promptly, including the Owner and Architect.

C. Do not proceed if the meeting cannot be successfully concluded. Initiate whatever actions are necessary to resolve impediments to performance of Work and reconvene the meeting at the earliest feasible date.

D. Preinstallation Meetings or conferences are required for the following Work as specified herein:

1. 03 30 00 - Cast-In-Place Concrete
2. 07 26 10 - Underslab Vapor Retarder
3. 07 27 29 - Air Barrier Coatings
4. 07 54 00 - Full Adhered PVC Sheet Roofing
5. 07 92 00 - Joint Sealants
6. 09 67 00 - Resinous Floor Flooring
7. 09 68 13 - Tile Carpeting
8. 09 80 00 - Acoustical Wall Treatment.
9. 09 91 00 - Painting
10. 09 50 00 - Integrated Ceiling Assemblies
11. 09 51 13 - Acoustical Panel Ceilings
12. 09 64 66 - Wood Athletic Flooring
13. 11 66 23 - Gymnasium Equipment
14. Refer to Divisions 21, 22, 23, 26, 27, 28, 31, 32, and 33 for pre-installation meeting requirements.

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1.5 COORDINATION MEETINGS

A. The Construction Manager shall conduct Project coordination meetings at regularly scheduled times convenient for all parties involved. Project coordination meetings are in addition to specific meetings held for other purposes, such as regular progress meetings and special pre-installation meetings. Coordination Meetings will be as required by the Construction Manager or as requested by the Architect , or as specified.

B. Request representation at each meeting by every party currently involved in coordination or planning for the construction activities involved.

C. Record meeting results and distribute copies to everyone in attendance and to others affected by decisions or actions resulting from each meeting.

D. Coordination Meetings are specifically required for the following:

1. All above ceiling construction including HVAC, FP, Plumbing and Electrical Work.
2. All below-slab construction including Plumbing, Electrical and Security Electronics.
3. 09 51 13 - Acoustical Panel Ceilings
4. Refer to Divisions 21, 22, 23, 26, 27, 28, 31, 32, and 33 for coordination meeting requirements.

1.6 PROGRESS MEETINGS

A. The Construction Manager shall conduct progress meetings at the Project site at regularly scheduled intervals. Notify the Owner and Architect of scheduled meeting dates. Coordinate dates of meetings with preparation of the payment request. Progress Meetings will be as required by the Construction Manager or as requested by the Architect.

B. Attendees: In addition to representatives of the Owner and Architect, each Contractor, subcontractor, supplier or other entity concerned with current progress or involved in planning, coordination or performance of future activities shall be represented at these meetings by persons familiar with the Project and authorized to conclude matters relating to progress

C. Agenda: Review and correct or approve minutes of the previous progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to the current status of the Project.

1. Contractor's Construction Schedule: Review progress since the last meeting. Determine where each activity is in relation to the Contractor's Construction Schedule, whether on time or ahead or behind schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.
2. Review the present and future needs of each entity present, including such items as:

   a. Interface requirements.
   b. Time.
   c. Sequences.
   d. Deliveries.
   e. Off-site fabrication problems.
   f. Access.
   g. Site utilization.
   h. Temporary facilities and services.
   i. Hours of Work.
   j. Hazards and risks.
   k. Housekeeping.

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l. Quality and Work standards.
m. Change Orders.
n. Documentation of information for payment requests.

D. Reporting: No later than 3 days after each progress meeting date, the General Prime Contractor shall distribute copies of minutes of the meeting minutes to each party present and to other parties who should have been present. Include a brief summary, in narrative form, of progress since the previous meeting and report.

1. Schedule Updating: Revise the construction schedule after each progress meeting where revisions to the schedule have been made or recognized. Issue the revised schedule concurrently with the report of each meeting.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION

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SECTION 01 33 00 - SUBMITTALS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. The Work of this Section shall be included as a part of the Contract Documents on this Project.

B. Shop drawings and submittals are not part of the Contract Documents.

1.2 SUBMITTAL PROCEDURES

A. General Prime Contractor shall utilize Web-Based Project Software.

B. Submittals, including those specified herein shall be submitted directly to the Architect for his review. General Prime Contractor shall forward required submittals to the Architect for review.

1. **Construction Manager shall submit shop drawings in electronic format.** Shop drawings or data submitted electronically to be in Acrobat Reader PDF format. Coordinate with Architect prior to submitting. ALL submittals shall be submitted in pdf format unless requested otherwise.

   a. Construction Manager shall utilize Web-Based Project Software with tracking capabilities.

2. MSDS and SDS sheets are not submittals. The Architect is not responsible for reviewing MSDS or SDS sheets and their chemical information for products. Do not submit these items. The Architect will reject all submittals and product data with the MSDS or SDS sheets attached to the submittals. Refer to Article 1.7 herein for directions about MSDS and SDS sheets.

C. Contractor shall provide submittals in accordance with the requirements of this Section and as specified in the individual technical specification sections.

D. Where submission of shop drawings, or other items are required from suppliers, it shall be the responsibility of the Construction Manager/Contractor to see that the submittal items required are complete and properly submitted, and corrected and resubmitted at the time and in the order required so as not to delay the progress of the Work.

1. SUBMISSION OF SUBMITTALS WITHOUT THE REQUIRED INFORMATION WILL BE REJECTED AND RETURNED.

E. The each Contractor shall check shop drawings, samples, and other submittals and submit them to the Construction Manager with a letter of transmittal giving approval, comments, and suggestions. Each transmittal shall include the following information:

1. Date Submitted.
2. Project title and number.
3. General Prime Contractor's name and address.
4. **Identification by Specification Section and quantity submitted for each submittal including name of manufacturer, and supplier.**
5. Notification of deviations from the Contract Documents for each submittal. (if any, and reason explaining why)
6. Contractor's written approval marked on each submittal.

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F. The Contractor shall prepare, review, and stamp with his approval and submit, with reasonable promptness or within the specified time periods and in orderly sequence so as to cause delay in the Work or in the Work of another Contractor, submittals required by these Contract Documents or subsequently required by modifications.

1. If the product is not as specified or approved by Addenda, it will be rejected by the Architect. General Prime Contractor shall not make submittals if the product manufacturer is not specified or listed in the Addenda. This will delay the submittal process and the General Prime Contractor shall assume full responsibility for any delays caused by unapproved manufacturer submittals.

G. The Architect shall review and take action on submittals with reasonable promptness, so as to cause no delay in the progress. A reasonable period of time for review of and action taken on submittals shall be as specified herein, but in no case shall it be more than 10 calendar days from the time it is received by the Architect until the time the submittal is marked and forwarded or returned.

H. The same submittal will only be reviewed a maximum of two (2) times. If the same submittal is not correct within the two (2) submittal limit for the same item, the Contractor will be charged for the additional reviews required. The Architect's additional time will be issued by deduct Change Order.

1.3 SUBMITTAL SCHEDULE

A. The Construction Manager shall submit a Submittal Schedule to the Architect no later than ten (10) business days after Notice to Proceed or signing of the Agreement. No payment applications will be processed until the Architect is in receipt of the Submittal Schedule.

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

1. Coordinate submittal schedule with list of subcontracts, the schedule of values, and Contractor's construction schedule.
2. Initial Submittal Schedule: Submit concurrently with startup construction schedule. Include submittals required during the first 60 days of construction. List those submittals required to maintain orderly progress of the Work and those required early because of long lead time for manufacture or fabrication.
3. Final Submittal Schedule: Submit concurrently with the first complete submittal of Contractor's construction schedule.

   a. Submit revised submittal schedule as required to reflect changes in current status and timing for submittals.

4. Format: Arrange the following information in a tabular format:

   a. Scheduled date for first submittal.
   b. Specification Section number and title.
   c. Submittal Category: Action; informational.
   d. Name of subcontractor.
   e. Description of the Work covered.
   f. Scheduled date for Architect's and Construction Manager's final release or approval.

C. Submittal Information: Include the following information in each submittal:

1. Project name.
2. Date.

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

D. Options: Identify options requiring selection by Architect.

E. Deviations and Additional Information: On each submittal, clearly indicate deviations from requirements in the Contract Documents, including minor variations and limitations; include relevant additional information and revisions, other than those requested by Architect[and Construction Manager] on previous submittals. Indicate by highlighting on each submittal or noting on attached separate sheet.

F. Electronic Submittals: Prepare submittals as PDF package, incorporating complete information into each PDF file. Name PDF file with submittal number.

G. ALL submittals shall utilize web-based Project Software: Prepare submittals as PDF files or other format indicated by Project management software.

1.4 SUBMITTAL PEOCEDURES

A. Prepare and submit submittals required by individual Specification Sections. Types of submittals are indicated in individual Specification Sections.

1. Web-Based Project Management Software: Prepare submittals in PDF form, and upload to web-based Project management software website. Enter required data in web-based software site to fully identify submittal.
2. Software shall have tracking capability.

B. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.

1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
2. Submit all submittal items required for each Specification Section concurrently unless partial submittals for portions of the Work are indicated on approved submittal schedule.
3. Submit action submittals and informational submittals required by the same Specification Section all included in one (1) submittal package as required by each specification section.
4. Coordinate transmittal of submittals for related parts of the Work specified in different Sections, so processing will not be delayed because of need to review submittals concurrently for coordination.

    a. Architect and General Prime Contractor reserve the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.

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C. Processing Time: Allow time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Architect's receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.

1. Initial Review: Allow ten (10) business days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Architect or General Prime Contractor will advise contractor when a submittal being processed must be delayed for coordination.
2. Intermediate Review: If intermediate submittal is necessary, process it in same manner as initial submittal.
3. Resubmittal Review: Allow ten (1) business days for review of each resubmittal.
4. Sequential Review: Where sequential review of submittals by Architect, Architect's consultants, Owner, or other parties is indicated, allow fifteen (15) business days for initial review of each submittal.

D. Resubmittals: Make resubmittals in same form and number of copies as initial submittal. Submittals will only be reviewed a maximum of two (2) times.

1. Note date and content of previous submittal.
2. Note date and content of revision in label or title block, and clearly indicate extent of revision.
3. Resubmit submittals until they are marked with approval notation from Architect's and General Prime Contractors action stamp.

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

F. Use for Construction: Retain complete copies of submittals on Project site. Use only final action submittals that are marked with approval notation from Architect's action stamp.

1.5 ARCHITECT'S AND CONSTRUCTION MANAGER'S REVIEW

A. Submittals: Architect and Construction Manager will review each submittal, indicate corrections or revisions required, and return.

1. All submittals shall be by Web-Based Project Management Software: Architect will indicate, on Project management software website, the appropriate action.

B. Partial submittals prepared for a portion of the Work will be reviewed when use of partial submittals has received prior approval from Architect.

C. Incomplete submittals are unacceptable, will be considered nonresponsive, and will be returned for resubmittal without review.

D. Architect and Construction Manager will return without review submittals received from sources other than Contractor.

E. Submittals not required by the Contract Documents will be returned by Architect without action.

1.6 REQUIRED SUBMITTALS

A. The Contractor shall be aware of the required dates that shop drawings are to be submitted for approval and the critical date for delivery. Dates submitted for shop drawings and samples shall be realistic and be coordinated with the Progress Schedule for critical dates that affect the progress of construction.

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B. Construction Schedules

1. Construction Schedule and a Submittal Schedule shall be submitted to the Architect at least 10 calendar days prior to start of Work.

C. Schedule of Values

1. Construction Manager shall prepare and submit to the Construction Manager a Schedule of Values for approval within 5 days after notice is given to proceed with Work. The Schedule of Values shall consist of a complete breakdown of the Prime Contractor's contract sum showing the various items of the Work, divided so as to facilitate the approval of payments to the General Prime Contractor for Work completed. The Schedule of Values shall be prepared on AIA Document G703, Continuation Sheet, showing the breakdown of items of Work and supported by such data to substantiate its correctness as the Architect may require.
2. Schedule of Values shall be coordinated with the Construction Schedules such that the percentages of Work completed closely relates to the values for the Work shown on the request for payments. At the beginning of the Project, each General Prime Contractor shall prepare a schedule of monthly progress payments showing the amount the General Prime Contractor may require for the Work proposed to be completed. The purpose of this schedule is to allow the Owner to determine what amounts of funds he will be required to have available each month during the progress of construction for progress payments.

D. Project Use Site Plan

1. The Construction Manager shall prepare a proposed project use of the site plan.
2. Contractors shall confine operations at the site to areas within the areas indicated and as approved on the use of the site plan, and as permitted by law, ordinances, and permits. Site shall not be unreasonably encumbered with materials, products, or construction equipment.
3. Submit Project use site plan to the Architect within 5 days after Notice to Proceed OR 10 days prior to occupation of site.

E. Shop Drawings and Product Data

1. Shop drawings are drawings, diagrams illustrations, schedules, performance charts, brochures, and other data which are prepared by the Contractor, manufacturer, supplier, or distributor to illustrate some portion of the Work.

    a. Advertising brochures will not be accepted as shop drawings.
    b. Shop drawings shall repeat the identification shown on the Contract Drawings.

2. Product data are illustrations, standard schedules, performance charts, instructions, brochures, diagrams, and other information furnished by the General Prime Contractor to illustrate a material, product, or system for some portion of the Work.

    a. Clearly mark each copy to identify pertinent materials.
    b. Show dimensions and clearance required.
    c. Show performance and characteristics and capacities.
    d. Note variances from the Contract Documents including manufacturer's recommended changes to sequencing and to piping and control diagrams.

3. Preparation of Submittals: Provide permanent marking on each submittal to identify project, date, General Prime Contractor, submittal name, and similar information to distinguish it from other submittals. Show General Prime Contractor's executed review and approval marking and provide space for Architect's "Action" marking. Package each submittal appropriately for transmittal and handling. Submittals which are received from sources other than through the General Prime Contractor will be returned "without action", which does not mean approval.

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4. By approving and submitting shop drawings, the Contractor thereby represents that he has determined and verified field measurements, field construction criteria, materials, catalog numbers, and similar data, and that he has checked and coordinated each shop drawing with the requirements of the Work and of the Contract Documents prior to submitting to the Architect.
5. The Contractor shall make corrections required by the Architect and shall resubmit the required number of corrected copies of shop drawings until approved. The Contractor shall direct specific attention in writing or on resubmitted shop drawings to revisions other than the corrections requested by the Architect on previous submissions.
6. The Architect will review shop drawings with the information given in the Contract Documents.
7. The Architect's review of shop drawings shall not relieve the Contractor of responsibility for any deviation from the requirements or the Contract Documents unless the Contractor has informed the Architect in writing of such deviation at the time of submission and the Architect has given written approval to the specific deviation, nor shall the Architect's action relieve the Contractor from responsibility for errors or omissions in the shop drawings.
8. Notations and remarks added to shop drawings by the Architect are to insure compliance to Drawings and Specifications and do not imply a requested or approved change to contract cost.
9. Should deviations, discrepancies, or conflicts between shop and contract drawings and Specifications be discovered, either prior to or after review, Contract Documents shall control and be followed.
10. Shop drawings will be marked as follows: General Prime Contractor shall take the following action for each respective marking:

    a. "REVIEWED AND RELEASED" - Copies will be distributed as indicated under above schedule.
    b. "REVIEWED AND RELEASED WITH CORRECTIONS" - General Prime Contractor may proceed with fabrication, taking into account the necessary corrections. Corrected shop drawings shall be resubmitted before fabrication of this Work is completed.
    c. "REJECTED" - Not enough information has been sent. General Prime Contractor will be required to resubmit shop drawings in their entirety.
    d. "REVISE AND RESUBMIT" - General Prime Contractor will be required to resubmit shop drawings in their entirety. No fabrication or installation shall be started until shop drawings so marked have been completely revised, resubmitted, and marked by Architect according to preceding Paragraphs 1. or 2.
    e. "REFER TO NOTES BELOW" - Refer to the notes below on this Shop Drawing Review stamp for any special instructions from the Architect.

F. The work shall be furnished and installed in accordance with the Drawings, Specifications and as additionally required by the manufacturer's instructions, and where a conflict occurs between the Drawings or Specifications and the manufacturer's instructions, the Contractor shall request clarification from the Architect prior to commencing the work and shall follow the interpretations given by the Architect. In most cases, manufacturers written installation instructions take precedence over the Project Manual for installation procedures. Obtain clarification from Architect as previously stated herein.

1.7 MATERIAL SAFETY DATA SHEETS

A. In compliance with the OSHA Hazard Communication Standard (1910.1200, 08-24-1987) Contractors are required to have on the site, MSDS (Material Safety Data Sheets) for ALL products classified as hazardous that their firm has knowledge that they will be furnishing, using, or storing on the jobsite during the duration of this Project. MSDS sheets are not part of the shop drawing review process.

1. The Contractor at completion of the Work shall provide the Owner with the MSDS sheets for the hazardous products used on the Project site during construction.

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PART 2 - PRODUCTS (NOT USED).

PART 3 - EXECUTION (NOT USED).

END OF SECTION

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SECTION 01 41 19 - PROJECT WORK RULES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and General Provisions of the Contract, including General Conditions, and other Division-1 Specification Sections, apply to Work of this Section and all Sections in the Project Manual whether or not specifically indicated.

1.2 GENERAL

A. Project Work Hours: Work after 5:00 p.m., Saturdays, Sundays and holidays require prior notification to Construction Manager.

B. The Work of this section shall be included as a part of the contract documents of each Contractor.

C. Construction Manager will see that these work rules are enforced, not only among its employees, but also the employees of subcontractors working with it.

D. Submittals

1. Name of Contractor's on-site safety officer.
2. Material Safety Data Sheet (not for review, on site file only. Do not submit MSDS or SDS sheets with the submittals. Refer to Section 01 33 00 for additional information).
3. Contractor safety program (not for review, on site file only) .

PART 2 - WORK RULES

A. Safety (OSHA) rules and the Project Safety Program rules are to be followed at all times. General Contractor shall maintain communication with the Architect at all times. Architect is not responsible for OSHA requirements and means and methods.

B. Work personnel are to be fully clothed at all times.

C. Work personnel shall enter and exit the construction site at designated site access entries.

D. Work personnel are to park in designated areas only. Parking off-site shall be permitted only when on-site parking is not possible. When off-site parking is necessary, local parking regulations must be observed.

E. Unauthorized entrance or use of the Owner's occupied facilities shall be cause for dismissal.

F. **The use of AM/FM radios, or other sound producing devices is strictly prohibited unless approved by the Construction Manager.**

G. Work personnel are to keep the project site clean of personal litter. Any areas used for breaks, or lunch shall be cleaned up immediately after such use.

H. Any work personnel on the Project who is found to be under the influence of drugs or alcohol shall be removed from the Project immediately.

I. No vulgar or inappropriate language or inappropriate harassment is allowed.

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J. Provide daily cleaning of construction and demolition debris.

K. Contractor and subcontractor's employees may be subjected to a background check.

L. The General Prime Contractor and all subcontractors shall have a company drug policy in effect.

PART 3 - EXECUTION (NOT USED)

END OF SECTION

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SECTION 01 45 00 - QUALITY CONTROL AND TESTING LABORATORY SERVICES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and General Provisions of Contract, including General and Supplementary Conditions and other Division-1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Definitions: Quality control services include inspections and tests, and sections related thereto including reports, but do not include contract enforcement activities performed directly by Architect. Quality control services include those inspections and tests and related actions performed by independent agencies and governing actions performed by independent agencies and governing authorities, as well as directly by Contractor.

B. Inspections, tests, and related actions specified in this Section and elsewhere in Contract Documents are not intended to limit contractors quality control procedures which facilitate compliance with requirements of Contract Documents.

C. Requirements for quality control services by Contractor, as requested or to be requested by Architect, Owner, governing authorities, or other authorized entities are not limited by provisions of this Section.

D. Inspections and testing required by laws, ordinances, rules, regulations, or orders of public authorities and General Conditions.

E. Certification of products and mill test reports: Respective Specification Sections.

F. Test, adjust, and balance of equipment.

G. Inspection, sampling, and testing: Soils, asphalt, and concrete.

1.3 CONTRACTOR RESPONSIBILITIES

A. Except where specifically indicated to be provided by another entity as identified, inspections, tests, and similar quality control services including those specified to be performed by independent agency.

1. Engage and pay for the services of an independent agency to perform inspections and tests as specified, and for the specification sections as follows:

   a. 03 30 00 Cast-In-Place Concrete
   b. 04 05 13 Mortar
   c. 04 05 16 Masonry Grout
   d. 04 22 00 Unit Masonry
   e. 05 12 00 Structural Steel Framing
   f. Civil specification section in Divisions 31, 32, 33. Provide testing for all civil items as specified in these Divisions Sections.

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B. Retest Responsibility: Where results of required inspection, test, or similar service are unsatisfactory (do not indicate compliance of related work with requirements of Contract Documents), retests are responsibility of Contractor; except, first retest is responsible party if retest results are satisfactory. Retesting of work revised or replaced by Contractor is Contractor's responsibility, where required tests were performed on original work.

C. Responsibility for Associated Services: Contractor is required to cooperate with independent agencies performing required inspections, tests, and similar services. Provide auxiliary services as reasonably requested, including access to work, the taking of samples or assistance with the taking of samples, delivery of samples to test laboratories, and security and protection for samples and test equipment at project site.

D. Coordination: Contractor and each engaged independent agency performing inspections, tests, and similar services for project are required to coordinate and sequence activities so as to accommodate required services with minimum delay of work and without the need for removal/replacement of work to accommodate inspections and tests. Scheduling of times for inspections, tests, taking of samples, and similar activities is Contractor's responsibility.

E. Sampling and testing is required for the following Sections of Work:

1. Cast-In-Place Concrete: Field quality control of concrete.
2. Cast-In-Place Concrete: Tests for concrete materials and mix design tests.
3. 04 05 13 Mortar
4. 04 05 16 Masonry Grout
5. 04 22 00 Unit Masonry
6. 05 12 00 Structural Steel Framing
7. Civil specification section in Divisions 31, 32, 33. Provide testing for all civil items as specified in these Divisions Sections.

F. Cooperate with laboratory personnel to provide access to Work and to manufacturer's operations.

G. Assist laboratory personnel in obtaining samples at the site.

H. Notify laboratory sufficiently in advance of operations to allow for his assignment of personnel and scheduling of tests.

I. Should the Contractors fail to schedule laboratory services or fail to cancel laboratory services, if the need arises, all additional cost shall be borne by the Contractors.

J. Employ, and pay for, services of a separate, equally qualified independent testing laboratory to perform additional inspections, sampling and testing required when initial tests indicate work does not comply with Contract Documents.

1. Separate laboratory shall be approved by the Owner and the Architect.

1.4 QUALIFICATION OF LABORATORY

A. Shall meet "Recommended Requirements of Independent Laboratory Qualifications," published by American Council of Independent Laboratories. For concrete and steel the laboratory shall comply with the basic requirements of ASTM E 329, "Standards of Recommended Practice for Inspection and Testing Agencies for Concrete and Steel as Used in Construction."

B. Submit copy of report of inspection of facilities made by Materials Reference Laboratory of National Bureau of Standards during most recent tour of inspection; with memorandum of remedies of deficiencies reported by inspection.

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C. Testing equipment shall be calibrated at maximum 12 month intervals by devices of accuracy traceable to either:

1. National Bureau of Standards.
2. Accepted values of natural physical constants.
3. Submit copy of certificate of calibration, made by accredited calibration agency.

D. Submit documentation of specified requirements. Submit 2 copies to the Architect.

1.5 SUBMITTALS

A. Submit electronic copies of test reports directly to the Architect from the approved testing services, with one copy to the Contractor.

1.6 LABORATORY DUTIES, LIMITATIONS OF AUTHORITY

A. Provide qualified personnel promptly on notice.

B. Perform specified inspections, sampling, and testing of materials and methods of construction.

1. Comply with specified standards; ASTM, other recognized authorities and as specified.
2. Ascertain compliance with requirements of Contract Documents.

C. Promptly notify (Construction Manager) *(or)* (Architect) and Contractor of irregularities or deficiencies of Work which are observed during performance of services.

D. Promptly submit 3 copies of reports of inspections and tests to the Architect, including the following information, as applicable:

1. Date issued.
2. Project title and number.
3. Testing laboratory name and address.
4. Name and signature of inspector.
5. Date of inspection or sampling.
6. Record of temperature and weather.
7. Date of test.
8. Identification of product and specification.
9. Location in project.
10. Type of inspection or test.
11. Observations regarding compliance with Contract Documents.

E. Perform additional services as required by Owner on a unit cost, as submitted.

F. Laboratory is not authorized to:

1. Release, revoke, alter, or enlarge on requirements of Contract Documents.
2. Approve or accept portion of Work.
3. Perform duties of the Contractor.

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PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.1 REPAIR AND PROTECTION

A. Upon completion of inspection, testing, sample-taking, and similar services performed on Work, protect work, repair damaged Work and restore substrates and finishes to eliminate deficiencies, including defects in visual qualities of exposed finishes. Except as otherwise indicated, comply with requirements of Section 01 73 29, Cutting and Patching. Protect Work exposed by or for service activities and protect repaired Work. Repair and protection is Contractor's responsibility, regardless or assignment or responsibility for inspection, testing, or similar service. Work disturbed or altered after completion of testing, sample taking and similar service shall be reinspected or retested by the same testing agency with the cost borne by the Contractor.

END OF SECTION

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SECTION 01 60 00 - PRODUCTS, MATERIALS, AND EQUIPMENT

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. The Work of this Section shall be included as a part of the Contract Documents.

1.2 SUMMARY

A. It is the intent of the Specifications and Drawings to accomplish a complete and first-grade installation in which there shall be installed new materials and products of the latest and best design and manufacturer. Workmanship shall be thoroughly first-class and complete, executed by competent and experienced workmen.

B. Equipment, specialties, and similar items shall be checked for compliance and fully approved prior to installation. Contractors are cautioned that work or equipment installed without approval is subject to condemnation, removal, and subsequent replacement with an approved item without extra compensation.

1.3 DEFINITIONS

A. Definitions used in this Article are not intended to change the meaning of other terms used in the Contract Documents, such as "specialties," "systems," "structures," "finishes," "accessories," and similar terms. Such terms and definitions are self-explanatory and have well recognized meanings in the construction industry.

1. Products" are items purchased for incorporation in the Work, whether purchased for the Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.

    a. Named Products" are items identified by manufacturer's product name, including make or model designation, indicated in the manufacturers published product literature that is current at of the date of the Contract Documents.
    b. Foreign Products", as distinguished from "domestic products," are items substantially manufactured (50 percent or more of value) outside of the United States and its possessions; or produced or supplied by entities substantially owned (more than 50 percent) by persons who are not citizens or nor living within the United States and its possessions.

2. Materials" are products that are substantially shaped, cut, worked, mixed, finished, refined or otherwise fabricated, processed, or installed to form a part of the Work.
3. "Equipment" is a product with operational parts, whether motorized or manually operated, that requires service connections such as wiring or piping.

PART 2 - PRODUCTS

2.1 PRODUCT STANDARD AND QUALITY - SUBSTITUTIONS

A. The Contract is based on the materials, equipment, and methods described in the Contract Documents.

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B. Where in the Drawings and Specifications certain products, manufacturer's tradenames, or catalog numbers are given, it is done for the expressed purpose of establishing a basis of design, quality, durability, and efficiency of design in harmony with the work outlined and is not intended for the purpose of limiting competition.

C. The Architect will consider proposals for substitutions of materials, equipment, and methods only when such proposals are accompanied by full and complete technical data and all other information required by the Architect, at least ten (10) days prior to bid receipt, to evaluate the proposed substitution.

1. Architect will not accept substitution requests by email unless all product data, technical information, and all other pertinent product information is attached along with Section 01 25 13 Substitution Request Form. Refer to Section 01 25 00 Substitution Procedures for additional information.

D. Do not substitute materials, equipment, or methods unless such substitution has been specifically approved for this Work by the Architect.

E. "Or equal" or "or equal as approved by the Architect" :

1. Where the phrase "or equal" or "or equal as approved by the Architect" occurs in the Contract Documents, do not assume that material, equipment, or methods will be approved as equal by the Architect unless the item has been specifically approved for this Work by the Architect.
2. The decision of the Architect shall be final.

F. Availability of Specified Items:

1. Verify prior to bidding or supplying and installing that specified items will be available in time for installation during orderly and timely progress of the Work.
2. In the event specified item or items will not be so available, so notify the Architect prior to receipt of bids.
3. Costs of delays because of non-availability of specified items, when such delays could have been avoided by the Contractor, will be back charged as necessary and shall not be borne by the Owner.

G. Where the questions of appearance, artistic effect, or harmony of design are concerned, the Architect reserves the right to refuse approval of substituted products proposed to be substituted for that specified, if in his opinion the item to be substituted is not harmonious to the finished effect and appearance desired, as portrayed in the Drawings and Specifications. The Architect's said refusal to approve, established by this paragraph, is final and not subject to arbitration.

H. Products of other manufacturers will be considered for acceptance provided they equal or exceed the material requirements and functional qualities of the specified product. Requests for Architect's approval and complete technical data for evaluation must be received at least (10) ten days prior to bid due date. Additional approved manufacturers will be issued by Addendum.

1. Architect will not accept substitution requests by email unless all product data, technical information, and all other pertinent product information is attached along with Section 01 25 13 Substitution Request Form. Refer to Section 01 25 00 Substitution Procedures for additional information.

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2.2 MANUFACTURER'S DIRECTIONS

A. Manufactured products shall be applied, installed, connected, erected, used, cleaned and conditioned in accordance with the manufacturer' printed directions, unless herein specified to the contrary. Where manufacturer's printed directions are available and where reference is made to manufacturer's directions in the Specification, the Contractor shall submit 2 copies of such directions to the Architect prior to the beginning of Work covered thereby.

B. Where specific installation instructions are not part of these Specifications and Drawings, equipment shall be installed in strict accordance with instructions from the respective manufacturers. Where installation instructions included in these Specifications or Drawings are at a variance with instructions furnished by the equipment manufacturer, the Contractor shall make written request for clarification from the Architect.

2.3 WARRANTIES

A. Specific warranties or bonds called for in the Contract Documents, in addition to that falling under the general warranty as set forth in General Conditions, shall be furnished in accordance with the requirements of the Specifications.

B. Where service on products is required under this Article, it shall be promptly provided when notified by the Owner and no additional charge shall be made, unless it can be established that the defect or malfunctioning was caused by abuse or accidental damage not to be expected under conditions of ordinary wear and tear.

C. In the event movement in the adjoining structure or components causes malfunctioning, the Contractor responsible for the original installation of the adjoining structure or components shall provide such repair, replacement, or correction necessary to provide for proper functioning to bring the equipment back into the same operating condition as approved at the completion of the building.

D. The manufacturer and supplier expressly warrants that each item of equipment furnished by him and installed in this Project is suitable for the application shown and specified in the Contract documents and includes features, accessories, and performing characteristics listed in the manufacturer's catalog in force on the date bids are requested for the Work. This warranty is intended as an assurance by the manufacturer that his equipment is not being misapplied and is fit and sufficient for the service intended. This warranty is in addition to and not in limitation of other warranties or remedies required by law or by the Contract Documents. It shall be the responsibility of the Contractor for the particular equipment to obtain this warranty in writing.

E. In case the Contractor fails to do Work so ordered, the Owner may have work done and charge the cost thereof against monies retained as provided for in the Agreement and, is said retained monies is available, the Contractor and his Sureties shall agree to pay to the Owner the cost of such Work.

2.4 MATERIAL DELIVERY AND RESPONSIBILITIES

A. Contractor shall be responsible for materials he orders for delivery to the jobsite. Responsibility includes, but is not limited to, receiving, unloading, storing, protecting, and setting in place; ready for final connections. Design/Builder will coordinate jobsite storage with the Owner.

1. The Owner will not be responsible for deliveries related to the construction or operation of the Contractor. The Owner cannot sign delivery forms for the Contractor.

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B. Contractors shall insure that products are delivered to the Project in accordance with the Construction Schedule of the Project. In determining date of delivery, sufficient time shall be allowed for shop drawings and sample approvals, including the possibility of having to resubmit improperly prepared submittals or products other than those specified and the necessary fabrication or procurement time along with the delivery method and distance involved.

2.5 PROTECTION

A. Contractor shall protect building elements and products when subject to damage. Should workmen or other persons employed or commissioned by one Contractor be responsible for damage, the entire cost of repairing said damage shall be assumed by said individual Contractor. Should damage be done by a person or persons not employed or commissioned by a Contractor, the respective Contractors shall make repairs and charge the cost to the guilty person or persons. The affected Contractors shall be responsible for collecting such charges. If the person or persons responsible for damage cannot be discovered, full and satisfactory repairs shall be made by the respective Contractor, and the cost of Work shall be prorated against Contractor.

B. The respective Contractors shall protect their products prior to installation and final acceptance. Storage shall be dry, clean, and safe. Materials or equipment damaged, deteriorated, rusted or defaced due to improper storage, shall be repaired, refinished, or replaced, as required by the Architect. Products lost through theft or mishandling shall be replaced by the Contractor without cost to the Owner.

2.6 ACCEPTANCE OF EQUIPMENT OR SYSTEMS

A. The Owner will not accept the start of the warranty period on systems or equipment until Substantial Completion is issued to the Contractor for Owner's occupancy of the building. Contractor shall make such provisions as required to extend the manufacturer's warranty from time of initial operation of systems or equipment until Substantial Completion is given in writing.

PART 3 - EXECUTION (NOT USED)

END OF SECTION

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SECTION 01 70 00 - PROJECT CLOSEOUT

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. The Work of this Section shall be included as a part of the Contract Documents to the Contractors on this Project.

B. Refer to the General and Supplementary Conditions of the Contract, for Substantial Completion and final payment.

1.2 SUMMARY

A. Closeout is hereby defined to include general requirements near the end of Contract Time in preparation for final acceptance, final payment, normal termination of contract, occupancy by Owner, and similar actions evidencing completion of the work. Specific requirements for individual parts of the Work are specified in Sections of Divisions 2 through 49. Time of closeout is directly associated to Date of Substantial Completion.

1.3 PREQUISITES TO SUBSTANTIAL COMPLETION

A. Prior to requesting Architect review for Certificate of Substantial Completion, (for either entire Work or portions thereof), complete the following and list known exceptions in request.

1. Advise Owner of pending insurance changeover requirements.
2. Submit specific warranties, workmanship/maintenance bonds, maintenance agreements, agreements, final certifications, and other required closeout documents.
3. Obtain and submit release enabling Owner's full and unrestricted use of the Work and access to services and utilities, including occupancy permits, operating certificates, and other similar required releases.
4. Deliver tools, spare parts, extra stocks of materials, and similar physical items as specified to the Owner. Obtain receipts for deliveries.
5. Take final changeover of locks and transmit keys to Owner and advise Owner's personnel of changeover in security provisions.
6. Complete start-up testing of systems and instruction of Owner's operating/maintenance personnel. Discontinue and remove from project site temporary facilities and service, construction tools and facilities, mock-ups, and other construction elements.
7. Complete final cleaning up requirements as specified in Section 01 74 19.

1.4 PREQUISITES TO FINAL PAYMENTS

A. Prior to requesting Architect final review for certification of final payment, complete the following:

1. Refer to the Supplementary Conditions.
2. Submit final payment request with required closeout attachments.
3. Submit copy of Architect's final punch list of itemized Work to be completed or corrected, stating that each and every item has been completed or otherwise resolved for acceptance.
4. Submit record drawings, maintenance manuals, and similar final record information as specified.
5. Submit certification of code compliance.
6. Submit certification stating that no materials containing asbestos were incorporated into the Work.

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7. Plumbing Contractor shall submit certification stating that no flux or solder used for drinking water piping containing more than 0.2 percent lead, and that no pipe or fittings used for drinking water piping contained no more than 0.8 percent lead.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.1 PUNCH LIST

A. Prior to the Architect's preparation of a Project Punch List, General Prime Contractor shall prepare his own punch list and submit to the Architect for use by the Architect to facilitate completion of the Work.

B. The Contractor's inspection shall be as thorough as possible, in accordance with his aspiration to provide first-class workmanship and maintain good reputation and shall include Work under his Contract, including that of his subcontractors.

C. The Architect shall observe the Work, providing that the Work on the General Prime Contractor's punch list has been completed and prepare the Project Punch List for use by contractors and their subcontractors to expedite proper completion of the Work.

3.2 WARRANTY - CORRECTION OF THE WORK

A. The General Prime Contractor and Architect shall check to see if additional Work by the subcontractor's is needed to make good the warranties. An itemized list will be furnished to the subcontractors for corrective or replacement work with a copy to the Architect.

1. At approximately one month prior to the one year warranty expiration, the Owner, Architect, and a representative of the Contractor shall visit the site and prepare the warranty punch-list.

B. This Work shall be completed immediately by the Contractor(s) after receiving notification.

3.3 PROJECT RECORD DRAWINGS AND PROJECT MANUAL

A. Contractor shall keep current during the progress of the Work, and submit updated Project Record Drawings at the completion of the project, especially for the purpose on this project. Drawings shall incorporate changes made in the Work of the respective trades during the construction period. Such changes shall be indicated at the time they occur for accuracy.

B. Maintain at the job site one copy of Drawings, Project Manual, Addenda, approved shop drawings, change orders, field orders, other Contract modifications, and other approved documents submitted by the Contractor(s), in compliance with various Sections of the Project Manual.

1. All of this information should be in PDF format, clearly identified, in a filing format that is acceptable to the Owner and easily accessible by the Owner and maintenance staff.

C. Each of these Project Record Documents shall be clearly marked "Project Record Copy"; maintained in good condition; available for observation by the Architect; and shall not be used for construction purposes. Mark up the documents to indicate the following:

1. Significant changes and selections made during the construction process;
2. Significant detail not shown in the original Contract Documents including change orders;

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3. The location of underground utilities and appurtenances dimensionally referenced to permanent surface improvements;
4. The location of internal utilities and appurtenances concealed in building structures, referenced to visible and accessible features of the structure;
5. When elements are placed exactly as shown on the Drawings, so indicate; otherwise, indicate changed location.

D. Keep Project Record Documents current. Do not permanently conceal Work until the required information has been recorded.

E. Prior to final payment on the Project, submit to the Architect the Project Record Drawings for changes recorded for the Work of Divisions 02 through 14.

F. Prior to final complete and payment, the Contractors for Mechanical/Plumbing Work and Electrical Work, Divisions 21, 22, 23, 26, 27 and 28, shall update their working drawings with changes made in his Work. Submit PDF of these changed working drawings to the Architect.

1. Each drawing shall be labeled "Project Record Drawing", dated and signed by the Contractor.

G. Prior to final complete and payment, the Contractors for Site Work, Divisions 31, 32 and 33, shall update their working drawings with changes made in their respective Work. Submit one complete set of transparencies and 2 complete sets of prints of these changed working drawings to the Architect.

1. Each drawing shall be labeled "Project Record Drawing", dated and signed by the Contractor.

H. The General Prime Contractor shall certify that the Project Record Drawings show complete and accurate as-built conditions, including without limitation, sizes, kinds of materials, vital piping and valves, conduit locations, and other similar and required items.

I. Contractor(s) shall include as part of the Project Record Drawings, a complete and current Project Manual; indicating changes made relating to the specifications. All requirements for the Project Record Drawings apply to the Project Record Project Manual.

END OF SECTION

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SECTION 01 73 29 - CUTTING AND PATCHING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and General Provisions of Contract, including General and Supplementary Conditions and other Division-1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section specifies administrative and procedural requirements for cutting and patching of new structure as may be required to observe covered up Work.

1.3 SUBMITTALS

A. Cutting and Patching Proposal: Where approval of procedures for cutting and patching is required before proceeding, submit a proposal to the Architect describing procedures well in advance of the time cutting and patching will be performed and request approval to proceed. Include the following information, as applicable, in the proposal:

1. Describe the extent of cutting and patching required and how it is to be performed; indicate why it cannot be avoided.
2. Approval by the Architect to proceed with cutting and patching does not waive the Architect's right to later require complete removal and replacement of a part of the Work found to be unsatisfactory.

1.4 QUALITY ASSURANCE

A. Operational and Safety Limitations: Do not cut and patch operating elements or safety related components in a manner that would result in reducing their capacity to perform as intended, or result in increased maintenance, or decreased operational life or safety.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Use new materials for patching that are as specified in the Project Manual.

PART 3 - EXECUTION

3.1 INSPECTION

A. Before cutting existing surfaces, examine surfaces to be cut and patched and conditions under which cutting and patching is to be performed. Take corrective action before proceeding, if unsafe or unsatisfactory conditions are encountered.

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3.2 PREPARATION

A. Protection: Protect existing construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of the Project that might be exposed during cutting and patching operations.

B. Take all precautions necessary to avoid cutting existing pipe, conduit or ductwork serving the building, but scheduled to be removed or relocated until provisions have been made to bypass them.

3.3 PERFORMANCE

A. General: Employ skilled workmen to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time and complete without delay.

1. Cut existing construction to provide for installation of new components and the subsequent fitting and patching required to restore surfaces to their new and original condition.

B. Cutting: Cut existing construction using methods least likely to damage elements to be retained or adjoining construction. Where possible review proposed procedures with the original installer; comply with the original installer's recommendations.

1. In general, where cutting is required use hand or small power tools designed for sawing or grinding, not hammering and chopping. Cut holes and slots neatly to size required with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.

C. Patching: Patch with new materials as specified in the Project Manual.

3.4 CLEANING

A. Thoroughly clean areas and spaces where cutting and patching is performed or used as access. Remove completely paint, mortar, oils, putty and items of similar nature. Thoroughly clean piping, conduit and similar features before painting or other finishing is applied. Restore damaged pipe covering to its original condition.

END OF SECTION

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SECTION 01 74 13 - CONSTRUCTION CLEANING

PART 1 - GENERAL

1.1 RELATED WORK

A. The Work of this Section shall be included as a part of the Contract Documents of General Contractor and subcontractors of this Project.

1.2 SUMMARY

A. The Construction Manager reserves the right to act on behalf of the Owner pertaining to the clean-up responsibilities that is art of the Contractors and subcontractors Work.

1.3 PURPOSE - DAILY CLEANING

A. The purpose is to define daily cleaning emphasize the responsibility of Contractor and subcontractors to remove their rubbish and debris from the construction site to guard against fire and safety hazards as well as to provide a more efficient construction operation for all contractors. It is the responsibility of the Contractor and each subcontractor for daily cleaning. This requirement will be strictly enforced.

1.4 PURPOSE - ROUTINE CLEANING

A. Each Friday afternoon, and more often if necessary, Contractor and subcontractors shall perform an overall cleanup of the entire site, including a broom cleaning of appropriate surfaces. The trades shall remove their rubbish and debris from the building site to the rubbish collection location promptly upon its accumulation and in no event later than the regular Friday general cleanup.

1.5 RUBBISH CONTAINER

A. The Construction Manager will provide dumpster type rubbish containers with lid, sized adequate for the Project waste, debris, and rubbish for the life of the Project.

B. Dispose of container contents weekly or at more frequent intervals if required by inadequate container capacity.

1.6 SAFETY REQUIREMENTS

A. Hazards Control (By each contractor)

1. Store volatile wastes in covered metal containers, and remove from the premises daily.
2. Prevent accumulation of wastes, which create hazardous conditions.
3. Provide adequate ventilation during use of volatile or noxious substances.

B. Conduct cleaning and disposal operations to comply with local ordinances and anti-pollution laws.

1. Do not burn or bury rubbish and waste materials on project site.
2. Do not dispose of volatile wastes such as mineral spirits, oil, or paint thinner in storm or sanitary drains.

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3. Do not dispose of wastes into streams or waterways.
4. Comply with all environmental regulations and State laws.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Use only cleaning materials recommended by manufacturer of surface to be cleaned.

B. Use cleaning materials only on surface recommended by cleaning material manufacturer.

PART 3 - EXECUTION

3.1 DAILY CLEANING

A. Contractor and subcontractors shall execute daily cleaning to ensure that building, grounds, and public properties are maintained free from accumulations of waste materials and rubbish.

B. Wet down dry materials and rubbish to lay dust and prevent blowing dust.

C. Daily, during progress of work, clean site and public properties and dispose of waste materials, debris, and rubbish in dumpster type rubbish container provided under this Section.

D. Handle materials in a controlled manner with as few handlings as possible; do not drop or throw materials from heights.

E. Schedule cleaning operations so that dust and other contaminants resulting from cleaning process will not fall on wet, newly painted surfaces.

F. Place no new work on dirty surfaces.

3.2 ROUTINE CLEANING

A. Employ experienced workmen for cleaning.

B. Remove dirt, mud, and other foreign materials from sight exposed interior and exterior surfaces.

C. Each Friday, or at more frequent intervals, if work activities justify same, perform the following cleaning. This includes all dirt, dust, and debris not identifiable as part of a Contract. Broom clean floor and paved surfaces; rake clean other surfaces of ground.

D. Maintain adjacent roads free from the accumulation of mud, rocks, rubbish, litter and debris resulting from construction activities.

E. Remove litter, rubbish and debris from chases, whether the chases will be accessible or not.

3.3 Maintain cleaning throughout the life of the ProjectFINAL CLEANING (Each Contractor)

A. Contractor and subcontractors shall perform their respective final clean-up and shall leave the Work of the complete Project in clean, neat condition. The following are examples, but not by way of limitation, of cleaning levels required.

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1. Remove labels which are not required as permanent labels.
2. Clean transparent materials, including mirrors and window/door glass, to a polished condition, removing substances which are noticeable as vision-obscuring materials. Replace broken glass and damaged transparent materials.
3. Clean exposed exterior and interior hard surfaces to a dirt free condition, free of dust, stains, films, and similar noticeable distracting substances. Except as otherwise indicated, avoid disturbance of natural weathering of exterior surfaces. Restore reflective surfaces to original reflective condition.
4. Wipe surfaces of mechanical and electrical equipment clean; remove excess lubrication and other substances.
5. Remove debris and surface dust from limited access spaces including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.
6. Clean concrete floors in non-occupied spaces broom clean.
7. Vacuum clean carpeted surfaces and similar soft surfaces.
8. Clean plumbing fixtures to a sanitary condition, free of stains, including those resulting from water exposure.
9. Clean food service equipment to a condition, free of stains, including those resulting in water exposure.
10. Clean light fixtures and lamps so as to function with full efficiency. Replace all lamps that are burnt out and/or flickering.
11. Clean project site (yard and grounds), including landscape development areas, of litter and foreign substances. Sweep paved areas to a broom clean condition; remove stains, petro-chemical spills, and other foreign deposits. Rake grounds which are neither planted nor paved to a smooth, even textured surface.

END OF SECTION

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SECTION 01 95 00 - INDEMNIFICATION AND RELEASE FOR CAD INFORMATION

Entity requesting Data ("Transferee"):		Transferee Contact Name:	
Project:	WCSC Milford Elementary School	Project Number:	2301106
Client:		Date:	

1. Upon receipt of this signed agreement, electronic copies or access to, certain drawings, specifications, or other documents, CAD data files, and/or building information models (collectively, "Data") shall be provided to the transferee subject to the following conditions of this agreement:

2. It is understood and agreed that the Data prepared pursuant to this agreement, whether in hard copy or machine readable form, are instruments of professional service intended for one time use in the construction of this project. They are and shall remain the property of S2 Architects, LLC dba ELEVATUS Architecture and/or its Consultants. The copyright of such information belongs to the Architect and/or its Consultants, subject to the terms of the Agreement between the Architect and the Owner of the Project.

3. Issuance of this information grants the Contractor/ Construction Manager a limited non-transferable license to make copies of this information for purposes of work in conjunction only with the project identified above. The recipient of this information shall exercise great care to preserve the confidentiality of the content of these files.

4. Transferee may transfer the Data to its contractors, subcontractors, suppliers, and consultants (collectively "Others"), provided Transferee requires the Others to be bound by this agreement as if they were the Transferee In this Agreement. Transferee and Others may use the Data only for the purposes related to the Project.

5. Transferee acknowledges that anomalies and errors may occur when the Data is transferred electronically or used in an incompatible computer environment. Transferee solely accepts the risks associated with, and the responsibility for, any damages to hardware, software, computer systems, or networks related to the Data's transfer or use. The Architect makes no representation that these files can be utilized with any equipment or software other than that available at the Architect's offices. S2 Architects, LLC dba ELEVATUS Architecture and/or its Consultants shall have no responsibility to provide software or training to allow Transferee to use the Data.

6. The information contained in the Data may not constitute a complete set of Construction Documents. The Architect makes no warranty, expressed or implied, as to the completeness of the information transferred.

7. It is understood that the Data does not contain record drawings and therefore do not necessarily reflect as-built conditions.

8. Transferee agrees to indemnify, defend, and hold S2 Architects, LLC dba ELEVATUS Architecture, its officers, directors, shareholders, employees, agents and consultants harmless from and against any and all claims, liabilities, suits, demands, losses, damages, costs, and expenses, including, but not limited to, reasonable attorneys' fees and all legal expenses and fees incurred through appeal, and all interest thereon, accruing to or resulting from any and all persons, firms or any other legal entities on account of any damages or losses to property or persons, including but not limited to, injuries, death or economic losses, arising out of Transferee's or Others' use, reuse, transfer, or modification of the Data, except where a court of forum of competent jurisdiction determines that S2 Architects, LLC dba ELEVATUS Architecture is solely liable for such damages and losses.

9. To the extent the Data includes building information models ("Models"), the parties agree to the following additional terms: (i) The Contract Documents shall be the 2D plans and the specifications

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prepared by the Architect and its consultants. The Models are intended for the purpose of illustrating design intent. While they may be helpful to illustrate conflicts or inconsistencies in the design, the Models may not detect all conflicts or inconsistencies, (ii) Any use of the Models for the purpose of generating quantity take-offs or cost estimates, or for fabrication, will be at the Transferee's sole risk, (iii) As with S2 Architects, LLC dba ELEVATUS Architecture's other services and deliverables, the Models will be prepared using that degree of skill and care exercised by licensed professionals practicing in the same community, under the same or similar circumstances. The Models may contain, or be based upon, data or information provided by others. S2 Architects, LLC dba ELEVATUS Architecture has relied upon such data or information as is consistent with this standard of care, (iv) information contained in the Models will not be construed to dictate construction means or methods, which will remain the contractor's responsibility, and (v) to the extent of any conflict between information contained in, or generated by, the Models and the Contract Documents (drawings and specifications), the latter documents will prevail.

10. This Agreement shall be governed by the law of the location of S2 Architects, LLC dba ELEVATUS Architecture's office that is identified at the top of this Agreement.

11. In any legal proceeding to enforce this Agreement, the prevailing party shall be entitled to recover its reasonable attorney's fees and costs of defense.

12. Unless otherwise explicitly agreed to in writing by the parties, this Agreement shall govern any and all future data transfers to the Transferee by S2 Architects, LLC dba ELEVATUS Architecture.

13. This Agreement is not deemed a sale of a product and S2 Architects, LLC dba ELEVATUS Architecture makes no warranties, expressed or implied, in agreeing to furnish the Data.

14. Transferee agrees to pay the sum of _____, per document requested, to S2 Architects, LLC dba ELEVATUS Architecture as compensation for time and effort to convert and/or transfer the Data.

List of requested Data:	
ELEVATUS Architecture Authorization by:	Date Signed:
Transferee Authorization by:	Date Signed:

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Milford Elementary
100% CD Schedule 3.05.24

ID	Task Name	Duration	Start	Finish
1	**Milford Elementary**	**908 days**	**Tue 3/14/23**	**Mon 10/5/26**
2	**Preconstruction**	**539 days**	**Tue 3/14/23**	**Fri 4/25/25**
3	**SD Drawings/Budget**	**67 days**	**Mon 4/24/23**	**Thu 7/27/23**
9	**DD Drawings/Budget**	**72 days**	**Mon 6/26/23**	**Thu 10/5/23**
15	**CD Drawings/Budget**	**60 days**	**Wed 6/19/24**	**Fri 9/13/24**
16	100% CD Drawings Received	1 day	Wed 6/19/24	Wed 6/19/24
17	Drawing Review	3 days	Thu 6/20/24	Mon 6/24/24
18	Bid Manual Prep	5 days	Mon 6/24/24	Fri 6/28/24
19	Bidding	17 days	Mon 7/1/24	Thu 7/25/24
20	Bids Due / Bid Opening	0 days	Thu 7/25/24	Thu 7/25/24
21	Scrub, Award, Issue LOI's	5 days	Fri 7/26/24	Thu 8/1/24
22	School Board Approval?	0 days	Thu 8/1/24	Thu 8/1/24
23	Submittals Due from Subs	20 days	Fri 8/2/24	Thu 8/29/24
24	Submittal Review/Approval	10 days	Fri 8/30/24	Fri 9/13/24
25	**CD Drawings/GMP**	**157.5 days**	**Tue 3/5/24**	**Wed 10/16/24**
40	**NTP and Handoffs**	**16 days**	**Thu 8/1/24**	**Fri 8/23/24**
41	Owner NTP	0 days	Thu 8/1/24	Thu 8/1/24
42	Estimating to PM/Superintendent Handoff	3 days	Fri 8/2/24	Tue 8/6/24
43	Project Kickoff Meeting	3 days	Wed 8/7/24	Fri 8/9/24
44	Issue Subcontracts	10 days	Mon 8/12/24	Fri 8/23/24
45	**Permitting**	**32 days**	**Thu 6/20/24**	**Tue 8/6/24**
46	ILP Routing	20 days	Thu 6/20/24	Fri 7/19/24
47	A/E Obtain State Design Release	20 days	Thu 6/20/24	Fri 7/19/24
48	State Design Release in-hand	1 day	Mon 7/22/24	Mon 7/22/24
49	Obtain Local Permits	10 days	Tue 7/23/24	Mon 8/5/24
50	Local Permits in-hand	1 day	Tue 8/6/24	Tue 8/6/24
51	**Mockups (tentative dates below)**	**10 days**	**Mon 10/21/24**	**Mon 11/4/24**
54	**Pre-Install/Pre-Safety Meetings (tentative dates below)**	**539 days**	**Tue 3/14/23**	**Fri 4/25/25**
66	**Owner Training/Demonstration**	**0 days**	**Tue 3/14/23**	**Tue 3/14/23**
91	**Construction**	**555 days**	**Thu 8/1/24**	**Mon 10/5/26**
92	Set up Temp Fencing/Soft Mobilization	5 days	Thu 8/1/24	Wed 8/7/24
93	Full mobilization to site	10 days	Wed 8/7/24	Tue 8/20/24
94	**New Construction**	**340 days**	**Wed 8/21/24**	**Mon 12/22/25**
95	**Sitework**	**253 days**	**Wed 8/21/24**	**Tue 8/19/25**
96	SWPPP Setup	2 days	Wed 8/21/24	Thu 8/22/24
97	Site Demolition Phase 1	10 days	Fri 8/23/24	Fri 9/6/24
98	Soil Stabilization	5 days	Mon 9/9/24	Fri 9/13/24
99	Rough Grading	5 days	Mon 9/16/24	Fri 9/20/24
100	Layout of Geopier Locations	5 days	Mon 9/23/24	Fri 9/27/24
101	Geopiers	10 days	Mon 9/30/24	Fri 10/11/24
102	Site Utilities Phase 1	35 days	Mon 10/14/24	Tue 12/3/24
103	Site Concrete Phase 1	25 days	Tue 7/1/25	Tue 8/5/25

Milford Elementary
100% CD Schedule 3.05.24

ID	Task Name	Duration	Start	Finish
104	Site Furnishings Phase 1	5 days	Wed 8/6/25	Tue 8/12/25
105	Landscaping Phase 1	10 days	Wed 8/6/25	Tue 8/19/25
106	Sitework Phase 1 Complete	0 days	Tue 8/19/25	Tue 8/19/25
107	**Structural**	**90 days**	**Mon 10/14/24**	**Thu 2/20/25**
108	Footings	15 days	Mon 10/14/24	Fri 11/1/24
109	Foundation Walls and Piers	25 days	Mon 11/4/24	Tue 12/10/24
110	Load Bearing CMU/In Wall MEPs	55 days	Mon 11/18/24	Thu 2/6/25
111	Steel Columns and Beams	15 days	Fri 1/24/25	Thu 2/13/25
112	Joist & Decking Roof Level	15 days	Wed 12/18/24	Thu 1/9/25
113	Joists & Decking Detailing	15 days	Fri 1/10/25	Thu 1/30/25
114	Underground MEP	15 days	Fri 1/31/25	Thu 2/20/25
115	**Slabs**	**30 days**	**Fri 1/31/25**	**Thu 3/13/25**
116	Prep SOG Pour 1	3 days	Fri 2/21/25	Tue 2/25/25
117	Pour SOG Pour 1	2 days	Wed 2/26/25	Thu 2/27/25
118	Prep SOG Pour 2	3 days	Fri 2/28/25	Tue 3/4/25
119	Pour SOG Pour 2	2 days	Wed 3/5/25	Thu 3/6/25
120	Prep SOG Pour 3	3 days	Fri 3/7/25	Tue 3/11/25
121	Pour SOG Pour 3	2 days	Wed 3/12/25	Thu 3/13/25
122	Prep SOD Pour 1	3 days	Fri 1/31/25	Tue 2/4/25
123	Pour SOD Pour 1	2 days	Wed 2/5/25	Thu 2/6/25
124	Prep SOD Pour 2	3 days	Wed 2/5/25	Fri 2/7/25
125	Pour SOD Pour 2	2 days	Fri 2/7/25	Mon 2/10/25
126	**Envelope**	**101 days**	**Fri 2/7/25**	**Mon 6/30/25**
127	Brick Veneer	60 days	Fri 2/7/25	Thu 5/1/25
128	Metal Siding/Preformed Wall Panels	30 days	Fri 3/21/25	Thu 5/1/25
129	Roofing/Curbs	20 days	Fri 5/2/25	Fri 5/30/25
130	Storefront/Window Framing	15 days	Fri 5/2/25	Thu 5/22/25
131	Measure for Glass	1 day	Fri 5/23/25	Fri 5/23/25
132	Glass Lead Time	15 days	Tue 5/27/25	Mon 6/16/25
133	Install Glass	10 days	Tue 6/17/25	Mon 6/30/25
134	Weathertight	0 days	Mon 6/30/25	Mon 6/30/25
135	**1st Floor Interiors**	**200 days**	**Wed 3/12/25**	**Mon 12/22/25**
136	Wall Layout and Install Door Frames	8 days	Wed 3/12/25	Fri 3/21/25
137	Non-Loadbearing Masonry	35 days	Mon 3/24/25	Fri 5/9/25
138	Metal Stud Framing (Hard Lid Ceilings	15 days	Mon 5/12/25	Mon 6/2/25
139	In wall MEPFP	35 days	Mon 3/24/25	Fri 5/9/25
140	Blocking	3 days	Thu 5/29/25	Mon 6/2/25
141	Above Ceiling MEPFP	25 days	Mon 5/19/25	Mon 6/23/25
142	In Wall Inspections	5 days	Mon 5/12/25	Fri 5/16/25
143	Hang Drywall	10 days	Mon 5/19/25	Mon 6/2/25
144	Firestopping and Joint Sealants	5 days	Tue 6/3/25	Mon 6/9/25
145	Finishing/First Coat Paint	15 days	Tue 6/10/25	Mon 6/30/25

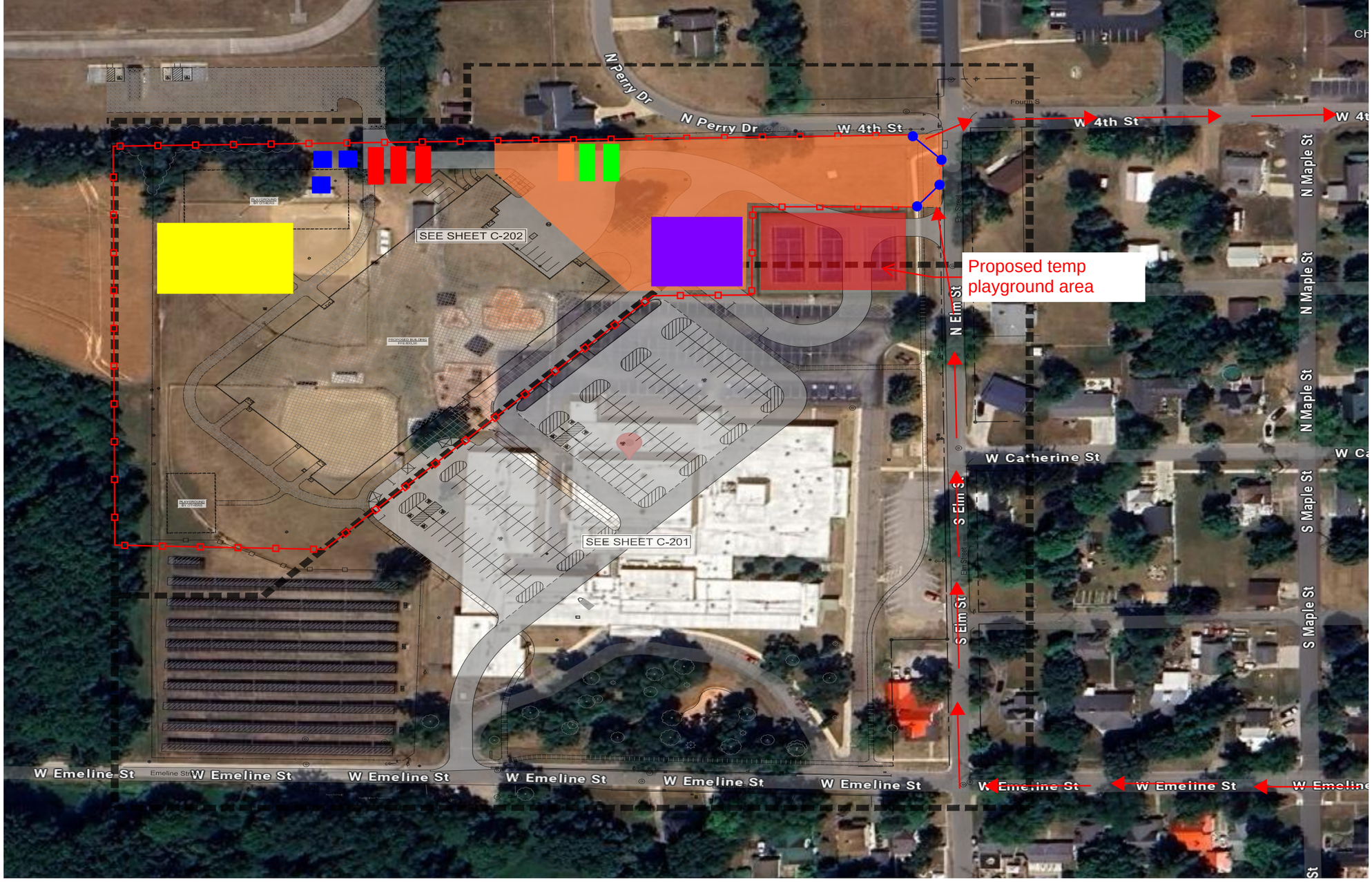
Milford Elementary
100% CD Schedule 3.05.24

ID	Task Name	Duration	Start	Finish
146	Above Ceiling Rough Inspections	5 days	Tue 6/24/25	Mon 6/30/25
147	Insulate Piping/Ductwork	10 days	Tue 7/1/25	Tue 7/15/25
148	Install Ceiling Grid	15 days	Wed 7/16/25	Tue 8/5/25
149	Install In Grid MEPFP	15 days	Wed 8/6/25	Tue 8/26/25
150	Install Border Tiles	13 days	Wed 8/20/25	Fri 9/5/25
151	Install Casework	10 days	Wed 8/27/25	Tue 9/9/25
152	Above Ceiling Finals	5 days	Wed 8/27/25	Tue 9/2/25
153	Install MEP Wall Fixtures/Devices	15 days	Wed 8/27/25	Tue 9/16/25
154	Drop Full Ceiling Tiles	8 days	Wed 9/3/25	Fri 9/12/25
155	Install Epoxy Floor Coating	10 days	Mon 9/15/25	Fri 9/26/25
156	Install Accessories (Tackboard/Markerboard/Tv Brackets/Lockers/FECs)	12 days	Wed 9/10/25	Thu 9/25/25
157	Install Countertops	10 days	Fri 9/26/25	Thu 10/9/25
158	Install Plumbing Fixtures	10 days	Fri 10/10/25	Thu 10/23/25
159	Install Resilient Flooring	25 days	Fri 10/24/25	Mon 12/1/25
160	Final Paint	15 days	Tue 12/2/25	Mon 12/22/25
161	Install Base	10 days	Tue 12/2/25	Mon 12/15/25
162	Install Doors/Hardware	15 days	Fri 11/21/25	Mon 12/15/25
163	Rough Cleaning	5 days	Tue 12/9/25	Mon 12/15/25
164	Interior Complete	0 days	Mon 12/15/25	Mon 12/15/25
165	**Phase 2 Demo Existing School/Complete Remaining Site Work**	**206 days**	**Tue 12/16/25**	**Mon 10/5/26**
166	Abatement	15 days	Mon 4/13/26	Fri 5/1/26
167	Utility Disconnects	14 days	Mon 5/4/26	Thu 5/21/26
168	Obtain Demo Permits	3 days	Fri 5/22/26	Wed 5/27/26
169	Building Demo	20 days	Thu 5/28/26	Wed 6/24/26
170	Foundation Demo	10 days	Thu 6/25/26	Wed 7/8/26
171	Backfill	5 days	Thu 7/9/26	Wed 7/15/26
172	Site Demolition Phase 2	10 days	Thu 7/16/26	Wed 7/29/26
173	Site Utilities Phase 2	20 days	Thu 7/30/26	Wed 8/26/26
174	Site Concrete Phase 2	25 days	Thu 8/27/26	Wed 9/30/26
175	Asphalt Paving and Striping Phase 2	8 days	Thu 9/17/26	Mon 9/28/26
176	Site Furnishing Phase 2	5 days	Tue 9/29/26	Mon 10/5/26
177	Landscaping Phase 2	10 days	Thu 9/17/26	Wed 9/30/26
178	Sitework Phase 2 Complete	0 days	Mon 10/5/26	Mon 10/5/26
179	**Post-Construction**	**206 days**	**Tue 12/16/25**	**Mon 10/5/26**
180	Test and Balance + Commissioning	20 days	Tue 12/16/25	Thu 1/15/26
181	Punchlist Development and Completion	15 days	Tue 12/16/25	Thu 1/8/26
182	Final Inspections	10 days	Tue 12/16/25	Wed 12/31/25
183	Substantial Completion Phase 1	0 days	Wed 12/31/25	Wed 12/31/25
184	Substantial Completion Phase 2 (Building Demo and Remaining Site)	0 days	Mon 10/5/26	Mon 10/5/26
185	Final Cleaning	5 days	Fri 1/9/26	Thu 1/15/26
186	Certificate of Occupancy Routing	10 days	Fri 1/2/26	Thu 1/15/26
187	Certificate of Occupancy Received	0 days	Thu 1/15/26	Thu 1/15/26

Milford Elementary
100% CD Schedule 3.05.24

ID	Task Name	Duration	Start	Finish
188	Owner Move	5 days	Mon 4/6/26	Fri 4/10/26

Phase 1



LEGEND

- Temp Stone Lot
- Port A Johns
- Site Fencing
- Construction Delivery Traffic
- Dumpsters
- Site Trailer
- Material Laydown
- Connex Storage
- Contractor Parking
- Contruction Entrances

MKS
MICHAEL KINDER & SONS
PLAN | DESIGN | BUILD

Jobsite Address
611 W Emeline St, Milford, IN 46542

Primary Work Hours
7:30 am to 4:00 pm

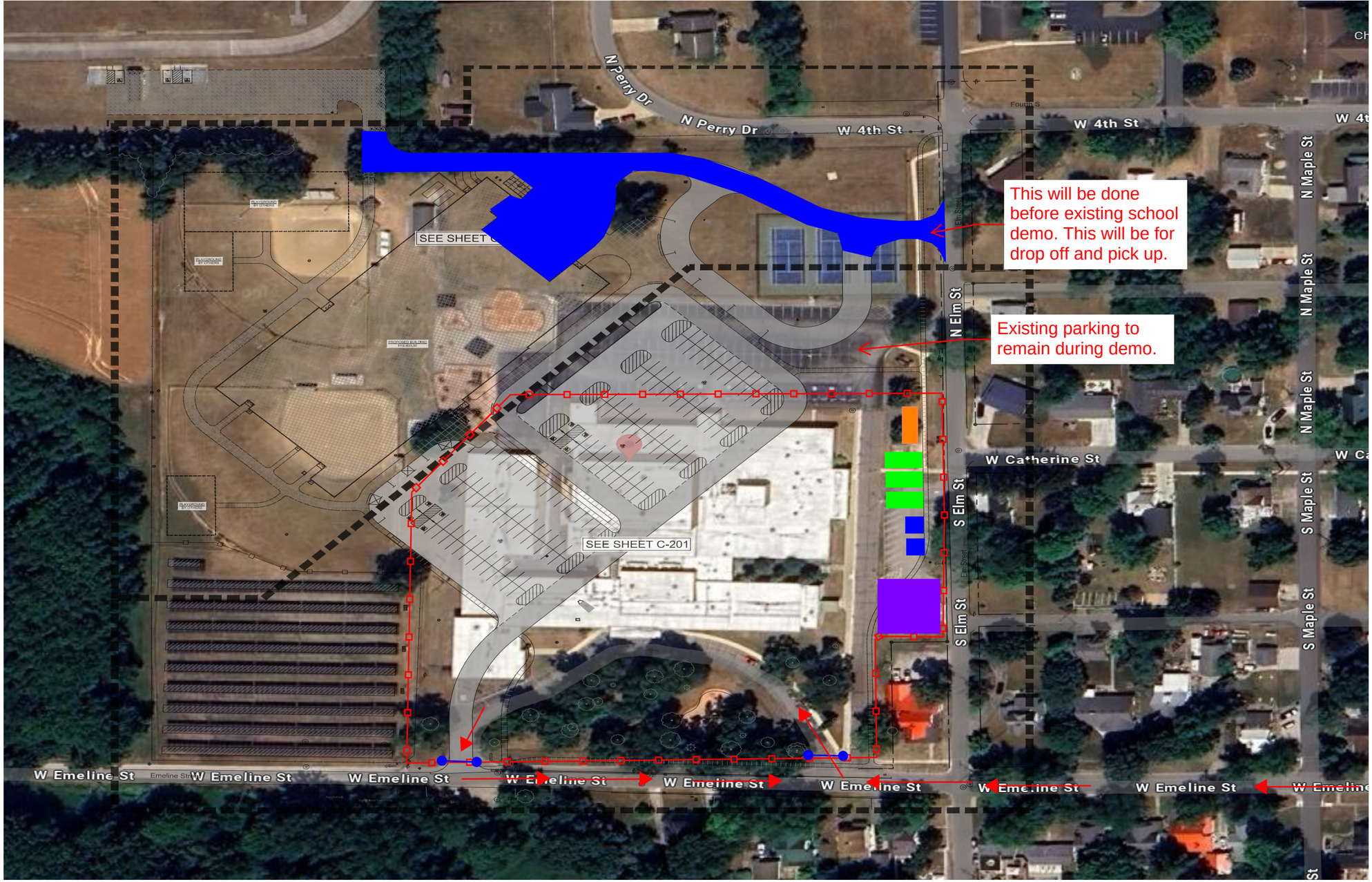
Delivery Hours
9:00 am to 2:00 pm

Required Safety Gear
Hi-Vis,Hard Hats
Boots, Safety Glasses

Superintendent

Project Manager

Phase 2



LEGEND

- Port A Johns
- Site Fencing
- Construction Delivery Traffic
- Dumpsters
- Site Trailer
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Hi-Vis,Hard Hats
Boots, Safety Glasses

Superintendent

Project Manager

Milford Elementary School – New Building

Location: Room 108, Milford Elementary School, 611 W Emeline St., Milford, IN
When: July 11, 2024 at 1 P.M.

PRE CONSTRUCTION TEAM

- Michael Kinder and Sons, Inc.
    - Doug Kinder
    - Larry Easterday
    - Heath Troyer – Sr Project Manager for the Project
- Elevatus Architecture
    - Emily Hower
    - Sam Schaust
- Engineering Resources, Inc.
    - Keelan Rushing
    - Ethan Yoder
- Primary Engineering
    - Andrew Louderback
    - Mike Lubbehusen
    - Randy Treadway
- Wawasee Community School Corporation
    - Dr Stephen Troyer, Superintendent
    - Dr Branden Penrod, CFO
    - Michael Casey, Principal and his staff
    - Brandon Kiser, Head of Facilities

HIGH LEVEL OVERVIEW

Project is construction of a new 70,000 SF building. Phase 1 will be construction of the new building to the NW of existing. Phase 2 will be demolition of the existing structure along with civil demolition to the south.

Project has 17 bid packages:

- Bid Package 03a Cast in Place Concrete
- Bid Package 04a Masonry
- Bid Package 05a Steel (furnish and erect)
- Bid Package 06a General Trades
- Bid Package 07a Roofing/Flashing/Sheetmetal
- Bid Package 08b Aluminum Framed Entrances and Storefronts/Aluminum Windows/Glazing
- Bid Package 09a Gyp Bd/Steel Stud Framing/APC/Acoustical Wall Trmt./Painting
- Bid Package 09b Flooring/Tiling
- Bid Package 09c Wood Athletic Flooring
- Bid Package 11a Food Service Equipment

- Bid Package 21a Fire Suppression
- Bid Package 23a Mechanical (Plumbing & HVAC)
- Bid Package 26a Electrical/Communications/Electronic Safety & Security
- Bid Package 31a Earthwork/Utilities
- Bid Package 32a Bituminous Paving (Asphalt)
- Bid Package 32b Lawns/Landscape
- Bid Package 32c Fence

DRAWINGS & SPECIFICATIONS

- 1 set of drawings
- 1 set of specifications (3 volumes)
- Addenda will be distributed as needed.
- Available for free download at Eastern Eng., Construct Connect, Builders Exchange, Dodge.

ALTERNATES

A. Alternate No. 1: State the costs to provide a payment and performance bond for this bid package.

B. Alternate No. 2: State the costs to delete temperature controls from your scope of work.
C. Alternate No. 3: State the costs to add building information technology (BIM) to BP 05A, BP 21a, BP 23a and BP 26a.

SAFETY

- Project site is kept clean and organized throughout the duration of the project.
- MKS safety director will conduct routine site visits.

BIDS DUE July 25, 2024
WHEN 2 p.m.
WHERE WCSC Admin Offices 801 S Sycamore St. Syracuse, IN

INCLUDE WITH BID

- See Section 00 41 13 for all forms required
- State Bid Form 96
- Financial Statement
- Project is IN sales tax exempt.
- 5% Bid Bond included on AIA Form 310 or Certified check payable to owner
- Allowance Included in Bid Package
- Performance and Payment Bond included in Base Bid

QUESTIONS AND CLARIFICATIONS

- SEND TO leasterday@kinderandsons.com , no direct contact with design team.
- WHEN SUBMITTING QUESTIONS, BE SURE TO INDICATE SPECIFIC DRAWING, SPECIFICATION SECTION, ETC. WITH YOUR QUESTION.
- SUBSTITUTION REQUESTS – USE PROVIDED REQUEST FORM IN THE SPECIFICAITONS

ADDENDA/RFI
ADDENDUM #1 – ISSUED
ADDENDUM #2 – 7/16
DEADLINE FOR BIDDING RFI'S – 7/19
ADDENDUM #3 – 7/23

QUESTIONS

1. Question: Responsibility of erosion control blankets. Answer: Erosion control blankets are the responsibility of Bid Package 31a Earthwork / Utilities. The areas highlighted on the Erosion Control drawings are to be treated as final seeding including maintenance.
2. Question: Design of temporary stormwater drainage. Answer: This design from roof drains to nearest inlet is by Bid Package 31a Earthwork / Utilities.
3. Question: What is design of temporary stone lot for staging/parking area? Answer: Bid documents for this scope read "Strip 6" topsoil on 55,000 SF where shown on drawing. Replace with 6" base layer of #2 limestone and 4" top layer of #53 limestone". BP 31a is to remove and dispose of this material when directed by the Construction Manager. Timing should be close to end of new building construction.
4. Question: What is to be shown on as builts? Answer: All new work and any discovered existing utility lines including elevations, inverts, etc.
5. Michael Casey wants great communication from Construction Manager. All bid packages to keep CM aware of all construction activities that would impact school operations.

THANK YOU

MKS
MICHAEL KINDER & SONS
PLAN | DESIGN | BUILD

Milford Elementary School
Pre Bid Meeting Sign In Sheet
DATE: 07/11/2024
TIME: 1:00 pm
LOCATION: Room 108, Milford Elementary School

NAME	COMPANY	EMAIL
Cory Hostetler	Almac Sutebeer	Cory.hostetler@almacsutebeer.com
GARRETT LLOYD	GSL	GARRETT@G-LCORP.COM
Jeff Beer	Beer/Slabaugh	jbeer@beerandslabaugh.com
Robert Cinninger	Ziolkowski Const.	rcinninger@zbuild.com
ROD LINDZY	ZIOLKOWSKI CONST.	rlindzy@zbuild.com
EMILY HOWER	ELEVATOS	ehower@elevatos.com
Michael Casey	MES	mcasey@warsaw.k12.in.us
SAM ALLBRITTEN	G&G HAULING & EXC.	sama@gandghauling.com
Derrick Jensen	G+G Hauling + Exc.	DerrickJ@gandghauling.com

MKS
MICHAEL KINDER & SONS
PLAN | DESIGN | BUILD

Milford Elementary School
Pre Bid Meeting Sign In Sheet
DATE: 07/11/2024
TIME: 1:00 pm
LOCATION: Room 108, Milford Elementary School

NAME	COMPANY	EMAIL
DJ Kierpaul	D.D Electric	estimating@dnd-electric.com
Randy Treadway	Primary	rtreadway@primary.cug.com
Ross Wagoner	Phend & Brown	Ross O Wagoner @ Phend & Brown.com
Jack Reed	Millwood Roofing & Const.	jack@millwoodconstruction.com
DAN KOVAS	L2 Architectural Prod.	dan@L2ARC.com
Brad Yoder	R. Yoder Construction	brad@ryoderconstruction.com

MKS
MICHAEL KINDER & SONS
PLAN | DESIGN | BUILD

Milford Elementary School
Pre Bid Meeting Sign In Sheet
DATE: 07/11/2024
TIME: 1:00 pm
LOCATION: Room 108, Milford Elementary School

NAME	COMPANY	EMAIL
Branden Wood	Sitework Services	bwood@siteworkservices.com
Lauren Green + Keelan Rushing	Engineering Resources, Inc.	
JOHN FEEKS	HHG Services	jfeeks@hgservices.com
Chandler Schoeff	Project Design & Piping	cschoeff@pdpinc.com

MKS
MICHAEL KINDER & SONS
PLAN | DESIGN | BUILD

Milford Elementary School
Pre Bid Meeting Sign In Sheet
DATE: 07/11/2024
TIME: 1:00 pm
LOCATION: Room 108, Milford Elementary School

NAME	COMPANY	EMAIL
Brian Palmer	Gibson-Lewis	bpalmer@gl.nceusa.com
Josh Reibs	Hamilton Hunter Builders	jreibs@hamiltonhunterbuilders.com
Steve Neibert	NEIS Collective	Steven.Neibert@Neis.com
Kenny Narramore	Advanced Systems Group	KNarramore@advsysgrp.com

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SECTION 06 41 10 - MILLWORK

PART 1 - GENERAL

1.1 SUMMARY

A. Provide labor, materials, and equipment necessary for the complete installation of custom millwork items as shown on Drawings. Delivery and installation shall be completed by a woodworking company or millwork and furniture shop as specified. Items to be provided, but not limited to, are as follows:

1. Custom millwork items

a. Media Center circulation desk
~~b. Display case~~
b. Mail slots
c. Reveal trim for circulation desk.

2. Millwork hardware.
3. Solid surfacing material

a. Counter tops and backsplash

4. Counter brackets
~~5. Shelves and standards~~
~~6.~~5. ~~Plastic laminate counter tops~~.
~~7.~~6. Other items and accessories as may be indicated on the drawings and details.

B. Work Not Included: Resilient base, blocking within walls, floors, or ceilings required for reinforcement and support, and electrical within millwork items

1.2 .DEFINITIONS

A. Exposed Surfaces:

1. Surfaces visible when doors and drawers are closed.
2. Bottoms of cases more than 4 feet above floor.
3. Visible members in open cases or behind glass doors

B. Semi-Exposed Surfaces

1. Members behind opaque doors, such as shelves, divisions, interior faces of ends, case back, drawer sides, backs and bottoms, and back face of doors.
2. Tops of cases 6 ft. – 6 in. or more above floor.

C. Concealed Portions of Millwork/Casework: Includes sleepers, web frames, dust panels, and other surfaces not visible after installation.

1.3 SUBMITTALS

A. All millwork/casework items and accessories specified in this Section shall be submitted as a single package as practicable. Separate submittals for each system or product may not be acceptable.

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B. **Do not submit MSDS or SDS sheets with the product data submittal.** Architect is not responsible for review of this information. Submittals that include MSDS or SDS data sheets may be returned as rejected.

C. The millwork/casework and furniture manufacturer or woodworking company shall furnish shop drawings giving details, dimensions, and hardware, including methods of attachment and everything pertinent to the construction and installation of Work. Submit with shop drawings:

1. Details and sizes including methods of attachment.
2. Type and locations for support within walls.
3. Include field verified dimensions.
4. Indicate utility locations to be coordinated with other trades.

D. Submit manufacturers product data for the particleboard, hardboard, hinges, pulls, plastic laminate, grommets, solid surfacing counter tops and sinks, 1 mm & 3mm PVC edgings, shelf clips, catches, keyboard trays, cable trays, counter supports, and all other millwork/casework items as may be specified or noted on the drawings.

E. The manufacturer or woodworking company shall keep aware of the progress of the Project and shall make sure that shop drawings are furnished in adequate time so that the millwork/casework covered thereby can be fabricated and delivered in accordance with the scheduled installation date.

F. The manufacturer or woodworking company shall be responsible for making field measurements and electrical receptacle and switch locations and computer hook-up locations, bank equipment, and other Owner provided equipment, to insure proper fit of custom millwork/casework and related items.

G. Submit list of previous projects of similar size and scope as may be requested by the Architect. List may be requested prior to award of subcontract.

H. Samples:

1. Samples matching those on the interior drawings, for approval. Provide 8 inch x 10 inch size samples for selected samples for final approval.
2. Cabinet hardware, submit one unit for each type and finish.

I. Qualification Data: For firms and persons specified in "Quality Assurance" Article to demonstrate their capabilities and experience.

1. Include list of completed projects with project names, addresses, names of Architects and Owners, and other information specified.

J. Warranty: Submit sample warranty as specified herein.

K. Submit certification letter on manufacturers letterhead stating compliance with Section 1600 - Modular Cabinets of the Architectural Woodwork Institute's Architectural Woodwork Quality Standards and all specifications herein. Certification letter shall be signed and dated by the Owner of the manufacturer.

L. Submit certification letter on manufacturers letterhead stating compliance with Section 400, 400B and 400C of the Architectural Woodwork Institute's Architectural Woodwork Quality Standards and and all specifications herein. Certification letter shall be signed and dated by the Owner of the manufacturer.

1.4 PROJECT CONDITIONS

A. Manufacturer or woodworking company shall be responsible for quantities shown on equipment schedules and Drawings and shall be responsible for complete coordination of installation and shall fully cooperate with the Contractor with scheduling, material delivery, and installation.

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B. The manufacturer or woodworking company shall be responsible for making field measurements and electrical receptacle and switch locations and computer hook-up to insure proper fit of millwork/casework and furniture.

C. Environmental Limitations without Humidity Control: Do not deliver or install interior architectural woodwork until building is enclosed, wet-work is complete, and HVAC system is operating and maintaining temperature and relative humidity at levels designed for building occupants for the remainder of the construction period.

D. Environmental Limitations with Humidity Control: Do not deliver or install interior architectural woodwork until building is enclosed, wet-work is complete, and HVAC system is operating and maintaining temperature between 60 and 90 deg F and relative humidity between 25 and 55 percent during the remainder of the construction period.

1.5 QUALITY ASSURANCE

A. Manufacturer or woodworking company shall comply with the latest AWI Standards for millwork/casework construction and all details of construction and requirements as specified herein and as shown on Drawings.

B. Installation shall be by the manufacturer or woodworking company; installation by the General Contractor is prohibited.

C. Do not deliver millwork/casework to project site until dry and heated spaces are provided. The millwork/casework specified under this Section is prefinished and caution must be taken to protect it against damage during installation.

D. Coordinate delivery of templates and other similar items from other trades necessary for the construction of required millwork/casework units.

E. Coordinate submittals with construction schedule ensuring timely review to avoid delays from installation.

F. Comply with Section 1600 - Modular Cabinets of the Architectural Woodwork Institute's Architectural Woodwork Quality Standards and all specifications herein.

G. Take field measurements and show on shop drawings.

H. Defective workmanship or damaged components shall be corrected, repaired, or replaced as requested by the Architect, without further cost to the Owner.

I. Manufacturer’s Qualifications: Not less than 7 years of successful experience in the manufacture of millwork/casework similar in type and extent to those required as work of this Section.

J. Installer’s Qualifications: Not less than 5 years of successful experience in the installation of the millwork/casework similar in type and extent to those required as work of this Section.

K. Comply with AWI Section 400 and Sub-Division 400B of the Architectural Woodwork Institute’s Architectural Woodwork Quality Standards for laminate clad architectural cabinets.

L. Comply with AWI Section 400 and Sub-Division 400C of the Architectural Woodwork Institute’s Architectural Woodwork Quality Standards for high pressure decorative laminate tops.

M. All millwork/casework shall comply with NFPA 101 Life Safety Code Chapter 10 for flame spread requirements.

1. All millwork/casework in rated exit corridors must have a Class A rated finish.

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1.6 WARRANTY

A. Manufacturer's Warranty: Manufacturer or woodworking (millwork/casework) company shall warrant the products from delamination, loose edges, defective or broken hardware, loose wood trim, and horizontal or vertical members coming apart from each other for indicated warranty period.

1. Exception: Damage caused by improper operation or misuse.
2. If problems occur, each affected item shall be repaired in field or replace the product at no cost to the Owner.
3. Warranty Period: Five (5) full years from the Date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MILLWORK MANUFACTURER

A. Any millwork manufacturer or millwork shop or woodworking company capable of meeting these specifications, complies with one or more of the following listed requirements, and meets experience and qualification requirements as specified herein, may bid this project. However, final approval and acceptance of manufacturer, contractor, and installer will be made by the Architect. Listed requirements (comply with one or more):

1. Is a Manufacturer Company Member of AWI
2. Is an Industry Member of AWI.
3. Is a Supplier Company Member of AWI
4. Is certified by the Woodwork Institute.
5. Is an affiliate of the Woodwork Institute.
6. Will comply with AWI Standards, Section 1600-Modular Cabinets of AWI Standards, latest edition, and comply with all technical requirements and construction as specified herein.

B. Manufacturer's Certification:

1. Licensed participant in Architectural Woodwork Institute (AWI) Quality Assurance Program (QCP) or submit certified letter stating compliance with AWI Standards and technical specifications herein.

C. Installer Qualifications:

1. Either the manufacturer of the millwork or an approved installer by the manufacturer or woodworking company.

2.2 CONSTRUCTION - GENERAL

A. Coordinate with other trades for required dimensions of items to be built into millwork.

B. Exposed exterior and interior surfaces shall be finished with high pressure plastic laminate, unless otherwise indicated on Drawings. Exterior surfaces shall be fused to core using a minimum average high pressure of 360 PSI and average 300 degrees F. temperature. Interior surfaces and edges receiving laminate shall be bonded to substrate with Lekweld Brand Contract Adhesive, or equal. Laminate must be bonded tight to substrate to ensure against delamination. The face and backing laminates and substrates should be conditioned in the same equipment for 48 hour before fabrication. Conditioning temperature should be 75 degrees F. at 45 percent relative humidity. There shall be no exposed seams in furniture or casework, except where end panels covered in laminate meet.

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C. Machine parts for accurate fit and assemble with appropriate fastenings and adhesives to result in true, square, level and plumb units.

D. Verify dimensions of other trades which result in an interface with casework and furniture.

E. Provide removable, false backs or cut outs for access to heating, plumbing, or electrical items to be concealed by casework to furniture.

F. Scribe tops and back splashes to walls and other adjoining surfaces.

G. Provide fillers and trim strips where necessary.

H. There shall be a minimum scribe with cabinets at end walls unless shown otherwise.

I. Wood trim and in-lays shall be premium grade wood in species to match Architects sample

2.3 MATERIALS

A. Plastic Laminate:

1. Manufacturers: Subject to compliance with requirements, provide products of one of the following:

   a. Formica
   b. Nevamar
   c. WilsonArt
   d. Refer to the Finish Legend for additional information.

2. Plastic Laminate Grades:

   a. Vertical high-pressure decorative laminate VGS (0.028) GP-28 Grade.
   b. Horizontal high-pressure decorative laminate HGS (0.048). GP-50 Grade.
   c. High-pressure cabinet liner CLS (0.020) Grade.
   d. High-pressure backer BKH (0.028) Grade.

3. Exposed horizontal surfaces: HGS (GP-50 Grade).
4. Exposed interior and exterior vertical surfaces: VGS (GP-28 Grade).
5. Vertical interior semi-exposed surfaces shall receive grade CLS Grade.

B. Edging Material: High impact, PVC extrusion with satin finish.

1. 1 mm high impact PVC banding, machine applied with waterproof, hot melt adhesive for end panels, exposed shelves, and intermediate vertical panels on exposed shelving.
2. 3 mm PVC banding for all counter top edging, edges on all doors and drawers machine applied with waterproof, hot melt adhesive for all doors and drawer fronts.
3. Colors: Refer to the Room Finish Legend. (If exact match is not available, submit color options to Architect for selection.)
4. Barbed T-edging will not be acceptable.

C. Component Materials:

1. Cabinet components shall be constructed of formaldehyde-free particleboard core material of a minimum 47 pound density industrial grade and have a moisture content of 8 percent or less, 3/4 inch thick minimum. The particle board used shall have been tested under ANSI A 208.1 and ASTM D-1037, latest edition, standards.
2. Drawers and doors shall be constructed of formaldehyde-free particleboard with a minimum of 47 pounds density and shall have been tested under ANSI 208.2 standards.

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3. Formaldehyde-Free Particleboard:
   a. ""or Architect approved equal.

D. Locks:

1. Locks shall be provided on all drawers and doors unless otherwise shown and/or indicated on the Equipment Schedule in the Drawings.
2. The locks shall be a diecast, surface mounted, disc tumbler with 2 keys per lock.
3. Locks in each room or area shall be keyed alike unless indicated otherwise in itemized specification.
4. Locks: Masterkeyed alike, unless otherwise shown and/or indicated.

E. Reveal Trim: Fry Reglet #DRM-50-50 1/2 inch wide by 1/2 inch deep. Equal products by Pittcon Industries are acceptable.

2.4 CABINET CONSTRUCTION

A. Cabinet Bases

1. 4-inch-high base constructed of two layers of ¾" pressure treated plywood. Provide additional center support for cabinets over 24 inches wide.
2. Cabinet base construction shall be separate from base cabinet construction.

~~B. Base, and Wall Cabinet Boxes~~

~~1. Sides, Bottom and Top: Constructed of glued and spline doweled 3/4 inch formaldehyde-free particleboard, providing balanced construction.~~
~~2. Wall Cabinet Bottoms and Tops: Constructed of glued and spline doweled 1 inch thick formaldehyde-free particleboard providing balanced construction.~~
~~3. Back Panel: Constructed of minimum 3/8 inch thick formaldehyde-free particleboard or 1/4-inch prefinished tempered hardboard. Inset and glue into sides, bottom and top of cabinet.~~
~~4. Exposed Backs: Constructed of 3/4-inch formaldehyde-free particleboard surfaced with vertical grade laminate of balanced construction for exposed locations. Inset and glue into sides, bottom and top of cabinet.~~
~~5. Intermediate Support Rail: Minimum 3/4 inch formaldehyde-free particleboard, glued and doweled into cabinet sides; provide wood veneer where indicated.~~
~~6. Hanger Rails: Two located at top and bottom of cabinet back, 3 on tall cabinets, locate at top, bottom, and center of 3/4 inch formaldehyde-free particleboard.~~

~~C. Fixed and Adjustable Shelves and Dividers~~

~~1. 1-inch-thick formaldehyde-free particleboard shelves.~~
~~2. Exposed Locations: GP-28 vertical grade plastic laminate both sides. Color shall match cabinet exterior, or as selected by Architect.~~
~~3. Semi-Exposed Locations: GP-28 vertical grade plastic laminate.~~
~~4. Front and back leading edges shall be edged with flat 1mm thick high impact PVC edging to match shelf color.~~
~~5. Adjustable Dividers: 1/4 inch minimum thickness, prefinished tempered hardboard or plywood, smooth both faces, retained by molded plastic support clip.~~
~~6. Fixed dividers shall be constructed of 3/4 inch thick formaldehyde-free particleboard; provide balanced construction; glued and spline doweled. PVC edged to match adjacent laminate or melamine.~~

~~D. Cabinet Doors~~

~~1. Hinged Doors~~

~~a. 3/4 inch formaldehyde-free particleboard.~~

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~~b. High pressure plastic laminate GP-28 vertical grade laminate exterior and interior side of doors; wood veneer where indicated.~~
~~c. Doors 48 inches and less in length shall have two hinges per door; doors over 48 inches in length shall have three hinges per door.~~
~~d. 3mm PVC edging on all 4 sides.~~

~~E.~~B. Cabinet Drawers

1. Standard construction of minimum components listed below; or high-density formaldehyde-free fiberboard; glued and doweled or dovetail jointed; surfaced with GP-28 vertical grade laminate of balanced construction. Bottoms constructed of 1/4-inch tempered hardboard or ½" thick formaldehyde-free particleboard.
2. Drawer Face

   a. Constructed of minimum 3/4-inch formaldehyde-free particleboard surfaced with high pressure GP-28 vertical grade laminate exterior and interior, screw attached to drawer box. Provide 3mm PVC edging on all 4 sides. File Drawers
   b. File drawers shall be constructed in accordance with 1. and 2. above.

~~F.~~C. Plastic Laminate for millwork herein ~~Counter Tops~~: ~~All countertops~~ Millwork cabinets herein shall be faced with plastic laminate. ~~shall be edged with 3mm PVC in color to match plastic laminate.~~

1. High Pressure Plastic Laminate: HGS grade and balanced with backer underside.
2. Counter top shall be Solid surfacing material as scheduled and detailed on the Drawings.
3. Plywood concealed members; solid plywood shall be 7 ~~"~~"Ply marine grade boat plywood or Baltic birch marine grade boat plywood.
4. Plywood shall incorporate Type II water resistant glue.
~~5. Horizontal work surfaces to be 1 ½ inch thick, unless otherwise indicated.~~
~~6.~~5. Cut openings in countertops for ~~sinks or other~~ items as may be required. ~~Cut to size from template furnished by supplier of sinks or use the designated sinks on job.~~
~~7.~~6. Refer to ~~Unit~~ Drawings and details for specific counter top details and dimensions.
~~8. Provide balancing sheet on opposite face.~~
~~9. Laminate tops shall be continuous in practical lengths. When requiring splice joints, use a combination of splines or dowels for alignment and Tite-Joint fasteners as required to make a uniform and gapless joint. Splices in core materials or laminate shall not be over knee spaces or sink cabinets.~~
~~10. Backsplash and Endsplashes: ¾ inch butt type, square set, color matching, and mechanically attached.~~

   ~~a. Backsplashes are required at locations where countertops abut walls where indicated on Drawings.~~
   ~~b. Edges of back and endsplashes to be square edge configuration.~~

~~11. Provide chemical resistant plastic laminate where indicated or noted.~~

~~G.~~D. Sealants: Fully bed and seal splashes to tops and to other splashes with Dow Corning 786 Mildew esistant Silicone Sealant, clear; or Architect approved equal.

~~H.~~E. Provide all items and accessories as required for a complete installation in every respect.

2.5 SOLID SURFACING MATERIAL

A. Homogeneous filled acrylic; not coated, laminated or of composite construction; meeting ANSI Z124.3 & 6, Type Six, and Fed. Spec. WW-P-541E/GEN.

1. Material shall have minimum physical and performance properties specified.
2. Superficial damage to a depth of 0.010" shall be repairable by sanding and polishing.

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B. Performance Properties: Comply with the provisions of the latest editions for the following codes, specifications, and standards.

1. Tensile Strength.....6000 psi per ASTM D 638
2. Flexural Strength.....7890 psi per ASTM D 790
3. Elongation.....0.4% per ASTM D 638
4. Wear and Cleanability.....passes ANSI Z 124.3
5. Stain Resistance.....passes ANSI Z124.3

C. Accessories

1. Joint adhesive shall be manufacturer's standard, two-part adhesive.
2. Panel adhesive shall be manufacturer's standard neoprene-based panel adhesive meeting ANSI A 136.1 UL listed.
3. Sealant shall be mildew resistant silicone.

D. Manufacturers:

1. "Corian" by DuPont, Wilmington, DE
2. "Solid Surface" by Wilsonart Americas, Temple, TX
3. "Everform Solid Surface" by Formica Group North America, Cincinnati, OH

~~E. Provide integral sinks of solid surfacing material where indicated.~~

~~a. ÓÓKemresin by Kewaunee Scientific Corp., Statesville, NC~~
~~b. ÓÓEpoxy Resin by Hanson Lab Solutions, Camarillo, CA~~

~~2. Physical Properties:~~

~~a. Flexural Strength: Not less than 10,000 psi (70 MPa).~~
~~b. Modulus of Elasticity: Not less than 2,000,000 psi (1400 MPa).~~
~~c. Hardness (Rockwell M): Not less than 100.~~
~~d. Water Absorption (24 Hours): Not more than 0.02 percent.~~
~~e. Heat Distortion Point: Not less than 260 deg F (127 deg C).~~

~~3. Chemical Resistance: Epoxy-resin material has the following ratings when tested with indicated reagents according to NEMA LD 3, Test Procedure 3.4.5:~~

~~a. No Effect: Acetic acid (98 percent), acetone, ammonium hydroxide (28 percent), benzene, carbon tetrachloride, dimethyl formamide, ethyl acetate, ethyl alcohol, ethyl ether, methyl alcohol, nitric acid (70 percent), phenol, sulfuric acid (60 percent), and toluene.~~
~~b. Slight Effect: Chromic acid (60 percent) and sodium hydroxide (50 percent).~~

~~4. Countertop Configuration: Fabricate with factory cutouts for sinks, holes for service fittings and accessories, and with butt joints assembled with epoxy adhesive and connected metal splines.~~
~~5. Fabrication tolerances:~~

~~a. Size:~~

~~1) Length: +/- 1/16 inch.~~
~~2) Width: +/- 1/16 inch.~~
~~3) Thickness: +/- 1/16 inch.~~

~~b. Cutouts:~~

~~1) Sinks: +/- 1/8 inch.~~
~~2) Cup sinks: +/- 1/8 inch.~~
~~3) Gem box: +/- 1/8 inch.~~

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~~4) Columns: + 1/8 inch, - 0 inch.~~
~~5) Column cut out, covered by applied curb: + 1/4 inch, - 0 inch.~~
~~6) Service drilling: + 1/8 inch, - 0 inch.~~

~~6. Colors for Epoxy Countertops: As selected by Architect from manufacturer's standard colors.~~
~~7. Backsplash Curb: Same material as top, 4 high, butt jointed and cemented to top. Provide where tops abut wall surfaces and at reagent ledges. Include end curb where top abuts end wall.~~

~~F. Epoxy Sinks: Modified epoxy-resin formulation with smooth, non-specular finish. Non-glare matte finish to match epoxy resin tops. Undercounter mounting. Coordinate with Plumbing Contractor.~~

~~1. Single compartment undercounter mount sink: #52L47300 by Hamilton Laboratory Solutions; or equal.~~

~~2.6 SHELVES AND STANDARDS~~

~~A. ¾ thick particleboard shelves surfaced with HGS plastic laminate top and bottom with 1 mm PVC edging, front and back.~~

~~B. Glass Shelves: 1/4" thick tempered glass with all edges polished.~~

~~2.7 CABLE TRAYS~~

~~A. Part # VI-WT35IN, top mount.~~

~~B.~~E. ~~Provide all items and accessories as required for a complete installation in every respect~~.

~~2.8~~2.6 COUNTER BRACKETS

A. #CCH-CBWB - 18 x 24 workstation bracket by CounterBalance, Huntington Valley, PA

B. 1/8 steel with 1-1/2 forms with multiple ¼ mounting holes.

C. Field paint to match wall.

D. Provide raised die formed ferrule around punch or drilled holes in counter tops.

PART 3 - EXECUTION

3.1 DELIVERY

A. Items shall be shipped in trucks owned by manufacturer or Woodworking Company. Manufacturer will be responsible for loading and unloading truck.

B. Items shall be blanket wrapped. Manufacturer shall pack truck as to avoid shipping damage.

C. Items shall be inspected for shipping damage. Damage found should be immediately reported to the Architect and the manufacturer. If the damage cannot be repaired in field to meet the approval of the Architect, the item shall be returned to the manufacturer for immediate repair or replacement.

D. Remove packing materials from site.

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3.2 INSTALLATION

A. Strictly follow shop drawings and installation instructions. Installation shall be by experienced carpenters, capable of the highest quality of workmanship.

B. Counter tops shall be installed flush against the wall. Provide clear sealant at the top and around ends of counter tops and back splashes where they meet wall surfaces.

C. Grommet holes not cut in the shop, or other openings for passage of wires or access of electrical, heating, plumbing devices, shall be neatly cut in the field. If exposed to sight, opening will require grommet or access plate as specified.

D. The installer of the millwork shall make use of filler sections, if required, and scribe panels to fit cabinet work to specific dimensions.

E. Provide all items and accessories as required for a complete installation in every respect.

F. Install millwork level, plumb, true in line, and without distortion.

1. Shim as required with concealed shims.
2. Install level and plumb to a tolerance of 1/8 inch in 96 inches.

G. Scribe and cut millwork to fit adjoining work, refinish cut surfaces, and repair damaged finish at cuts.

H. Anchor millwork to anchors or blocking built in or directly attached to substrates.

1. Secure with countersunk, concealed fasteners and blind nailing.
2. For shop-finished items, use filler matching finish of items being installed.

3.3 FIELD QUALITY CONTROL

A. Defective workmanship or damaged components shall be corrected, repaired, or replaced, as requested by Architect without further cost to the Owner.

3.4 ADJUSTMENT

A. Adjust door hinges and drawer slides after installation to provide proper operation and appearance.

3.5 CLEANING

A. Clean exterior and interior surfaces.

END OF SECTION

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SECTION 07 22 00 - ROOF AND DECK INSULATION

PART 1 - GENERAL

1.1 SUMMARY

A. Provide labor, materials, and equipment necessary for complete installation of roof insulation for roofing of new building, as indicated on the Drawings and specified herein. This specification includes, but is not limited to:

1. Poly-Iso Parallel and Tapered Roof Insulation
2. Cover Board
3. Roof saddle sysrem
4. Accessories and fasteners.
5. Low Rise Foam Adhesive

B. Related Work Specified Elsewhere

1. Section 07 54 00 Fully Adhered PVC Sheet Roofing

1.2 SUBMITTALS

A. All roof and deck insulation items and accessories specified in this Section shall be submitted as a single package as practicable. Separate submittals for each system or product may not be acceptable.

B. Do not submit MSDS or SDS sheets with the product data submittal. Architect is not responsible for review of this information. Submittals that include MSDS or SDS data sheets may be returned as rejected.

C. Submit complete manufacturer shop drawings for roof insulation and for tapered roof insulation and roof saddle system.

D. Submit complete product data for roof insulation boards and fasteners.

1. Roof insulation boards and cover boards.
2. Fasteners
3. Installation instructions for HCFC FREE Polyiso insulation board and fasteners
4. Installation instructions for extruded polystyrene insulation boards.
5. Product Data as per ASTM C 2129 Standard for Data Collection for Sustainability Assessment of Building Products
6. Adhesives.

1.3 QUALITY ASSURANCE

A. The insulation is to meet the physical properties of ASTM C 1289, Type II; Class 1, Grade 2. The insulation shall provide a minimum Long Term Thermal Resistance (LTTR) value of 5.6 per inch @ 75 degrees F. 5.6 per inch shall be the basis for establishing thickness in inches required. The use of aged R-values based on the RIC-TIMA conditioning procedure 281-1 is not acceptable.

B. Hydrocarbon blowing agents: Third generation, using Zero Ozone Depletion (ODP) as in compliance with the US EPA requirements of January 1, 2003 requirement to eliminate production of HCFC 141b.

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1.4 DELIVERY, STORAGE, AND HANDLING

A. Deliver products in manufacturer's original packaging, dry, undamaged, with seals and labels intact.

B. Store products in weather protected environment, clear of ground and moisture.

C. Protect from direct exposure to sunlight.

D. Do not install insulation which has become wet or damaged.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Products of the following manufacturers will be considered for polyisocyanurate (ISO) roof insulation providing they can furnish products equal to those specified and are approved by the membrane manufacturer, and does not restrict the terms of the roofing warranty

1. “ACFoam-III by Atlas Roofing Corp., Atlanta, GA
2. “H-Shield "by Hunter Panels, Portland, ME
3. “ENRGY 3” by Johns-Manville, Denver, CO
4. "Duro-Guard ISO" by Duro-Last, Saginaw, MI

B. ISO Parallel and Tapered Roof Insulation and Cover Board: Insulation shall have glass fiber reinforced facer sheets on both sides integrally laminated to the polyisocyanurate core material. Insulation shall meet FM Class 1 construction. Type II, Class 2, Grade 2 ~~3~~ per ASTM C1289, latest edition.

1. Total LTTR value shall be minimum 20.00, unless otherwise indicated.
2. Achieve LTTR by a minimum assembly of two layers. Use additional layers depending on board thickness
3. Compressive Strength: 20 pounds per square inch (PSI) minimum. Grade 2 per ASTM C1289, latest edition.
4. Dimensional Stability: 2% maximum linear change when conditioned at 158 degrees F and 97% relative humidity for seven days.
5. Curing Time: 24 hours minimum, plus an additional 24 hours minimum per inch of thickness, at a minimum of 60 degrees F before shipment from the manufacturer
6. Board Thickness: 2 inches maximum for parallel insulation only.~~.~~
7. Board Size: 4 x 4 ft. maximum board fully adhered insulation boards.
8. Cover Board: 1/2" thick Georgia-Pacific Dens-Deck Prime, or approved equal, fully adhered to the rigid roof insulation.

C. Roof Saddle System: Same as insulation as specified above.

D. Cants and Edge Strips: Wood as specified in Section 06 10 00.Low Rise Foam Adhesive: Two-part low-rise polyurethane foam adhesive. “OlyBond 500” by OMG Roofing Products; “Twin Jet” by Firestone Building Products; “JM Two-Part Urethane Insulation Adhesive” by JohnsManville; or “FAST Dual Cartridge Adhesive” by Carlisle SynTec Systems.

E. No insulation panel shall be greater than 2" thick unless included in a tapered panel repeat.

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PART 3 - EXECUTION

3.1 INSTALLATION

A. Comply with insulation manufacturer's instructions and recommendations for the handling, installation, and bonding or anchorage of insulation to substrate.

B. Roof Insulation: Lay in multiple courses. Edges shall be butted to provide moderate contact but not deformed or placed in surface compression. Neatly cut and fit insulation around projections and vertical surfaces. Edges shall be mitered at ridges and elsewhere to prevent open joints or irregular surfaces. Stagger end joints in adjoining courses or base course. Stagger joints in succeeding layers with joints of layer below.

1. Fully adhered to comply with FM 1-90 wind uplift requirements.

C. Provide all items and accessories as required for a complete installation in every respect.

3.2 COORDINATION

A. Installation of insulation shall be coordinated with other relative work preceding and subsequent to actual installation of insulation. This includes, but is not necessarily limited to, the following:

1. Installation of nailers, blocking, and insulation strips.
2. Installation of roof curbs.
3. Installation of flashings.

3.3 GENERAL INSTALLATION PROVISIONS

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

B. Manufacturer's Instructions: Comply with manufacturer's installation instructions and recommendations, to the extent that those instructions and recommendations are more explicit or stringent than requirements contained in Contract Documents.

C. Inspect materials or equipment immediately upon delivery and again prior to installation. Reject damaged and defective items.

D. Provide attachment and connection devices and methods necessary for securing Work. Secure Work true to line and level. Allow for expansion and building movement.

E. Recheck measurements and dimensions, before starting each installation.

F. Install each component during weather conditions and Project status that will ensure the best possible results. Isolate each part of the completed construction from incompatible material as necessary to prevent deterioration.

END OF SECTION

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SECTION 07 54 00 - FULLY ADHERED PVC SHEET ROOFING

PART 1 - GENERAL

1.1 SUMMARY

A. Provide labor, materials, and equipment necessary for complete installation of fully adhered PVC membrane roofing system indicated on the Drawings and as specified herein.

~~A.~~B. Duro-Last, Saginaw, MI is WCSC Design Standard.

1.2 SUBMITTALS

A. All PVC roofing materials, flashing and accessories specified in this Section shall be submitted as a single package as practicable. Separate submittals for each system or product may not be acceptable.

B. Do not submit MSDS or SDS sheets with the product data submittal. Architect is not responsible for review of this information. Submittals that include MSDS or SDS data sheets may be returned as rejected.

C. Submit product data in accordance with Division 01 requirements, to substantiate that the products being installed are as specified. Product data shall be submitted so that it can be established that the roofing subcontractor has clear understanding as to what was specified.

D. When warranties are delivered to the Owner, a cover letter shall be included directing the Owner to inform (copy) the manufacturer as well as the Roofing Contractor when reporting roofing problems, regardless of when they occurred during the warranty period.

E. Contractor shall submit shop drawings for ordering, manufacturing, and final inspection of the Roofing System. Drawings shall include roof outline, roof dimensions, roof penetrations, insulation type and thickness, piece layout, parapet size and location, and other information which may affect the suitability and installation of the Roofing System on the respective project.

F. Pre-roofing conference meeting minutes.

G. Roof inspection and maintenance manual.

H. Copies of each roof inspection as conducted by the manufacturer's representative.

I. Submit warranties as specified.

1.3 QUALITY ASSURANCE

A. Roofing Contractor shall obtain from the roofing manufacturer copies of each roof inspection and furnish a copy to the Architect. Contractor shall inform roofing manufacturer, with regard to warranties, that warranties shall be issued, based upon the acceptance of the roofing work, and that deficiencies noted on inspection reports have been corrected. Manufacturer shall not refuse or restrict the provisions of its warranty, based upon deficiencies noted on inspection reports, especially any report that may not have been furnished to Architect. Architect will not approve final payment of roofing work until final and interim inspection reports and warranty are in hand. Architect's representative shall accompany manufacturer's inspector and Roofing Installer during final inspection before issuing manufacturer's warranty.

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B. Roofing firm (installer) and roofing membrane manufacturer shall have a least 10 years successful experience in the type of roofing system specified. Roofing contractor shall be approved and trained specifically by the membrane manufacturer in the installation of the fully adhered PVC membrane roofing.

C. Project Foreman/Supervisor: Roofing installer shall have on the job whenever roofing work is being done, a foreman/supervisor with a minimum 3 years experience in the type of roofing specified or the roofing manufacturer's technical field representative.

D. Roofing and associated work shall be performed by a single firm called the "Installer" in this Section, so that there will be undivided responsibility for the specified performance of components parts including, but not limited to, the following (even though some parts may be subcontracted to others):

1. Insulation and saddles, Section 07 22 00.
2. Metal flashing and counterflashing in connection with roofing, Section 07 62 00.
3. Provide wood insulation stops, wood nailers, and blocking required for installation of new roof and sheet metal in conformance with requirements of Section 06 10 00.

E. Roofing membrane manufacturer shall provide a qualified technical roofing inspector on the job site during installation of the fully adhered flexible sheet roofing. The technical roofing inspector shall be present for the pre-installation conference, a minimum of one (1) time per week during the roofing membrane and flashing installation and shall accompany the Architect during the Substantial Completion inspection for the project.

F. Roof membrane system shall be designed to meet wind-loading requirements for State of Indiana Building Codes and Regulations. Refer to Structural Drawings for wind velocity.

G. Protect roofing membrane during installation from shoe marks, debris, mud, loose screws and fasteners, adhesive over runs and overflows. Clean roof in its entirety following completion of roofing Work. Marked-up, scuffed-up and all of the above will not be tolerated.

H. Patching at roof areas will NOT BE ALLOWED regardless of manufacturers warranty requirements.

I. Cleaning of the roof membrane shall be in strict accordance with the manufacturers written instructions. Power cleaners (washers or scrubbers) will not be allowed.

J. Final payment may be withheld if final roof appearance is not satisfactory to the Architect or Owner

K. The Architect and the Owner reserve the right, at their discretion, to reject all roofing Work based on appearance of the final roof membrane installation. Excessive patching, striping and corrections will not be allowed and may be cause for rejection.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Deliver materials in manufacturer's original, unopened containers and rolls with labels intact and legible. Materials having fire resistance classifications shall be delivered to the Project with labels attached as required. Deliver materials in sufficient quantity to allow continuity of work.

B. Product shall be stored indoors or in properly protected areas outdoors to provide continuous protection against wetting and moisture absorption. Adhesive shall be stored in temperature above 40 degrees F.

1. Materials stored outdoors shall be on raised platforms and cover top and sides with waterproofed materials properly tied down. Remove wet products from project site.
2. Handle roll goods as to prevent damage to edge or ends.
3. Provide continuous protection of products during delivery, storage, handling, and application.
4. Do not store roofing materials in concentrated areas of roof deck.

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1.5 MEMBRANE STORAGE DURING CONSTRUCTION

A. Store rolls on pallets fully protected from the weather with clean canvas tarpaulins. Un-vented plastic or polyethylene tarpaulins are unacceptable due to accumulation of moisture.

1.6 JOB CONDITIONS

A. Pre-Roofing Conference

1. Before installation of roofing and associated work, meet at Project site with installer, installer of each component of associated work, installers of deck or substrate construction to receive roofing work, installers of other work in and around roofing that must follow the roofing work (including Mechanical Work, if any), the Architect and other representatives directly concerned with performance of the work, including (where applicable) insurers, test agencies, product manufacturers, governing authorities, and the Owner. Record (by Contractor) the discussions of the conference and the decisions and agreements (or disagreements) reached and furnish a copy of the record to each party attending. Review foreseeable methods and procedures related to roofing work, including, but not necessarily limited to, the following:

   a. Review project requirements (Drawings, Specifications and other Contract Documents).
   b. Review required submittals, both completed and yet to be completed.
   c. Review status of substrate work (not by the roofing installer), including drying, structural loading limitations, and similar considerations.
   d. Review availability of materials, tradesmen, equipment, and facilities needed to make progress and avoid delays.
   e. Review required inspection, testing, certifying, and accounting procedures.
   f. Review weather and forecasted weather conditions, and procedures for coping with unfavorable conditions, including the possibility of temporary roofing.
   g. Review regulations concerning code compliance, environmental protection, health, safety, fire, and similar considerations.
   h. Review procedures needed for protection of roofing during the remainder of the construction period.
   i. Consider each party's extant judgment, as advanced in the interest of successful completion of the work.

2. **Roofing work may not begin until after the pre-roofing conference.** Meeting minutes of the pre-roofing conference shall be reviewed and commented by all involved parties prior to the application of the roofing work.
3. **PRE-ROOFING CONFERENCE IS MANDATORY** for the:

   a. Roofing membrane manufacturer's technical inspector for the project.
   b. Roofing membrane representative for the membrane manufacturer.
   c. Design/Builder (D/B representative)
   d. Architect or Architect's representative.
   e. Roof and deck insulation manufacturer's representative.
   f. Flashing and sheet metal contractor.
   g. Mechanical contractor for coordination of roof top curbs and air handler unit penetrations.

B. Weather Condition Limitations

1. Proceed with roofing and associated work only when weather conditions will permit unrestricted use of materials and quality control of the Work being installed, complying with the requirements and with the recommendations of the roofing materials manufacturer.

   a. Proceed only when the Installer is willing to guarantee the work as required and without additional reservations and restrictions.

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2. Apply in dry weather on a dry deck only. Where rain or inclement weather occur during application, the Work shall stop and not resume until the weather has cleared and the deck is properly dry.

1.7 ROOF MAINTENANCE MANUAL

A. Roofing membrane manufacturer shall submit a Roof Maintenance and Inspection Manual with warranties and project closeout submittals. (Final payment will not be made until roof maintenance manual is submitted).

B. Roof Maintenance and Inspection Manual shall be bound in a single, combined PDF, bookmarked and titled accordingly with name of project, Owner, Architect, and Roofing Contractor on front cover.

C. Roof Maintenance and Inspection Manual shall include:

1. Cover letter recommending to the Owner that 2 roof maintenance inspections should be conducted per year.
2. Table of Contents.
3. Visual inspection checklist indicating specific flashings and details to be inspected. Include items such as base flashing seams, reglets and counterflashings, roof edge flashings, roof penetration flashings, roof curb flashings, boot flashings, roof drain areas, parapet wall flashings, copings, roof membrane seams, skylight flashings, etc. Applicable items shall be listed per project.
4. Copies of as-built roofing details.
5. Roof plan indicating penetrations, detail locations, roof drains, and seams.
6. Roof Maintenance and Inspection Manual shall be submitted in PDF format combined and bookmarked in one (1) PDF.

1.8 WARRANTIES

A. The Contractor shall furnish to the Owner a written guarantee warranting the roofing insulation and flashing work, including the installation of products furnished by others and installed under this Section of the Work, against defects in materials and workmanship for a period of 5 years from the Date of Substantial Completion.

1. Guarantee shall include, but not be limited to, roofing, roof insulation, sheet metal flashings and gravel stops, gutters and downspouts, flexible flashings, expansion joints, control joints, and curbs at roof openings.
2. Guarantee period shall begin on the date of Substantial Completion for the Project or such date that the roof is accepted by the Architect and Owner, if the date is after the date of Substantial Completion.
3. Repairs required, either permanent or temporary, to roofing or roof flashings under this guarantee to keep the roof watertight shall be made within 3 days after notice of the need for repairs. Should the Contractor fail to make such repairs within the time period, the Owner may have such repairs made and charge the cost to the Contractor.

B. In addition to the guarantee above, provide to the Owner a written warranty from the roofing membrane manufacturer, warranting the roofing system membrane, flashing, and all roof system items against leaks and defects in materials and workmanship for a period of 20 years no dollar limit, starting the day of Substantial Completion as established by the Architect.

1. Warranties shall be extended as required to cover the time period between roof membrane completion and the Date of Substantial Completion for the building or portion thereof.

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PART 2 - PRODUCTS

2.1 FULLY ADHERED PVC ROOFING SYSTEM

A. Acceptable Manufacturers;

1. "Duro-Last X 60-Mil Membrane" by Duro-Last, Saginaw, MI (WCSC Design Standard)
2. ~~"Sure-Flex PVC FRS Membrane " by Carlisle Syntec, Carlisle, PA~~
3. ~~"JM PVC SD Plus" by Johns-Manville, Denver, CO~~

2.2 MATERIALS

A. Membrane:

1. Type: fully adhered in cold adhesive.
2. Thickness: Nominal .060 inch thick reinforced membrane. (60 MIL)
3. Breaking Strength (ASTM D751): 110 pounds min.
4. Underwriters Laboratory: Roof system shall be a U.L Class "A" roof.
5. Low Temperature Bend (ASTM D2136): -40 degrees F. - PASS
6. Weight Change After Immersion (ASTM D570): 1.7% maximum.
7. Seam Strength (ASTM D751): PASS
8. Accelerated Weathering Test (ASTM G154): 10,000 hours- no cracking, no crazing and negligible discoloration
9. UL: Class A.
10. Factory Mutual: Class 1-90
11. Color: light gray

B. Flashing Material:

1. All flashing material shall be flashing membrane as recommended in roofing manufacturer's standard details.
2. Pressure sensitive flashing is not allowed.

C. All seaming shall be hot-air welding tool.

D. Cold adhesive as recommended and applied in rates and method as recommended by the manufacturer.

E. Membrane reinforcement shall be fiberglass or polyester scrim

F. Membrane shall be U.L, Class A rated.

G. Roofing membrane and applications as specified shall comply with all requirements of FM 1-90. Submit approvals and certifications as specified herein.

H. At all parapets, run the roofing membrane up and over the top of the parapet, and down 2" on the outside face of the parapet.

PART 3 - EXECUTION

3.1 SUBSTRATE AND SURFACE PREPARATION

A. Roofing contractor shall verify proper surfaces to receive roofing and flashing materials. Do not apply roofing membrane during periods of precipitation. **Do not apply below 40 degrees F.**

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B. ALL substrates, metal decking and insulation layers shall be free from debris, trash, dirt, screws, cans, and all other contaminants.

C. Coordinate installation of all items by other trades prior to starting roofing Work.

3.2 GENERAL INSTALLATION PROVISIONS

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

1. Clean substrate of dust, debris, moisture, and other substances detrimental to roofing installation according to roofing system manufacturer's written instructions. Remove sharp projections.
2. Prevent materials from entering and clogging roof drains and conductors, and from spilling or migrating onto surfaces of other construction. Remove roof-drain plugs when no work is taking place or when rain is forecasted.
3. Complete terminations and base flashings and provide temporary seals to prevent water from entering completed sections of roofing at end of workday or when rain is forecasted. Remove and discard temporary seals before beginning work on adjoining roofing area.

B. Manufacturer's Instructions: Comply with manufacturer's installation instructions and recommendations, to the extent that those instructions and recommendations are more explicit or stringent than requirements contained in Contract Documents.

C. Inspect materials immediately upon delivery and again before installation. Reject damaged and defective items.

D. Provide attachment and connection devices and methods necessary for securing Work. Secure Work true to line and level. Allow for expansion and building movement.

E. Recheck measurements and dimensions, before starting each installation.

F. Install each component during weather conditions and Project status that will ensure the best possible results. Isolate each part of the completed construction from incompatible material as necessary to prevent deterioration.

3.3 MEMBRANE INSTALLATION

A. Follow membrane manufacturers recommended application procedures for the application of the membrane roofing. Install in strict accordance with the manufacturers written installation instructions.

B. Provide all items and accessories as required for a complete and watertight installation in every respect.

C. Ensure membrane is flat, smooth and taught prior to application of adhesive. Wrinkles in membrane will not be allowed or accepted.

3.4 FLASHING INSTALLATION

A. Cover all vertical surfaces with membrane as recommended by the manufacturer.

B. Weld and adhere flashings to roofing membrane as recommended by the manufacturer.

C. Install walkways pads where indicated on the Drawings in accordance with the manufacturers written installation instructions.

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D. General:

1. All penetrations shall be sealed.
2. At roof drains, end membrane 1" inside drain clamping ring.
3. Drain Protection: Roof drains shall be covered at all times while work is in progress and opened for water flow at time when work is not in progress and the roof membrane surface is clean free of dirt, waste and debris. THIS WILL BE ENFORCED.

E. All soil stacks and roof vents penetrating the roof shall receive premolded pipe flashings with stainless steel clamp.

3.5 PROTECTION AND CLEANING OF ROOFING

A. Upon completion of roofing, institute appropriate procedures for protection of roofing during remainder of construction period.

B. Protect roofing membrane during installation from shoe marks, debris, mud, loose screws and fasteners, adhesive over runs and overflows. Clean roof in its entirety following completion of roofing Work. Marked-up, scuffed-up and all of the above will not be tolerated.

C. Patching at roof areas WILL NOT BE ALLOWED.

D. Cleaning of the roof membrane shall be in strict accordance with the manufacturers written instructions. Power cleaners will not be allowed.

E. Final payment may be withheld if final roof appearance is not satisfactory to the Architect or Owner.

F. The Architect and the Owner reserve the right, at their discretion, to reject all roofing Work based on appearance of the final roof membrane installation. Excessive patching, striping and corrections will not be allowed and may be cause for rejection.

END OF SECTION

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SECTION 07 92 00 - SEALANTS AND CAULKING

PART 1 - GENERAL

1.1 SUMMARY

A. Provide labor, materials, and equipment necessary to complete sealant work, both interior and exterior of the Project. The extent of each type of sealant and caulking work is indicated on the Drawings and specified herein.

1. Sealants include, but may not be limited to, the following:

a. Siliconized Acrylic Latex Sealant
b. Non-Staining Silicone Sealant
c. Mildew Resistant Silicone Sealant
d. Polyurethane Sealant
e. Self-Leveling Polyurethane Sealant
~~e.~~f. Acoustical sealants

2. Sealant ~~and Security Sealant~~ Work:

a. All exterior joint sealants, regardless of location, shall be by the same manufacturer and of the type(s) as specified.
b. All exterior roofing and flashing joint sealants, regardless of location, shall be by the same manufacturer and of the type(s) as specified.
c. All interior joint sealants, regardless of location ~~in non-secure areas~~, shall be by the same manufacturer and of the type(s) as specified.
d. Control and expansion joints in CMU and Face Brick
~~e. Joints in exterior insulation and finish system (EIFS)~~
~~f.~~e. Joints between metal panels

3. Install in exterior joints in vertical surfaces and non-traffic horizontal surfaces as indicated below:

a. Joints between different materials listed above.
b. Perimeter joints between materials listed above and frames of doors and windows.
c. Control and expansion joints in ceiling and overhead surfaces.
d. Other joints as indicated or required.

4. Install in exterior joints in horizontal traffic surfaces as indicated below:

a. Control, expansion, and isolation joints in cast-in-place concrete slabs.
b. Joints between different materials listed above.
c. Other joints as indicated or required.

5. Install in interior joints in vertical surfaces and horizontal non-traffic surfaces as indicated below:

a. Perimeter joints of exterior openings where indicated.
b. Joints between tops of non-load-bearing unit masonry walls and underside of cast-in-place concrete slabs and beams precast concrete slabs metal floor deck metal roof deck.
c. Vertical control joints on exposed surfaces of interior unit masonry and concrete walls and partitions.
d. Perimeter joints between interior wall surfaces and frames of interior doors and windows.
e. Perimeter joints of toilet fixtures.

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f. Other joints as indicated or required.
~~f.~~g. Acoustical joint sealants in STC rated walls.

6. Install in interior joints in horizontal traffic surfaces as indicated below:

a. Control and expansion joints in cast-in-place concrete slabs.
b. Other joints as indicated or required.

7. The Work of this Section also includes the preparation of the sealant joint substrates and the installation of the sealant joint backings.

B. Surface Hardness: Provide types of sealants to withstand anticipated abrasive or possible indentation as recommended by manufacturer.

C. Compatibility: Provide materials that are compatible with the joint surfaces, joint fillers, and other materials in the joint system. Refer to pre-construction field testing as specified herein.

PART 2 - PRODUCTS

2.1 GENERAL

A. Compatibility: Provide joint sealants, joint fillers, and other related materials that are compatible with one another and with joint substrates under conditions of service and application, as demonstrated by sealant manufacturer based on testing and field experience.

B. Colors: Provide color of exposed joint sealants to comply with the following:

1. Provide selections made by Architect from manufacturer's full range of standard colors for products of type indicated.

2.2 MATERIALS

A. General

1. Where the term "Acceptable Standard" is used within this Section, it refers to the manufacturer and product listed, which is specified as the type and quality required for this Project.
2. Products of other manufacturers will be considered, providing their products equal or exceed the quality specified, and they can provide products of the type and quality required.
3. Single source responsibility for joint sealer materials: Obtain joint sealer materials from a single manufacturer for each different product required.
4. Compatibility: Provide joint sealers, joint fillers, and other related materials that are compatible with on another and with joint substrates under conditions of service and application, as demonstrated by sealant manufacturer based on testing and final experience.

B. Siliconized Acrylic Latex Sealant

1. One part, non-priming, siliconized acrylic latex sealant formulated to be paintable and recommended for exposed applications on interior locations involving joint movement of not more than plus or minus 5 percent. Exceeds ASTM C834, Type OP, Grade NF -18 degrees C. Class A per ASTM E84 or UL 723.

2. Acceptable Manufacturers:

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a. "Masterseal NP 520" by Master Builders Solutions (BASF)
b. "TremGlaze SA1100" by Tremco Commercial Sealants & Waterproofing
c. "AC-20 +Silicone" by Pecora Corporation
d. "Adseal DWM 1090" by Adfast Corporation

C. Non-Staining Silicone Sealant

1. All exterior building envelope weathertight and watertight sealants shall be silicone unless specified otherwise.

a. One part non-staining low modulus silicone sealant, complying with ASTM C920, Class 50, Type S, Grade NS. No staining of substrates when tested in accordance with ASTM C1248.

2. Acceptable Manufacturers

a. "Pecora 864 NST" by Pecora Corporation
b. "Dowsil 795" by Dow Corning Corp.
c. "Spectrem 1" by Tremco Commercial Sealants & Waterproofing
d. "Sikasil WS-295" by Sika Corporation

3. All exterior building envelope weathertight and watertight sealants shall be silicone unless specified otherwise.

D. Mildew Resistant Silicone Sealant (Around interior countertops and backsplashes, plumbing fixtures and other wet interior locations.)

1. One-part mildew resistant silicone sealant:

a. Acceptable Manufacturers

1) "Dowsil 786"; Dow Corning Corp.
2) "Tremsil 200"; Tremco Commercial Sealants & Waterproofing
3) "Pecora 860"; Pecora Corporation
4) "Sikasil GP"; Sika Corporation

E. Polyurethane Sealant (interior only)

1. One part polyurethane sealant, complying with ASTM C920, Type S, Grade NS, Class 25 (nonsag).

a. Acceptable Manufacturers

1) "Masterseal NP1"; Master Builders Solutions, BASF
2) "Sikaflex 1a"; Sika Corporation

F. Self-Leveling Polyurethane Sealant, (for interior horizontal slabs-on-grade except at polished concrete)

1. One component polyurethane self-leveling sealant, complying ASTM C920, Type S, Grade P, Class 25. Shore A hardness of 25 or 30 per ASTM C661, with ±25% total joint movement.

a. Acceptable Manufacturers

1) "Urexpan NR-201": Pecora Corporation.
2) "MasterSeal SL 1"; Master Builders Solutions, BASF
3) "Sikaflex -1c SL"; Sika Corporation.

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b. Install in all horizontal control joints in concrete slabs-on-grade.

G. Miscellaneous Materials

1. Provide joint cleaner and joint primer sealer as recommended by the sealant or caulking compound manufacturer.
2. Primer: Provide type recommended by joint sealer manufacturer where required for adhesion of sealant to joint substrates indicated, as determined from preconstruction joint sealer substrate tests and field tests.
3. Cleaners for Nonporous Surfaces: Provide non-staining, chemical cleaners of type which are acceptable to manufacturers of sealants and sealant backing materials, which are not harmful to substrates and adjacent nonporous materials, and which do not leave oily residues or otherwise have a detrimental effect on sealant adhesion or in service performance.

2.3 JOINT SEALANT BACKING

A. Provide sealant backings of material and type that are non-staining; are compatible with joint substrates, sealants, primers and other joint fillers; and are approved for applications indicated by sealant manufacturer based on field experience and laboratory testing.

B. Plastic Foam Joint Fillers: Preformed, compressible, resilient, non-staining, non-waxing, non-extruding strips of flexible plastic foam of material indicated below and of size, shape, and density to control sealant depth and otherwise contribute to producing optimum sealant performance:

1. Closed-cell polyethylene foam, nonabsorbent to liquid water and gas, non-out-gassing in un-ruptured state.

C. For Fire-rated UL Joint Systems for Rated Sealant:

1. "Ultra Block" by Backer Rod Mfg., Inc, Phoenix, AZ
~~1.~~2. "Sika Backer Rod Fire" by Sika Corporation

2.4 ACOUSTICAL JOINT SEALANTS

B. Acoustical Sealant: Manufacturer's standard non-sag, paintable, non-staining latex sealant complying with ASTM C 834, latest edition, and the following requirements:

1. Product is effective in reducing airborne sound transmission through perimeter joints and openings in building construction as demonstrated by testing representative assemblies per ASTM E 90, latest edition.
2. The product has flame spread and smoke developed ratings of less than 25 per ASTM E 84, latest edition.

C. Acoustical Sealant for Concealed Joints: Manufacturer's standard, nondrying, non-hardening, non-skinning, non-staining, gunnable, synthetic rubber sealant recommended for sealing interior concealed joints to reduce transmission of airborne sound.

D. Products: Subject to compliance with requirements, provide one of the following:

1. Acoustical Sealants (for use in fire-rated walls):

"AC-20 FTR Acoustical and Insulation Sealant" by Pecora Corp.

2. Acoustical Sealant (for use in non-rated walls):

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"AIS-919" Pecora Corp.
"QuietSeal by Quiet Solution, Inc., Sunnyvale, California.
"Sheetrock Brand Acoustical Sealant by USG.
"STOP Noise (Professional Series) Acoustical Sealant by Acoustical Surfaces, Inc. Chaska, Minnesota.

2. Acoustical Sealant for Concealed Joints:

BA-98, Pecora Corp.
Tremco Acoustical Sealant, Tremco, Inc.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine joints indicated to receive joint sealants, with Installer present, for compliance with requirements for joint configuration, installation tolerances, and other conditions affecting joint sealant performance. Do not proceed with installation of joint sealants until unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants to comply with recommendations of joint sealant manufacturer and the following requirements:

1. Remove all foreign material from joint substrates that could interfere with adhesion of joint sealant, including dust, paints (except for permanent, protective coatings tested and approved for sealant adhesion and compatibility by sealant manufacturer), old joint sealants, oil, grease, waterproofing, water repellents, water, surface dirt, and frost.
2. Clean concrete, masonry, unglazed surfaces of ceramic tile, and similar porous joint substrate surfaces by brushing, grinding, blast cleaning, mechanical abrading, or a combination of these methods to produce a clean, sound substrate capable of developing optimum bond with joint sealants. Remove loose particles remaining from above cleaning operations by vacuuming or blowing out joints with oil-free compressed air.
3. Remove laitance and form release agents from concrete.
4. Clean metal, glass, porcelain enamel, glazed surfaces of ceramic tile, and other nonporous surfaces with chemical cleaners or other means that do not stain, harm substrates, or leave residues capable of interfering with adhesion of joint sealants.

B. Joint Priming: Prime joint substrates where indicated or where recommended by joint sealant manufacturer based on pre-construction joint sealant-substrate tests or prior experience. Apply primer to comply with joint sealant manufacturer's recommendations. Confine primers to areas of joint sealant bond; do not allow spillage or migration onto adjoining surfaces.

C. Masking Tape: Use masking tape where required to prevent contact of sealant with adjoining surfaces that otherwise would be permanently stained or damaged by such contact or by cleaning methods required to remove sealant smears. Remove tape immediately after tooling without disturbing joint seal.

3.3 SELECTION OF MATERIAL

A. Caulking compounds shall be used for interior nonmoving joints and at locations specifically indicated on Drawings.

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B. One component elastomeric silicone sealants shall be used at exterior and interior joints where thermal of dynamic movement is anticipated including, but not limited to, the following locations:

1. Metal to metal joints.
2. Sheet metal flashings, copings, preformed metal caps, fascias, extenders, trim, and panels.
3. Glass to glass joints.
4. Glass to metal joints.

C. One component elastomeric silicone sealants: exterior and interior joints where weatherproofing or waterproofing is required and exterior joints between dissimilar materials including, but not limited to, the following locations:

1. Expansion and control joints.
2. Exterior side of hollow metal frames to adjacent materials.
3. Exterior side of aluminum frames to adjacent dissimilar materials.
4. Lintels and shelf angles to masonry construction.
5. Louvers to adjacent construction.
6. Vertical and horizontal control joints and expansion joints in the building - interior (if not exposed to inmates) and exterior sides.
7. Exterior joints between dissimilar materials where the joining of the two surfaces leaves a gap between the meeting materials or components as may be dictated by the various methods of construction to make watertight.
8. Masonry expansion and control joints.

D. One component elastomeric polyurethane sealants shall be used at interior joints where indicated, but not limited to, the following locations:

1. Interior locations which are noted "caulked" or "sealant" and not specifically listed herein or included in the Work of other Sections of the Specifications.

E. One-part self-leveling polyurethane sealants shall be used for exterior and interior horizontal joints subject primarily to pedestrian traffic and light and moderated vehicular traffic, and in all control joints in slab-on-grade; interior.

END OF SECTION

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SECTION 08 41 13 - ALUMINUM FRAMED ENTRANCES AND STOREFRONTS

PART 1 - GENERAL

1.1 SUMMARY

A. Provide labor, materials, and equipment necessary for complete installation of aluminum doors, frames and storefronts as shown on the Drawings and specified herein.

B. Type of storefront system:

1. Sight Line: 2".
2. System Depth: 4-1/2" with 1" insulated glazing.

1.2 Tested to AAMA 501, ASTM E 1886, E 1996, and TAS 201, 202, 203.

~~1.2~~1.3 SUBMITTALS

A. Aluminum framed entrances and storefronts and accessories specified in this Section shall be submitted as a single package as practicable. Separate submittals for each system or product may not be acceptable.

B. Do not submit MSDS or SDS sheets with the product data submittal. Architect is not responsible for review of this information. Submittals that include MSDS or SDS data sheets may be returned as rejected.

C. Shop drawings for aluminum frames and doors shall be submitted to Architect no later than 15 days after receiving notice to proceed with Work.

D. Shop drawings shall show elevations of aluminum framed entrances and storefronts and of each door and frame type, door and frame construction details and methods of assembling sections, hardware locations and installation methods, dimensions, and shapes of materials, anchorage and fastening methods, door frame types and details, wall opening construction details, weatherstripping, threshold, and finish requirements. Also include details, hardware, and attachments to other work, operational clearances and installation details.

1. Provide schedule of doors and frames using same reference numbers for details and openings as those on Contract Drawings and Schedules.

E. Delegated Design:

1. Design aluminum storefront systems, including comprehensive engineering analysis by a qualified professional engineer, using performance requirements and design criteria indicated.

F. Obtain review of Drawings prior to proceeding with manufacturing.

G. Submit pre-installation meeting minutes.

H. Submit warranties as specified herein.

I. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency for each type of aluminum-framed entrance doors.

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J. Entrance Door Hardware Schedule: Prepared by or under the supervision of supplier, detailing fabrication and assembly of entrance door hardware, as well as procedures and diagrams. Coordinate final entrance door hardware schedule with doors, frames, and related work to ensure proper size, thickness, hand, function, and finish of entrance door hardware.

~~1.3~~1.4 PERFORMANCE REQUIREMENTS

A. General Performance:

1. Aluminum-framed storefront framing system and doors shall withstand the effects of the following performance requirements without exceeding performance criteria or failure due to defective manufacture, fabrication, installation, or other defects in construction.
2. Product to comply with the specified performance requirements without failure due to defective manufacture, fabrication, installation, or other defects in construction, as determined by testing of aluminum storefront systems representing those indicated for this project.
3. Aluminum storefront systems shall withstand movements of supporting structure including, but not limited to, story drift, twist, column shortening, long-term creep, and deflection from uniformly distributed and concentrated live loads.
4. Failure includes any of these events:

    a. Thermal stresses transferring to building structure
    b. Glass breakage
    c. Loosening or weakening of fasteners, attachments, and other components
    d. Failure of operating unit

B. Aluminum-Framed Storefront Performance Requirements:

1. Wind loads: Provide entrance system; include anchorage, capable of withstanding wind load design pressures of 25 lbs./sq. ft. inward and 25 lbs./sq. ft. outward. The design pressures are based on the Indiana ~~Missouri Michigan South Dakota~~ Building Code, latest edition in effect.
2. Air Infiltration: For single acting offset pivot or butt hung entrances in the closed and locked position, the test specimen shall be tested in accordance with ASTM E 283 at a pressure differential of 1.57 psf (75 Pa) for pairs of doors. A single 3'0" x 7'0" (915 mm x 2134 mm) entrance door and frame shall not exceed 1.0 cfm/ft2. A pair of 6'0" x 7'0" (1830 mm x 2134 mm) entrance doors and frame shall not exceed 1.0 cfm per square foot.
3. Uniform Load Deflection: A static air design load of 50.13 psf for single doors and 40.10 psf for pairs of doors shall be applied in the positive and negative direction in accordance with ASTM E 330. There shall be no deflection in excess of L/175 for typical application of the span of any framing member. At a structural test load equal to 1.5 times the specified design load, no glass breakage or permanent set in the framing members in excess of 0.2% of their clear spans shall occur.
4. To meet UFC 04-010-01, B-3.3 Standard 12 for exterior doors and Standard 10 for glazing and frame bite provisions, the following options are available:

    a. Section B-3.1.1 Dynamic analysis
    b. Section B-3.1.2 Testing
    c. Section B-3.1.3 ASTM F2248 Design Approach

5. Forced Entry: Tested in accordance with AAMA 1304.
6. Energy Efficiency:

    a. Thermal Transmittance (U-factor): When tested to AAMA Specification 1503, the thermal transmittance (U-factor) shall not be more than:

        1) Insulated Glass - 0.52 (low-e) BTU/hr/ft2/°F per AAMA 507.

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b. Solar Heat-Gain Coefficient (SHGC) : Glazed thermally broken aluminum door and frame shall have a Solar Heat Gain Coefficient (SHGC) as determined according to NFRC 200.
c. Visible Transmittance (VT): Glazed thermally broken aluminum door and frame shall have a Visible Transmittance (VT) as determined according to NFRC 200.

7. Condensation Resistance Factor (CRF): When tested to AAMA Specification 1503, the condensation resistance factor shall not be less than:

a. Insulated Glass - 49 frame and 68 glass (low-e).

8. Condensation Resistance Factor (I): When tested to CSA A440, the condensation resistance factor shall not be less than:

a. Insulated Glass - 37 frame and 66 glass (low-e).

9. Sound Transmission Class (STC) and Outdoor-Indoor Transmission Class (OITC): When tested in accordance with ASTM E 90, the STC and OITC ratings shall not be less than:

a. 37 (STC) and 32 (OITC).

C. Delegated Design:

1. Design aluminum storefront systems, including comprehensive engineering analysis by a qualified professional engineer, using performance requirements and design criteria indicated.

~~1.4~~1.5 QUALITY ASSURANCE

A. Perform Work in accordance with AAMA SFM-1 and AAMA - Metal Curtain Wall, Window, Store Front and Entrance - Guide Specifications Manual.

B. Conform to requirements of ANSI A117.1.

C. Manufacturer and Installer: Company specializing in manufacturing aluminum glazing systems with minimum ten (10) years documented experience.

D. Source Limitations: Obtain thermally broken aluminum-framed door through one source from a single manufacturer.

E. Product Options: Drawings indicate size, profiles, and dimensional requirements of aluminum-framed glass entrance doors and are based on the specific system indicated. Refer to Division 01 Section "Product Requirements". Do not modify size and dimensional requirements.

1. Do not modify intended aesthetic effects, as judged solely by Architect, except with Architect's approval. If modifications are proposed, submit comprehensive explanatory data to Architect for review.

~~1.5~~1.6 PRE-INSTALLATION MEETING

A. Meet at the project site with the contractor, installers, and Architect prior to beginning installation of aluminum doors, frames and windows. Contractor or CM shall record meeting minutes and submit to the Architect for review.

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~~1.6~~1.7 DELIVERY, STORAGE, AND PROTECTION

A. Handle Products of this section in accordance with AAMA - Curtain Wall Manual #10.

B. Protect finished aluminum surfaces with wrapping. Do not use adhesive papers or sprayed coatings which bond when exposed to sunlight or weather.

~~1.7~~1.8 PROJECT CONDITIONS

A. Coordinate the Work with installation of all adjoining components and materials.

~~1.8~~1.9 WARRANTY

A. Provide written warranty in form acceptable to Owner jointly signed by manufacturer, installer and Contractor warranting work to be watertight, free from deflective materials, defective workmanship, glass breakage due to defective design, and agreeing to replace components which fail within two (2) years from date of Substantial Completion.

B. Warranty shall cover following:

1. Complete watertight and airtight system installation within specified tolerances.
2. Completed installation will remain free from rattles, wind whistles and noise due to thermal and structural movement and wind pressure.
3. System is structurally sound and free from distortion.
4. Glass and glazing gaskets will not break or "pop" from frames due to design wind, expansion or contraction movement or structural loading.
5. Glazing sealants and gaskets will remain free from abnormal deterioration or dislocation due to sunlight, weather or oxidation.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Acceptable Manufacturers:

1. "Trifab VersaGlaze 451/451T" by Kawneer North America, Norcross, Georgia
2. "4500 Series" by Wausau Window and Wall Systems, Wausau, WI
3. "Series 493" by EFCO, Monet, MO
4. "T14000" by Tubelite, Walker, MI

2.2 TYPE

A. Doors: Shall be 500 Wide Stile Entrance Doors (1" glazing).

B. Frames/Storefront/Windows

1. Non-Thermal Framing System (¼" glass; 2" by 4-1/2" frame) - interior vestibule framing or other interior framing where indicated.
2. Thermal Framing System (1" glass; by 2" by 4 ½" frame w/ thermal barrier) - exterior storefront integrated entrance doors exterior aluminum entrance doors at other locations storefront framing and exterior window framing

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2.3 DOOR MATERIALS AND CONSTRUCTION

A. Sections shall be extruded from 6063-T5 aluminum alloy (ASTM B221 Alloy GS 10A T5).

B. Major portions of the door stiles shall be .125 inch in thickness, and glazing molding shall be .050 inch thick.

C. Screws, miscellaneous fastening devices, and internal components shall be of stainless steel, plated, or corrosion-resistant materials of sufficient strength to perform the functions for which they are used.

D. Vertical stiles shall be 5 inches; top rail 5 inches; and bottom rail 10 inches or as indicated on the drawings.

E. Corner construction shall consist of both sigma deep penetration and sigma fillet welds and mechanical fastening. Interior glazing stops shall be square snap-in type with neoprene bulb type glazing. Square stops on exterior side shall be lock-in tamperproof type. No exposed screws shall be required to secure stops.

F. Door shall be weather-stripped on 3 sides with metal backed pile cloth installed in the door and/or frame. An adjustable weatherstrip astragal with stainless steel backing shall be provided at the meeting stiles of a pair of doors.

G. Anchors, Clips, and Accessories: Aluminum, nonmagnetic stainless steel, or zinc-coated steel or iron complying with ASTM B 633 for SC 3 severe service conditions or other suitable zinc coating; provide sufficient strength to withstand design pressure indicated.

H. Reinforcing Members: Aluminum, nonmagnetic stainless steel, or nickel/chrome-plated steel complying with ASTM B 456 for Type SC 3 severe service conditions, or zinc-coated steel or iron complying with ASTM B 633 for SC 3 severe service conditions or other suitable zinc coating; provide sufficient strength to withstand design pressure indicated.

I. Slide-In-Type Weather Stripping: Provide woven-pile weather stripping of wool, polypropylene, or nylon pile and resin-impregnated backing fabric. Comply with AAMA 701/702.

   1. Weather Seals: Provide weather stripping with integral barrier fin or fins of semi-rigid, polypropylene sheet or polypropylene-coated material. Comply with AAMA 701/702.

J. Fabricate aluminum-framed entrance doors in sizes indicated. Include a complete system for assembling components and anchoring doors.

K. Fabricate aluminum-framed doors that are reglazable without dismantling perimeter framing.

   1. Door corner construction shall consist of mechanical clip fastening, SIGMA deep penetration plug welds and 1" (25.4 mm) long fillet welds inside and outside of all four corners. Glazing stops shall be hook-in type with EPDM glazing gaskets reinforced with non-stretchable cord.
   2. Accurately fit and secure joints and corners. Make joints hairline in appearance.
   3. Prepare components with internal reinforcement for door hardware.
   4. Arrange fasteners and attachments to conceal from view.

L. Weather-stripping: Provide weather-stripping locked into extruded grooves in door panels or frames as indicated on manufactures drawings and details.

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2.4 FRAMING MATERIALS AND CONSTRUCTION

A. Thermal framing members shall provide for front center back glazing of 1 inch insulated tempered glass, by use of elastomeric gaskets on both sides of the glass, with no projecting stops. Framing members shall incorporate a two-part chemically curing high density polyurethane thermal barrier. Vertical and horizontal framing members shall have a nominal face dimension of 2 inches with an overall depth of 4-1/2 inches. All single acting entrance frames shall include the positive barrier weathering.

B. Non-thermal framing members shall provide for front center back glazing of 1/4 inch tempered glass, by use of elastomeric gaskets on both sides of the glass, with no projecting stops.

C. Framing members, transition members, mullions, sills, adapters, and mountings (including sill anchors, frame receptors at jambs, and other frame trim and accessories shown on Drawings), shall be extruded aluminum with alloy and temper consistent with the method of manufacturer. These members shall be of 6063-T5 with extruded aluminum alloy (ASTM B221-54T alloy G.S. 10A-T5).

1. Provide sill flashing and receptor, jamb receptors, intermediate horizontal members, head receptors and flashings, mullions, horizontal shear blocks, tube columns, corners, and all accessories for a complete and watertight installation in every respect.

D. Screws, miscellaneous fastening devices, and internal components shall be of stainless steel or plated of corrosion resistant materials of sufficient strength to perform the functions for which they are used.

E. Thermal Barrier: 1/4" separation consisting of a two-part chemically curing, high-density polyurethane, which is mechanically and adhesively joined to aluminum framing sections.

1. Thermal Break shall be designed in accordance with AAMA TIR-A8 and tested in accordance with AAMA 505.

F. Brackets and Reinforcements: Manufacturer's standard high-strength aluminum with nonstaining, nonferrous shims for aligning system components.

G. Perimeter Anchors: When steel anchors are used, provide insulation between steel material and aluminum material to prevent galvanic action

H. Framing Members, General: Fabricate components that, when assembled, have the following characteristics:

1. Profiles that are sharp, straight, and free of defects or deformations.
2. Accurately fit joints; make joints flush, hairline and weatherproof.
3. Means to drain water passing joints, condensation within framing members, and moisture migrating within the system to exterior.
4. Physical and thermal isolation of glazing from framing members.
5. Accommodations for thermal and mechanical movements of glazing and framing to maintain required glazing edge clearances.
6. Provisions for field replacement of glazing.
7. Fasteners, anchors, and connection devices that are concealed from view to greatest extent possible.

I. Mechanically Glazed Framing Members: Fabricate for center glazing without projecting stops.

J. Aluminum Framing: Fabricate components for assembly using manufacturer's standard installation instructions.

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2.5 ALUMINUM FINISH

A. Color Anodic Finish: AAMA 611, AA-M12C22A42/A44, Class I, 0.018 mm or thicker.

1. Dark Bronze - equal to Kawneer #40

2.6 HARDWARE

A. The aluminum door manufacturer shall provide weatherstripping and thresholds to meet ADA requirements.

B. All other hardware is specified in Section 08 71 00 Builder's Door Hardware.

PART 3 - EXECUTION

3.1 PREPARATION

A. Openings for aluminum entrances and framing shall be prepared to the proper size, plumb, square, level, and in the proper location and alignment as shown on the Architect's Drawings and the approved shop drawings.

3.2 EXAMINATION

A. With installer present, examine openings, substrates, structural support, anchorage, and conditions for compliance with requirements for installation tolerances and other conditions affecting performance of work:

1. Verify rough opening dimensions.
2. Verify levelness of sill plate.
3. Verify operational clearances.
4. Examine wall flashings, vapor retarders, water and weather barriers, and other built-in components for proper water management.
5. Masonry Surfaces:

a. Masonry surfaces must be visibly dry and free of excess mortar, sand, and other construction debris.

~~6. Wood Frame Walls:~~

~~a. Wood frame walls must be dry, clean, sound, well nailed, free of voids, and without offsets at joints.~~
~~b. Ensure that nail heads are driven flush with surfaces in opening and within 3" of opening.~~

~~7.~~6. Metal Surfaces:

a. Metal surfaces must be dry and clean (free of grease, oil, dirt, rust, corrosion, and welding slag).
b. Ensure that metal surfaces are without sharp edges or offsets at joints.

B. Proceed with installation only after correcting unsatisfactory conditions

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3.3 INSTALLATION

A. Aluminum doors, and frames shall be securely installed according to the manufacturer's recommendations, and operating hardware shall be checked for proper function and adjustment.

B. Protect the aluminum doors, frames and windows and their finish against damage from construction activities and harmful substances. Clean the aluminum surfaces as recommended for the type of finish applied.

C. Install all items in strict accordance with the manufacturers written installation instructions.

D. Provide all items and accessories as required for a complete and weathertight installation in every respect.

E. Comply with Drawings, Shop Drawings, and manufacturer's written instructions for installing aluminum-framed storefront system, accessories, and other components.

F. Install aluminum-framed storefront system so that components:

1. Are level, plumb, square, and true to line
2. Are without distortion and do not impede thermal movement
3. Are anchored securely in place to structural support
4. Are in proper relation to wall flashing and other adjacent construction

G. Set sill members in bed of sealant or with gaskets, as indicated, for weather-tight construction

H. Install aluminum-framed storefront system and components to drain condensation, water penetrating joints, and moisture migrating within aluminum-framed storefront system to the exterior.

I. Separate aluminum and other corrodible surfaces from sources of corrosion or electrolytic action at points of contact with other materials.

3.4 FIELD QUALITY CONTROL

A. Manufacturer's Field Services:

1. Upon owner¢¢s written request, provide periodic site visit by manufacturer¢¢s field service representative

3.5 GENERAL INSTALLATION PROVISIONS

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

B. Manufacturer's Instructions: Comply with manufacturer's installation instructions and recommendations, to the extent that those instructions and recommendations are more explicit or stringent than requirements contained in Contract Documents.

C. Inspect materials or equipment immediately upon delivery and again prior to installation. Reject damaged and defective items.

D. Provide attachment and connection devices and methods necessary for securing Work. Secure Work true to line and level. Allow for expansion and building movement.

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E. Visual Effects: Provide uniform joint widths in exposed Work. Arrange joints in exposed Work to obtain the best visual effect. Refer questionable choices to the Architect for final decision.

F. Recheck measurements and dimensions, before starting each installation.

G. Install each component during weather conditions and Project status that will ensure the best possible results. Isolate each part of the completed construction from incompatible material as necessary to prevent deterioration.

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

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SECTION 08 51 13 - ALUMINUM WINDOWS

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes heavy commercial-grade aluminum window units of the performance class indicated. Window types required include:

1. Fixed and Project-Out Windows

B. All windows shall be factory glazed.

1.2 REFERENCES

A. AAMA - American Architectural Manufacturers Association

1. AAMA/WDMA/CSA 101/I.S.2/A440-08 “NAFS - North American Fenestration Standard/Specification for windows, doors, and skylights”
2. AAMA 502-12 "Voluntary Specification for Field Testing of Newly Installed Fenestration Products"
3. AAMA 611-12 "Voluntary Specification for Anodized Architectural Aluminum"
4. AAMA 701/702-11 "Voluntary Specification for Pile Weatherstripping and Replaceable Fenestration Weatherseals”
5. AAMA 904-09 “Voluntary Specification for Multi-bar Hinges in Window Applications”
6. AAMA 910-10 “Voluntary ‘Life Cycle’ Specifications and Test Methods for AW Class Architectural Windows and Doors”
7. AAMA 1503-09 "Voluntary Test Method for Thermal Transmittance and Condensation Resistance of Windows, Doors, and Glazed Wall Sections"
8. AAMA 2605-13 “Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels”
9. AAMA CW-10-12 "Care and Handling of Architectural Aluminum from Shop to Site"

B. ASTM International - American Society for Testing and Materials

1. ASTM E283-12 "Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen"
2. ASTM E330-14 "Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights, and Curtain Walls by Uniform Static Air Pressure Difference"
3. ASTM E331-09 "Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference"
4. ASTM E547-09 "Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Cyclic Static Air Pressure Differential"
5. ASTM E2190-10 "Standard Specification for Insulating Glass Unit Performance and Evaluation"
6. ASTM F588-07 “Standard Test Methods for Measuring the Forced Entry Resistance of Window Assemblies, Excluding Glazing Impact”

C. IGCC – Insulating Glass Certification Council

D. NFRC – National Fenestration Rating Council

1. NFRC 100-2010 “Procedure for Determining Fenestration Product U Factors”

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2. NFRC 102-2010 “Procedure for Measuring the Steady-State Thermal Transmittance of Fenestration Systems”

E. SGCC – Safety Glazing Certification Council

1. ANSI Z97.1-09 “American National Standard for Safety Glazing Materials used in Buildings – Safety Performance Specifications and Methods of Test”
2. 16 CFR 1201 “Consumer Product Safety Commission Safety Standard for Architectural Glazing Materials – codified at Title 16, Part 1201 of the Code of Federal Regulations 2011 Edition”

1.3 SYSTEM PERFORMANCE REQUIREMENTS

A. General: Provide aluminum window units complying with performance requirements specified, as demonstrated by testing manufacturer's corresponding stock systems according to test methods indicated.

B. Design Requirements: Comply with structural performance, air infiltration, and water penetration requirements indicated in AAMA AP-AW100 for type, grade, and performance class of window units required.

C. Window systems shall be designed to meet wind-loading requirements of the **Indiana State Building Code, latest edition** Refer to Structural Drawings for wind velocity.

D. Testing: Test each type and size of required window unit through a recognized independent testing laboratory or agency, in accordance with ASTM E 330 for structural performance, with ASTM E 283 for air infiltration, and with both ASTM E 331 and ASTM E 547 for water penetration. Provide certified test results, complying with the provisions of the latest editions of the referenced standards.

1. Structural Performance: Provide window units with no failure or permanent deflection in excess of 0.4 percent of any member's span after removal of the imposed load, for a positive (inward) and negative (outward) test pressure of 75 lbf/sq. ft.
2. Air Infiltration: Provide units with air infiltration rate of not more than 0.06 cfm/ft. of operable sash joint for an inward test pressure of 6.24 lbf/sq. ft.
3. Water Penetration: Provide units with no water penetration as defined in the test method at an inward test pressure of 15 percent of the design pressure.
4. Condensation Resistance: Provide units that have been tested for thermal performance in accordance with AAMA 1503.1, latest edition, showing a condensation resistance factor (CRF) of not less than 50.
5. Thermal Transmittance: Provide window units that have a U-value maximum of 0.69 BTU/hour/sq. ft./deg F at 15-mph exterior wind velocity, when tested in accordance with AAMA 1503.1, latest edition.

1.4 SUBMITTALS

A. Submit the following in accordance with Division 1 requirements.

1. Submit copies of product data for each type of window required, including:

a. Construction details and fabrication methods.
b. Profiles and dimensions of individual components.
c. Data on hardware, accessories, and finishes.

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d. Recommendations for maintenance and cleaning of exterior surfaces.

2. Shop drawings for each type of window required. Include information not fully detailed in manufacturer's standard product data and the following:

a. Layout and installation details, including anchors.
b. Elevations of continuous work at 1/4-inch scale and typical window unit elevations at 3/4-inch scale.
c. Full-size section details of typical composite members, including reinforcement.
d. Hardware including operators.
e. Glazing details.
f. Accessories.
i. Sample of Approved Product Label and location of attachment to assembly.
j. ~~Submit current Miami-Dade NOA for all exterior window units.~~

B. Submit warranty as specified herein.

C. Submit proof of compliance with AAMA AP-AW100 requirements. Testing for this requirement shall be by an independent testing laboratory conducted within 5 years from the date of the submittal. Test must be for a window or windows larger than those required for this project. Non-current tests and inappropriate sizes will be cause for rejection.

D. Pre-Installation Conference notes.

1.~~2~~4 QUALITY ASSURANCE

A. Installer Qualifications: Engage an experienced Installer who has completed installation of aluminum windows similar in design and extent to those required for the project and whose work has resulted in construction with a record of successful in-service performance.

B. Standards: Requirements for aluminum windows, terminology and standards of performance, and fabrication workmanship are those specified and recommended in AAMA 101 and applicable general recommendations published by AAMA.

C. Single-Source Responsibility: Provide aluminum window units from one source and produced by a single manufacturer.

E. Pre-Installation Conference: Conduct a pre-installation conference at the project site prior to ordering and installation of the aluminum windows. Coordinate shop drawings, details, and delivery dates with all contractors.

1.~~3~~5 PROJECT CONDITIONS

A. Field Measurements: Check actual window openings by accurate field measurement before fabrication. Show recorded measurements on final shop drawings. Coordinate fabrication schedule with construction progress to avoid delay of work.

1. Where necessary, proceed with fabrication without field measurements, and coordinate fabrication tolerances to ensure proper fit of window units.

1.~~4~~6 WARRANTY

A. Aluminum Window Warranty: Written warranty, executed by the window manufacturer, agreeing to repair or replace window units that fail in materials or workmanship within the specified warranty period. Failures include but are not necessarily limited to:

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1. Structural failures including excessive deflection, excessive leakage, or air infiltration.
2. Faulty operation of sash and hardware.
3. Deterioration of metals, metal finishes, and other materials beyond normal weathering.

B. Warranty Period: 5 years from the Date of Substantial Completion.

PART 2 – PRODUCTS

2.1 MANUFACTURERS

A. Manufacturers

1. "Model G201 Project-Out Thermal Aluminum Window" as manufactured by Peerless Products, Inc., Ft. Scott, KS
2. "PX32 Project-Out Window" as manufactured by EFCO, LLC, Monett, MO

A. Other manufacturers may be acceptable. However, final decision as to acceptance is solely the Architect's and will be listed in a future addendum. Submit requests for product substitution at least ten (10) days prior to bid due date.

1. Specified depths of continuous receivers/receptors and total window system depth including receiver/reeptor are minimums. Provide window system with all specified accessories including thermally broken, extruded aluminum, continuous head/jamb/sill receptors; extended strap anchors; and matching extruded aluminum interior box trim; all around the full perimeter of each window opening; as well as matching extruded aluminum subsill extension at the exterior of the sill.
2. All additional approved manufacturers shall provide Giesse OS operator and specified screens at each operable portion, and other specified materials and accessories.

2.2 SYSTEM DESCRIPTION

A. AAMA Certification: AP-AW100.

B. Configuration: project-out vent; vent-under-fixed with a horizontal integral mullion in one master frame; vent hinged at the top and projects out from the top to open.

C. Windows: 3-1/4" frame depth; extruded aluminum with integral structural thermal break installed by the window manufacturer in the frame and vent members; equal-leg flange frame; exterior and interior finishes applied by the window manufacturer; frames and vents assembled by the window manufacturer.

2.3 MATERIALS

A. Aluminum extrusions: extruded by the window manufacturer from commercial quality 6063-T5 alloy; free from defects impairing strength and durability.

B. Frame: Double tubular head, sill, and jambs miter cut and fastened with two zamac corner gussets per corner; double tubular integral mullion, if required, fastened with two zamac gussets per frame member without penetrating the frame member with fasteners; corners sealed by the window manufacturer with sealant conforming to AAMA 800-10.

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C. Vents: Double tubular horizontal and vertical vent rails and stiles miter cut and fastened with two zamac corner gussets per corner; corners sealed by window manufacturer with sealant conforming to AAMA 800-10.

D. Water Control: Continuous compression gasket to utilize pressure equalization and to allow water to drain by gravity.

E. Window Frame: Extruded aluminum with integral structural thermal break installed by the window manufacturer in the frame and vent members; exterior and interior finishes applied by the window manufacturer; frames and vents assembled by the window manufacturer.

1. Frame Depth: 3-1/4 inches (83 mm).
2. Fabricated with equal-leg flange frame.
F. Thermal break: The thermal break separating the exterior and interior aluminum extrusions shall be a mechanical crimp-in-place system utilizing multi-directional glass fiber reinforced polyamide nylon struts with locking mechanical connections to the aluminum extrusions. The thermal break shall not be compromised by hardware or metal fasteners.

G. Glazing: exterior ExxonMobil Santoprene™ foam gasket; 1" insulating glass; two weep holes under each glass pocket for drainage; foam backer rod and silicone heel bead forming an internal seal; interior Santoprene™ bulb gasket threaded into aluminum glazing beads; glass description in item G. below; glazed by the window manufacturer.

H. Weatherstrip: secured in extruded ports; Santoprene™ seals conforming to AAMA 702-11; flap seal single row mounted on the vent interior on the bottom rail, top rail, and stiles; triple-tubular seal single internal row mounted on the head, sill and jamb frame members.

I. Operating hardware: mounted in concealed extruded grooves to avoid penetrating frame or vent members with fasteners:

1. two concealed stainless steel hinges conforming to AAMA 904-09 per vent to rotate the vent on horizontal axis.
2. One single-action OS (out-swing) operator handle with multiple point locks per vent, painted to match the finish of the window
3. Provide with key-release limit arms with clear opening dimension of 8”.

J. Receivers, Trim and Mullions:

1. Provide all windows with minimum 7.702” deep, thermally-broken receiver at window jambs and head, and minimum 7.702” wide, thermally-broken subsill at window sill (refer to manufacturer’s receptor detail “G2DIRS with Strap Anchors/Sill Extender”). Receivers and subsill shall be fully continuous around the perimeter of the window opening. Receivers and subsill shall span the wall cavity and be fastened to the supporting construction to meet applicable load requirements. Provide matching two- piece snap-in box trim at all receivers and subsills to fill gap between receivers, subsills and window frame.
2. Provide all windows with extruded aluminum sill angle extension on the exterior, to span from subsill to masonry/precast sill.
3. Window units shall be provided with integral horizontal mullions between units.
4. Provide vertical three-piece mullion with polyamide strip thermal break to properly join multiple window units together within the same opening and meet design pressure requirements. Fasteners shall be concealed.
5. Materials: extruded aluminum; nominal .062” wall; with exposed surfaces finished to match window color and finish performance;
6. Provide trim with concealed fasteners, required weatherseals, polyamide thermal breaks when spanning cavity, and design for unrestricted expansion and contraction.

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K. Glass with Internal Blinds

1. All aluminum windows shall be dual glazed. All aluminum windows shall have internal, integral, between-the-glass blinds.

   a. The exterior glass shall be an insulated glass unit (1” thick) and certified as manufactured by Peerless Products, Inc. consisting of 1/4” clear tempered exterior with Cardinal Glass LoE-270 on #2 face, 1/2” airspace, and 1/4” clear tempered interior. Guardian Industries Sunguard Supernuetral 68 or PPG Solarban 60 on the #2 face is also acceptable.
   b. Head and sill rails of blinds shall be extruded aluminum. Blind slats to be (5/8”or 1”) aluminum.
   c. Blinds: 1" x .008" aluminum slats; slat color chosen from manufacturer's standards; tilt adjusted with interior tilt control knob.
   d. Interior glass shall be 1/4” clear tempered removable panel, custodial fastened.

2. Glass surface protection: Factory-apply removeable protective clear Cardinal Glass Preserve™ film on insulating glass exterior and interior surfaces for protection during window installation and building construction.

L. Insect screens: full; mounted on the window frame interior; 3/8” x 1-3/8” x .050” extruded tubular aluminum frame with the same finish as the window interior in color and performance; corners mitered, gusset reinforced, and crimped; 18 x 16 dark aluminum mesh; flexible PVC spline. Screen mounting holes shall be factory drilled.

~~M. Finish:~~

~~1. Application: on clean extrusions free from serious surface blemishes; on exposed surfaces visible when installed product's operating vents are closed.~~
~~2. Coating: PPG Duranar® with resin containing 70% fluoropolymer.~~
~~3. Quality standard: conforming to AAMA 2605-13, including 10 years Florida exposure and 4000 hours humidity tests.~~
~~4. Pretreatment: Mechanically clean and chemically pretreat fabricated items in accordance with coating manufacturer's requirements and AAMA requirements with a Chrome Free Treatment.~~
~~5. Application: electrostatic spray by a PPG Approved Duranar® Applicator and appropriate oven bake process.~~
~~6. Coating Quantity: One single color coating, additional coating quantities will not be accepted. This includes, but is not limited to barrier coats, primers and clear coats.~~
~~7. Dry Film Thickness: Eighty percent of measurements on primary exposed surfaces shall exceed 1.9 mils with a standard thickness range of 1.9 to 3.14 mils, except inside corners and channels.~~
~~8. Environmental Factors: Less than 3% harmful VOC's (Volatile Organic Compounds) emitted during powder coating application process.~~
~~9. Finish color shall be chosen by Architect after bidding from manufacturer's full range of available colors~~

2.2~~3~~ HARDWARE

A. Projected units: White bronze cam handle, stainless steel concealed friction hinges or surface mounted extruded aluminum butt hinges.

B. Concealed stainless steel hinges on all operating units shall conform to AAMA 904.1. Provide cam-lock manual push-out for project units, manufacturer’s standard.

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2.34 ACCESSORIES

A. Provide the manufacturer's standard accessories that comply with specified requirements.

B. Provide all receptors, sill flashing (.062"), and head flashings at all windows as required to provide a watertight installation.

C. Provide weatherstripping at all operable units. All weatherstripping shall be EPDM or neoprene bulbs.

D. Insect Screen: Provide insect screens for each operable exterior sash or ventilator. Locate screens on the inside of the window sash or ventilator, depending upon window type. Design windows and hardware to accommodate screens in a tight-fitting removable arrangement, with a minimum of exposed fasteners and latches.

1. Screen Frames: Fabricate frames of tubular-shaped extruded or formed aluminum members of 0.040-inch minimum wall thickness, with mitered or coped joints and concealed mechanical fasteners. Finish frames to match window units.
2. Provide removable PVC spline-anchor concealing the edge of the screen frame.

2.5 FABRICATION

A. General: Fabricate aluminum window units to comply with indicated standards. Include a complete system for assembly of components and anchorage of window units.

B. Pre-Glazed Fabrication: Comply with glass and glazing requirements of Section 08 80 00 – Glazing, AAMA 101 and wind loading requirements.

C. Mullions: Integral mullions and cover plates as shown, matching window units, complete with anchors for support to structure and installation of window units. Allow for erection tolerances and provide for movement of window units due to thermal expansion and building deflections, in the manner indicated.

D. Frame shall be mechanically joined and reinforced at all corners. All corners shall be mitered.

E. Operable vents shall be tubular members with mitered corners, gusset reinforced and crimped.

F. All frame and vent joints shall be factory sealed with sealant conforming to AAMA 800.

G. Water Control: compression gaskets on vent interior shall utilize pressure equalization and shall allow water to drain by gravity.

H. Drip caps shall be field mounted on frame exteriors above all vent heads. Finish shall match window finish.

2.6 FINISHES

A. General: Comply with NAAMM "Metal Finishes Manual" for recommendations relative to application and designations of finishes.

B. Finish designations prefixed by “AA” conform to the system established by the Aluminum Association for designating aluminum finishes.

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C. AAMA 608 dark bronze anodized finish conforming to AAM10C22A44 Class I, .7 mils thick.

PART 3 - EXECUTION

3.1 GENERAL INSTALLATION PROVISIONS

A. Inspect both the substrate and conditions under which Work is to be performed. Do not proceed until unsatisfactory conditions have been corrected in an acceptable manner.

1. Verify cleaning of masonry is complete prior to installation of aluminum windows.

B. Verify that rough or masonry opening is correct and the sill plate is level.

3.2 INSTALLATION

A. Set sill members and other members in a bed of compound or with joint fillers or gaskets, as shown, to provide weathertight construction. Refer to the "Joint Sealer" sections of Division 7 for compounds, fillers, and gaskets to be installed concurrently with window units. Coordinate installation with wall flashings and other components of the work.

1. Compounds, joint fillers, and gaskets to be installed after installation of window units are specified as work in another section in Division 7.

B. Provide all items as required for a complete and watertight installation in every respect, whether or not indicated on the drawings or specifications. Provide all miscellaneous accessories and trim and panning flashing as required whether or not indicated on the drawings or specified herein.

C. All installed windows shall be weather and watertight in every respect.

D. Erection Tolerance: Maximum variation from plumb is 1/16-inch in 3’-0 non-cumulative or 1/8-inch in 10’-0, which ever is less.

3.3 ADJUSTING, CLEANING, AND PROTECTION

A. Adjust operating sash and hardware to provide a tight fit at contact points and at weatherstripping for smooth operation and a weathertight closure.

B. Clean aluminum surfaces promptly after installation of windows. Exercise care to avoid damage to protective coatings and finishes. Remove excess glazing and sealant compounds, dirt, and other substances. Lubricate hardware and other moving parts.

C. Clean glass of pre-glazed units promptly after installation of windows. Comply with requirements of the "Glass and Glazing" section for cleaning and maintenance.

D. Initiate and maintain protection and other precautions required through the remainder of the construction period, to ensure that, except for normal weathering, window units will be free of damage or deterioration at the time of Substantial Completion.

END OF SECTION

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SECTION 08 80 00 - GLAZING

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes builders glazing, including, but not limited to, the following:

1. 1/4" tempered clear glass
2. ~~Laminated glass~~
3. ~~3.~~2. K-12 Laminated security glass
4. ~~4.~~3. 1" Insulated glass
5. ~~5.~~4. Glazing sealants
6. ~~6.~~5. Glazing tapes
7. ~~7.~~6. Miscellaneous glazing materials

1.2 PRECONSTRUCTION TESTING

A. Preconstruction Adhesion and Compatibility Testing: Test each glass product, tape sealant, gasket, glazing accessory, and glass-framing member for adhesion to and compatibility with elastomeric glazing sealants.

1. Testing is not required if data are submitted based on previous testing of current sealant products and glazing materials matching those submitted. Submit the results and dates of those tests.
2. Use ASTM C1087 to determine whether priming and other specific joint-preparation techniques are required to obtain rapid, optimum adhesion of glazing sealants to glass, tape sealants, gaskets, and glazing channel substrates.
3. Test no fewer than four (4) samples of each type of material, including joint substrates, shims, sealant backings, secondary seals, and miscellaneous materials.
4. Schedule enough time for testing and analyzing results to prevent delaying the Work.
5. For materials failing tests, submit sealant manufacturer's written instructions for corrective measures including use of specially formulated primers.

1.3 DELIVERY, STORAGE, AND HANDLING

A. Deliver glass to site in suitable containers that will protect glass from the weather and from breakage. Carefully store material, as directed, in a safe place where breakage can be reduced to a minimum. Deliver sufficient glass to allow for normal breakage. Glazing compounds shall arrive at the project site in labeled containers which have not been opened.

1.4 PROJECT CONDITIONS

A. Environmental Conditions: Do not proceed with glazing when ambient and substrate temperature conditions are outside the limits permitted by glazing materials manufacturer or when glazing channel substrates are wet from rain, frost, condensation, or other causes.

1. Install liquid sealants at ambient and substrate temperatures above 40 deg F (4.4 deg C).

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1.5 WARRANTY

A. Warranties specified in this Article shall not deprive the Owner of other rights the Owner may have under other provisions of the Contract Documents and will be in addition to and run concurrent with other warranties made by the Contractor under requirements of the Contract Documents.

B. Manufacturer's Special Warranty for Coated-Glass Products: Manufacturer agrees to replace coated-glass units that deteriorate within specified warranty period. Deterioration of coated glass is defined as defects developed from normal use that are not attributed to glass breakage or to maintaining and cleaning coated glass contrary to manufacturer's written instructions. Defects include peeling, cracking, and other indications of deterioration in coating.

1. Warranty Period: 10 years from Date of Substantial Completion Date of Manufacture.

C. Manufacturer's Special Warranty for Insulating Glass: Manufacturer agrees to replace insulating-glass units that deteriorate within specified warranty period. Deterioration of insulating glass is defined as failure of hermetic seal under normal use that is not attributed to glass breakage or to maintaining and cleaning insulating glass contrary to manufacturer's written instructions. Evidence of failure is obstruction of vision by dust, moisture, or film on interior surfaces of glass.

1. Warranty Period: 10 years from date of Substantial Completion Date of Manufacture.

D. Manufacturer's Special Warranty for Heat-Soaked Tempered Glass: Manufacturer agrees to replace heat-soaked tempered glass units that spontaneously break due to nickel sulfide (NiS) inclusions at a rate exceeding 0.3 percent (3/1000) within specified warranty period. Coverage for any other cause is excluded.

1. Warranty Period: 5 years from Date of Substantial Completion Date of Manufacture.

PART 2 - PRODUCTS

2.1 GLASS MANUFACTURERS

A. Primary Glass Manufacturers:

1. Pilkington North America - NSG Group, Toledo, OH
2. Guardian Glass, Auburn Hills, MI
3. Vitro Architectural Glass, Carlisle, PA

B. Wire Glass Manufacturers

1. Pilkington North America - NSG Group, Toledo, OH

C. Fire-Rated Laminated Glass Manufacturers

1. SAFTI FIRST, Brisbane, CA
2. Technical Glass Products (TGP), Snoqualmie, WA

D. Laminated Glass Manufacturers

1. Pilkington North America - NSG Group, Toledo, OH
2. Guardian Glass, Auburn Hills, MI
3. Cardinal Glass Industries, Fremont, IN
4. Viracon, Owatonna, MN

E. K-12 Laminated Security Glass Manufacturers

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1. “School Guard Glass " as manufactured by LTI Smart Glass, Inc., Pittsfield, MA
2. "Childgard" as manufactured by Isoclima Specialty Glass, LLC., Selma, AL
3. "DefendEd" as manufactured by McGrory Glass, Paulsboro, NJ

2.2 GLASS FABRICATORS

A. Glass Fabricators

1. Cardinal Glass Industries, Fremont, IN
2. Tempglass, Inc., El Paso, TX
3. HGP Architectural Glass, Dallas, TX
4. McGrory Glass, Paulsboro, NJ
5. Viracon, Owatonna, MN
6. Oldcastle BuidingEnvelope, Cleveland, OH

2.3 PERFORMANCE REQUIREMENTS

A. General: Installed glazing systems shall withstand normal thermal movement and wind and impact loads (where applicable) without failure, including loss or glass breakage attributable to defective manufacture, fabrication, or installation; failure of sealants or gaskets to remain watertight and airtight; deterioration of glazing materials; or other defects in construction.

B. Structural Performance: Glazing shall withstand the following design loads within limits and under conditions indicated determined in accordance with the IBC and ASTM E1300:

1. Design Wind Pressures: As indicated on Drawings.
   a. Wind Design Data: As indicated on Drawings.
   b. Basic Wind Speed: As indicated on Drawings.
   c. Importance Factor: 1.5 or as otherwise required by Indiana State Building Code, latest version as adopted.
   d. Exposure Category: as required by Indiana State Building Code, latest version as adopted.
2. Design Snow Loads: As indicated on Drawings.
3. Maximum Lateral Deflection: For glass supported on all four edges, limit center-of-glass deflection at design wind pressure to not more than 1/50 times the short-side length or 1 inch, whichever is less.
4. Thermal Loads: Design glazing to resist thermal stress breakage induced by differential temperature conditions and limited air circulation within individual glass lites and insulated glazing units.

C. Thermal and Optical Performance Properties: Provide glass with performance properties specified, as indicated in manufacturer's published test data, based on procedures indicated below:

1. For monolithic-glass lites, properties are based on units with lites 1/4" thick.
2. For laminated-glass lites, properties are based on products of construction indicated.
3. For insulating-glass units, properties are based on units of thickness indicated for overall unit and for each lite.
4. U-Factors: Center-of-glazing values, in accordance with NFRC 100 and based on most current non-beta version of LBL's WINDOW computer program, expressed as Btu/sq. ft. x h x deg F.
5. SHGC and Visible Transmittance: Center-of-glazing values, in accordance with NFRC 200 and based on most current non-beta version of LBL's WINDOW computer program.
6. Visible Reflectance: Center-of-glazing values, in accordance with NFRC 300.

D. Acoustic Performance:

1. Exterior Glazing: 28 OITC 33 OITC 45 OITC. (Outdoor-Indoor Transmission Class).

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2. Interior Glazing: 35 STC 37 STC 41 STC. (Sound Transmission Class)

2.4 GLASS TYPES

A. **Glass Type G-1:** (Not Used)

B. **Glass Type G-2:** Bronze tinted, 1-inch thick Insulated Glass shall consist of 1/4 inch thick , tinted, tempered, outer panel, a 1/2 inch wide hermetically sealed air space, and 1/4 inch thick clear glass tempered inner panel.

1. "Eclipse Advantage™Bronze with Radiant Low-E" by Pilkington North America - NSG Group, Toledo, OH
2. "Solarbronze + Solarban 70" by Vitro Architectural Glass, Cheswick, PA

C. **Glass Type G-3:** K-12 Security Glass, clear, 1-inch thick Insulated Glass shall consist of 1/4 inch thick , bronze tinted, tempered, outer panel, a 3/8 inch wide hermetically sealed air space, and 3/8 inch thick clear K-12 security glass inner panel.

1. "SG4 Lminated Security Glass" by School Guard Glass, Pittsfield, MA
2. "Childgard" by Isoclima, Global Security Glazing, Butler, PA

D. **Glass Type G-4:** (Not Used)

E. **Glass Type G-5:** 1/4 inch thick, clear tempered

G. Interior

1. Glass for Vestibule Doors, Sidelights, and Transoms: 1/4 inch thick clear tempered glass.
2. Glass for Interior Non-Fire Rated Doors and Windows: 1/4 inch clear tempered safety glass.

H. U-Values, Shading Coefficient and Other Properties:

1. 1-inch insulated Pilkington Eclipse Advantage™Bronze with Radiant Low-E glass outer pane and Pilkington clear Optifloat inner pane.
2. Summer Day-time U-Value: 0.33
3. Winter Night-time U-Value: 0.33
4. Shading Coefficient: 0.52
5. Solar Heat Gain Coefficient: 0.45
6. Visible light transmittance: 44%
7. Solar energy transmittance: 32%
8. Solar energy reflectance: 8%
9. UV transmittance: 14%

2.5 PRIMARY FLOAT GLASS PRODUCTS

A. Float Glass: ASTM C 1036, Type I (transparent glass, flat), Class as indicated below, and Quality q3 (glazing select).

1. Class 1 (clear) unless otherwise indicated.

2.6 HEAT-TREATED FLOAT GLASS

A. Fabrication Process: By horizontal (roller-hearth) process with roll-wave distortion parallel to bottom edge of glass as installed, unless otherwise indicated.

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B. Uncoated, Clear, Heat-Treated Float Glass: ASTM C 1048, Condition A (uncoated surfaces), Type I (transparent glass, flat), Class 1 (clear), Quality q3 (glazing select), kind as indicated below.

1. Kind FT (fully tempered) at all locations.

2.7 COATED MONOLITHIC GLASS PRODUCTS

A. General: Performance characteristics designated for coated monolithic glass products are nominal values based on manufacturer's published test data for glass products 6.0 mm thick (0.23 inch thick), unless otherwise indicated. Comply with requirements specified including those for primary and heat-treated float glass products as they relate to properties of glass to which coatings are applied.

1. U-values are expressed as Btu/hour x sq. ft. x deg F.
2. Provide heat-treated coated float glass of kind indicated or, if not otherwise indicated, Kind HS (heat strengthened) where recommended by manufacturer to comply with system performance requirements specified and Kind FT (fully tempered) where coated safety glass is designated or required.
3. Provide Kind HS (heat-strengthened) coated float glass except provide Kind FT (fully tempered) products where coated safety glass is designated or required.

2.8 ELASTOMERIC GLAZING SEALANTS

A. General: Provide materials as recommended by the manufacturer for the required application and condition of installation in each case. Provide only compounds which are proven to be fully compatible with surfaces contacted.

B. Silicone Rubber Glazing Sealant: Shall be silicon rubber, one-part elastomeric sealant complying with FS TT-S-001543, Class A. Provide acid type for nonporous channel surfaces and provide nonacid medium-modulus type for porous channel surfaces.

2.9 GLAZING GASKETS

A. Dense Compression Gaskets: Molded or extruded gaskets of material indicated below, complying with standards referenced with name of elastomer indicated below, and of profile and hardness required to maintain watertight seal:

1. Silicone, ASTM C 1115.

B. Soft Compression Gaskets: Extruded or molded closed-cell, integral-skinned gaskets of material indicated below, complying with ASTM C 509, Type II, black, and of profile and hardness required to maintain watertight seal:

1. Silicone, ASTM C 1115

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

D. Preformed Gaskets:

a. Advanced Elastomer Systems, L.P.
b. Schnee-Morehead, Inc.
c. Tremco, Inc.

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2.10 MISCELLANEOUS GLAZING MATERIALS

A. General: Provide products of material, size, and shape complying with referenced glazing standard, requirements of manufacturers of glass and other glazing materials involved for glazing application indicated, and with a proven record of compatibility with surfaces contacted in installation.

B. Cleaners, Primers and Sealers: Type recommended by sealant or gasket manufacturer.

C. Setting Blocks: Elastomeric material with a Shore A durometer hardness of 85 plus or minus 5.

D. Spacers: Elastomeric blocks or continuous extrusions with a Shore A durometer hardness required by glass manufacturer to maintain glass lites in place for installation indicated.

E. Edge Blocks: Elastomeric material of hardness needed to limit glass lateral movement (side-walking).

F. Compressible Filler Rod: Shall be closed-cell or waterproof jacketed rodstock of synthetic rubber or plastic foam with proven compatibility with sealants used. Rod shall be flexible and resilient with 5-10 PSI compression strength for 25 percent deflection.

2.11 FABRICATION OF GLASS

A. Fabricate glass and other glazing products in sizes required to glaze openings indicated for Project, with edge and face clearances, edge and surface conditions, and bite complying with recommendations of product manufacturer and referenced glazing standard as required to comply with system performance requirements.

B. Clean cut or flat grind vertical edges of butt-glazed monolithic lites in a manner that produces square edges with slight kerfs at junctions with indoor and outdoor faces.

PART 3 - EXECUTION

3.1 STANDARDS AND PERFORMANCE

A. Watertight and airtight installation of each piece of glass required, except as otherwise shown. Each installation must withstand normal temperature changes, wind loading, impact loading (for operating sash and doors) without failure, including loss or breakage of glass, failure of sealants or gaskets to remain watertight and air tight, deterioration of glazing materials, and other defects in the Work.

B. Protect glass from edge damage at all times during handling, installation, and operation of the building.

C. Glazing channel dimensions as shown are intended to provide for necessary minimum bite on the glass, minimum edge clearance, and adequate sealant thicknesses with reasonable tolerances. The glazier is responsible for correct glass size for each opening within the tolerances and necessary dimensions established.

D. Comply with combined recommendations of glass manufacturer and manufacturer of sealants and other materials used in glazing and their technical representatives except where more stringent requirements are shown or specified.

E. Comply with "Glazing Manual" by Flat Glass Marketing Association and the manufacturers of the glass and glazing materials except as shown and specified otherwise.

F. Inspect each piece of glass immediately before installation and eliminate those which have observable edge damage or face imperfections.

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G. Unify appearance of each series of lights by setting each piece to match others as nearly as possible. Inspect each piece and set with pattern, draw, and blow oriented in the same direction as other pieces.

3.2 EXAMINATION

A. Examine glass framing, with glazier present, for compliance with the following:

1. Manufacturing and installation tolerances, including those for size, squareness, offsets at corners.
2. Presence and functioning of weep system.
3. Minimum required face or edge clearances.
4. Effective sealing between joints of glass-framing members.

B. Do not proceed with glazing until unsatisfactory conditions have been corrected.

3.3 PREPARATION

A. Clean glazing channels and other framing members receiving glass immediately before glazing. Remove coatings that are not firmly bonded to substrates.

3.4 GLAZING, GENERAL

A. Comply with combined recommendations of manufacturers of glass, sealants, gaskets, and other glazing materials, except where more stringent requirements are indicated, including those in referenced glazing publications.

B. Glazing channel dimensions as indicated on Drawings provide necessary bite on glass, minimum edge and face clearances, and adequate sealant thicknesses, with reasonable tolerances. Adjust as required by Project conditions during installation.

C. Protect glass from edge damage during handling and installation as follows:

1. Use a rolling block in rotating glass units to prevent damage to glass corners. Do not impact glass with metal framing. Use suction cups to shift glass units within openings; do not raise or drift glass with a pry bar. Rotate glass lites with flares or bevels on bottom horizontal edges so edges are located at top of opening, unless otherwise indicated by manufacturer's label.
2. Remove damaged glass from Project site and legally dispose of off site. Damaged glass is glass with edge damage or other imperfections that, when installed, weaken glass and impair performance and appearance.

D. Apply primers to joint surfaces where required for adhesion of sealants, as determined by pre-construction sealant-substrate testing.

E. Install elastomeric setting blocks in sill rabbets, sized and located to comply with referenced glazing standard, unless otherwise required by glass manufacturer. Set blocks in thin course of compatible sealant suitable for heel bead.

F. Do not exceed edge pressures stipulated by glass manufacturers for installing glass lites.

G. Provide spacers for glass sizes larger than 50 united inches (length plus height) as follows:

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1. Locate spacers inside, outside, and directly opposite each other. Install correct size and spacing to preserve required face clearances, except where gaskets and glazing tapes are used that have demonstrated ability to maintain required face clearances and comply with system performance requirements.
2. Provide 1/8-inch minimum bite of spacers on glass and use thickness equal to sealant width. With glazing tape, use thickness slightly less than final compressed thickness of tape.

H. Provide edge blocking to comply with requirements of referenced glazing publications, unless otherwise required by glass manufacturer.

I. Set glass lites in each series with uniform pattern, draw, bow, and similar characteristics.

J. Where wedge-shaped gaskets are driven into one side of channel to pressurize sealant or gasket on opposite side, provide adequate anchorage so gasket cannot walk out when installation is subjected to movement.

K. Square cut wedge-shaped gaskets at corners and install gaskets in manner recommended by gasket manufacturer to prevent corners from pulling away; seal corner joints and butt joints with sealant recommended by gasket manufacturer.

L. Provide all items and accessories as required for a complete installation in every respect.

M. Install fire-rated glass in strict accordance with the manufacturers written installation instructions to achieve the required and specified fire rating.

3.5 GASKET GLAZING (DRY)

A. Fabricate compression gaskets in lengths recommended by gasket manufacturer to fit openings exactly, with stretch allowance during installation.

B. Secure compression gaskets in place with joints located at corners to compress gaskets producing a weathertight seal without developing bending stresses in glass. Seal gasket joints with sealant recommended by gasket manufacturer.

C. Install gaskets so they protrude past face of glazing stops.

3.6 SEALANT GLAZING (WET)

A. Install continuous spacers between glass lites and glazing stops to maintain glass face clearances and to prevent sealant from extruding into glass channel weep systems until sealants cure. Secure spacers in place and in position to control depth of installed sealant relative to edge clearance for optimum sealant performance.

B. Force sealants into glazing channels to eliminate voids and to ensure complete wetting or bond of sealant to glass and channel surfaces.

C. Tool exposed surfaces of sealants to provide a substantial wash away from glass. Install pressurized gaskets to protrude slightly out of channel to eliminate dirt and moisture pockets.

3.7 PROTECTION AND CLEANING

A. Protect exterior glass from breakage immediately after installation by attaching crossed streamers to framing held away from glass. Do not apply markers to glass surface. Remove nonpermanent labels, and clean surfaces.

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B. Protect glass from contact with contaminating substances resulting from construction operations including weld splatter. If, despite such protection, contaminating substances do come into contact with glass, remove them immediately as recommended by glass manufacturer.

C. Examine glass surfaces adjacent to or below exterior concrete and other masonry surfaces at frequent intervals during construction, but not less than once a month, for build-up of dirt, scum, alkali deposits, or stains, and remove as recommended by glass manufacturer.

D. Remove and replace glass that is broken, chipped, cracked, abraded, or damaged in any way, including natural causes, accidents and vandalism, during construction period.

E. Wash glass on both faces in each area of Project not more than 4 days prior to date scheduled for inspections that establish date of Substantial Completion. Wash glass as recommended by glass manufacturer.

END OF SECTION

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SECTION 09 29 00 - GYPSUM BOARD

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes the following:

1. Non-load-bearing steel framing members.
2. Gypsum board
3. Reveal trim
4. Abuse-resistant gypsum board.
5. Tile backing board..
6. Reinforcement, both metal and wood, within framing systems to support wall and ceiling mounted furnishings or equipment provided by other trades.

1.2 DEFINITIONS

A. Gypsum Board Construction Terminology: Refer to ASTM C11 and GA-505 for definitions of terms related to gypsum board assemblies not defined in this Section or in other referenced standards.

1.3 ASSEMBLY PERFORMANCE REQUIREMENTS

A. Sound Transmission Characteristics: For gypsum board assemblies indicated to have STC ratings, provide materials and construction identical to those of assemblies whose STC ratings were determined per ASTM E 90 and classified per ASTM E 413 by a qualified independent testing agency.

1.4 SUBMITTALS

A. All gypsum board products and accessories specified in this Section shall be submitted as a single package as practicable. Separate submittals for each system or product may not be acceptable.

B. Do not submit MSDS or SDS sheets with product data submittal. Architect is not responsible for review of this information as practicable. Submittals that include MSDS or SDS data sheets may be returned as rejected.

C. Product certificates signed by manufacturers of gypsum board assembly components certifying that their products comply with specified requirements.

D. Product data for each type of product specified, including wall boards, metal studs, deflection track, and other shapes, fasteners, and finishing materials.

E. All interior non-structural walls over 12 feet high shall be designed by the metal framing manufacturer. Delegated design may not be required. Comply with stud manufacturers loading, deflection and design height charts. If the contractor requires delegated design to calculate the size of the metal studs, then that service shall be provided by the contractor.

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1.5 QUALITY ASSURANCE

A. Single-Source Responsibility for Panel Products: Obtain each type of gypsum board and other panel products from a single manufacturer.

B. Single-Source Responsibility for Finishing Materials: Obtain finishing materials from either the same manufacturer that supplies gypsum board and other panel products or from a manufacturer acceptable to gypsum board manufacturer.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Store materials inside under cover and keep them dry and protected against damage from weather, direct sunlight, surface contamination, corrosion, construction traffic, and other causes. Neatly stack gypsum panels flat to prevent sagging.

1.7 PROJECT CONDITIONS

A. Room Temperatures: For non-adhesive attachment of gypsum board to framing, maintain not less than 40 deg F For adhesive attachment and finishing of gypsum board, maintain not less than 50 deg F for 48 hours prior to application and continuously after until dry. Do not exceed 95 deg F when using temporary heat sources.

B. Ventilation: Ventilate building spaces, as required, for drying joint treatment materials. Avoid drafts during hot dry weather to prevent finishing materials from drying too rapidly.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

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

1. Steel Framing and Furring:

a. Clark Dietrich Metal Framing, Inc., Westchester, OH
b. Telling Industries, Willoughby, OH
c. Craco Manufacturing, York, SC
d. MRI Steel Framing, LLC, Hinsdale, IL
e. Marino\Ware, East Chicago, IN
f. MBA Metal Framing, Libertyville, IL
g. The Steel Network, Inc., Durham, NC

2. Gypsum Board and Related Products:

a. Georgia-Pacific Corp. Atlanta, GA
b. CertainTeed Gypsum, Valley Forge, PA
c. Fry Reglet; Alpharetta, GA
d. Pittcon Industries, Riverdale, MD
e. United States Gypsum Company, Chicago, IL
f. National Gypsum Co., Charlotte, NC

3. Non-Rated Deflection Track:

a. "Max-Track" by Clark Dietrich, Westchester, OH
b. "True-Action Slotted Track" by Telling Industries, Willoughby, OH
c. "Slotted Slip Track" by Craco Mfg, York, SC

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d. "Slotted Track" by MRI Steel Framing, LLC, Hinsdale, IL

4. Rated Deflection Track:

a. "BlazeFrame (DSL-2)" by Clark Dietrich, Westchester, OH

5. Other manufacturers that do not make a rated deflection track shall provide fire-rated firestopping system at head of wall. UL rated and published system is required. Refer to 07 84 10 Firestopping and herein for additional information.

2.2 FRAMING COMPONENTS FOR SUSPENDED CEILINGS

A. Provide components of sizes indicated but not less than that required to comply with ASTM C 754 for conditions indicated.

B. Cast-In-Place and Post-installed Anchors in Concrete: Anchors of type indicated below, fabricated from corrosion-resistant materials, with holes or loops for attaching hanger wires, and with capability to sustain, without failure, a load equal to 5 times that imposed by ceiling construction, as determined from testing per ASTM E 488 conducted by a qualified independent testing agency.

1. Cast-in-place type designed for attachment to concrete forms.
2. Chemical anchor.
3. Expansion anchor.

C. Powder-Actuated Fasteners in Concrete: Fastener system of type suitable for application indicated, fabricated from corrosion-resistant materials, with clips or other accessory devices for attaching hangers of type indicated, and with capability to sustain, without failure, a load equal to 10 times that imposed by ceiling construction, as determined by testing per ASTM E 1190 conducted by a qualified testing agency.

D. Wire for Hangers and Ties: ASTM A 641, Class 1 zinc coating, soft temper.

1. Tie wire shall be 18 gauge galvanized annealed wire.
2. Hanger wire shall be 8 gauge galvanized annealed wire.

E. Hanger Rods: Mild steel and zinc-coated or protected with rust-inhibitive paint.

F. Flat Hangers: Mild steel and zinc-coated or protected with rust-inhibitive paint.

G. Angle-Type Hangers: Angles with legs not less than 7/8 inch wide, formed from 0.0635-inch-thick galvanized steel sheet complying with ASTM A 446 Coating Designation G90, with bolted connections and 5/16-inch-diameter bolts.

H. Channels: Cold-rolled steel, 0.05980-inch-minimum thickness of base (uncoated) metal and 7/16-inch-wide flanges, and as follows:

1. Carrying Channels: 1-1/2 inch deep, 475 lb per 1000 feet, unless otherwise indicated.
2. Furring Channels: 7/8 inch deep, 325 lb per 1000 feet, unless otherwise indicated.
3. Finish: G-90 hot-dip galvanized coating per ASTM A 525 for framing for exterior soffits and where indicated.

I. Steel Rigid Furring Channels: ASTM C 645, hat-shaped, depth of 7/8 inch, and minimum thickness of base (uncoated) metal as follows:

1. Thickness: 0.0329 inch, unless otherwise indicated.
2. Protective Coating: G40 hot-dip galvanized coating per ASTM A 525.

J. **CONTRACTOR'S OPTION** (DRYWALL GRID):

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1. Steel framing components for suspended gypsum board ceilings may be drywall grid as follows in lieu of the carrying and furring channels as specified above:

   a. "SingleSpan" and/or "ShortSpan" Drywall Grid by Armstrong World Industries; or equal by USG or CertainTeed.
   b. "Drywall Suspension System" by USG, Chicago, IL

2. Consists of pre-engineered drywall main beams and drywall cross tees as required for room, ceiling height and configuration.
3. Provide all items and accessories as required for a complete installation in every respect.
4. This system is preferred over the carrying channels, furring channels and other hangers as specified above.

2.3 STEEL FRAMING FOR WALLS AND PARTITIONS

A. Provide steel framing members complying with the following requirements:

   1. Component Sizes: As indicated but not less than that required to comply with ASTM C 754 under the following maximum deflection and lateral loading conditions:

      a. Maximum Deflection: L/240 at 5 lbf per sq. ft.

   2. Protective Coating: G-40 hot-dip galvanized coating per ASTM C 645.

B. Steel Studs and Runners: ASTM C 645, with flange edges of studs bent back 90 deg and doubled over to form 3/16-inch-wide minimum lip (return) and complying with the following requirements for depth:

   1. Depth: 3-5/8 inches, unless otherwise indicated.

C. Steel Rigid Furring Channels: ASTM C 645, hat-shaped, 7/8" deep.

D. Fasteners for Metal Framing: Provide fasteners of type, material, size, corrosion resistance, holding power, and other properties required to fasten steel framing and furring members securely to substrates involved; complying with the recommendations of gypsum board manufacturers for applications indicated.

E. Unless indicated otherwise, metal stud framing shall be formed from the following gauge metal. If two conditions apply in the following listing, use the heavier gauge:

   1. Framed openings (heads and jambs of door and window openings) - 16 gauge.

      a. 16-gauge studs include both (2) studs at each jamb, full height, and horizontal headers.

   2. Remaining metal studs - **20 gauge**. (Drywall 20 gauge or “EQ” 20 gauge is not acceptable).

F. Head of Fire Rated Wall Joint Systems shall be:

   1. At fire rated GWB walls and partitions under use Dynamic systems indicated on the drawings that allow for a minimum of 50% compression or 50% extension with 1" nominal joints. ~~(Detail 11/A10.15 for U.L. Design No HW-D-0042 and similar to No HW-D-0049).~~
   2. ~~At fire rated GWB walls and partitions under reinforced concrete floor slabs/beams use U.L HW-Dynamic systems that allow for a minimum of 25% compression with 1" nominal joints equal to U.L. Design No. HW-D-0016.~~

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G. Backerplates: Except grab bars for the handicapped, and stair rails use 6 in. wide 18 ga. galvanized sheet steel per ASTM A164, type RS or heavier, lengths of backerplates as required, minimum length of 4 studs, fastened to studs for the attachment of surface mounted accessories, shelving locations, etc., at required locations and where indicated.

H. Runners: Galvanized steel, sizes and gauges as recommended by the steel stud manufacturer for the wall systems indicated. Runners shall not be lighter than 20 gauge. Drywall 20 gauge or "EQ" 20 gauge are not acceptable. Comply with ASTM C645. Flex-C Trac by Flex-Ability Concepts Edmund, OK or equal may be used in lieu of cutting top and bottom tracks at curved partitions.

1. At fire rated heads of wall joint systems utilize 20 gauge extended leg runner tracks with minimum 2-1/2" vertical legs.
2. For fire rated partitions that are parallel to the span of metal deck provide a 12" wide, 20 ga continuous plate ~~per detail 11/A10.15~~.
3. At all fire rated walls provide seismic clip angles installed at 4'-0" on center maximum.

2.4 GYPSUM BOARD PRODUCTS

A. Provide gypsum board of types indicated in maximum lengths available to minimize end-to-end butt joints.

1. Thickness: Provide gypsum board 5/8 inch thick to comply with ASTM C 840 for application system and support spacing indicated.

B. Gypsum Wallboard: ASTM C 36 and as follows:

1. Type: Type X at all locations. (Provide Type C at ceilings).
2. Edges: Tapered.
3. Thickness: 5/8 inch, unless otherwise noted.
4. Type: WR or MR gypsum board as may be indicated.

C. Glass-Mat Water-Resistant Gypsum Board: ASTM C1177, latest edition, of type and thickness indicated below:

1. Type and Thickness: Type "X", 5/8 inch thick, unless otherwise indicated.
2. Product: Subject to compliance with requirements, provide "Dens-Glass Gold" manufactured by Georgia Pacific Corp., Atlanta, Georgia;
3. GlasRoc by BPB America, Inc. is an acceptable equal.

D. Abuse-Resistant Gypsum Board :

1. ASTM C1396 gypsum board, tested according to ASTM C1629.
2. Core: 5/8 inch, Type X.
3. Surface Abrasion: ASTM C1629, meets or exceeds Level 3 requirements.
4. Indentation: ASTM C1629, meets or exceeds Level 3 requirements.
5. Soft-Body Impact: ASTM C1629, meets or exceeds Level 3 requirements.
6. Long Edges: Tapered.
7. Mold Resistance: ASTM D3273, score of 10 as rated according to ASTM D3274.
8. Manufacturers:

a. "Gold Bond eXP Interior Extreme AR Gypsum Panel by National Gypsum Company.
b. "Sheetrock Brand Abuse-Resistant Gypsum Panels by USG.
c. "Extreme Abuse Resistant Type X Gypsum Board with M2Tech by CertainTeed

E. Tile Backing Board 5/8" thickness. To be used as backer-board at wall tile applications. Comply with ANSI A118.9, ASTM A108.11 and ASTM C 1325. Use Type X panels in fire-rated assemblies. Manufacturers:

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1. "Durock Brand Glass-Mat Tile Backerboard" by USG.
2. "Gold Bond eXP Tile Backer" by Gold Bond Building Products, National Gypsum.
3. "DensShield Tile Backer" by Georgia-Pacific.

2.5 TRIM ACCESSORIES

A. Accessories for Interior Installation: Corner beads, edge trim, and control joints complying with ASTM C 1047 and requirements indicated below:

1. Material: Formed metal, complying with the following requirement:

   a. Sheet steel zinc-coated by hot-dip process.

2. Shapes indicated below by reference to Fig. 1 designations in ASTM C 1047:

   a. Cornerbead on outside corners, unless otherwise indicated.
   b. LC-bead with both face and back flanges; face flange formed to receive joint compound. Use LC-beads for edge trim unless otherwise indicated.
   c. L-bead with face flange only; face flange formed to receive joint compound. Use L-bead where indicated.
   d. U-bead with face and back flanges; face flange formed to be left without application of joint compound. Use U-bead where indicated.
   e. One-piece control joint formed with V-shaped slot, with removable strip covering slot opening.

~~B. Reveal Trim: Fry Reglet #DRM-50-50 1/2-inch wide by 1/2-inch deep. Fry Reglet #DRMF-625-50 ½-inch wide by 5/8-inch deep. Fry Reglet #DRM-PCR-100-100 1-inch wide by 1-inch deep. Fry Reglet #T5 J-Channel 10-60. Equal products by Pittcon Industries are acceptable.~~

2.6 JOINT TREATMENT MATERIALS

A. Provide joint treatment materials complying with ASTM C 475 and the recommendations of both the manufacturers of sheet products and of joint treatment materials for each application indicated.

B. Joint Tape for Gypsum Board: Paper reinforcing tape, unless otherwise indicated.

C. Setting-Type Joint Compounds for Gypsum Board: Factory-packaged, job-mixed, chemical-hardening powder products formulated for uses indicated.

1. There setting-type joint compounds are indicated as a taping compound only or for taping and filling only, use formulation that is compatible with other joint compounds applied over it.
2. For prefilling gypsum board joints, use formulation recommended by gypsum board manufacturer for this purpose.
3. For filling joints and treating fasteners of water-resistant gypsum backing board behind base for ceramic tile, use formulation recommended by the gypsum board manufacturer for this purpose.
4. For topping compound, use sandable formulation.

2.7 MISCELLANEOUS MATERIALS

A. Provide auxiliary materials for gypsum board construction that comply with referenced standards and recommendations of gypsum board manufacturer.

B. Steel drill screws complying with ASTM C 1002 for the following applications:

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1. Fastening gypsum board to steel members less than 0.03 inch thick.
2. Fastening gypsum board to gypsum board.

C. Steel drill screws complying with ASTM C 954 for fastening gypsum board to steel members from 0.033 to 0.112 inch thick.

D. Corrosion-resistant-coated steel drill screws of size and type recommended by board manufacturer for fastening cementitious backer units.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates to which gypsum board assemblies attach or abut, installed hollow metal frames, cast-in-anchors, and structural framing with Installer present for compliance with requirements for installation tolerances and other conditions affecting performance of assemblies specified in this Section. Do not proceed with installation until unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Ceiling Anchorages: Coordinate installation of ceiling suspension systems with installation of overhead structural assemblies to ensure that inserts and other provisions for anchorages to building structure have been installed to receive ceiling hangers that will develop their full strength and at spacing required to support ceilings.

1. Furnish concrete inserts and other devices indicated to other trades for installation well in advance of time needed for coordination with other construction.

3.3 INSTALLING STEEL FRAMING, GENERAL

A. Do not bridge building expansion and control joints with steel framing or furring members. Independently frame both sides of joints with framing or furring members as indicated.

3.4 INSTALLING STEEL FRAMING FOR SUSPENDED CEILINGS

A. Wire-tie or clip furring members to main runners and to other structural supports as indicated.

3.5 INSTALLING STEEL FRAMING FOR WALLS AND PARTITIONS

A. Frame door openings to comply with details indicated, with GA-219, and with applicable published recommendations of gypsum board manufacturer. Attach vertical studs at jambs with screws either directly to frames or to jamb anchor clips on door frames; install runner track section (for cripple studs) at head and secure to jamb studs.

1. Extend vertical jamb studs through suspended ceilings and attach to underside of floor or roof structure above.

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3.6 APPLYING AND FINISHING GYPSUM BOARD, GENERAL

A. Isolate perimeter of non-load-bearing gypsum board partitions at structural abutments, except floors, as detailed. Provide ¼ inch to ½ inch-wide spaces at these locations and trim edges with U-bead edge trim where edges of gypsum panels are exposed. Seal joints between edges and abutting structural surfaces with acoustical sealant.

3.7 INSTALLING TRIM ACCESSORIES

A. Install control joints at locations indicated, and where not indicated according to ASTM C 840, and in locations approved by Architect for visual effect.

3.8 FINISHING GYPSUM BOARD ASSEMBLIES

A. Prefill open joints, rounded or beveled edges, and damaged areas using setting-type joint compound.

B. Apply joint tape over gypsum board joints and to trim accessories with concealed face flanges as recommended by trim accessory manufacturer and as required to prevent cracks from developing in joint compound at flange edges.

C. Levels of Gypsum Board Finish: Provide the following levels of gypsum board finish per GA-214.

1. Level 0: No taping, finishing, or accessories required. This level of finish shall be used in temporary construction only.
2. Level 1: Joints and interior angles shall have tape embedded in joint compound. Surface shall be free of excess joint compound. Tool marks and ridges are acceptable. This finish level shall be used in plenum areas above ceilings, in attics, in areas where the assembly is concealed.
3. Level 2: Joints and interior angles shall have tape embedded in joint compound and one separate coat of joint compound applied over joints angles fastener heads and accessories. Surface shall be free of excess joint compound. Tool marks and ridges are acceptable. This finish level shall be used where water resistant gypsum backing board (ASTM C630) is used as a substrate for tile only.
4. Level 3: Joints and interior angles shall have tape embedded in joint compound and two separate coats of joint compound over joints, angles, fastener heads, and accessories. Joint compound shall be smooth and free of tool marks and ridges. Note: It is recommended that the prepared surface be coated with a primer/sealer prior to the application of final finishes. See painting/wall covering specification in this regard. This final level shall be used in areas which are to receive heavy textured, thick (1/8 inch or greater) wall coverings.
5. Level 4: Joints and interior angles shall have tape embedded in joint compound and three separate coats of joint compound applied over joints, angles, fastener heads, and accessories. Joint compound shall be smooth and free of tool marks and ridges. Note: Prepare surface to be coated with a primer/sealer prior to the application of final finishes. This finish level shall be used where textured finishes, wall coverings, and painted finishes are to be applied.

END OF SECTION

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SECTION 09 30 13 - TILING

PART 1 - GENERAL

1.1 SUMMARY

A. The Work required under this Section consists of tile work, accessories, and related items, as shown on Drawings, and described in the Specifications.

1. Ceramic wall tile.
2. Porcelain floor tile
3. Grouting materials.
4. Tile accessories.

1.2 SUBMITTALS

A. All tile products and accessories specified in this Section shall be submitted as a single package as practicable. Separate submittals for each system or product may not be acceptable.

B. Do not submit MSDS or SDS sheets with product data submittal. Architect is not responsible for review of this information. Submittals that include MSDS or SDS data sheets may be returned as rejected.

~~1. Refer to the Division 01 General Requirements as prepared by the Architect. CMa. CMc Design/Builder. for MSDS and SDS submittal requirements.~~

C. One copy of manufacturer's prepared sample board showing actual piece of each available variety of each required tile type and 2 copies of printed type facsimiles (such as page from full color product catalog) of each piece.

D. Manufacturer's published complete product data for each required grout type along with 3 copies of chart showing available grout colors. Include maintenance instructions.

E. Pre-Installation Conference meeting notes

F. Substrate moisture test results

1.3 QUALITY ASSURANCE

A. Work done under this Section of the Specifications shall be performed by mechanics skilled and experienced in the class of Work involved. Workmanship shall be in accordance with best trade practices, and surface shall be true to line and free from waves and other imperfections. Joints between tiles shall be maintained uniform and even and properly grouted.

B. Definitions in ANSI A108 series of tile installation standards and in ANSI A137.1 apply to Work of this Section unless otherwise specified.

1.4 PROJECT COLORS AND PATTERNS

A. Colors, surface textures, and other appearance characteristics shall be as selected by the Architect. Selections shall be made from among manufacturer's standard products, regardless of differing price groupings.

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B. Refer to the Finish Legend and the Room Finish Plans.

C. Architect shall select colors of grout from all available price groups.

1.5 EXTRA STOCK

A. Upon completion of Work, the Contractor under this Section shall deliver extra tile, consisting of not less than 2 percent of the total quantity of each type, size, pattern, and color installed, to the Owner for use in future repair and maintenance work. Furnish tile in original boxes, properly marked.

1.6 PREINSTALLATION MEETING

A. Preinstallation Conference: Conduct conference at Project site.

1. Review requirements in ANSI A108.01 for substrates and for preparation by other trades.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Products of the following manufacturers will be acceptable, providing their products equal or exceed the type and quality of the specified products herein, on the Room Finish Schedule, on the Finish Legend, and meet the other specification requirements.

1. Crossville, Inc., Crossville, TN (Refer to the Finish Legend)
2. Dal-Tile Corporation, Dallas, TX (Refer to the Finish Legend)
3. Marazzi USA, Dallas, TX (Refer to the Finish Legend)
4. American Olean Tile Co. Inc., Dallas, TX (Refer to the Finish Legend)

B. Manufacturers of mortars and grouts

1. American Olean Tile Co., Inc.
2. H. B. Fuller Co.
3. Laticrete International, Inc.
4. Mapei Corporation
5. Summitville Tiles, Inc.
6. Upco Co. Div., Emhart Corp.

C. Ceramic tile accessories

1. Schluter-Systems, Plattsburgh, New York.
2. Ceramic Tool Company, Waukesha, Wisconsin

D. Setting Methods:

1. Walls: TCNA W244C
2. New concrete slabs on grade: TCNA F113A

2.2 CERAMIC / PORCELAIN TILE

A. Refer to Room Finish Schedule. Porcelain and ceramic tile shall conform to requirements of ANSI A137.1, latest edition.

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B. Color(s) as selected by Architect. Refer to the Finish Legend on the Drawings.

C. Setting material shall be latex-portland cement mortar per ANSI 118.4, latest edition.

D. Provide base and trim pieces as required or as scheduled for a complete installation.

2.3 SETTING MATERIALS - Comply with the provisions of the latest editions for the following codes, specifications, and standards, except as otherwise shown or specified:

A. Cementitious Bond Coat (for floors and walls):

1. When a crack isolation membrane is not used on floors: ANSI A118.15 or better.
2. When a crack isolation membrane is used floors: ANSI A118.4 or better.
3. When porcelain tile is used on walls: ANSI A118.4 or better.

~~B. Crack Isolation Membrane (required at existing concrete floor slabs and at new elevated concrete floor slabs): Crack isolation membrane shall comply with ANSI A118.12. (Crack isolation membrane will not be required at new concrete slabs on grade).~~

~~C.~~B. Epoxy Grout: ANSI A108.6.

~~D.~~C. Tile Backer Board (refer to Section 09 29 00): ANSI A118.9

2.4 GROUTING MATERIALS

A. One hundred percent solids epoxy grout, complying with ANSI A108.6, latest edition (at all locations, floor and wall)

B. Color(s) as selected by Architect. Refer to the Finish Legend on the Drawings.

2.5 CERAMIC TILE ACCESSORIES

A. Schluter Systems Products:

1. Floors same height transitions: Schluter-DECO or Schluter-SCHIENE
2. Floors for sloped transition to exposed concrete: Schluter-RENO-RAMP/K
3. Other transitions may be required based on actual conditions. Verify all required transitions to be provided and installed.

B. Fit tile carefully against trim and accessories, also around pipes, electrical boxes, and other built-in fixtures so that escutcheons, plates, and collars will completely overlap cut edges.

C. When using glazed tile sheets, minimize tearing sheets apart by drilling pipe holes as much as possible.

D. Be sure tile Work is free of grout film upon completion.

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PART 3 - EXECUTION

3.1 INSPECTION

A. Prior to installing tile, inspect new surfaces which are to receive tile covering. Notify the Architect in writing of defects or conditions that will interfere with or prevent a satisfactory tile installation. Do not proceed with installation until such defects or conditions have been corrected.

B. The starting of installation in a room or space shall imply acceptance of the surfaces to receive the tile in that space.

3.2 LAYOUT

A. Determine locations of movement joints before starting tilework.

B. Lay out tile work so as to minimize cuts less than one-half tile in size.

C. Locate cuts in both walls and floors so as to be least conspicuous.

D. Lay out tile wainscots to next full tile beyond dimensions shown.

E. Align floor joints to give straight uniform grout lines parallel with walls.

F. Make joints between tile sheets same width as joints within sheets so extent of each sheet is not apparent in finished Work.

3.3 WORKMANSHIP

A. Supply first-class Workmanship in tilework.

B. Use products in strict accordance with recommendations and directions of manufacturer.

C. Proportion mixes in accordance with latest ANSI standard specifications.

D. Smooth exposed cut edges.

E. Be sure cut edges are clean before installing tiles.

F. Fit tile carefully against trim and accessories, also around pipes, electrical boxes, and other built-in fixtures so that escutcheons, plates, and collars will completely overlap cut edges.

G. When using glazed tile sheets, minimize tearing sheets apart by drilling pipe holes as much as possible.

H. Be sure tile Work is free of grout film upon completion.

3.4 SETTING METHODS

A. Method and typical detailing for tile Work shall be in accordance with the following TCNA alphanumeric method, listing from the "2022 TCNA Handbook for Ceramic, Glass, and Stone Tile Installation" by the Tile Council of North America, Inc.

B. Setting Methods:

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1. New concrete slabs on grade: TCNA F113A-19.
2. Walls: TCNA W244C.
3. Large format porcelain tile:

    a. For interior installation install per ANSI A108.19.
    b. Install expansion and control joints per TCNA method EJ171.

C. Sound each tile after set. Replace all hollow sounding tile

3.5 GROUTING

A. Grouting shall be installed in accordance with ANSI A108.6 for epoxy and the manufacturer's recommended procedures and precautions during application and cleaning.

B. Rinse tilework thoroughly with clean water before and after using chemical cleaners.

3.6 PROTECTION

A. The Contractor shall make such provisions as necessary to protect the tile against damage of any kind after installation. Damaged tile that appears in the finish work prior to turning the building over to the Owner is to be repaired or replaced by the Contractor without further cost to the Owner. Protect adjoining areas and surfaces and clean up everything at completion. Remove scrap, debris, and surplus material as it accumulates.

END OF SECTION

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SECTION 09 64 66 - WOOD ATHLETIC FLOORING

PART 1 - GENERAL

1.1 SUMMARY

A. Provide labor, materials, and equipment necessary for complete wood flooring work, including finish, painted lines and symbols, and vented rubber base as detailed on the Drawings and as specified herein.

1. Gymnasium Wood Floor System.

1.2 SUBMITTALS

A. All wood doors and accessories specified in this Section shall be submitted as a single package as practicable. Separate submittals for each system or product may not be acceptable.

B. Do not submit MSDS or SDS sheets with product data submittal. Architect is not responsible for review of this information. Submittals that include MSDS or SDS data sheets may be returned as rejected.

C. Submit complete manufacturer's product data for each flooring systems.

D. Submit certification that the installer has verified and will install playing line layouts in accordance with the current requirements of the applicable athletic regulating association.

E. Submit complete shop drawings showing details, connections, and layout of each wood floor.

F. Submit warranty as specified herein.

1.3 DELIVERY OF MATERIALS / QUALITY CONTROL

A. Materials shall not be delivered, stored or installed until all masonry, painting, plastering tilework, marble and terrazzo work is complete, and all overhead mechanical work, lighting, backstops, scoreboards are installed. Room temperature of 55-80 degrees Fahrenheit (13 to 27 degrees Celsius) and relative humidity of 35-50 % are to be maintained. In- Slab Relative Humidity shall be 85% or less using ASTM F 2170 In-Slab Relative Humidity test. Ideal installation/storage conditions are the same as those that will prevail when building is occupied

B. Materials shall not be stored at the installation location if the In-Slab relative humidity level for the concrete slab is above 85% using ASTM F 2170 In-Slab Relative Humidity test.

1.4 QUALITY ASSURANCE

A. The Work herein specified shall be carried out by an experienced wood flooring contractor and a member of the Wood and Synthetic Flooring Institute.

B. Wood Certifications

1. Each bundle of hardwood flooring shall be clearly marked with the required MFMA grades, and each piece shall be indented on its back side with the MFMA trademark.

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C. Floor system shall have passed the requirements of DIN 18032, (part 2), 2001, as set out below.

1. Shock Absorption: shall be 53% minimum.
2. Ball Return: shall be at least 90%.
3. Deflection: shall be 2.3 mm minimum.
4. Area Deflection: (Isolation of impact) less than 15%.
5. Friction: Range 0.5 - 0.7 per DIN Test Method.

D. Comply with the following:

1. MFMA PUR
2. ASTM F2772 Sport Floor Standards
3. DIN 18032 (part 2), 2001
4. FIBA International Standards
5. EN 14904 Standards

1.5 JOB CONDITIONS

A. The concrete subfloors shall be installed and finished at the correct elevation, under Section 03 30 00, to accommodate the wood floor construction specified, and be finished with steel troweled surface to floor levelness and floor flatness tolerances specified in Section 03 30 00.

B. Subfloors shall be dry, free from foreign material and broom clean, are essential. Moderate room temperatures of 65 degrees or more are necessary. Areas should be free from other trades, scaffolding, and equipment of other Contractors.

C. Starting application of wood flooring shall constitute acceptance, under this Section, that the subfloor surface is in proper condition and at correct elevation.

D. At time of installation, moisture content of wood components shall test less than 7-10 percent and have been allowed to acclimate within the space to receive flooring for at least 3-14 days, depending on season and environmental conditions.

E. Conditioning period begins not less than seven days before wood athletic flooring installation, is continuous through installation, and continues not less than seven days after installation.

1. Environmental Conditioning: Maintain ambient temperature between 65 and 75 deg F and relative humidity planned for building occupants, but not less than 35 percent or more than 50 percent, in spaces to receive wood athletic flooring during the conditioning period.
2. Wood Conditioning: Move wood components into spaces where they will be installed, no later than beginning of the conditioning period.

   a. Do not install wood athletic flooring until wood components adjust to relative humidity of, and are at same temperature as, spaces where they are to be installed.
   b. Open sealed packages to allow wood components to acclimatize immediately on moving wood components into spaces in which they will be installed.

F. After conditioning period, maintain relative humidity and ambient temperature planned for building occupants.

G. Install wood athletic flooring after other finishing and construction operations, including but not limited to; painting, lighting, mechanical ductwork, all overhead work, except athletic equipment, have been completed.

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1.6 WARRANTY

A. Provide a 2-year warranty signed jointly by the Contractor and wood flooring subcontractor covering the materials, workmanship, and satisfactory performance of the floors. Warranty shall begin on Date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Gymnasium Wood Flooring System:

1. "Eclipse" by Robbins Inc., Cincinnati, OH
2. "Excel AR Floor System" by Action Floor Systems, Mercer, WI
3. "CRP System" by Horner Flooring Company, Dollar Bay, MI
4. "Alliance" by Connor Sports, Amasa, MI

2.2 MATERIALS

A. Anchored Resilient System

1. Vapor Barrier: 6 mil thick polyethylene sheeting complying with Commerce Standard PS17.
2. Cushioning Pads: as recommended by the manufacturer.
3. Subflooring: 2 layers of 1/2 inch thick CDX Grade plywood, 4 by 8-foot sheets.
4. Wood Flooring: 25/32 inch thick by 2-1/4-inch-wide kiln-dried, continuous tongue and groove and end-matched, steel knife face polished, mixed grain Northern Hard Maple, MFMA grade and trademarked. Provide 2nd and Better Grade.
5. Base: Shall be equal to molded rubber "Vent Cove Base" as produced by Johnson Rubber Company of Middlefield, Ohio, 4 inches high and 3 inches wide, with semi-circular venting grooves on back of vertical leg. Provide premolded outside corner pieces. Color as selected by the Architect.
6. Finish (VOC Compliant - New Floors): "Bona SuperSport MVP" and "Bona SuperSport Paint" as manufactured by Bona, Englewood, CO or "GymShoe" by Basic Coatings, Des Moines, IA. Line paints and/or stains as recommended by the manufacturer.
7. Fasteners:

   a. Flooring: 1-3/4" barbed cleats or equivalent.
   b. Subfloor: 1-5/8" - 1-3/4" subfloor nails.
   c. Anchors: 1-1/2" pneumatic or powder actuated concrete anchors.

B. Slab Depression: 2-1/8 inches

C. Rubber Vented Cove Base: 3" x 4" ventilation type.

D. Refer to Section 05 50 00 for floor cover plates at door thresholds and as may be required elsewhere.

E. Game Lines: Game line paint shall be as recommended by the athletic floor manufacturer. Refer to 2.2, A, 6 herein.

~~E.~~F. Game lines shall be laid out in accordance with the IHSAA requirements.

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PART 3 - EXECUTION

3.1 INSPECTION

A. Concrete subfloor shall be instrument checked by Flooring Contractor and discrepancies reported to General Contractor for correction. Do not proceed until corrections are made and approved.

3.2 INSTALLATION

A. Install materials and components in strict accordance with the manufacturer's written instructions.

B. Gymnasium Flooring

1. Install vapor barrier over concrete slab, lap and seal seams to provide a continuous membrane. Take care not to puncture or damage vapor barrier membrane. Lap joints minimum 6 inches.

   a. Run sheeting up sides of floor depression and seal at top edge with continuous bead of high-grade mildew resistant silicone sealant.

2. Install resilient pads in quantities and at locations as instructed by the floor system manufacturer. In no case shall there be less than 32 pads attached to each 4 by 8-foot sheet of lower subflooring. Resilient pads shall be attached by nails or staples; adhesive attachment of resilient pads is not allowed.
3. Install first layer of plywood subflooring parallel with long dimension of the room, spacing edges 1/4 inch apart and placing joints at full stagger.
4. Install second layer of plywood subflooring at 45-degree diagonal direction to first layer. Space edges 1/4 inch apart, place joints at full stagger, and attach with approved one-inch-long fasteners at maximum 12-inch spacings.
5. Nail finish wood flooring into second subfloor layer with boards running parallel to main playing court and with end joints tightly driven up. Provide suitable expansion spaces at regular intervals across flooring surface as fully agreed upon at jobsite preinstallation meeting between flooring subcontractor, flooring system manufacturer's representative, and Architect. Fasteners must have system manufacturer's approval.
6. Allow a continuous 1-1/2-inch-wide expansion gap at meetings of flooring system with walls and other permanent vertical obstructions.
7. Install metal cover plates at door openings at edge of wood floor.
8. Affix vented base to walls with appropriate cement. Use premolded outside corners and neatly miter at inside corners.
9. Install metal cover plates at edge of hardwood flooring that does not abut wall intersections.

C. Provide all items and accessories as required for a complete installation in every respect.

3.3 SANDING

A. General: Sand flooring with drum sander, edger, buffer, and hand scraper.

1. Use coarse, medium, and fine grade sandpaper.
2. After final sanding with drum sander, buff entire floor using 100 grit screenback or equal sandpaper with a heavy-duty buffing machine.
3. Vacuum floor before first coat of finish.
4. Floor shall present a smooth surface without drum stop marks, gauges, streaks, or shiners.

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3.4 FINISHING

A. Gymnasium Flooring

1. Apply sealer per manufacturer's application instructions.
2. Mark game lines with game line paint and let dry at least 13 hours. Prepare surfaces to receive finish coats.
3. NOTE: Game lines shall be laid out in accordance with Drawings and current rules of Athletic Association having jurisdiction (IHSAA, NCAA, NBA) Lines shall be straight with sharp edges of colors selected by Architect.
4. Apply a uniform coat of floor finish. Let dry at least 12 hours, then scour lightly with #2 steel wool; clean floor thoroughly and allow to dry. Apply second coat of floor finish and let cure for at least 7 days before permitting floor usage.
5. Game line paint shall be as recommended by the manufacturer if different than specified; game line paint shall be compatible with the finish coats.

3.5 CLEAN-UP

A. Upon completion of the Work under this Section, remove from the premises unused materials, tools, and equipment and see that rubbish is disposed of.

3.6 GENERAL INSTALLATION PROVISIONS

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

B. Manufacturer's Instructions: Comply with manufacturer's installation instructions and recommendations, to the extent that those instructions and recommendations are more explicit or stringent than requirements contained in Contract Documents.

C. Inspect materials or equipment immediately upon delivery and again prior to installation. Reject damaged and defective items.

D. Provide attachment and connection devices and methods necessary for securing Work. Secure Work true to line and level. Allow for expansion and building movement.

E. Visual Effects: Provide uniform joint widths in exposed Work. Arrange joints in exposed Work to obtain the best visual effect. Refer questionable choices to the Architect for final decision.

F. Recheck measurements and dimensions, before starting each installation.

END OF SECTION

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SECTION 09 67 23 - RESINOUS FLOORING

PART 1 - GENERAL

1.1 SUMMARY

A. Furnish all necessary materials, labor and equipment required to prepare designated floor areas and install a resinous floor coating, as specified herein and as indicated on the Drawings.

1.3 SUBMITTALS

A. All resinous floor coatings and accessories specified in this Section shall be submitted as a single package as practicable. Separate submittals for each system or product may not be acceptable.

B. Do not submit MSDS or SDS sheets with product data submittal. Architect is not responsible for review of this information. Submittals that include MSDS or SDS data sheets may be returned as rejected.

C. Product Data: Submit manufacturer's specification or specific products of the resinous flooring, including physical properties and performance properties and all tests described herein.. Each individual component of the system will be evaluated on the basis of these standards. For any of the tests not listed in the manufacturer's standard nationally published data, the manufacturer must supply the missing data from an independent test laboratory tested according to the referenced standard. Manufacturer's standard color chart shall also be submitted and must afford the Architect color selection from at least 12 standard colors.

~~A.~~D. The industrial resinous flooring contractor shall submit a 6" x 6" system sample for verification purposes and finish texture approval.

E. Provide a minimum 3 foot by 3 foot on-site mock-up for final finishes approval.

F. Contractor Experience: The industrial resinous specialist shall furnish a list of three (3) projects using either specified material or another material pre-approved for this project that they have installed during the last five (5) years. Information shall include project name, square footage, contract name with owner's address and phone number. Also, the industrial resinous flooring specialist shall furnish resumes detailing the experience of key project personnel including supervisors and technicians.

G. Submit warranty as specified herein.

~~B.~~H. Submit pre-installation meeting minutes.

1.2 QUALITY ASSURANCE

~~C.~~A. Manufacturer's Qualifications: Obtain resinous flooring materials from a single manufacturer.

~~D.~~B. Applicator's Qualifications: Installation shall be performed by an industrial resinous flooring specialist with skilled mechanics having not less than three (3) years of satisfactory experience in the application of the type and complexity of system as specified in this section. The industrial resinous flooring specialist shall be approved in writing by the manufacturer of the resinous flooring as specified herein.

~~E.~~C. Submit warranty as specified herein.

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~~F.~~D. SSPC-SP 13/NACE 6 - Surface Preparation of Concrete.

~~G.~~E. Conduct a pre-installation meeting at the project site prior to installation of resinous floor coating. Review the environmental requirements, protection of surfaces not scheduled to be coated, surface preparation, application methods and concerns, repair requirements, field quality control, cleaning, protection of completed flooring, one year inspection and coordination with other work.

1. Attendees:

   a. Owner (not mandatory)
   b. Architect
   c. CMc (if applicable)
   d. Contractor and Installing contractor

2. Agenda

   a. Review manufacturer's written instructions for substrate preparation and environmental conditions affecting resinous flooring installation.
   b. Review details of integral cove bases.
   c. Review manufacturer's written instructions for installing resinous flooring systems.
   d. Review protection measures for adjacent construction and installed flooring, floor drainage requirements, curbs, base details, and so forth.

~~1.3~~1.4 MATERIAL DELIVERY, HANDLING AND STORAGE

A. Primary system materials shall be delivered in the manufacturer's undamaged, unopened containers. Each container shall be clearly marked with the following:

   1. Product Name
   2. Manufacturer's Name
   3. Component designation (A or B, etc.)
   4. Ratio of component mixture

B. Provide equipment and personnel to handle the materials by methods which prevent damage.

C. The industrial resinous flooring specialist shall promptly inspect all direct jobsite deliveries to assure that quantities are correct and that materials comply with requirements and are not damaged.

D. The industrial resinous flooring specialist shall be responsible for all materials furnished by him, and he shall replace, at his own expense, all such material that is found to be defective in manufacturing or that has become damaged in transit, handling or storage.

E. Store materials in accordance with manufacturer's instructions, with seals and labels intact and legible.

~~1.4~~1.5 JOB CONDITIONS

A. The industrial resinous flooring specialist shall visit jobsite prior to beginning the application of the resinous flooring to evaluate substrate condition, including substrate moisture content, and the extent of repairs required, if any. Concrete subfloors shall be tested to verify that the moisture content of the substrate doors do not exceed that as recommended by the manufacturer.

B. The industrial resinous flooring specialist should exercise care during surface preparation and system application to protect surrounding substrates and surfaces, as well as in place equipment. The industrial resinous flooring specialist shall use his discretion as to the physical means used for preparation and protection. Any costs incurred for resultant damage from negligence or inadequate protection shall be the sole responsibility of the industrial resinous flooring specialist.

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C. Subfloor tolerances are specified in Section 03 30 00. All drains in the installation area must be working and raised or lowered to the actual finish elevation of the resinous flooring system.

D. Job area shall be free of other trades during floor installation, and for a period of 24 hours upon completion.

E. Where natural ventilation is inadequate, provide ventilation by use of fans or other devices.

F. Maintain lighting at a minimum uniform level of 50-60 foot candles in all areas where resinous flooring system is being installed. It is the recommendation of the Designer that permanent lighting be in place and working during the installation.

~~1.5~~1.6 WARRANTY

A. The industrial resinous floor specialist shall furnish a standard guarantee of the resinous flooring for a period of one (1) year after installation. This labor guarantee shall include loss of bond and wear-through in the concrete substrate, through normal wear and tear.

B. The manufacturer shall warrant that the product meets all published standards.

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

A. Products of the following manufacturers are approved provided compliance with all technical requirements as specified herein:

1. Tnemec Company, Kansas City, MO
2. Sherwin-Williams, General Polymers Corp., Cincinnati, OH

2.2 MATERIALS

A. Primer:

1. Tnemec Series 201, "Epoxoprime", two component, 96% solids, penetrating polyamine cured resinous primer.

   a. Recommended Dry Film Thickness: 6.0 to 8.0 mils per coat; or as otherwise recommended by the manufacturer.
   b. Number of Components: Two (2)

2. Sherwin-Williams, Resuprime Standard Epoxy Primer/Binder, 96% solids, penetrating polyamine cured resinous primer.

   a. Recommended Dry Film Thickness: 6.0 to 8.0 mils per coat; or as otherwise recommended by the manufacturer.
   b. Number of Components: Two (2)

B. Resinous Flooring:

1. Tnemec Series 241 "Ultra-Tread MVT", broadcast laminated resinous coating system, three component, 100% solids (mixed), quartz filled polyurethane modified concrete.

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a. Recommended Dry Film Thickness: Minimum 3/16". Requires two broadcast applications at 3/32" each or applied as a slurry.
b. Number of Components: Three (3). Two liquid and one-color quartz.

2. Sherwin-Williams Top Deco Quartz SL45, broadcast laminated resinous coating system, three component, 100% solids (mixed), quartz filled polyurethane modified concrete.

a. Recommended Dry Film Thickness: Minimum 3/16". Requires two broadcast applications at 3/32" each or applied as a slurry.
b. Number of Components: Three (3). Two liquid and one-color quartz.

C. Sealer Coat:

1. Tnemec Series 284, "Deco-Clear", two component, 86% solids, polyamine resinous.

a. Recommended Dry Film Thickness: 16.0 to 20.0 mils per coat; or as otherwise recommended by the manufacturer.
b. Number of Components: Two (2).

2. Sherwin-Williams Resuflor 3746 High Performance Epoxy, two component, 98% solids, polyamine epoxy.

a. Recommended Dry Film Thickness: 16.0 to 20.0 mils per coat; or as otherwise recommended by the manufacturer.
b. Number of Components: Two (2).

D. Glaze Coat:

1. Tnemec Series 285, "Satinglaze", two component, 92% solids, polyamine resinous.

a. Recommended Dry Film thickness: 4.0 to 6.0 mils, per coat; or as otherwise recommended by the manufacturer.
b. Number of Components: Two (2).

2. Sherwin-Williams, Resuflor 3746 High Performance Epoxy, two component, 98% solids, polyamine epoxy.

a. Recommended Dry Film Thickness: 8.0 to 10.0 mils per coat; or as otherwise recommended by the manufacturer.
b. Number of Components: Two (2).
c.

E. Provide stainless steel termination strips and all accessories as required for a complete installation in every respect. Termination strips shall be provided where resinous flooring abuts adjacent floor finish materials. Termination strip style shall be as recommended by the manufacturer.

F. Provide medium non-slip finish in Kitchen, food preparation areas and Dishwashing. Obtain Architect's and Owner's approval of finishes prior to installation.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Install all items at thicknesses and in strict accordance with the manufacturers written installation instructions.

B. Provide all items as required for a complete and watertight installation in every respect.

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C. Coordinate installation of floor drains with the Division 22 plumbing contractor.

D. Provide 4" high integral coved bases.

E. General: Apply components of resinous coating system according to manufacturer's written instructions to produce a uniform, monolithic wearing surface at the specified thickness.

1. Coordinate application of components to provide optimum adhesion of resinous floor/wall system to substrate and intercoat adhesion.
2. At substrate control, isolation, and expansion joints, provide joint as necessary in resinous flooring in compliance with manufacturer's directions and engineering details for each joint type.

F. Sawcut resinous flooring directly over control joints and expansion joints in concrete slab on grade substrate. Fill sawcuts with self-leveling traffic grade sealant as specified in Section 07 92 00.

3.2 CURING

A. Cure resinous flooring components according to manufacturer's written instructions. Prevent contamination during curing processes.

1. Temperatures shall be maintained at 70°F - 80°F if at all possible.
2. Water leaks must be prevented as they will compromise component's ability to set properly; water drips may compromise or stain finishes.
3. Steam or any airborne contamination will adversely affect curing.

3.3 CLEANING

A. Work area shall be left clean with all trash, equipment, and leftovers removed.

B. Floor and walls may be cleaned prior to final inspection, providing complete curing has taken place. Refer to Product Data Sheets for curing information for each product. Generally, non-chlorinated detergents should be used for the first month after curing is complete.

C. For optimum coating performance and cleanability, manufacturer recommends the use of liquid soaps to prevent caking on resinous surfaces caused by bar soaps.

D. Follow manufacturers written installation instructions.

3.4 PROTECTION

A. Protection from damage and wear during the construction process is recommended. Comply with manufacturer's recommendations for protective materials and their method of application. Remove temporary protection prior to final inspection. Protection from welding, impact from heavy tools and other abuse is anticipated, the contractor doing the work shall take extra care in protecting the floor with impact resistance and if necessary, flame-resistant coverings. Removal of any temporary or protective material is not the responsibility of the Installer.

END OF SECTION

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SECTION 09 72 00 - WALL COVERINGS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:

1. Digital wall covering.

1.3 SUBMITTALS

A. Product Data: For each type of product.

1. Include data on physical characteristics, durability, fade resistance, and fire-test-response characteristics.

B. Sustainable Design Submittals:

1. Chain-of-Custody Certificates: For certified wood products. Include statement of costs.

C. Shop Drawings: Show location and extent of each wall-covering type. Indicate pattern placement and veneer matching seams and termination points.

D. Samples for Verification: For each type of wall covering and for each color, pattern, texture, and finish specified, full width by 36 inches long in size.

1. Wall-Covering Sample: From same production run to be used for the Work, as specified..

a. Show complete pattern repeat.
b. Mark top and face of fabric.

~~2. Wood Veneer Wall Covering Sample: From same flitch to be used for the Work, with specified finish applied.~~

E. Product Test Reports: For each wall covering, for tests performed by a qualified testing agency.

F. Maintenance Data: For wall coverings to include in maintenance manuals.

G. Furnish extra materials, from the same production run, that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

1. Wall-Covering Materials: For each type, color, texture, and finish, full width by length to equal to five (5) percent of amount installed.

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1.4 FIELD CONDITIONS

A. Environmental Limitations: Do not deliver or install wall coverings until spaces are enclosed and weathertight, wet-work in spaces is complete and dry, work above ceilings is complete, and HVAC system is operating and maintaining ambient temperature and humidity conditions at levels intended for occupants after Project completion during the remainder of the construction period.

1. Wood-Veneer Wall Coverings: Condition spaces for not less than 48 hours before installation.

B. Lighting: Do not install wall covering until lighting that matches conditions intended for occupants after Project completion is provided on the surfaces to receive wall covering.

C. Ventilation: Provide continuous ventilation during installation and for not less than the time recommended by wall-covering manufacturer for full drying or curing.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Fire-Test-Response Characteristics: As determined by testing identical wall coverings applied with identical adhesives to substrates in accordance with test method indicated below by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.

1. Surface-Burning Characteristics: Comply with ASTM E84; testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.

a. Flame-Spread Index: 25 or less.
b. Smoke-Developed Index: 450 or less.

2. Fire-Growth Contribution: No flashover and heat and smoke release when tested in accordance with NFPA 265 or NFPA 286.

2.2 DIGITAL WALL COVERINGS

A. Manufacturers: Refer to the Finish Legend for specified manufacturers. Other manufacturers may be acceptable provided compliance with all technical requirements, aesthetics and colors. Submit request for product substitution at least ten (10) days prior to bid due date. Final acceptance will solely be the Interior Designer's.

B. Description: Provide vinyl products in rolls from same production run and complying with the following:

1. FS CCC-W-408D and Wallcovering Association's W-101 for Type II Medium and Type III Heavy Duty.
2. ASTM F793 for wall coverings.

a. Category: IV, Type II, Commercial Serviceability (Vinyl Coated) and Type III, Commercial Serviceability (Vinyl Coated).

3. The vinyl wall covering shall contain mildew inhibitors.

C. Total Weight: Refer to manufacturer's product data for wall covering types indicated on the Finish Schedule.

D. Width: 54 inches Insert dimension.

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E. Backing: Scrim fabric, poly-cotton woven or manufacturers standard for the type of wall covering specified in the Finish Legend.

F. Mildew Resistance: Rating of zero or 1 when tested in accordance with ASTM G21.

G. Features:

1. Stain-Resistant Coating: Manufacturers standard.
2. Antimicrobial.
3. Water-based inks.
4. Phthalate free.
5. Heavy-metals free.
6. Halogenated-fire-retardant free.

H. Colors, Textures, and Patterns: Refer to the Finish Legend.

2.3 ACCESSORIES

A. Adhesive: Mildew-resistant, nonstaining[**, strippable**] adhesive, for use with specific wall covering and substrate application indicated and as recommended in writing by wall-covering manufacturer.

B. Primer/Sealer: Mildew resistant, complying with Insert requirements and recommended in writing by primer/sealer and wall-covering manufacturers for intended substrate.

C. Wall Liner: Nonwoven, synthetic underlayment and adhesive as recommended in writing by wall-covering manufacturer.

D. Seam Tape: As recommended in writing by wall-covering manufacturer.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates and conditions, with Installer present, for compliance with requirements for installation surfaces being true in plane and vertical and horizontal alignment, maximum moisture content, and other conditions affecting performance of the Work.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Comply with manufacturer's written instructions for surface preparation.

B. Clean substrates of substances that could impair bond of wall covering, including dirt, oil, grease, mold, and mildew.

C. Prepare substrates to achieve a smooth, dry, clean, structurally sound surface free of flaking, unsound coatings, cracks, and defects.

1. Moisture Content: Maximum of 5 percent on new plaster, concrete, and concrete masonry units when tested with an electronic moisture meter.
2. Plaster: Allow plaster to cure for at least 90 days. Neutralize areas of high alkalinity. Apply primer/sealer as recommended in writing by primer/sealer manufacturer and wall-covering manufacturer.

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3. Metals: If not factory primed, clean and apply metal primer as recommended in writing by metal-primer manufacturer and wall-covering manufacturer.
4. Gypsum Board: Apply primer/sealer as recommended in writing by primer/sealer manufacturer and wall-covering manufacturer.
5. Painted Surfaces:

    a. Check for pigment bleeding. Apply primer/sealer to areas susceptible to pigment bleeding as recommended in writing by primer/sealer manufacturer.
    b. Sand gloss, semigloss, and eggshell finishes with fine sandpaper.

D. Remove hardware and hardware accessories, electrical plates and covers, light fixture trims, and similar items.

E. Acclimatize wall-covering materials by removing them from packaging in the installation areas not less than 24 hours before installation.

END OF SECTION

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SECTION 12 32 16 - MANUFACTURED PLASTIC LAMINATE CLAD CASEWORK

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes: Plastic laminated faced Casework, solid surface counter tops, epoxy resin counter tops and sinks.

B. The use of dimensions and specific requirements set forth in the Contract Documents are not intended to preclude the use of other manufacturer's products that may be equivalent, but are given for purpose of establishing standard of design and quality for materials, construction, and workmanship.

C. Installation of casework by installers other than the manufacturer's own forces is prohibited without written consent of casework manufacturer and Architect.

D. Work Specified Elsewhere: Resilient base, general millwork, blocking within walls, floors, or ceilings required for reinforcement and support, stainless steel sinks, fittings, and electrical.

E. This Work includes special and modified stock design pre-assembled units for installation as movable, fixed, or built-in, as noted on the Drawings, or listed in the schedule.

1.2 DEFINITIONS

A. Exposed Surfaces:

1. Surfaces visible when doors and drawers are closed.
2. Bottoms of cases more than 4 feet above floor.
3. Visible members in open cases or behind glass doors

B. Semi-Exposed Surfaces:

1. Members behind opaque doors, such as shelves, divisions, interior faces of ends, case back, drawer sides, backs and bottoms, and back face of doors.
2. Tops of cases 6'-6" or more above floor.

C. Concealed Surfaces: Surfaces not visible after installation.

D. The casework manufacturer and supplier shall keep aware of the progress of the Project and shall make sure that shop drawings are furnished in adequate time so that the casework covered thereby can be fabricated and delivered in accordance with the scheduled completion.

1.3 SUBMITTALS

A. Product Data

1. Specification requirements
2. Published construction details
3. Maintenance recommendations

B. Shop Drawings:

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1. Details and sizes including methods of attachment
2. Type and locations for support within walls
3. Field verified dimensions
4. Indicate utility locations to be coordinated with other trades

C. Samples

1. Full range of colors, textures, and patterns available for plastic laminate and edging.
2. Full range of actual wood samples for natural finishes.
3. Pull
4. Full Size Cabinet: Base cabinet with door, drawer, shelf, and hardware. Unit may be incorporated into Work. Submit within 60 days of Notice to Proceed, a sample base cabinet and countertop constructed in accordance with these specifications.
5. Bidder shall submit to the Architect, within 24 hours of bid receipt, a sample base cabinet and countertop constructed in accordance with these specifications by one of the specified casework manufacturers. Owner/Architect review of sample cabinet will occur prior to awarding contract. Bid may be rejected by Owner if sample cabinet is not included with the Bid Proposal. Bid may be rejected by Owner if sample cabinet is not constructed in accordance with these specifications.

D. Sample Guarantee

PART 2 - PRODUCTS

2.1 MANUFACTURER

A. Products of the following manufacturers are acceptable provided they comply with all technical specification requirements, materials, construction, and details in every respect. Standard production casework will not be allowed. Manufacturers shall conform to all requirements as specified herein.

1. Stevens Industries, Inc., Teutopolis, Illinois
2. TMI Systems, Dickinson, North Dakota
3. Case Systems, Normal Wood Products, Midland, Michigan

2.2 GENERAL WORKMANSHIP

A. Machine parts for accurate fit and assemble with appropriate fasteners and adhesives to result in true, square, level, and plumb units.

B. Coordinate with other trades for required dimensions of items to be built into casework.

C. Provide removable or false backs for access or concealment of heating or plumbing items.

D. Scribe tops and backsplashes to walls and other adjoining vertical surfaces.

E. Cabinets at end walls shall have minimum scribe unless shown otherwise.

2.3 MATERIALS

A. Plastic Laminate

1. Acceptable Manufacturers: Wilsonart, Pionite, Formica, and Nevamar
2. Decorative Laminates

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a. High-pressure decorative laminate VGS (.028), NEMA LD 3-1995
b. High-pressure decorative laminate HGS (.048), NEMA LD 3-1995
c. Chemical resistant decorative laminate, NEMA LD 3-1995
d. High-pressure cabinet liner CLS (.020), NEMA LD 3-1995
e. High-pressure backer BKH (.028) NEMA LD 3-1995

3. Exposed horizontal surfaces: HGS
4. Exposed, interior and exterior vertical surfaces: VGS
5. Backing sheet for concealed surfaces: BKH or CLS for balanced panel.
6. Backing sheet for semi-exposed surfaces: BKH
7. Color (all surfaces): Selected by Architect.

B. Plastic Laminate

1. Plastic laminate shall be high pressure laminate conforming to NEMA LD3-1991. Thickness: .028 inch, GP28 grade, with a density of 90 pounds per cubic foot.
2. Required kinds shall be chosen from current Wilsonart "Design Group I" series of all solid color and woodgrain and patterned laminate materials with low lustre textured finish, as produced by the Ralph Wilson Plastics Company of Temple, Texas, or Architect approved equivalent palette with similar number of available choices. Colors/patterns shall be selected by the Architect from among the full complement of choices for each component. Palettes of limited available choices for casework colors are not acceptable.
3. Exposed horizontal surfaces: Shall be nominal .050 inch thick minimum with textured finish and conforming to NEMA standards for GP50 horizontal grade.
4. Exposed, interior and exterior vertical surfaces: Shall be .028 inch thick minimum with low lustre textured finish and conforming to NEMA standards for GP28 vertical grade.
5. Backing sheet for concealed surfaces: Shall be .030 or .020 inches thick, conforming to NEMA standards for GP28 vertical grade or CL20 cabinet liner.
6. Backing sheet for semi-exposed surfaces: Shall be .030 or .020 inches thick, conforming to NEMA standards for GP28 vertical grade. Use to balance face laminate.
7. Color of laminate

a. Exposed Interior: To match exterior.

1) Exposed interiors include: Open cabinets and cabinets with glass doors.

b. Exposed exterior, as selected by Architect.
c. Concealed exterior, manufacturer's standard or other color as may be selected by Architect.

C. Melamine

1. Melamine shall be saturated paper laminated to core. <u>Weight of paper shall not be less than 80 grams.</u>
2. Semi-exposed surfaces: Melamine shall conform to NEMA LD3-3.1, latest edition, for wear requirements for GP28 vertical grade.

D. Edging Material

1. High impact PVC extrusion, with satin finish
2. Door and Drawer Fronts: 3mm, machine profile to 1/8 inch radius
3. Horizontal and Vertical Front Cabinet Members: 1mm thick
4. Colors: Selected by Architect

E. Leading Edges

1. Door and drawer fronts shall be edged with a 3mm thick high impact PVC extrusion, with satin finish.
2. Horizontal and vertical front cabinet members shall be flat edged with a 1mm thick high impact PVC extrusion, with a satin finish.

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3. Colors of PVC leading edges:

   a. Open Units: Shall match exterior plastic laminate color.
   b. Horizontal and Vertical Front Cabinet Members: Shall match exposed plastic laminate color or as selected by Architect.
   c. Semi-Exposed Locations: Shall match interior plastic laminate color.
   d. Drawer and Door Fronts: As selected from colors to match plastic laminate, or as selected by Architect.

F. Core Materials:

1. Particleboard

   a. Cabinets and Countertops: Provide Premium Industrial Grade, minimum 47 pound density, conforming to ANSI A208.1 - 1999, M3.
   b. Countertops in wet areas: Minimum 47 pound density moisture resistant particleboard, conforming to ANSI A208.1 - 1999, M3.
   c. Particle board Specifications

1)	Modules or Rupture, lb. per sq.in.	2500
2)	Modulus of Elasticity, lb. per sq. in.	450000
3)	Internal Bond, lb. per sq. in.	100
4)	Thickness Swell (24 hr immerse)	4%
5)	Moisture Content % by weight	6.0
6)	Screw Holding Face	330
7)	Screw Holding Edge	250
8)	Surface Strength lb. per sq. in.	275
9)	Hardness lb.	900

2. Hardboard: ANSI A135.4, Class 1 tempered, smooth, 2 sides equal to "Duron" by U.S. Gypsum Company.
3. Hardwood and Hardwood Plywood

   a. Solid lumber or plywood concealed members; solid wood to be hardwood, kiln dried, select Poplar, Fir, or mill option lumber and plywood shall be Baltic Birch 7-ply, cabinet grade.
   b. Countertops in wet areas: Marine grade plywood.

2.4 HARDWARE AND MISCELLANEOUS

A. Hinges:

1. Steel, institutional 5 knuckle with interlaying leaves, 270-degree swing, hospital tipped with non-removable pins fastened with 4 screws each leaf into faces. No edge fastening allowed.
2. Thickness .090 inch minimum
3. Doors 48 inches and over shall have 3 hinges per leaf
4. Finish: Powder coat baked-on enamel, color as selected by Architect.

B. Pulls:

1. Bent wire
2. Color: Selected by Architect
3. Accurately position on drawer and door fronts
4. Through fastened with machine screws

C. Drawer Slides:

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1. Manufacturer's standard, epoxy coated metal, nylon rollers, 100 pounds dynamic load (or) European style, bottom mounted, captive profile, epoxy finished, nylon rollers, and 100 pounds dynamic loading with positive in-stop and out-stop.
2. Provide full extension at designated drawers
3. Provide outstop and outkeeper to maintain drawer in 80 percent open position.
4. File drawers and paper storage drawers: Same as above except full extension and load rating static position to be no less than 125 pounds, Blum No. BS 430E.

D. Locks

1. Locks shall be provided on all receptionist desk drawers and doors whether indicated on the Drawings or not, including desks in the following areas:

   a. Media Center circulation areas.

2. Locks shall be of cylinder type cast with 5-disc tumbler mechanism. Each lock shall be provided with milled brass key and keying as specified in keyed different and master keyed or keyed alike. Locks shall be provided as shown on equipment drawings or described in cabinet description.
3. Each area or room shall be keyed alike.
4. Locks shall be master keyed using the casework manufacturer's keying system. (This is independent to the building master keying system.)
5. Locks shall be master keyed using Schlage CL1000 and CL2000 or equivalent by Olympus.
6. Provide ratchet type sliding showcase lock at sliding glass doors.
7. Provide automatic door bolt on double doors at leaf opposite lock core.

E. Adjustable Shelf Supports: Manufacturer's standard, 2 pin, anti-lift, minimum 200 pounds capacity support clip. Support to accept either 3/4 inch or 1-inch thick shelf.

F. Catches: Magnetic type, adjusted for maximum 5-pound pull. Attach with screws and slotted for adjustment.

1. Manufacturer's standard roller catch equivalent to LSI "LH-345" catches assembly.
2. Two required for doors over 48 inches in height, positioned at top and bottom.

G. Cubicle cabinet dividers shall be 3/4 inch plywood particleboard with laminate on both sides.

H. Tote Trays: Molded high impact plastic with card holder on front.

1. Plastic tote tray dividers shall be prefinished 1/4-inch thick tempered hardboard.

2.5 CABINET CONSTRUCTION

A. Cabinet Base: 2 by 4 pressure treated. Provide additional center support for cabinets over 24 inches wide.

B. Cabinet Base: 4-inch high, 3/4 inch CDX plywood. Provide additional center support for cabinets over 24 inches wide.

C. Base, Wall, and Tall Cabinet Boxes

1. Sides, bottom, and top: Constructed of glued and spline doweled 3/4 inch plywood particleboard providing balanced construction, surfaced with cabinet liner CLS CL20 for semi-exposed and vertical grade laminate for exposed locations.
2. Wall cabinet bottoms and tops: Constructed of glued and spline doweled one inch thick plywood particleboard, providing balanced construction surfaced with vertical grade laminate for exposed locations and cabinet liner CLS CL20 for semi-exposed locations.

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3. Back panel: Constructed of minimum 3/8 inch particleboard or 1/4 inch prefinished tempered hard board, surfaced with melamine for semi-exposed and vertical grade laminate for exposed locations, inset and glued into sides, bottom, and top.
4. Exposed backs: Constructed of 3/4 inch particleboard, surfaced with vertical grade laminate of balanced construction for semi-exposed locations, glued and spline doweled, and mechanically attached if required.
5. Intermediate support rail: Minimum 3/4 inch plywood particleboard, surfaced with vertical grade laminate of balanced construction, glued and doweled into cabinet sides.
6. Hanger rails: Two located at top and bottom of cabinet back, 3 on tall cabinets, locate at top, bottom, and center of 3/4 inch plywood particleboard.

D. Fixed and Adjustable Shelves and Dividers

1. One inch (plywood particleboard) shelves
2. Exposed Locations: Vertical grade plastic laminate both sides. Color to match cabinet exterior plastic laminate or as selected by Architect.
3. Semi-exposed locations: VGS or CLS. Vertical grade high pressure plastic laminate. Melamine surfacing on shelves is NOT allowed.
4. Front and back leading edges shall be edged with flat 1mm thick high impact PVC edging to match shelf color.
5. Number of adjustable shelves provided, unless indicated otherwise on the Drawings or on the Schedule

   a. Low and tall cabinets

      1) up to 24 inches — 4 up to 72 inches
      2) up to 36 inches — 5 up to 84 inches
      3) up to 60 inches — 6 up to 96 inches

   b. Wall hung cabinets

      1) 0 up to 24 inches — 2 up to 36 inches
      2) 1 up to 30 inches — 3 up to 40 inches

6. Adjustable dividers: 1/4 inch minimum thickness, prefinished tempered hardboard or plywood, smooth both faces, retained by molded plastic support clip.
7. Fixed dividers: Constructed of 3/4 inch plywood particleboard, surfaced with vertical grade laminate, providing balanced construction; glued and spline doweled. PVC edged to match laminate or adjacent PVC edging.

E. Cabinet Doors

1. 3/4 inch particleboard
2. High pressure plastic vertical grade laminate exterior and interior.
3. Doors 48 inches and less in length shall have 2 hinges per door; doors over 48 inches in length shall have 3 hinges per door.
4. Corners: Square with radiused edges, 3mm PVC edging.
5. Doors to be flush overlay design.

F. Drawers

1. Manufacturers standard construction of minimum components listed below; or high density fiber board; glued and doweled or dovetail jointed; surfaced with vertical grade laminate of balanced construction. Bottoms constructed of minimum 1/4-inch tempered hardboard, surfaced to match drawer sides, inset and glued to four sides.
2. Drawer Face

   a. Constructed of minimum 3/4-inch particleboard, surfaced with VGS, screw attached to the drawer box.

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1) Corners: To match doors.
2) Edging: To match doors.
3) Plastic Laminate: To match doors.

3. File Drawers: File drawers shall be constructed in accordance with standard drawers specified above with the following: Include front-to-back and side-to-side hanger file capability with hanger channel for letter size files integral with file drawer sides and 3/16-inch by 1/2-inch removable steel channel to span side-to-side for legal size hanging files.
4. Drawers to be flush overlay design.

G. Counter Tops:

1. High Pressure Plastic Laminate: GP-50 grade.
2. Top and matching front edge to be high pressure plastic laminate factory bonded.
3. Plywood concealed members; solid plywood shall be 7 - Ply marine grade boat plywood or Baltic birch marine grade boat plywood.
4. Moisture resistant particleboard
5. Plywood shall incorporate Type II water resistant glue.
6. Square Edge Configurations: 1 inch to 1-1/8 inch thick monolithic particleboard with 1-1/4 inch edge face including top and bottom laminates.
7. Horizontal work surfaces to be 1-1/2 inch thick unless otherwise noted.
8. Cut openings in countertops for sinks or other items required. Cut to size from template furnished by supplier of sinks or use the designated sinks on job.
9. Refer to Unit Drawings for specific counter top details and dimensions.
10. Edging: Radius, with 3mm PVC
11. Provide balancing sheet on opposite face.
12. Laminate tops shall be continuous in practical lengths. When requiring splice joints, use a combination of splines or dowels for alignment and Tite-Joint fasteners as required to make a uniform and gapless joint. Provide continuous top for counter type cabinets fixed in a line.
13. Backsplash and Endsplashes: Scribable, square set, color matching, and mechanically attached.

    a. a. Backsplashes are required at locations where countertops abut walls where indicated on Drawings.
    b. b. Edges of back and endsplashes shall be of square edge configuration.

H. Sealants: Fully bed and seal splashes to tops and to other splashes with Dow Corning 786 Mildew Resistant Silicone Sealant, clear; or Architect approved equal.

2.6 EPOXY COUNTER TOPS AND SINKS

A. Epoxy Countertops and Epoxy Sinks: Modified epoxy-resin formulation with smooth, non-specular finish. Countertop Configuration: Flat, 1 inch (25 mm) thick, with beveled edge and corners, and with drip groove and non-glare matte finish.

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

"Epoxy Resin Work Surface by Hamilton Laboratory Solutions, Manitowoc, WI
"Kemresin by Kewaunee Scientific Corp., Statesville, NC
"Epoxy Resin by Hanson Lab Solutions, Camarillo, CA

C. Physical Properties:

Flexural Strength: Not less than 10,000 psi (70 MPa).
Modulus of Elasticity: Not less than 2,000,000 psi (1400 MPa).
Hardness (Rockwell M): Not less than 100.
Water Absorption (24 Hours): Not more than 0.02 percent.
Heat Distortion Point: Not less than 260 deg F (127 deg C).

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D. Chemical Resistance: Epoxy-resin material has the following ratings when tested with indicated reagents according to NEMA LD 3, Test Procedure 3.4.5:

No Effect: Acetic acid (98 percent), acetone, ammonium hydroxide (28 percent), benzene, carbon tetrachloride, dimethyl formamide, ethyl acetate, ethyl alcohol, ethyl ether, methyl alcohol, nitric acid (70 percent), phenol, sulfuric acid (60 percent), and toluene.
Slight Effect: Chromic acid (60 percent) and sodium hydroxide (50 percent).

E. Countertop Configuration: Fabricate with factory cutouts for sinks, holes for service fittings and accessories, and with butt joints assembled with epoxy adhesive and connected metal splines. Fabrication tolerances:

Size:

Length: +/- 1/16 inch.
Width: +/- 1/16 inch.
Thickness: +/- 1/16 inch.

Cutouts:

Sinks: +/- 1/8 inch.
Cup sinks: +/- 1/8 inch.
Gem box: +/- 1/8 inch.
Columns: + 1/8 inch, - 0 inch.
Column cut-out, covered by applied curb: + 1/4 inch, - 0 inch.
Service drilling: + 1/8 inch, - 0 inch.

Colors for Epoxy Countertops: As selected by Architect from manufacturer's standard colors.
Backsplash Curb: Same material as top, 4 high, butt jointed and cemented to top. Provide where tops abut wall surfaces and at reagent ledges. Include end curb where top abuts end wall.
Reagent Ledges: Same material as top. Provide 6" high x 7-1/2" wide single faced units and 6" high x 9" wide double faced units as required. Ledge face shall permit installation of service fixtures and top shall be removable for access to service utilities.

F. Epoxy Sinks: Modified epoxy-resin formulation with smooth, non-specular finish. Non-glare matte finish to match epoxy resin tops. Undercounter mounting. Coordinate with Plumbing Contractor.

Provide required sink supports.
Single compartment undercounter mount sink: #52L47300 by Hamilton Laboratory Solutions; or equal.

2.7 SOLID SURFACING MATERIAL

A. Homogeneous filled acrylic; not coated, laminated or of composite construction; meeting ANSI Z124.3 & 6, Type Six, and Fed. Spec. WW-P-541E/GEN.

Material shall have minimum physical and performance properties specified.
Superficial damage to a depth of 0.010" shall be repairable by sanding and polishing.

B. Performance Properties: Comply with the provisions of the latest editions for the following codes, specifications, and standards.

Tensile Strength……..6000 psi per ASTM D 638
Flexural Strength……7890 psi per ASTM D 790
Elongation……0.4% per ASTM D 638
Wear and Cleanability…….passes ANSI Z 124.3
Stain Resistance……passes ANSI Z124.3

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C. Accessories

Joint adhesive shall be manufacturer's standard, two-part adhesive.
Panel adhesive shall be manufacturer's standard neoprene-based panel adhesive meeting ANSI A 136.1 UL listed.
Sealant shall be mildew resistant silicone.

D. Manufacturers:

"Corian" by DuPont, Wilmington, DE
"Solid Surface" by Wilsonart Americas, Temple, ”TX
"Everform Solid Surface" by Formica Group North America, Cincinnati, OH

PART 3 - EXECUTION

3.1 PREPARATION

A. Examine conditions under which casework will be installed. Do not proceed with installation until all unsatisfactory conditions have been corrected.

B. Condition casework to conditioned space prior to installation.

3.2 INSTALLATION

A. Erect casework, plumb, level, true, and straight without distortion.

B. Countertops shall be installed flush against wall. Provide clear sealant at top and around ends of countertops, endsplashes, and backsplashes where they meet wall surfaces. Countertops to be installed to within 1/8-inch of level in a 10-foot length in any direction. Seams to be flush.

C. Use filler sections and scribe panels to fit cabinetwork to required dimensions.

D. Provide all items and accessories as required for a complete installation in every respect.

E. Upper cabinets shall always be aligned with base cabinets unless otherwise approved by Architect.

F. Shop drawings and installation instructions furnished by the manufacturer shall be strictly adhered to. Mechanics making the installation shall be experienced in this type of work and capable of the highest quality of workmanship.

G. Cut openings in countertops for sinks or other items required. Cut to size from template furnished by supplier of sinks or use the designated sinks on job.

3.3 ADJUSTMENT AND CLEANING

A. Adjust casework and hardware so that doors and drawers operate smoothly and within accessibility requirements.

B. End cabinets placed against corners or where they tee into other cabinets or obstacles shall be provided with chain or bracket stops on the inside of the doors to prevent the door or door handles from hitting the obstruction.

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C. Exposed surfaces, edges, and cabinet interior shall be cleaned, and construction and installation marks removed prior to acceptance by Owner.

D. Supplier of this equipment shall be responsible for the immediate removal and disposal of trash, crating, and construction debris.

3.4 FIELD QUALITY CONTROL

A. Defective workmanship or damaged components shall be corrected, repaired, or replaced, as requested by Architect without further cost to the Owner.

B. All millwork shall comply with the latest applicable AWI standards for types of commercial millwork construction.

3.5 GENERAL INSTALLATION PROVISIONS

A. Inspect both the substrate and conditions under which Work is to be performed. Do not proceed until unsatisfactory conditions have been corrected in an acceptable manner.

B. Comply with manufacturer's installation instructions and recommendations, to the extent that those instructions and recommendations are more explicit or stringent than requirements contained in Contract Documents.

C. Inspect materials or equipment immediately upon delivery and again prior to installation. Reject damaged and defective items.

D. Provide attachment and connection devices and methods necessary for securing Work. Secure Work true to line and level. Allow for expansion and building movement.

E. Visual Effects: Provide uniform joint widths in exposed Work. Arrange joints in exposed Work to obtain the best visual effect. Refer questionable choices to the Architect for final decision.

F. Recheck measurements and dimensions, before starting each installation.

G. Install each component during Project status that will ensure the best possible results. Isolate each part of the completed construction from incompatible material as necessary to prevent deterioration.

H. Mounting Heights: Where mounting heights are not indicated, install individual components at standard mounting heights recognized within the industry for the particular application indicated. Refer questionable mounting height decisions to the Architect for final decision.

I. Provide maintenance instructions to Architect prior to request for final payment

END OF SECTION

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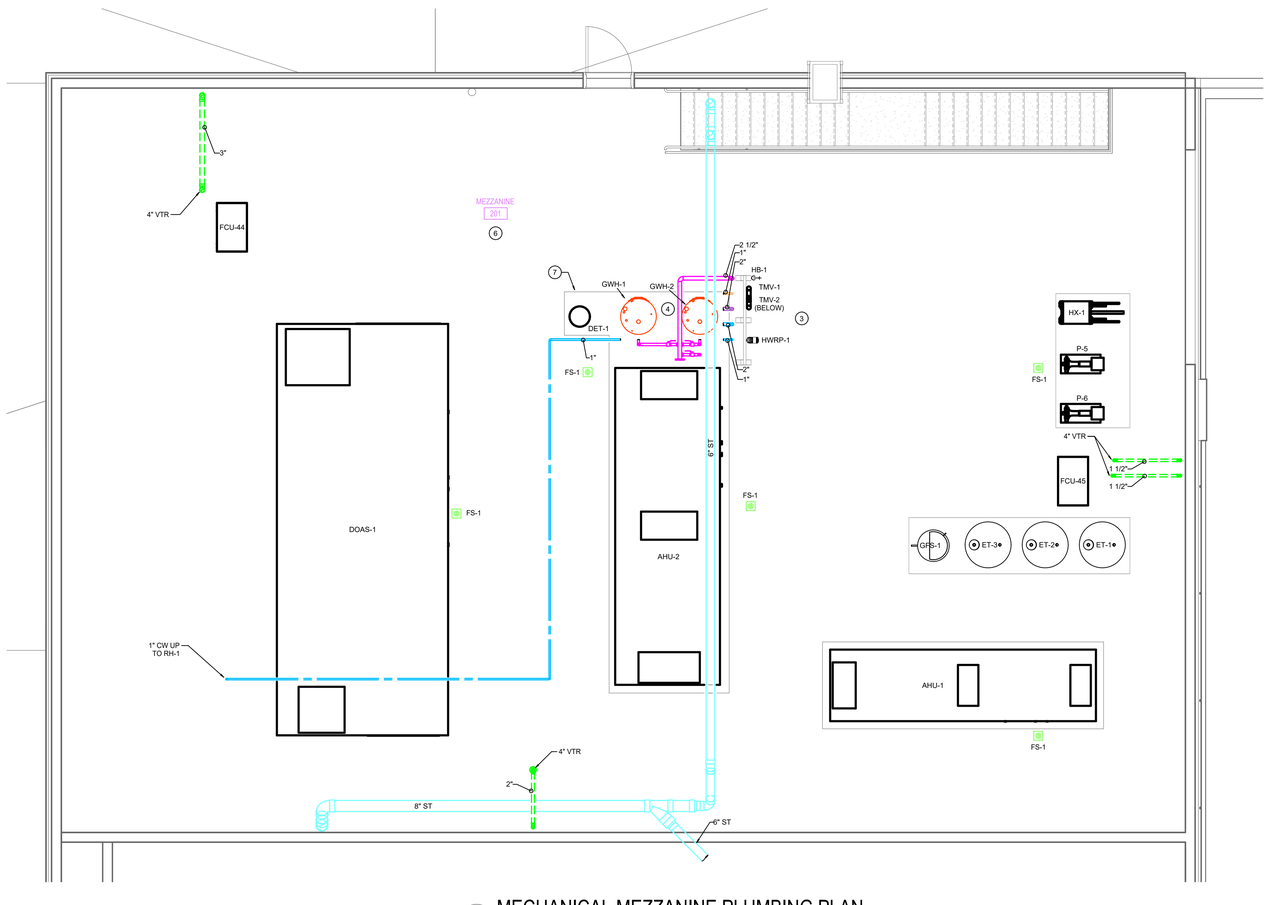
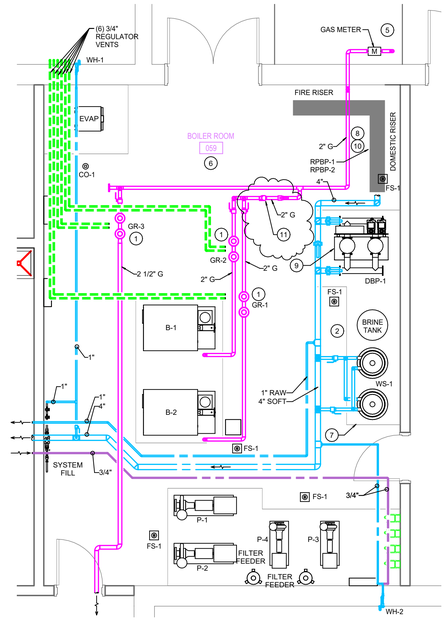
PLAN NOTES

1. PROVIDE AND INSTALL GAS REGULATOR PER MANUFACTURER'S INSTALLATION REQUIREMENTS. ROUTE REGULATOR VENT PIPING TO EXTERIOR. REFER TO GAS REGULATOR DETAIL ON DRAWING SHEET P401 FOR MORE INFORMATION.
2. PROVIDE AND INSTALL NEW DUPLEX WATER SOFTENER PER MANUFACTURER'S INSTALLATION REQUIREMENTS. ROUTE WATER SOFTENER DRAIN ON FLOOR AND DISCHARGE DIRECTLY INTO NEAREST FLOOR SINK. CUT GRATE TO RECEIVE WASTE. REFER TO DETAIL ON DRAWING SHEET P-401 FOR MORE INFORMATION.
3. REFER TO FLOW DIAGRAM ON DRAWING SHEET P402 FOR MORE INFORMATION.
4. PROVIDE AND INSTALL WATER HEATER PER MANUFACTURER'S INSTALLATION REQUIREMENTS. ROUTE CONDENSATE DRAIN PIPING ON FLOOR AND DISCHARGE INTO NEAREST FLOOR SINK. CUT GRATE TO RECEIVE CONDENSATE.
5. REMOVE SURFACE CORROSION AND PAINT EXPOSED OUTDOOR GAS PIPING. PAINTING BY GENERAL CONTRACTOR. COORDINATE WITH GENERAL CONTRACTOR. PAINT SHALL BE ALKYD SYSTEM MPI EXT 5.1D WITH METAL PRIMER AND (2) COATS FLAT GRAY ENAMEL.
6. PROVIDE AND INSTALL ALUMINUM JACKETING ON ALL PIPE INSULATION BELOW 6'-0" AFF, MINIMUM. EXTEND JACKETING TO NEAREST FITTING.
7. PROVIDE AND INSTALL NEW 4" TALL CONCRETE HOUSEKEEPING PAD.
8. WATER METER BY LOCAL UTILITY PROVIDER. COORDINATE WITH LOCAL UTILITY PROVIDER FOR EXACT REQUIREMENTS. CONTRACTOR SHALL COORDINATE WITH UTILITY PROVIDER TO SCHEDULE INSTALLATION OF NEW SERVICE.
9. PROVIDE AND INSTALL DOMESTIC WATER PRESSURE BOOSTER SYSTEM PER MANUFACTURER'S INSTALLATION REQUIREMENTS. REFER TO DETAIL ON DRAWING SHEET P-401 FOR MORE INFORMATION.
10. REFER TO DOMESTIC WATER ENTRANCE DETAIL ON DRAWING SHEET P-401 FOR MORE INFORMATION.
11. AUTOMATIC GAS CONTROL VALVE, FURNISHED BY TCC, INSTALLED BY MC.



2 MECHANICAL MEZZANINE PLUMBING PLAN
1/4" = 1'-0"



1 ENLARGED BOILER ROOM PLUMBING PLAN
1/4" = 1'-0"

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Wawasee Community School Corp.
Milford Elementary School
611 W Emeline St, Milford, IN 46542

REVISIONS

NO.	DESCRIPTION	DATE
1	ADDENDUM #2	07/16/24

PROJECT NO. 2301106
ISSUE DATE 06-21-2024
SUBMITTAL
ISSUE FOR BIDS, PERMITS, AND CONSTRUCTION

ENLARGED PLUMBING PLANS

P-301

PRIMARY JOB # 23530

IF THE WHEEL PRINTED BELOW IS NOT PRINTING IN COLOR, THE SET OF PRINTS IS NOT REPRESENTING ALL LINE TYPES CORRECTLY. CONTACT PRIMARY ENGINEERING FOR DIRECTIONS ON HOW TO OBTAIN A FULL COLOR SET OF PRINTS

SCALE: 1/16" = 1'-0" | SCALE: 3/32" = 1'-0" | SCALE: 1/8" = 1'-0" | SCALE: 1/4" = 1'-0" | SCALE: 1/2" = 1'-0" | SCALE: 3/4" = 1'-0" | SCALE: 1" = 1'-0"

7/15/2024 4:06:46 PM
Autodesk Docs://PEC_Milford Elementary School/23530 MILFORD ELEM MECH v22.rvt

GAS REGULATOR SCHEDULE

TAG	MFR.	MODEL	CAPACITY (CFH)	TURNDOWN	INLET (PSI)	INLET SIZE (IN)	OUTLET (IN WC)	OUTLET SIZE (IN)	EQUIP SERVED	REGULATOR LOCATION	REMARKS
GR-1	PIETRO FIORENTINI	31153OPD	2000	500:1	5	1 1/4	14	1 1/4	B-1	INTERIOR	1, 2, 3
GR-2	PIETRO FIORENTINI	31153OPD	2000	500:1	5	1 1/4	14	1 1/4	B-2	INTERIOR	1, 2, 3
GR-3	PIETRO FIORENTINI	31152OPD	1200	500:1	5	1	14	1	GWH-1, GWH-2, KITCHEN	INTERIOR	1, 2, 3

REMARKS:
1. PROVIDE AND INSTALL WITH VENT PIPED TO EXTERIOR.
2. VERIFY EXACT REGULATOR SIZE BASED ON ACTUAL EQUIPMENT INSTALLED PRIOR TO ORDERING.
3. PROVIDE WITH EXTERNAL DOWNSTREAM CONTROL LINE, FIELD INSTALLED.

1

PLUMBING FIXTURE SCHEDULE

TAG	MFR.	MODEL	TRIM MFR.	TRIM MODEL	FLOW RATE (GPF OR GPM)	TRIM TYPE	WASTE	VENT	CW	HW	COLOR	REMARKS
WC-1	AMERICAN STD.	2257.101	SLOAN	111 SFSM-1.6-TMO	1.6	SENSOR FLUSH VALVE	3"	2"	1"	-	WHITE	1, 2
WC-1H	AMERICAN STD.	2257.101	SLOAN	111 SFSM-1.6-TMO	1.6	SENSOR FLUSH VALVE	3"	2"	1"	-	WHITE	1, 2
WC-2H	AMERICAN STD.	2282.001	SLOAN	111 SFSM-1.6-TMO	1.6	SENSOR FLUSH VALVE	3"	2"	1"	-	WHITE	2
UR-1	AMERICAN STD.	6590.001	SLOAN	186 SFSM-0.5-TMO	0.5	SENSOR FLUSH VALVE	2"	1-1/4"	3/4"	-	WHITE	1
UR-1H	AMERICAN STD.	6590.001	SLOAN	186 SFSM-0.5-TMO	0.5	SENSOR FLUSH VALVE	2"	1-1/4"	3/4"	-	WHITE	1
L-1H	AMERICAN STD.	0355.012	CHICAGO	802-E34-1000XKABCP	1.5	DUAL HANDLE	1-1/4"	1-1/4"	1/2"	1/2"	WHITE	1, 3, 4, 5, 6
SK-1H	ELKAY	ELUHAD121255PD	CHICAGO	786-GN8AE3XKABCP	2.2	4" WRISTBLADE	2"	1-1/2"	3/4"	3/4"	STAINLESS	3, 5, 6
SK-2H	ELKAY	DRKAD251755C	CHICAGO	786-GN8AE3XKABCP, 748-244ABCP	2.2	4" WRISTBLADE	2"	1-1/2"	3/4"	3/4"	STAINLESS	3, 5, 6
SK-3	ELKAY	ELUHAD121255PD	CHICAGO	786-GN8AE3XKABCP	2.2	4" WRISTBLADE	2"	1-1/2"	3/4"	3/4"	STAINLESS	3, 5, 6, 11
SK-4H	ELKAY	ELUHAD121255PD	CHICAGO	786-GN8AE3XKABCP	2.2	4" WRISTBLADE	2"	1-1/2"	3/4"	3/4"	STAINLESS	3, 5, 6, 11
SK-5H	SLOAN	EHS-1000	SLOAN	EBF-775-4-TUR-ADM-CP-2.2GPM-LAM-IR-FCT	2.2	SENSOR	1-1/4"	1-1/4"	1/2"	1/2"	STAINLESS	-
WF-1H	SLOAN	ELRF-83000	CHICAGO FAUCET	(3) 3511-4E2805AB	0.5	LEVER HANDLE	2"	1-1/2"	3/4"	3/4"	STAINLESS	1, 3, 5, 6, 7
WF-2H	SLOAN	ELRF-84000		(4) 3511-4E2805AB	0.5	LEVER HANDLE	2"	1-1/2"	3/4"	3/4"	STAINLESS	1, 3, 5, 6, 7
EWC-1H	OASIS	PG8SBFSL	-	BI-LEVEL W/ BOTTLE FILL	-	MECH VALVE	1-1/4"	1-1/4"	1/2"	-	STAINLESS	1, 8
SH-1H	BEST BATH	LSS3636CP	SYMMONS	C-96-500-B30-V-X	2.0	SHWR HOSE	2"	1-1/2"	1/2"	1/2"	CHROME	9, 10
MSB-1	FIAT	MSB2424	CHICAGO	(1) 897-CP & (1) 998-RCF	1.5	DUAL HANDLE	3"	1-1/2"	1/2"	1/2"	WHITE	12
WH-1	WOODFORD	B67	-	-	-	WALL RECESSED	-	-	3/4"	-	CHROME	-
WH-2	WOODFORD	HCB67					-	-	3/4"	3/4"	CHROME	
RH-1	WOODFORD	SRH-MS	-	-	-	ROOF HYDRANT	-	-	3/4"	-	PAINTED	-
HB-1	CHICAGO	998-RCF	-	-	-	-	-	-	3/4"	-	CHROME	-
WB-1	SIOUX CHIEF	696-G1010MFS	-	-	-	-	-	-	1/2"	-	WHITE	13
WB-2	SIOUX CHIEF	696-G12313MF	-	-	-	-	2"	-	1/2"	1/2"	WHITE	13
WB-3	OATEY	39260	-	-	-	-	2"	-	-	-	WHITE	-
FD-1	SIOUX CHIEF	833-*5PNR	CAST IRON	835 TRAPSHIELD	-	-	-	-	-	-	NIKALOY	14
FS-1	SIOUX CHIEF	861-QF2*86N	CAST IRON	835 TRAPSHIELD	-	-	-	-	-	-	NIKALOY	14
CO-1	JR SMITH	4024S	CAST IRON	-	-	FLOOR ROUND	-	-	-	-	NIKALOY	14
CO-2	JR SMITH	4254S	CAST IRON	-	-	EXTERIOR	-	-	-	-	CAST IRON	14
CO-3	JR SMITH	4532Y-SS	CAST IRON	-	-	WALL W/COVER	-	-	-	-	STAINLESS	14
CO-4	JR SMITH	4422-SS	CAST IRON	-	-	END FERRULE	-	-	-	-	CAST IRON	14
RD-1	JR SMITH	1010Y-AD-RDP	ALUM OR ST. STL	-	-	-	-	-	-	-	CAST IRON	14
ORD-1	JR SMITH	1080Y-AD-RDP	ALUM OR ST. STL	-	-	-	-	-	-	-	CAST IRON	14

1

REMARKS:
1. PROVIDE AND INSTALL WITH FLOOR MOUNTED CARRIER OR APPROVED EQUAL.
2. PROVIDE AND INSTALL WITH HEAVTY DUTY, WHITE, ELONGATED, SOLID PLASTIC OPEN FRONT SEAT.
3. PROVIDE AND INSTALL WITH CHICAGO LOOSE KEY ANGLE STOP AND SUPPLY RISER.
4. PROVIDE AND INSTALL WITH OFFSET DRAIN AND INSULATION KIT ON ALL WASTE AND SUPPLY PIPING. TRUEBRO OR APPVD EQUAL.
5. PROVIDE AND INSTALL WITH 17 GA. CAST BRASS P-TRAP W/ CO, GRID STRAINER, CHICAGO LOOSE KEY ANGLE STOPS, AND SUPPLY RISERS.
6. PROVIDE AND INSTALL WITH CERAMIC CARTRIDGES.
7. COLOR SELECTION BY ARCHITECT.
8. PROVIDE WATER COOLER WITHOUT ANY INLINE FILTERS.
9. PROVIDE AND INSTALL WITH SHOWER DRAIN, GRAB BARS, FOLDING SEAT, CURTAIN, AND ROD. REFER TO DRAWING PLANS AND DETAILS FOR MORE INFORMATION.
10. PROVIDE AND INSTALL WITH 60" HOSE AND HAND SHOWER, FIXED HEAD SHOWER, DIVERTING VALVE, INTEGRAL SERVICE STOPS, AND 30" SLIDEBAR.
11. PROVIDE AND INSTALL WITH LIQUID ASSETS GLECO GT64 PLASTER TRAP.
12. PROVIDE AND INSTALL WITH STAINLESS STEEL STRAINER, STAINLESS STEEL BUMPER GUARDS, STAINLESS STEEL WALL GUARD, MOP BRACKET, HOSE, AND CHICAGO SILLCOCK 998-XKRCF. REFER TO DRAWING DETAILS FOR MOR...
13. PROVIDE AND INSTALL WITH INTEGRAL PISTON TYPE WATER HAMMER ARRESTOR(S).
14. REFER TO PLANS FOR SIZES.

NOTES:
1. "-H" DESIGNATES HANDICAP ACCESSIBLE FIXTURES.

BACKFLOW PREVENTER SCHEDULE

TAG	MFR.	MODEL	SERVICE	TYPE	SIZE (IN)	STRAINER	REMARKS
RPBP-1	WILKINS	375-FSC	DOMESTIC	REDUCED PRESSURE	4"	YES	1, 2, 3, 4
RPBP-2	WILKINS	375-FSC	DOMESTIC	REDUCED PRESSURE	4"	YES	1, 2, 3, 4

REMARKS:
1. SHALL MEET REQUIREMENTS OF NSF/ANSI 61 FOR LEAD FREE POTABLE SERVICE.
2. PROVIDE WITH AIR GAP DRAIN CUP ASSEMBLY, PIPED TO FLOOR DRAIN.
3. PROVIDE WITH EXPOXY COATED WATER WAY.
4. WITH NRS GATE SHUT OFF VALVES. INSTALL AT ANGLE TO PROVIDE CLEARANCE TO PIPING ABOVE AS NEEDED.

DOMESTIC BOOSTER PUMP SCHEDULE

TAG	MFR.	MODEL	TOTAL FLOW (GPM)	TOTAL HEAD (FT)	ENTERING PRESS. (PSI)	LEAVING PRESS. (PSI)	MOTOR (HP)	PUMP RPM	ELEC (V/PH)	REMARKS
DBP-1	BELL & GOSSETT	E-MT	150	81	25	55	7 1/2	3600	460/3	1, 2, 3, 4, 5, 6

REMARKS:
1. PROVIDE AND INSTALL WITH SKID MOUNTED PREPIPED AND FACTORY WIRED SYSTEM WITH PAKCAGED CONTROLS AND BACNET MS/TP INTERFACE.
2. PROVIDE INDIVIDUAL ISOLATION VALVES AND PRV'S FOR EACH PUMP.
3. PROVIDE AND INSTALL WITH FACTORY WIRED CONTROL PANEL WITH PRESSURE SENSORS, PRESSURE GAUGES, STARTERS, STATUS LIGHTS, AND DISCONNECT SWITCH.
4. PANEL SHALL BE WIRED FOR A SINGLE POINT ELECTRICAL CONNECTION.
5. PROVIDE AND INSTALL WITH DUPLEX 100% REDUNDANT PUMPS.
6. PROVIDE AND INSTALL WITH WESSELS FXA-400 DRAW DOWN TANK.

PLUMBING THERMAL EXPANSION TANK SCHEDULE

TAG	MFR.	MODEL	TOTAL VOL (GAL)	ACCEPT VOL (GAL)	DIA (IN)	HEIGHT (IN)	PRECHARGE (PSIG)	CONN. SIZE (IN)	REMARKS
DET-1	AMTROL	ST-210VC	90	35	24	57	50	1 1/4	1, 2, 3

REMARKS:
1. ALL TANKS SHALL BE ASME RATED AND SHALL BE PROVIDED WITH A LINE SIZE T&P RELIEF VALVE ON THE INLET PIPING.
2. PROVIDE WITH INTEGRAL INLET TURBULATOR TO PREVENT STAGNANT WATER IN THE TANK AS WELL AS ANTI-MICROBIAL LINER IN TANK.
3. CONTRACTOR MUST VERIFY THE SYSTEM STATIC WATER PRESSURE PRIOR TO INSTALLING TANK AND ADJUST PRE-CHARGE AS REQUIRED.

PLUMBING PUMP SCHEDULE

TAG	MFR.	MODEL	FLOW (GPM)	HEAD (FT)	MOTOR (HP)	MOTOR (BHP)	EFF (+/- 5%)	RPM	ELEC (V/PH)	SERVICE	REMARKS
HWRP-1	BELL & GOSSETT	PL55	7	50	2/5	0.4	-	3250	115/1	DOM HW RECIRC	1, 2, 3, 4

REMARKS:
1. ALL LEAD-FREE BRONZE CONSTRUCTION.
2. PROVIDE AND INSTALL WITH STRAP-ON AQUASTAT SENSOR WIRED TO CONTROL PUMP, ON AT 100 DEG F/OFF AT 120 DEG F.
3. PROVIDE AND INSTALL WITH ISOLATION BALL VALVES, DISCHARGE CHECK VALVE, MANUAL BALANCE VALVE, AND PRESSURE TAPS IN AND OUT.
4. PROVIDE AND INSTALL WITH STAINLESS STEEL BODY AND IMPELLER.

THERMOSTATIC MIXING VALVE SCHEDULE

TAG	MFR.	MODEL	MIN FLOW (GPM)	MAX FLOW (GPM)	P.D. (PSI)	INLETS (IN)	OUTLET (IN)	SETPOINT (DEG F)	ASSE CERT.	CABINET	SERVICE	REMARKS
TMV-1	LAWLER	802	2	39	10	1	1 1/4	120	1017	NA	DOMESTIC HW	1, 2
TMV-2	LAWLER	802	2	39	10	1	1 1/4	120	1017	NA	DOMESTIC HW	1, 2

REMARKS:
1. MAINTAIN SETPOINT TEMPERATURE TO WITHIN 3 DEG F, DOWN TO A MINIMUM FLOW RATE OF 0.5 GPM
2. WITH INTEGRAL CHECK STOPS.

WATER SOFTENER SCHEDULE

TAG	MFR.	MODEL	TYPE	PEAK FLOW (GPM)	NOM. FLOW (GPM)	NOM. WPD (PSI)	RESIN CAPACITY (GRAINS/TANK)	RESIN VOLUME (CU.FT./TANK)	SALT STORAGE (LBS)	EXIST HARD. (GRAINS)	ELEC (V/PH)	REMARKS
WS-1	CULLIGAN	CMT-300-PF	DUPLEX	95	70	15	300,000	10	1800	22	120/1	1, 2, 3, 4

REMARKS:
1. PROVIDE AND INSTALL WITH DEMAND USE REGENERATION WITH ULTRASONIC FLOW METERS AND FULLY ELECTRONIC CONTROLS.
2. FLOW METERS SHALL BE ULTRASONIC STYLE WITH MINIMUM PIPE DIAMETER REQUIREMENTS. DO NOT USE TURBINE WHEELS.
3. PROVIDE WITH FULL TANK OF SALT WITH AN ADDITIONAL 100% IN BAGS STORED ON PALLET FOR OWNER.
4. PROVIDE AND INSTALL WITH APPROPRIATE BRINE TANK SIZE, REFER TO MANUFACTURER FOR REQUIREMENTS.

GAS WATER HEATER SCHEDULE

TAG	MFR.	MODEL	TANK VOL (GAL)	EFF (%)	GAS INPUT (MBH)	RECOVERY AT 100 DEG F (GPH)	BURNER TURNDOWN	NAT GAS PRES. (IN W.C.)	GAS CONN (IN)	WATER CONN (IN)	FLUE CONN (IN)	FLUE MATL.	FILLED WT. (LB)	ELEC (V/PH)	ELEC (AMPS)	REMARKS
GWH-1	LOCHINVAR	SWA400N	110	95	399	459	5:1	4 - 11	1"	1-1/2"	4"	POLYPRO	1775	120/1	6.2	1, 2, 3, 4
GWH-2	LOCHINVAR	SWA400N	110	95	399	459	5:1	4 - 11	1"	1-1/2"	4"	POLYPRO	1775	120/1	6.2	1, 2, 3, 4

REMARKS:
1. INSTANTANEOUS FLOW RATE AT 67 DEG TEMP RISE.
2. PROVIDE WITH DESCALING/FLUSHING KIT WITH 5 GAL BUCKET, SUMP PUMP, (2) STAINLESS BRAIDED HOSES WITH HOSE CONNECTIONS, (1) GALLON DESCALER SOLUTION.
3. PROVIDE WITH FLUSHING PIPE CONNECTION FITTINGS AT INLET AND OUTLET OF HEATER TO ALLOW DESCALING WITHOUT BREAKING PIPE CONNECTIONS.
4. ASME CONSTRUCTION.

IF THE WHEEL PRINTED BELOW IS NOT SHOWN IN COLOR, THIS SET OF PRINTS IS NOT REPRESENTING ALL LINE TYPES CORRECTLY. CONTACT PRIMARY ENGINEERING FOR DIRECTIONS ON HOW TO OBTAIN A FULL COLOR SET OF PRINTS

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MKS MICHAEL KINDER & SONS PLAN | DESIGN | BUILD

Wawasee Community School Corp.
Milford Elementary School
611 W Emeline St, Milford, IN 46542

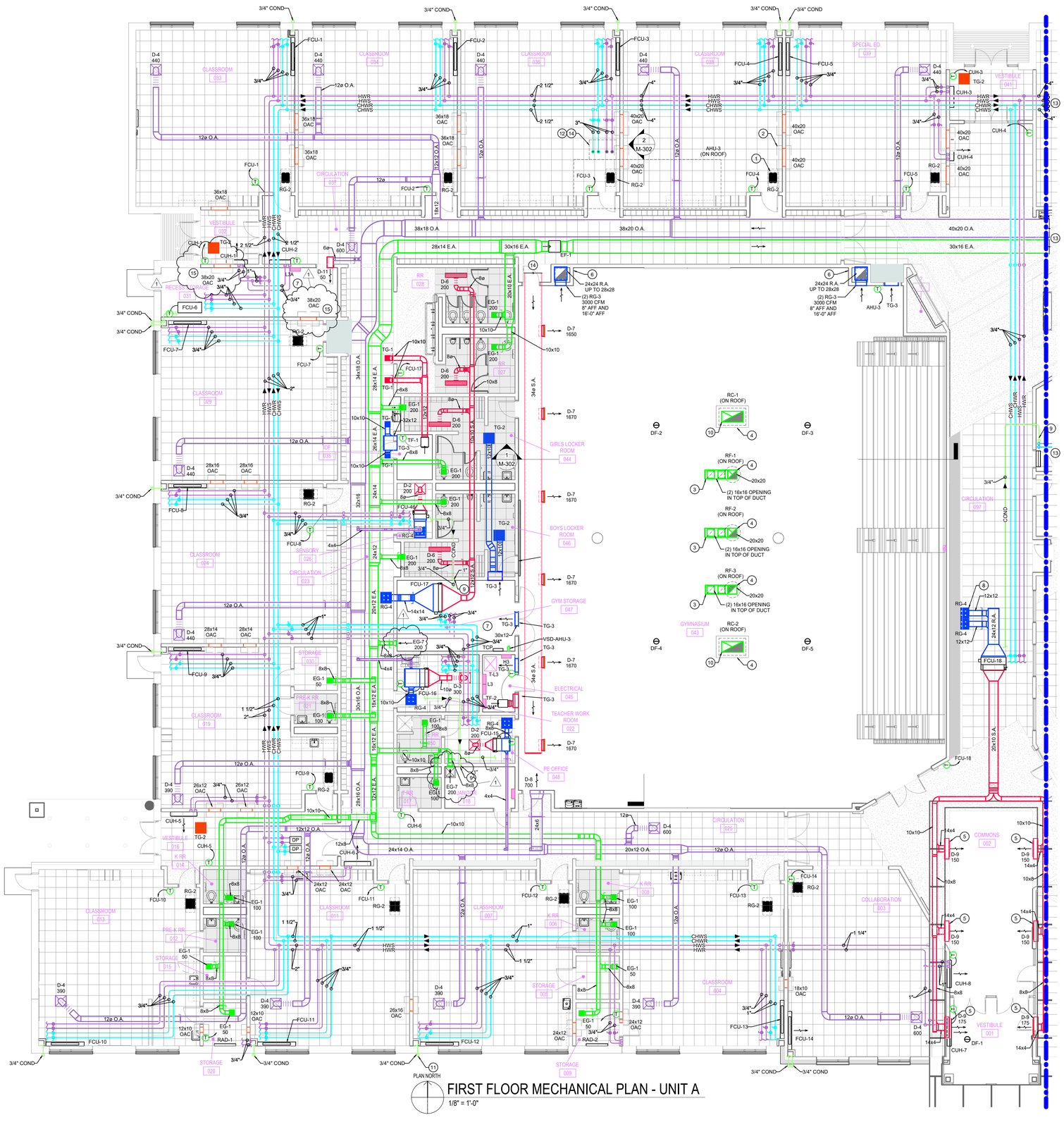
REVISIONS

NO.	DESCRIPTION	DATE
1	ADDENDUM #2	07/16/24

PROJECT NO. 2301106
ISSUE DATE 06-21-2024
SUBMITTAL
ISSUE FOR BIDS, PERMITS, AND CONSTRUCTION

PLUMBING SCHEDULES

P-501



FIRST FLOOR MECHANICAL PLAN - UNIT A

1/8" = 1'-0"

PLAN NOTES

1. PROVIDE AND INSTALL LINED RETURN AIR CANOPY ON RELIEF AIR PLENUM EGGCRATE GRILLES RG-1 AND RG-2. TYPICAL.
2. PROVIDE AND INSTALL RELIEF AIR OPENING ABOVE CEILING. MAINTAIN CLEARANCE EQUAL TO MINOR DUCT DIMENSION OR 12" MINIMUM EACH SIDE FOR AIRFLOW. MAINTAIN MINIMUM 8" FROM MASONRY CONTROL JOINT LOCATIONS. COORDINATE WITH ALL TRADES. TYPICAL.
3. PROVIDE AND INSTALL LINED PLENUM ON FAN INLET. REFER TO RELIEF FAN PLENUM DETAILS ON DRAWING SHEET M403 FOR MORE INFORMATION.
4. CONTROL DAMPERS FOR THROUGH-ROOF DUCT PENETRATIONS SHALL BE LOCATED BELOW ROOF DECK AND SHALL BE ACCESSIBLE FROM ROOF. REFER TO EQUIPMENT SCHEDULES AND DETAILS FOR MORE INFORMATION.
5. COORDINATE DIFFUSER D-9 LOCATION WITH ARCHITECTURAL ELEVATIONS. REFER TO ARCHITECTURAL DRAWINGS FOR MORE INFORMATION. COORDINATE WITH G.C. FOR FINISHED OPENING INSTALLATION REQUIREMENTS.
6. RETURN AIR CHASE OPEN TO GYMNASIUM RETURN GRILLE RG-3 AND RETURN AIR DUCTWORK UP TO AHU-3 ON ROOF. MAINTAIN CLEARANCES FOR RETURN AIR PATH AND PREVENT OBSTRUCTIONS BY OTHER TRADES. COORDINATE WITH ALL TRADES.
7. PROVIDE AND INSTALL PVC JACKETING ON ALL PIPING INSULATION EXPOSED TO VIEW, THIS ROOM.
8. PROVIDE AND INSTALL CEILING MOUNTED FILTER GRILLE(S) FOR HORIZONTAL FAN COIL UNITS. TYPICAL.
9. ROUTE CONDENSATE PIPING DOWN WITHIN WALL TO WALL BOX. REFER TO CONDENSATE WALL BOX DETAIL ON DRAWING SHEET P401 FOR MORE INFORMATION.
10. REFER TO RELIEF ROOF CAP DETAILS ON DRAWING SHEET M-403 FOR MORE INFORMATION.
11. ROUTE CONDENSATE PIPING THROUGH WALL APPROX. 18" AFF AND DISCHARGE ON GRADE. TYPICAL.
12. ROUTE PIPING UP TO OUTDOOR AIR HANDLING UNIT THROUGH INSULATED METAL PIPE CHASE. PIPE CHASE AND CURB SHALL BE OPEN TO PLENUM SPACE BELOW TO FULLEST EXTENT POSSIBLE TO MAXIMIZE AIR CIRCULATION. COORDINATE WITH GENERAL CONTRACTOR.
13. REFER TO DRAWING SHEET M-201-B FOR CONTINUATION.
14. REFER TO DRAWING SHEET M-202 FOR CONTINUATION.
15. PROVIDE AND INSTALL 1" x 1/2" 14 GAUGE GALVANIZED STEEL HARDWARE CLOTH TO COVER OPENING.

GENERAL NOTES

1. UNLESS NOTED OTHERWISE, IN SPACES WITH NO CEILINGS OR WITH CEILING CLOUDS, ALL DUCTWORK SHALL BE PAINT GRIP GALVANIZED FOR FIELD PAINTING BY GENERAL CONTRACTOR. COLOR SELECTION BY ARCHITECT. COORDINATE WITH GENERAL CONTRACTOR. REFER TO ARCHITECTURAL DRAWINGS FOR MORE INFORMATION. SUPPLY AIR DUCTWORK AND RETURN AIR DUCTWORK SHALL BE DOUBLE WALL DUCT WITH INTERSTITIAL INSULATION. RELIEF AIR DUCTWORK AND EXHAUST AIR DUCTWORK SHALL BE SINGLE WALL WITH INTERNAL LINER WITHIN 10 '0" MINIMUM OF FAN CONNECTION.
2. UNLESS NOTED OTHERWISE, IN SPACES WITH NO CEILINGS OR WITH CEILING CLOUDS, PROVIDE AND INSTALL FACTORY OR FIELD INSTALLED ASJ PAPER JACKETING ON ALL PIPE INSULATION FOR FIELD PAINTING BY GENERAL CONTRACTOR. COLOR SELECTION BY ARCHITECT. COORDINATE WITH GENERAL CONTRACTOR. REFER TO ARCHITECTURAL DRAWINGS FOR MORE INFORMATION.

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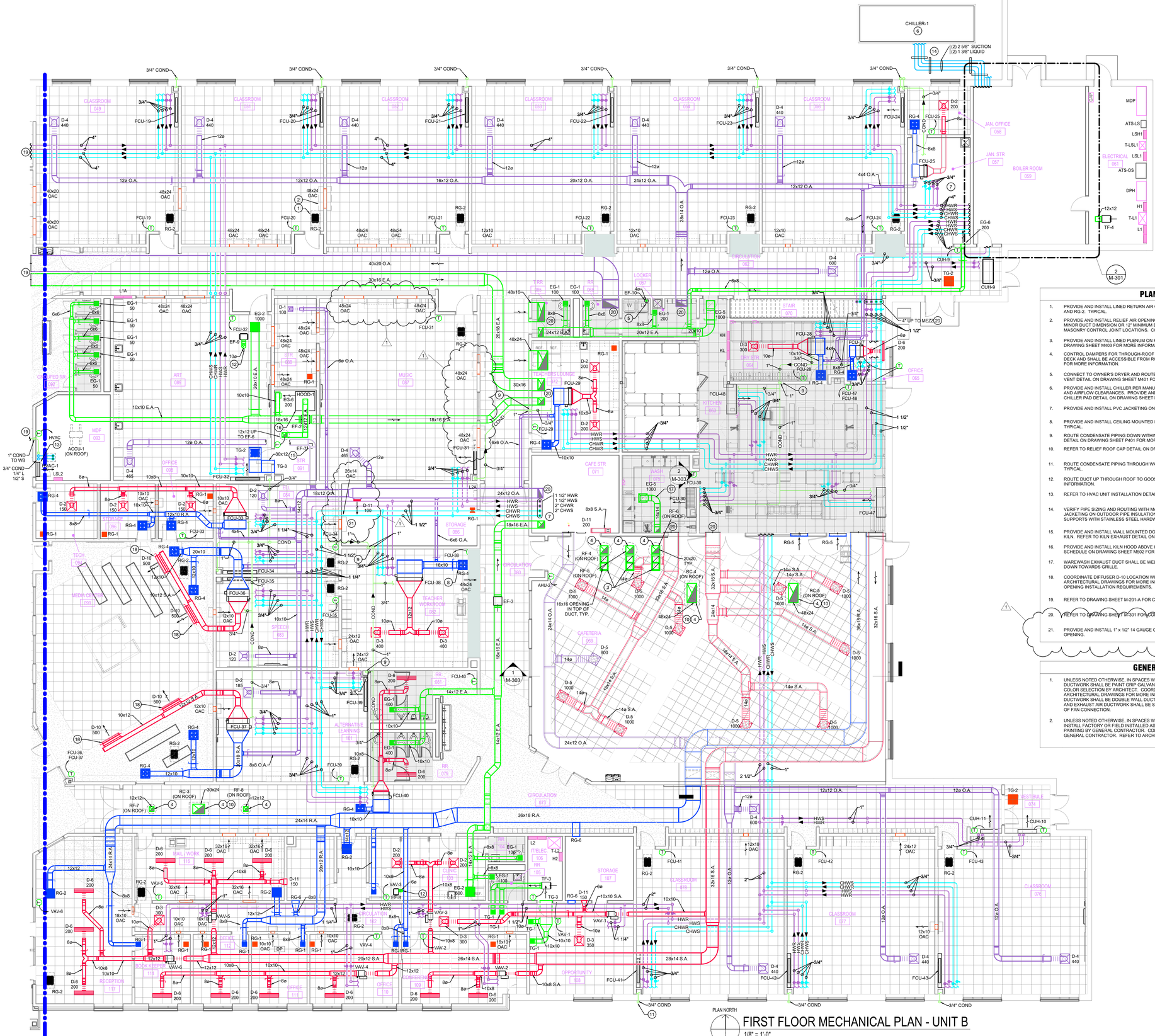
FIRST FLOOR MECHANICAL PLAN - UNIT A

M-201-A

PRIMARY JOB # 23530

IF THE WHEEL PRINTED BELOW IS NOT SHOWN IN COLOR, THIS SET OF PRINTS IS NOT REPRESENTING ALL LINE TYPES CORRECTLY. CONTACT PRIMARY ENGINEERING FOR DIRECTIONS ON HOW TO OBTAIN A FULL COLOR SET OF PRINTS

SCALE: 1/16" = 1'-0" | SCALE: 3/32" = 1'-0" | SCALE: 1/8" = 1'-0" | SCALE: 1/4" = 1'-0" | SCALE: 1/2" = 1'-0" | SCALE: 3/4" = 1'-0" | SCALE: 1" = 1'-0"



FIRST FLOOR MECHANICAL PLAN - UNIT B

1/8" = 1'-0"

PLAN NOTES

1. PROVIDE AND INSTALL LINED RETURN AIR CANOPY ON RELIEF AIR PLENUM EGGCRATE GRILLES RG-1 AND RG-2. TYPICAL.
2. PROVIDE AND INSTALL RELIEF AIR OPENING ABOVE CEILING. MAINTAIN CLEARANCE EQUAL TO MINOR DUCT DIMENSION OR 12" MINIMUM EACH SIDE FOR AIRFLOW. MAINTAIN MINIMUM 8" FROM MASONRY CONTROL JOINT LOCATIONS. COORDINATE WITH ALL TRADES. TYPICAL.
3. PROVIDE AND INSTALL LINED PLENUM ON FAN INLET. REFER TO RELIEF FAN PLENUM DETAILS ON DRAWING SHEET M403 FOR MORE INFORMATION.
4. CONTROL DAMPERS FOR THROUGH-ROOF DUCT PENETRATIONS SHALL BE LOCATED BELOW ROOF DECK AND SHALL BE ACCESSIBLE FROM ROOF. REFER TO EQUIPMENT SCHEDULES AND DETAILS FOR MORE INFORMATION.
5. CONNECT TO OWNER'S DRYER AND ROUTE DRYER VENT UP THROUGH ROOF. REFER TO DRYER VENT DETAIL ON DRAWING SHEET M401 FOR MORE INFORMATION.
6. PROVIDE AND INSTALL CHILLER PER MANUFACTURER'S INSTRUCTION FOR PIPING AND FOR SERVICE AND AIRFLOW CLEARANCES. PROVIDE AND INSTALL ON CONCRETE PAD. REFER TO TYPICAL CHILLER PAD DETAIL ON DRAWING SHEET M402 FOR MORE INFORMATION.
7. PROVIDE AND INSTALL PVC JACKETING ON ALL PIPING INSULATION EXPOSED TO VIEW, THIS ROOM.
8. PROVIDE AND INSTALL CEILING MOUNTED FILTER GRILLE(S) FOR HORIZONTAL FAN COIL UNITS. TYPICAL.
9. ROUTE CONDENSATE PIPING DOWN WITHIN WALL TO WALL BOX. REFER TO CONDENSATE WALL BOX DETAIL ON DRAWING SHEET P401 FOR MORE INFORMATION.
10. REFER TO RELIEF ROOF CAP DETAIL ON DRAWING SHEET M-403 FOR MORE INFORMATION.
11. ROUTE CONDENSATE PIPING THROUGH WALL APPROX. 18" AFF AND DISCHARGE ON GRADE. TYPICAL.
12. ROUTE DUCT UP THROUGH ROOF TO GOOSENECK. REFER TO DETAIL ON M401 FOR MORE INFORMATION.
13. REFER TO HVAC UNIT INSTALLATION DETAIL ON DRAWING SHEET M402 FOR MORE INFORMATION.
14. VERIFY PIPE SIZING AND ROUTING WITH MANUFACTURER. PROVIDE AND INSTALL ALUMINUM JACKETING ON OUTDOOR PIPE INSULATION. SUPPORT PIPING ON GRADE FROM DURA BLOCK PIPE SUPPORTS WITH STAINLESS STEEL HARDWARE.
15. PROVIDE AND INSTALL WALL MOUNTED DOWNDRAFT KILN EXHAUST FAN. CONNECT TO OWNER'S KILN. REFER TO KILN EXHAUST DETAIL ON DRAWING SHEET M401 FOR MORE INFORMATION.
16. PROVIDE AND INSTALL KILN HOOD ABOVE KILN. REFER TO GENERAL MECHANICAL EQUIPMENT SCHEDULE ON DRAWING SHEET M502 FOR MORE INFORMATION.
17. WAREWASH EXHAUST DUCT SHALL BE WELDED STAINLESS STEEL, SLOPED MINIMUM 1/8" PER FOOT DOWN TOWARDS GRILLE.
18. COORDINATE DIFFUSER D-10 LOCATION WITH ARCHITECTURAL ELEVATIONS. REFER TO ARCHITECTURAL DRAWINGS FOR MORE INFORMATION. COORDINATE WITH G.C. FOR FINISHED OPENING INSTALLATION REQUIREMENTS.
19. REFER TO DRAWING SHEET M-201-A FOR CONTINUATION.
20. REFER TO DRAWING SHEET M-301 FOR CONTINUATION.
21. PROVIDE AND INSTALL 1" x 1/2" 14 GAUGE GALVANIZED STEEL HARDWARE CLOTH TO COVER OPENING.

GENERAL NOTES

1. UNLESS NOTED OTHERWISE, IN SPACES WITH NO CEILINGS OR WITH CEILING CLOUDS, ALL DUCTWORK SHALL BE PAINT GRIP GALVANIZED FOR FIELD PAINTING BY GENERAL CONTRACTOR. COLOR SELECTION BY ARCHITECT. COORDINATE WITH GENERAL CONTRACTOR. REFER TO ARCHITECTURAL DRAWINGS FOR MORE INFORMATION. SUPPLY AIR DUCTWORK AND RETURN AIR DUCTWORK SHALL BE DOUBLE WALL DUCT WITH INTERSTITIAL INSULATION. RELIEF AIR DUCTWORK AND EXHAUST AIR DUCTWORK SHALL BE SINGLE WALL WITH INTERNAL LINER WITHIN 10' 0" MINIMUM OF FAN CONNECTION.
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IF THE WHEEL PRINTED BELOW IS NOT SHOWN IN COLOR, THIS SET OF PRINTS IS NOT REPRESENTING ALL LINE TYPES CORRECTLY. CONTACT PRIMARY ENGINEERING FOR DIRECTIONS ON HOW TO OBTAIN A FULL COLOR SET OF PRINTS

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FIRST FLOOR MECHANICAL PLAN - UNIT B

M-201-B

PRIMARY JOB # 23530

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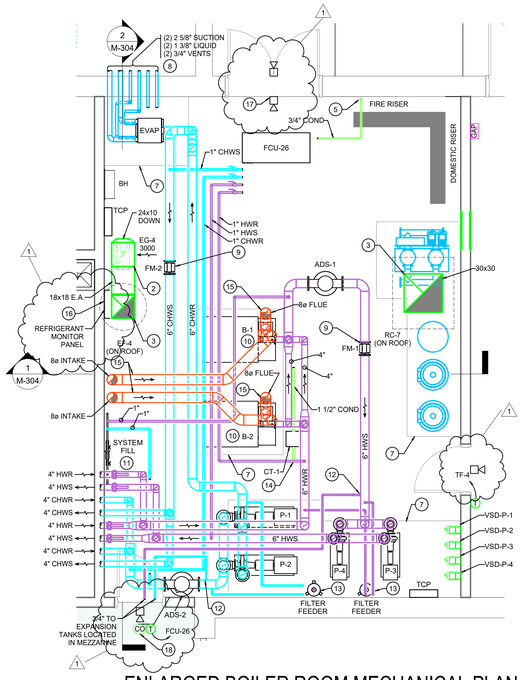
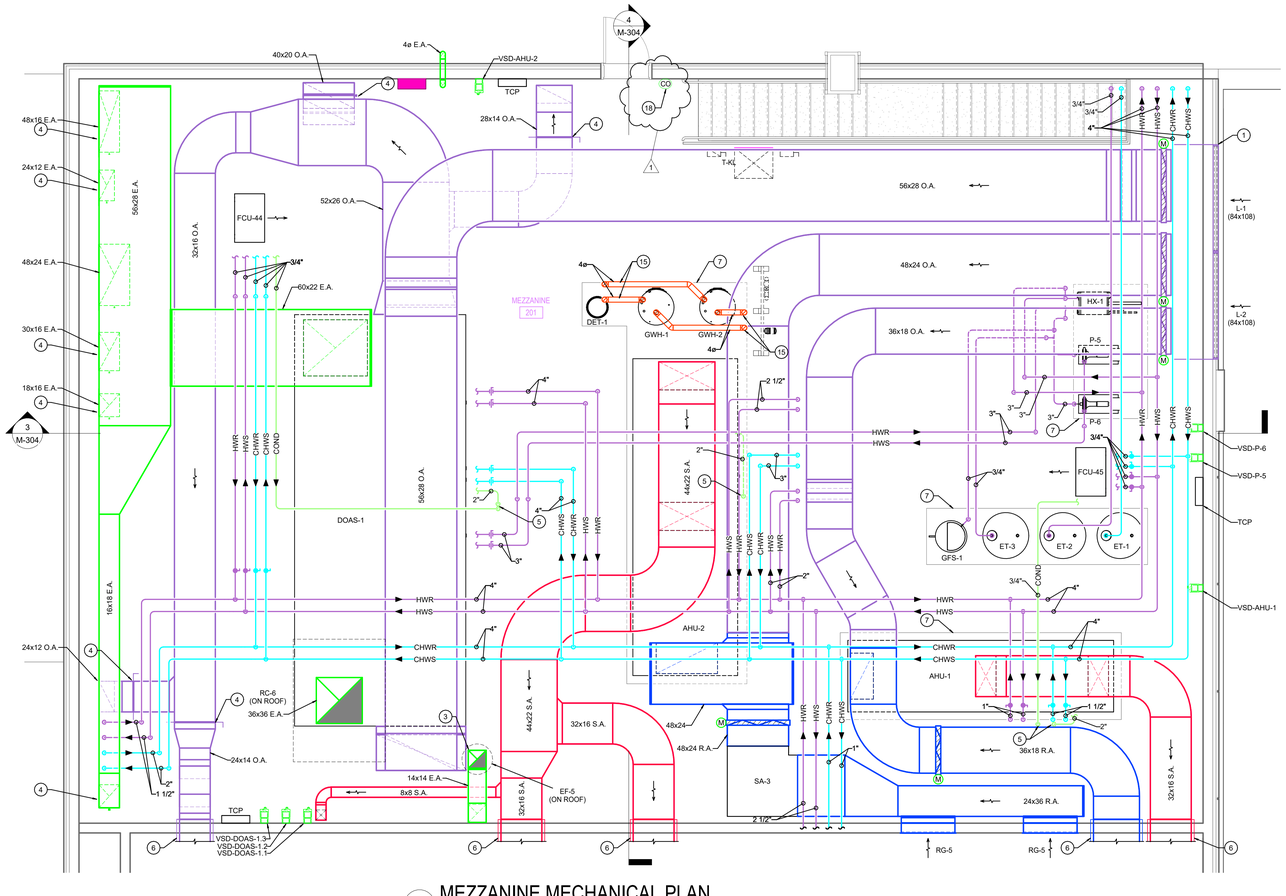


2 ENLARGED BOILER ROOM MECHANICAL PLAN

1/4" = 1'-0"



1 MEZZANINE MECHANICAL PLAN

1/4" = 1'-0"

PLAN NOTES

1. REFER TO LOUVER PLENUM DETAIL ON DRAWING SHEET M401 FOR MORE INFORMATION.
2. DUCT DROP TO FLOOR SHALL BE CONSTRUCTED OF 16 GAUGE GALVANIZED SHEET METAL WITHIN 7'-0" AFF MINIMUM.
3. CONTROL DAMPERS FOR THROUGH-ROOF DUCT PENETRATIONS SHALL BE LOCATED BELOW ROOF DECK AND SHALL BE ACCESSIBLE FROM ROOF. REFER TO EQUIPMENT SCHEDULES AND DETAILS FOR MORE INFORMATION.
4. RECTANGULAR MANUAL OPPOSED BLADE BALANCE DAMPER.
5. ROUTE COOLING COIL CONDENSATE PIPING ON FLOOR AND DISCHARGE DIRECTLY INTO FLOOR SINK. CUT GRATE TO RECEIVE CONDENSATE. COOLING COIL CONDENSATE PIPING SHALL BE COPPER WITH 1/2" THICK ELASTOMERIC RUBBER INSULATION. TYPICAL.
6. DUCT SHALL BE DOUBLE WALL WITH INTERSTITIAL LINER AND PAINT GRIP GALVANIZED OUTER WALL FOR FIELD PAINTING BY GC. COLOR SELECTION BY ARCHITECT.
7. PROVIDE AND INSTALL EQUIPMENT ON 4" TALL CONCRETE HOUSEKEEPING PAD.
8. VERIFY PIPE SIZING AND ROUTING WITH MANUFACTURER.
9. PROVIDE AND INSTALL NEW FLOW METER. INSTALL PER MANUFACTURER'S INSTALLATION REQUIREMENTS FOR ACCESS AND UP/DOWNSTREAM STRAIGHT PIPE LENGTHS.
10. PROVIDE AND INSTALL MODULAR CONDENSING BOILER. REFER TO DETAILS ON DRAWING SHEET M401 FOR MORE INFORMATION. INSTALL PER MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR CLEARANCE, PIPING, AND VENTING.
11. REFER TO SYSTEM FILL STATION DETAIL ON DRAWING SHEET M403 FOR MORE INFORMATION.
12. SIDE TAP MAIN FOR BRANCH PIPING TO EXPANSION TANK.
13. PROVIDE AND INSTALL BYPASS FILTER FEEDER, FURNISHED BY CHEMICAL TREATMENT PROVIDER. REFER TO WATER TREATMENT SPECIFICATIONS AND CHEMICAL SHOT FEEDER DETAIL ON DRAWING SHEET M402 FOR MORE INFORMATION.
14. ROUTE BOILER FLUE CONDENSATE DRAIN TO NEW FLOOR MOUNTED CONDENSATE NEUTRALIZATION TANK CT-1. MODIFY CT-1 INLET AND OUTLET CONNECTIONS AS REQUIRED FOR TRAP DEPTH AND CONDENSATE PIPE FALL. DISCHARGE DIRECTLY INTO NEAREST FLOOR DRAIN. BOILER CONDENSATE PIPE SHALL BE SCHEDULE 80 CPVC. CUT FLOOR SINK GRATE TO RECEIVE CONDENSATE.
15. ROUTE COMBUSTION AIR INTAKES AND FLUES UP TO ROOF. VERIFY VENTING REQUIREMENTS WITH BOILER MANUFACTURER AND VENTING MANUFACTURER. FLUES SHALL BE POLYPROPYLENE. COMBUSTION AIR INTAKE SHALL BE PVC PIPE OR GALVANIZED SHEET METAL.
16. REFRIGERANT MONITORING PANEL. FURNISHED AND INSTALLED BY TCC. REFER TO REFRIGERANT CONTROL DIAGRAM ON DRAWING SHEET M401 FOR MORE INFORMATION.
17. REFRIGERANT MONITOR A/V ALARM WITH ENGRAVED PLASTIC LABEL INSTALLED IN BOILER ROOM AND AT EACH ENTRANCE TO THE BOILER ROOM. FURNISHED AND INSTALLED BY TCC. REFER TO REFRIGERANT CONTROL DIAGRAM ON DRAWING SHEET M401 FOR MORE INFORMATION.
18. CARBON MONOXIDE SENSOR BY TCC.

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ENLARGED MECHANICAL PLANS

M-301

PRIMARY JOB # 23530

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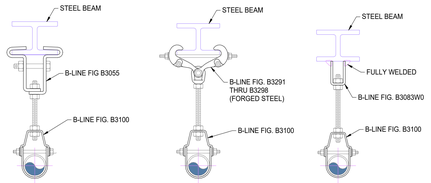
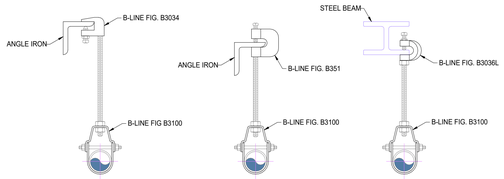


HANGER ASSEMBLY DETAIL

SCALE: NTS



HANGER ASSEMBLY DETAIL

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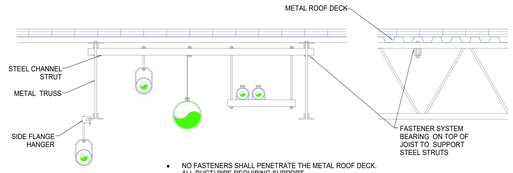
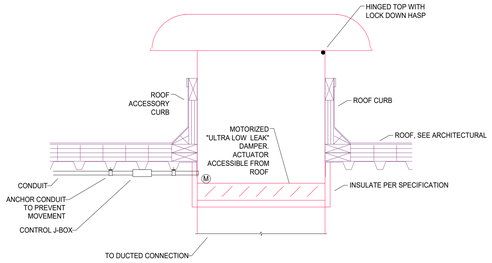


- NO FASTENERS SHALL PENETRATE THE METAL ROOF DECK. ALL DUCT/ PIPE REQUIRING SUPPORT
- BETWEEN STRUCTURAL FRAMING MEMBERS SHALL BE SUPPORTED FROM STEEL CHANNEL SYSTEMS
- INSTALLED BY THIS CONTRACTOR
- COORDINATE TO MAXIMIZE PLENUM SPACE WITH OTHER TRADES

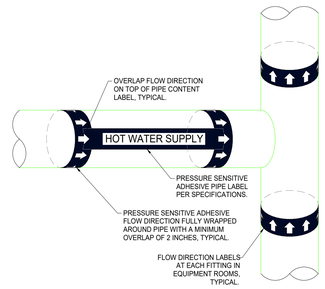
TYPICAL INTERMEDIATE DUCT/ PIPE HANGER SUPPORT FRAMING DETAIL

NOT TO SCALE



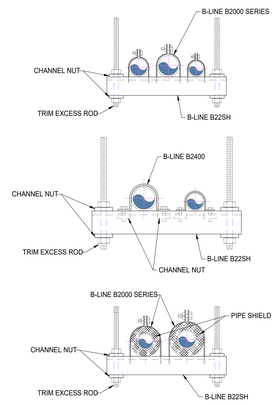
DUCTED ROOF CAP DETAIL

SCALE: NTS



PIPE LABEL DETAIL

SCALE: NTS



HANGER ASSEMBLY DETAIL

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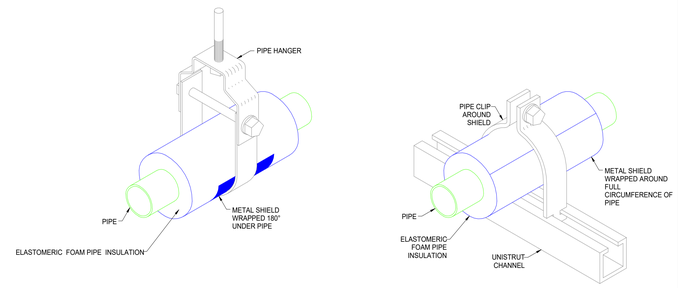
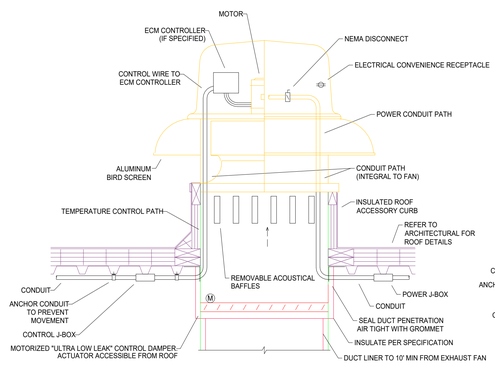


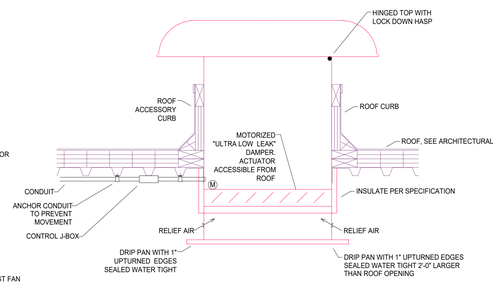
TYPICAL PIPE SUPPORT DETAIL FOR INSULATED PIPE

NOT TO SCALE



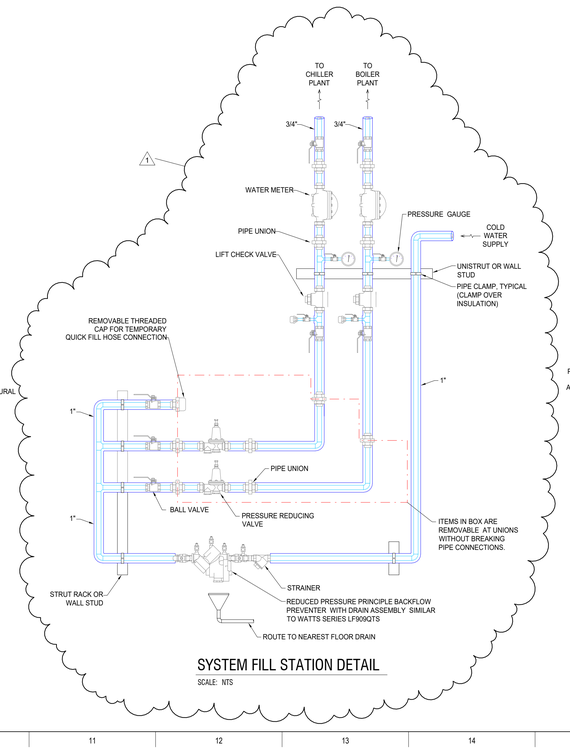
ROOF MOUNTED EXHAUST FAN DETAIL

NOT TO SCALE



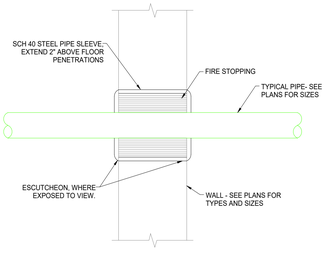
RELIEF ROOF CAP DETAIL

SCALE: NTS



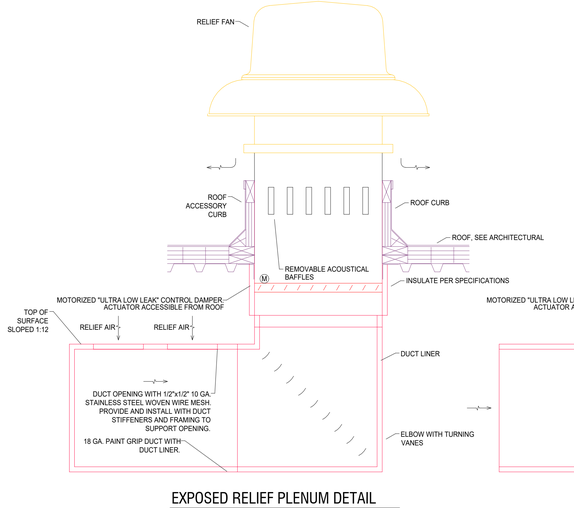
SYSTEM FILL STATION DETAIL

SCALE: NTS



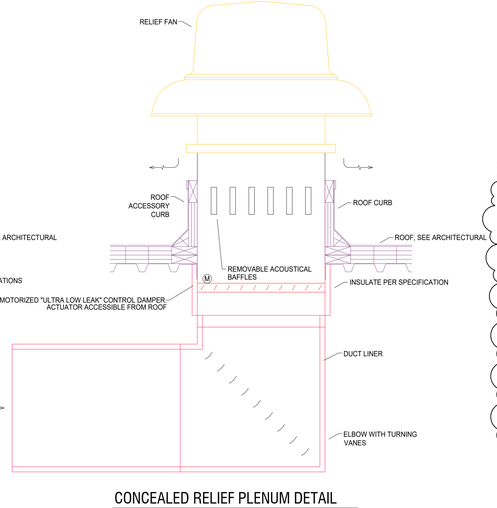
TYPICAL PIPING FIRE WALL AND FLOOR PENETRATION DETAIL

SCALE: NTS



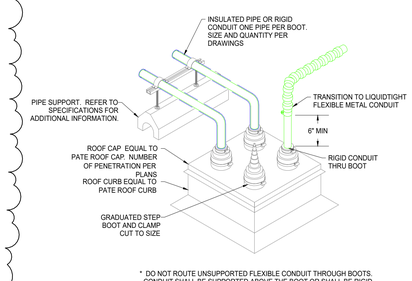
EXPOSED RELIEF PLENUM DETAIL

NOT TO SCALE



CONCEALED RELIEF PLENUM DETAIL

NOT TO SCALE



* DO NOT ROUTE UNSUPPORTED FLEXIBLE CONDUIT THROUGH BOOTS. CONDUIT SHALL BE SUPPORTED ABOVE THE BOOT OR SHALL BE RIGID GALVANIZED CONDUIT TO 6" ABOVE BOOT.

ROOF PENETRATION DETAIL

SCALE: NTS

IF THE WHEEL PRINTED BELOW IS NOT SHOWN IN COLOR, THIS SET OF PRINTS IS NOT REPRESENTING ALL LINE TYPES CORRECTLY. CONTACT PRIMARY ENGINEERING FOR DIRECTIONS ON HOW TO OBTAIN A FULL COLOR SET OF PRINTS

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SEAL

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REVISIONS

NO.	DESCRIPTION	DATE
1	ADDENDUM #2	07/15/24

PROJECT NO. 2301106
ISSUE DATE 06-21-2024
SUBMITTAL ISSUE FOR BIDS, PERMITS, AND CONSTRUCTION

MECHANICAL DETAILS

M-403

PRIMARY JOB # 23530

EXHAUST FAN SCHEDULE

TAG	AREA SERVED	MFR.	MODEL	CFM	TSP (IN W.C.)	MOTOR (HP)	MOTOR (BHP)	MOTOR (W)	RPM	DRIVE TYPE	IN/OUT/RAD DBA	SONES	ELEC (V/PH)	CONTROL	REMARKS
EF-1	UNIT A	GREENHECK	SQ-160-VG	2450	1.00	1.0	0.73	-	1265	DIRECT	66 / - / 59	-	115/1	TCC	1, 4, 5, 7, 8
EF-2	UNIT B	GREENHECK	SQ-130-VG	1450	1.00	3/4	0.46	-	1580	DIRECT	69 / - / 59	-	115/1	TCC	1, 4, 5, 7, 8
EF-3	UNIT B	GREENHECK	SQ-130-VG	1600	1.00	3/4	0.52	-	1645	DIRECT	65 / - / 60	-	115/1	TCC	1, 4, 5, 7, 8
EF-4	REFRIGERANT	GREENHECK	CUE-180-B	3000	1.00	1.0	0.88	-	1140	DIRECT	-	14.7	208/3	TCC	2, 3, 4, 6
EF-5	WAREWASH	GREENHECK	CUE-120-VG	1000	1.00	1/2	0.26	-	1440	DIRECT	-	12.8	115/1	EC	2, 3, 4, 5, 6, 10, 14
EF-6	KILN ROOM	GREENHECK	CUE-120-VG	1000	1.00	1/2	0.26	-	1440	DIRECT	-	12.8	115/1	TCC	2, 3, 4, 5, 6, 10
EF-7	KILN	SKUTT	ENVIROVENT 2	140	-	-	-	-	-	DIRECT	-	-	115/1	EC	-
EF-8	CLINIC	GREENHECK	SP-B200	200	0.50	-	-	172	980	DIRECT	-	6	115/1	EC	1, 7, 8, 10
EF-9	ART ROOM	GREENHECK	SP-A710	400	0.50	-	-	285	1080	DIRECT	-	5.5	115/1	EC	1, 7, 8, 10
EF-10	DRYER BOOSTER	FANTECH	DEDPV-75	75	1.10	-	-	70	2850	DIRECT	-	-	115/1	EC	11
RF-1	AHU-3 RELIEF	GREENHECK	G-180-VG	3000	0.50	1.0	0.52	-	935	DIRECT	-	11.1	115/1	TCC	2, 3, 4, 5, 6
RF-2	AHU-3 RELIEF	GREENHECK	G-180-VG	3000	0.50	1.0	0.52	-	935	DIRECT	-	11.1	115/1	TCC	2, 3, 4, 5, 6
RF-3	AHU-3 RELIEF	GREENHECK	G-180-VG	3000	0.50	1.0	0.52	-	935	DIRECT	-	11.1	115/1	TCC	2, 3, 4, 5, 6
RF-4	AHU-2 RELIEF	GREENHECK	G-180-VG	3000	0.50	1.0	0.52	-	935	DIRECT	-	11.1	115/1	TCC	2, 3, 4, 5, 6
RF-5	AHU-2 RELIEF	GREENHECK	G-180-VG	3000	0.50	1.0	0.52	-	935	DIRECT	-	11.1	115/1	TCC	2, 3, 4, 5, 6
RF-6	AHU-2 RELIEF	GREENHECK	G-180-VG	3000	0.50	1.0	0.52	-	935	DIRECT	-	11.1	115/1	TCC	2, 3, 4, 5, 6
RF-7	AHU-1 RELIEF	GREENHECK	G-120-VG	1500	0.50	1/2	0.29	-	1470	DIRECT	-	12.9	115/1	TCC	2, 3, 4, 5, 6
RF-8	AHU-1 RELIEF	GREENHECK	G-120-VG	1500	0.50	1/2	0.29	-	1470	DIRECT	-	12.9	115/1	TCC	2, 3, 4, 5, 6
TF-1	IDF 035	GREENHECK	SQ-100-VG	1000	0.50	1/4	0.16	-	1525	DIRECT	58 / - / 54	-	115/1	TCC	1, 5, 7, 8
TF-2	ELECTRICAL 030	GREENHECK	SQ-100-VG	1000	0.50	1/4	0.16	-	1525	DIRECT	58 / - / 54	-	115/1	TCC	1, 5, 7, 8
TF-3	IT/ELEC 103	GREENHECK	SQ-100-VG	1000	0.50	1/4	0.16	-	1525	DIRECT	58 / - / 54	-	115/1	TCC	1, 5, 7, 8
DF-1	A-10-SP-STD-120-X	AIRIUS	A-10-SP-STD	-	-	-	-	16	860		-	1	115/1	EC	12, 13
DF-2	A-10-SP-STD-120-X	AIRIUS	A-10-SP-STD	-	-	-	-	16	860		-	1	115/1	EC	12, 13
DF-3	A-10-SP-STD-120-X	AIRIUS	A-10-SP-STD	-	-	-	-	16	860		-	1	115/1	EC	12, 13
DF-4	A-10-SP-STD-120-X	AIRIUS	A-10-SP-STD	-	-	-	-	16	860		-	1	115/1	EC	12, 13
DF-5	A-10-SP-STD-120-X	AIRIUS	A-10-SP-STD	-	-	-	-	16	860		-	1	115/1	EC	12, 13

REMARKS:
1. PROVIDE AND INSTALL WITH FACTORY WIRED NEMA-1 ELECTRICAL DISCONNECT SWITCH.
2. PROVIDE AND INSTALL WITH FACTORY WIRED NEMA-3R ELECTRICAL DISCONNECT SWITCH.
3. PROVIDE AND INSTALL WITH 24" TALL INSULATED METAL ROOF CURB WITH HINGED BASE KIT AND RESTRAINING CABLES.
4. CONTROL DAMPER SHALL BE ACCESSIBLE FROM ROOF. DAMPER AND ACTUATOR FURNISHED BY TCC.
5. PROVIDE AND INSTALL WITH ELECTRONICALLY COMMUTATED MOTOR WITH SPEED ADJUSTMENT DIAL ON MOTOR AND WIRING PIGTAIL FOR SPEED CONTROL BY TCC.
6. PROVIDE AND INSTALL WITH ALUMINUM BIRDSCREEN.
7. PROVIDE AND INSTALL WITH NEOPRENE VIBRATION ISOLATION HANGERS.
8. PROVIDE AND INSTALL WITH GRAVITY BACKDRAFT DAMPER ON FAN OUTLET.
9. PROVIDE AND INSTALL WITH HI-PRO POLYESTER COATING.
10. PROVIDE AND INSTALL WITH PILOTED WALL SWITCH.
11. PROVIDE AND INSTALL WITH SECONDARY LINT TRAP.
12. COLOR SELECTION BY ARCHITECT.
13. PROVIDE AND INSTALL WITH 6' POWER CORD, SAFETY CABLE, AND PSC MOTOR.
14. PROVIDE AND INSTALL WITH 120V DAMPER ACTUATOR.

NOTES:
TCC = TEMPERATURE CONTROL CONTRACTOR.
EC = ELECTRICAL CONTRACTOR.

EXPANSION TANK SCHEDULE

TAG	MFR.	MODEL	SERVICE	APPROX SYS VOL (GAL)	PRE-CHARGE (PSIG)	CALC. ACCEPT FACTOR	TANK VOL. (GAL)	ACCEPT. VOL (GAL)	DIA. (IN)	HEIGHT (IN)	CONN. SIZE (IN)	TANK FULL WT (LBS)	REMARKS
ET-1	BELL & GOSSETT	B-1000	HOT WATER	3000	15	0.514	264	163	36	73	1 1/2	2869	1, 2, 3
ET-2	BELL & GOSSETT	B-400	CHILLED WATER	3000	15	0.514	106	66	24	65	1	1184	1, 2, 3
ET-3	BELL & GOSSETT	B-400	DOAS	300	15	0.514	106	66	24	65	1	1184	1, 2, 3

REMARKS:
1. PROVIDE AND INSTALL WITH LINE SIZE T&P RELIEF VALVE ON INLET.
2. ALL TANKS SHALL BE ASME STAMPED.
3. CONTRACTOR SHALL VERIFY SYSTEM STATIC WATER PRESSURE PRIOR TO INSTALLING TANK AND ADJUST PRE-CHARGE AS REQUIRED.

WATER FLOW/ENERGY METER SCHEDULE

TAG	MFR.	FLOW METER	SENSOR TYPE	DISPLAY	SYSTEM SERVED	FLUID	PIPE SIZE (IN)	DESIGN NOMINAL FLOW...	MIN / MAX FLOW (GPM)	REQ PIPE DIA UP /DOWN STREAM	ACCURACY (% OF FLOW RATE)	ELEC (V/PH)	REMARKS
FM-1	ONICON	F-3500	ELECTROMAG / INSERTION	SYSTEM 10	HOT WATER	WATER	6	380	15 / 1800	30D / 5D	1.0 %	24 VDC	1, 2, 3, 4, 5
FM-2	ONICON	F-3500	ELECTROMAG / INSERTION	SYSTEM 10	CHILLED...	WATER	6	360	15 / 1800	30D / 5D	1.0 %	24 VDC	1, 2, 3, 4, 5

REMARKS:
1. PROVIDE WITH DISPLAY UNIT.
2. CONTRACTOR SHALL VERIFY REQUIRED UPSTREAM AND DOWNSTREAM MINIMUM STRAIGHT PIPE REQUIREMENTS DURING INSTALL.
3. PROVIDE FACTORY AUTHORIZED TECHNICIAN TO CALIBRATE AND CONFIGURE METER FOR SPECIFIC PIPE/FLUID PARAMETERS.
4. PROVIDE WITH HOT TAP ADAPTER.
5. TCC SHALL PROVIDE POWER TRANSFORMER DEDICATED TO POWER FLOWMETER.

MINI-SPLIT HVAC INDOOR UNITS

TAG	MFR.	MODEL	TYPE	COOLING CAP (MBH) AT 95 DEG F	HEATING CAP (MBH) AT 17 DEG F	CFM	REFRIG.	CONTROL TYPE	ELEC (V/PH)	MCA (A)	REMARKS
HVAC-1	MITSUBISHI	PKA-A18HA7	WALL	18.0	13.9	425	R410A	WIRED WALL	208/1	1.0	1, 2, 3, 4, 5

REMARKS:
1. E.C. SHALL PROVIDE AND INSTALL DISCONNECT SWITCH. COORDINATE LOCATION PRIOR TO ROUGH-IN.
2. PROVIDE WITH REMOTE WALL MOUNTED THERMOSTAT AND PACKAGED CONTROLS.
3. PROVIDE WITH GOBI INTEGRAL CONDENSATE PUMP.
4. PROVIDE AND INSTALL WITH WHITE PVC "LINE HIDE" CONDUIT SYSTEM TO CONCEAL ALL PIPING/WIRING IN EXPOSED LOCATIONS.
5. REFRIGERANT LINE SETS AND CONDENSATE LINES SHALL BE INSULATED WITH 1/2" AEROCEL EPDM OR ARMAFLEX UT SOLAR EPDM TO INCLUDE CONDENSATE TUBING.

MINI-SPLIT OUTDOOR UNIT SCHEDULE

TAG	MFR.	MODEL	EQUIP. SERVED	COOLING CAP (MBH) AT 95 DEG F	HEATING CAP (MBH) AT 17 DEG F	MAX REF LINE LENGTH (FT)	COOLING SEER	HEATING COP	REFRIG	ELEC (V/PH)	MCA	MOP	REMARKS
ACCU-1	MITSUBISHI	PUZ-A18NKA7	HVAC-1	18.0	13.9	165	18.5	2.5	R410A	208/1	11	28	1, 2, 3, 4, 5

REMARKS:
1. MC SHALL PROVIDE AND INSTALL INTERLOCK WIRING AND CONTROLS AS REQUIRED FOR A COMPLETE INSTALLATION.
2. PROVIDE AND INSTALL WITH BACNET INTERFACE.
3. PROVIDE AND INSTALL WITH LOW AMBIENT COOLING KIT.
4. PROVIDE AND INSTALL WITH LOUVERED HAIL GUARD.
5. PROVIDE AND INSTALL ON 24" TALL MOUNTING STAND.

NEEDLEPOINT BIPOLAR IONIZER SCHEDULE

TAG	MFR.	MODEL	SERVICE	COIL AIRFLOW (CFM)	COIL DIM WxL (IN)	ION OUTPUT (ions/cc/sec/inch)	OUTPUT VOLTAGE	ELEC	MAX. CIR. AMPS	MAX FUSE	REMARKS
NPI-1	GLOBAL PLASMA SOLUTIONS	GPS-IMOD	AHU-1	4,000	56x36	140 M	5 kV RMS	24 V	0.5	-	1, 2, 3, 4
NPI-2	GLOBAL PLASMA SOLUTIONS	GPS-IMOD	AHU-2	10,000	82x52	140 M	5 kV RMS	24 V	0.5	-	1, 2, 3, 4
NPI-3	GLOBAL PLASMA SOLUTIONS	GPS-IMOD	AHU-3	10,000	96x66	140 M	5 kV RMS	24 V	0.5	-	1, 2, 3, 4

REMA...
1. SYSTEM SHALL COMPLY WITH UL2998, UL 867, AND IAQP STANDARDS WITH INDEPENDENT TEST DATA.
2. PROVIDE AND INSTALL WITH PACKAGED CONTROLS.
3. PROVIDE AND INSTALL MODULAR BARS AND ALL ASSOCIATED CABLING REQUIRED TO SERVE THE COIL SIZE LISTED. INCLUDE ALL REQUIRED MOUNTING HARDWARED. MOUNT ALL DEVICES INSIDE UNIT. DOWNSTREAM OF FILTER.
4. TCC SHALL INSTALL NPI AND PROVIDE LOW-VOLTAGE POWER.

BOILER SCHEDULE

TAG	MFR.	MODEL	HEATING INPUT (MBH)	HEATING OUTPUT (MBH)	THERMAL EFF (%)	FUEL	BURNER TURNDOWN	RELIEF PRESS (PSI)	FLUE MATERIAL	FUEL PRESS. (IN W.C.)	GAS CONN (IN)	WATER CONN (IN)	FLUE OUTLET (IN)	DESIGN FLOW (GPM)	MIN FLOW (GPM)	WATER PD (FT)	TEMP RISE (DEG F)	ELEC (V/PH)	MCA	REMARKS
B-1	CLEAVER BROOKS	CFC-E-2000	2000	1910	95.5%	NAT. GAS	5:1	50	POLYPRO	14	1-1/2	4	8	120	50	-	20	120/1	-	1, 2, 3, 4, 5, 6
B-2	CLEAVER BROOKS	CFC-E-2000	2000	1910	95.5%	NAT. GAS	5:1	50	POLYPRO	14	1-1/2	4	8	120	50	-	20	120/1	-	1, 2, 3, 4, 5, 6

REMARKS:
1. PROVIDE AND INSTALL WITH LOW WATER CUT-OFF AND ASME SAFETY RELIEF VALVE.
2. PROVIDE AND INSTALL WITH CONDENSATE NEUTRALIZATION TANK CT-1 WITH LIMESTONE. REFER TO GENERAL MECHANICAL EQUIPMENT SCHEDULE.
3. BOILERS SHALL BE PROVIDED WITH INTEGRAL SEQUENCER TO CONNECT ALL BOILERS INTO A COMMON TEAM. PROVIDE ALL ASSOCIATED CONTROLLERS, WIRING, PROGRAMMING, SETUP, ETC. FOR A FULLY FUNCITONAL SYSTEM.
4. BOILER MANUFACTURER SHALL VERIFY ALL FLUE/INTAKE SIZING AND ROUTING.
5. PROVIDE AND INSTALL WITH BACNET MSTP INTERFACE.
6. PROVIDE AND INSTALL WITH FACTORY TWO-POSITION AUTOMATIC CONTROL VALVE.

HOT WATER CABINET HEATER SCHEDULE

TAG	MFR.	MODEL	FAN SPEED (H/L)	CAPACITY (MBH)	AIRFLOW (CFM)	MOTOR (HP)	AMPS	RPM	EWT/LWT (DEG F)	FLOW (GPM)	ROWS	FINS/FT	CONTROL VALVE	ELEC (V/PH)	REMARKS
CUH-1	VULCAN	WI 04	L	20.4	335	(2) 1/10	1.4	875	130 / 110	2.0	2	144	3-WAY	115/1	1, 2, 3
CUH-2	VULCAN	WI 04	L	20.4	335	(2) 1/10	1.4	875	130 / 110	2.0	2	144	2-WAY	115/1	1, 2, 3
CUH-3	VULCAN	WI 04	L	20.4	335	(2) 1/10	1.4	875	130 / 110	2.0	2	144	3-WAY	115/1	1, 2, 3
CUH-4	VULCAN	WI 04	L	20.4	335	(2) 1/10	1.4	875	130 / 110	2.0	2	144	2-WAY	115/1	1, 2, 3
CUH-5	VULCAN	WI 06	L	32.5	495	(2) 1/10	1.4	875	130 / 110	3.0	2	144	3-WAY	115/1	1, 2, 3
CUH-6	VULCAN	WI 06	L	32.5	495	(2) 1/10	1.4	875	130 / 110	3.0	2	144	2-WAY	115/1	1, 2, 3
CUH-7	VULCAN	RWI 08	L	40.9	675	1/10, 1/15	2.2	875	130 / 110	4.0	2	144	3-WAY	115/1	1, 2, 3, 4
CUH-8	VULCAN	RWI 08	L	40.9	675	1/10, 1/15	2.2	875	130 / 110	4.0	2	144	2-WAY	115/1	1, 2, 3, 4
CUH-9	VULCAN	RC 06	L	32.5	495	(2) 1/10	1.4	875	130 / 110	3.0	2	144	2-WAY	115/1	1, 2, 3
CUH-10	VULCAN	WI 04	L	20.4	335	(2) 1/10	1.4	875	130 / 110	2.0	2	144	3-WAY	115/1	1, 2, 3
CUH-11	VULCAN	WI 04	L	20.4	335	(2) 1/10	1.4	875	130 / 110	2.0	2	144	2-WAY	115/1	1, 2, 3

REMARKS:
1. PROVIDE AND INSTALL WITH FACTORY WIRED ELECTRICAL DISCONNECT.
2. PROVIDE WITH 2 ROW COIL AND 1" MERV 11 PLEATED FILTER.
3. PROVIDE WITH TAMPER RESISTANT FASTENERS, AND 16 GA CONTSTRUCTION. PROVIDE 1 KEY FOR EACH UNIT.
4. PROVIDE WITH WALL TRIM KIT FOR SEMI RECESSED INSTALLATION.

AIR COOLED CHILLER SCHEDULE

TAG	MFR.	MODEL	EVAP LOCATION	REFRIG	REFRIG CHARGE (LBS)	TOTAL CAP (TONS)	DESIGN FLOW (GPM)	MIN FLOW (GPM)	FLUID P.D. (FT)	FLUID TYPE	EWT (DEG F)	LWT (DEG F)	AMBIENT (DEG F)	IPLV	EER	ELEC (V/PH)	MCA	MOP	OP. WEIGHT	REMARKS
CHLR-1	CARRIER	30RC-202	REMOTE	R-32	335	197.4	320	172	5.2	WATER	58	43	95	17.68	10.12	460/3	424	450	10084	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12

REMARKS:
1. PROVIDE AND INSTALL WITH WIRING FOR A SINGLE POINT ELECTRICAL CONNECTION WITH TRANSFORMER FOR 120 V CONTROL VOLTAGE (IF NEEDED).
2. PROVIDE AND INSTALL WITH INTEGRAL LCD GRAPHICAL CONTROL INTERFACE AND BACNET/LON INTEGRATION TO BMS.
3. POWER FACTOR SHALL BE MAINTAINED AT 0.9 OR BETTER AT ALL TIMES. PROVIDE FACTORY WIRED CAPACITORS IF REQUIRED.
4. THE CHILLER MANUFACTURER SHALL BE RESPONSIBLE TO VERIFY ALL ELECTRICAL REQUIREMENTS WITH THE BASIS OF DESIGN AND IF ADDITIONAL CIRCUITS, LARGER BREAKERS/WIRES/CONDUITS, ETC. ARE REQUIRED, THESE COSTS SHALL BE BORNE BY THE CHILLER MANUFACTURER.
5. PROVIDE CHILLER WITH NEOPRENE VIBRATION MOUNTS.
6. PROVIDE WITH 5 YEAR WARRANTY ON ENTIRE UNIT INCLUDING LABOR, PARTS, AND LOSS OF REFRIGERANT FOR ANY CAUSE.
7. PROVIDE WITH FULLY LOUVERED SIDE PANELS/HAIL GUARDS ON ALL SIDES.
8. WIRING LUGS FOR POWER SHALL BE SIZED FOR FULL LOAD WIRE SIZE AND NOT REDUCED DUE TO DERATE. MFR TO PROVIDE LUGS AS REQUIRED FOR WIRE SIZE SHOWN ON PLANS.
9. UNIT SHALL BE SHIPPED WITH PROTECTION ON ALL EXTERIOR COIL SURFACES TO PREVENT DAMAGE FROM ROCKS, RIGGING, AND HANDLING DURING SHIPPING, HANDLING, AND INSTALLATION.
10. PROVIDE AND INSTALL WITH FACTORY WIRED ELECTRICAL DISCONNECT SWITCH.
11. PROVIDE AND INSTALL WITH COMPRESSOR SOUND BLANKET AND LOW SOUND FANS.
12. PROVIDE AND INSTALL WITH BACNET MSTP INTERFACE.

NOTES:
1. FOULING FACTOR SHALL BE 0.0001.
2. REFRIGERANT CHARGE DOES NOT INCLUDE PIPING TO REMOVE EVAPORATOR.

DIFFUSER AND GRILLE SCHEDULE

TAG	MFR.	MODEL	NECK SIZE (IN)	FACE SIZE (IN)	THROW PATTERN	MAX CFM	MAX APD (IN)	THROW (FT)	MAX NC	MATERIAL	REMARKS
D-1	TITUS	TMS	6	12x12	4-WAY	100	0.03	6	20	STEEL	1, 2
D-2	TITUS	TMS	8	24x24	4-WAY	245	0.05	9	15	STEEL	1, 3
D-3	TITUS	TMS	10	24x24	4-WAY	400	0.06	19	13	STEEL	1, 3
D-4	TITUS	TMS	12	24x24	4-WAY	785	0.11	11	31	STEEL	1, 3
D-5	TITUS	TMS	14	24x24	4-WAY	1070	0.11	14	33	STEEL	1, 3
D-6	TITUS	TBDI-80	8	48x10	(4) 1-1/2" SLOT LINEAR	380	0.11	23	31	STEEL	1, 4
D-7	TITUS	111RL	24x14	26x16	SINGLE DEFL.	1715	0.07	42	29	STEEL	2, 7
D-8	TITUS	301RS-HD	30x6	32x8	SINGLE DEFL.	770	0.09	36	27	STEEL	2, 7
D-9	TITUS	FL-10	36x1	-	(1) 1" SLOT LINEAR	165	0.14	15	26	STEEL	1, 2, 8
D-10	TITUS	FL-30	48x3	-	(1) 3" SLOT LINEAR	500	0.18	22	27	STEEL	1, 2, 8
D-11	TITUS	300RL	14x6	16x8	DBL. DEFL.	380	0.2	11	28	STEEL	1, 2
RG-1	TITUS	45F	-	12x12	45 DEG EGG	400	0.04	-	15	ALUMINUM	1, 2
RG-2	TITUS	45F	-	24x24	45 DEG EGG	1600	0.04	-	15	ALUMINUM	1, 3
RG-3	TITUS	33RS	48x24	50x26	38 DEG. DEFL.	3050	0.04	-	23	STEEL	2, 7
RG-4	TITUS	50FF	20x20	24x24	EGG/FILTER	800	0.2	-	30	ALUMINUM	1, 3, 6
RG-5	TITUS	33RL	42x36	44x38	38 DEG. DEFL.	5050	0.01	-	32	STEEL	2, 7
RG-6	TITUS	350RL	18x10	20x12	35 DEG. DEFL.	440	0.01	-	10	STEEL	1, 2
EG-1	TITUS	45F	-	12x12	45 DEG EGG	400	0.04	-	15	ALUMINUM	1, 2
EG-2	TITUS	45F	-	24x24	45 DEG EGG	1600	0.04	-	15	ALUMINUM	1, 3
EG-3	TITUS	350FL	12x8	14x10	35 DEG. DEFL.	230	0.01	-	10	ALUMINUM	1, 2
EG-4	TITUS	33RS	24x48	25x50	38 DEG. DEFL.	3055	0.01	-	23	STEEL	1, 2
EG-5	TITUS	350RL-SS	20x20	22x22	45 DEG. DEFL.	1030	0.01	-	10	STAINLESS STEEL	1, 2
EG-6	TITUS	350FL	10x10	12x12	35 DEG. DEFL.	240	0.03	-	10	ALUMINUM	1, 2
EG-7	TITUS	33RL	12x8	14x10	38 DEG. DEFL.	225	0.04	-	12	STEEL	1, 2
TG-1	TITUS	45F	-	12x12	45 DEG EGG	400	0.04	-	15	ALUMINUM	1, 2
TG-2	TITUS	45F	-	24x24	45 DEG EGG	1600	0.04	-	15	ALUMINUM	1, 3
TG-3	TITUS	33RL	30x12	32x14	38 DEG. DEFL.	1145	0.01	-	25	STEEL	1, 2

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REMARKS:
1. COLOR SHALL BE WHITE.
2. PROVIDE AND INSTALL WITH FRAME FOR SURFACE INSTALLATION.
3. PROVIDE AND INSTALL WITH FRAME FOR LAY-IN INSTALLATION.
4. PROVIDE AND INSTALL WITH INSULATED DISTRIBUTION PLENUM.
5. PROVIDE AND INSTALL WITH FACE OPERATED BUTTERFLY VOLUME DAMPER.
6. HINGED FILTER GRILLE, PROVIDE WITH 1" THICK MERV 11 FILTER AND 1ADDITIONAL SPARE.
7. STANDARD COLOR SELECTION BY ARCHITECT.
8. FRAME TYPE 5, BORDER TYPE 55.

AIR AND SEDIMENT SEPARATOR SCHEDULE

TAG	MFR.	MODEL	SERVICE	PIPE CONN. (IN)	MAX FLOW (GPM)	TANK DIA (IN)	TANK HEIGHT (IN)	WATER VOL (GAL)	REMARKS
ADS-1	BELL & GOSSETT	CRS-6F	HOT WATER	6	550	12.75	41	23	1, 2
ADS-2	BELL & GOSSETT	CRS-6F	CHILLED WATER	6	550	12.75	41	23	1, 2
ADS-3	BELL & GOSSETT	CRS-3F	DOAS-1	3	138	6.63	25.63	4	1, 2

REMARKS:
1. PROVIDE WITH REMOVABLE BOTTOM FLANGE, SKIMMER VALVE, DRAIN PORT, AND HIGH CAPACITY AUTOMATIC AIR VENT EQUAL TO B&G MODEL 107A.
2. PROVIDE WITH INTEGRAL NEODYMIUM MAGNETIC INSERT ROD WITH SLEEVE TO ALLOW REMOVAL OF IRON FLAKES USING BLOW DOWN PORT.

GLYCOL FILL STATION SCHEDULE

TAG	MFR.	MODEL	CAPACITY (GAL)	MAX. PRESSURE (PSI)	FLOW RATE (GPM)	MOTOR SIZE (HP)	ELEC (V/PH)	REMARKS
GFS-1	BELL & GOSSETT	GMU60	55	60	5	3/4	120/1	1, 2

REMARKS:
1. PROVIDE AND INSTALL WITH FULLY PIPED PRESSURE SWITCH, PRESSURE GAUGE, AND LOW LEVEL ALARM SYSTEM.
2. PROVIDE WITH AUXILLARY ALARM CONTACT FOR LOW LEVEL FOR BMS INTEGRATION.

AIR HANDLER SCHEDULE

TAG	AHU-1	AHU-2	AHU-3	DOAS-1
MFR.	CARRIER	CARRIER	CARRIER	CARRIER
MODEL	39MN08W	39MN21W	39MW30W	39MN30W
SERVICE	OFFICE	CAFETERIA	GYMNASIUM	VENTILATION
LOCATION TYPE	INDOOR	INDOOR	OUTDOOR	INDOOR
UNIT DIM LxWxH (IN)	208x56x36	248x82x52	242x96x66	322x142x90
UNIT WIEGHT (LBS)	2242	4475	6199	12489
FILTER AREA (S.F.)	15.2	34.1	45.5	47.2
FILTER VELOCITY (FPM)	264	293	219	318
FILTER APD (IN W.C.)	0.15	0.17	0.1	0.13
DESIGN APD (IN W.C.)	0.5	0.58	0.55	0.56
FILTER TYPE	2" PLEATED	2" PLEATED	2" PLEATED	2" PLEATED
FILTER EFF.	MERV 13	MERV 13	MERV 13	MERV 13
SUPPLY FAN				
AIRFLOW (CFM)	4000	10000	10000	15000
OUTSIDE AIR (CFM)	400	3750	3750	15000
TSP (IN W.C.)	4.0	4.5	4.1	6.4
ESP (IN W.C.)	2.0	2.0	2.0	3.0
FAN RPM	2035	2150	2000	1845
MOTOR POLES	4	4	4	4
FAN TYPE	PL	PL	PL	PL
WHEEL DIAMETER (IN)	18.25	22.25	22.25	27
FAN QUANTITY	1	1	1	1
DRIVE TYPE	DIRECT	DIRECT	DIRECT	DIRECT
MOTOR (HP)	5.0	15.0	15.0	25.0
MOTOR (BHP)	3.6	10.9	10.1	19.05
ELECTRICAL (V / PH)	208/3	208/3	208/3	208/3
MODULATION	VSD	VSD	VSD	VSD
EXHAUST FAN				
AIRFLOW (CFM)	-	-	-	15000
TSP (IN W.C.)	-	-	-	4.0
ESP (IN W.C.)	-	-	-	2.0
FAN RPM	-	-	-	17.19
MOTOR POLES	-	-	-	4
FAN TYPE	-	-	-	PL
WHEEL DIAMETER (IN)	-	-	-	27
FAN QUANTITY	-	-	-	1
DRIVE TYPE	-	-	-	DIRECT
MOTOR (HP)	-	-	-	20.0
MOTOR (BHP)	-	-	-	14.8
ELECTRICAL (V / PH)	-	-	-	208/3
MODULATION	-	-	-	VSD
HOT WATER PRE HEAT COIL				
AIRFLOW (CFM)	4000	10000	10000	15000
FLUID	WATER	WATER	WATER	30% PG
TOTAL CAP (MBH)	67	599	599	855
EAT / LAT (DEG F)	60 / 75	40 / 95	40 / 95	-10 / 40
EWT / LWT (DEG F)	130 / 110	130 / 110	130 / 110	120 / 100
COIL FLOW (GPM)	7	60	60	87
FLUID VELOCITY (FPS)	1.4	3.1	3.1	3.5
WPD (FT)	1.0	4.4	4.4	8.2
APD (IN W.C.)	0.18	0.43	0.43	0.18
ROWS	1	3	3	2
FINS/FT	108	108	108	108
CONTROL VALVE	2-WAY	3-WAY	3-WAY	3-WAY
HOT WATER RE HEAT COIL				
AIRFLOW (CFM)	-	5000	5000	15000
FLUID	WATER	WATER	WATER	WATER
TOTAL CAP (MBH)	-	124	124	381
EAT / LAT (DEG F)	-	55 / 75	55 / 75	55 / 75
EWT / LWT (DEG F)	-	130 / 110	130 / 110	130 / 110
COIL FLOW (GPM)	-	12	12	38
FLUID VELOCITY (FPS)	-	3.7	3.7	1.5
WPD (FT)	-	8.5	8.5	1.6
APD (IN W.C.)	-	0.19	0.19	0.26
ROWS	-	1	1	2
FINS/FT	-	108	108	84
CONTROL VALVE	-	2-WAY	2-WAY	2-WAY
CHILLED WATER COIL				
AIRFLOW (CFM)	4000	10000	10000	15000
FLUID	WATER	WATER	WATER	WATER
TOTAL CAP (MBH)	147	494	494	731
SENS CAP (MBH)	105	337	337	473
EAT DB/WB (DEG F)	77 / 65	83 / 68	83 / 68	80 / 67
LAT DB/WB (DEG F)	53 / 53	52 / 52	52 / 52	52 / 52
EWT / LWT (DEG F)	43 / 58	43 / 58	43 / 58	43 / 58
COIL FLOW (GPM)	20	84	84	98
FLUID VELOCITY (FPS)	2.4	3.2	3.2	3
WPD (FT)	5.9	8.6	8.6	6
APD (IN W.C.)	0.87	0.92	0.92	1.07
ROWS	8	8	8	8
FINS/FT	108	108	108	144
CONTROL VALVE	3-WAY	3-WAY	2-WAY	3-WAY
REMARKS:	1, 2, 3, 4, 5, 6, 7, 8, 9, 12	1, 2, 3, 4, 5, 6, 7, 8, 9, 12	1, 2, 3, 4, 5, 6, 7, 8, 9, 12	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 13

REMARKS:
1. CASING SHALL BE 2" THICK DOUBLE WALL INSULATED R-13 MINIMUM.
1. +/- 8" W.C. STATIC PRESSURE CLASS, L/240 DEFLECTION, 1% LEAKAGE.
2. PROVIDE AND INSTALL ON 6" HIGH FULL LENGTH BASE RAIL.
3. MOTORS SHALL BE MULTI-TAP 460/240/208 BALDOR SUPER-E WITH INTEGRAL SHAFT GROUNDING RING AND COMPLY WITH NEMA MG1 FOR VARIABLE SPEED OPERATION.
4. MOTORS SHALL HAVE CLASS F INSULATION FOR USE WITH VARIABLE SPEED DRIVE.
5. REFER TO DRAWING DETAILS FOR MODULE CONFIGURATIONS.
6. CHILLED WATER COIL CASING SHALL BE STAINLESS STEEL.
7. ALL COIL HEADERS SHALL BE RED BRASS.
8. DRAIN PAN SHALL BE IAQ SLOPE DOUBLE WALL INSULATED STAINLESS STEEL.
9. FURNISH WITH NEEDLEPOINT BIPOLOAR IONIZER. REFER TO NEEDLEPOINT BIPLOAR IONIZER SCHEDULE.
10. PROVIDE AND INSTALL WITH 24" TALL INSULATED METAL ROOF CURB CONSTRUCTED TO SUPPORT AIR HANDLER AND PIPE CHASE.
11. PROVIDE AND INSTALL WITH INSULATED METAL PIPE CHASE, SAME CONSUTRCTION AS AIR HANDLING UNIT, WITH ACCESS DOOR.
12. PROVIDE AND INSTALL WITH IONIZER. REFER TO IONIZER SCHEDULE FOR MORE INFORMATION.
13. PROVIDE AND INSTALL WITH ENERGY RECOVERY WHEEL. REFER TO ENERGY RECOVERY WHEEL SCHEDULE FOR MORE...

PL=PLENUM, AF=AIRFOIL, FC=FORARD CURVE, BI=BACKWARD INCLINED
TPFT=TOP FRONT, TPBK=TOP BACK, FTTP=FRONT TOP, FTBT=FRONT BOTTOM
BTFT=BOTTOM FRONT, BTBK=BOTTOM BACK, SD=SIDE

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ANDREW STEPHEN LOUDERBACK REGISTERED PE11700017 STATE OF INDIANA PROFESSIONAL ENGINEER

CONSTRUCTION MANAGER
MKS MICHAEL KINDER & SONS PLAN | DESIGN | BUILD

Wawasee Community School Corp.
Milford Elementary School
611 W Emeline St, Milford, IN 46542

REVISIONS

NO.	DESCRIPTION	DATE
1	ADDENDUM #2	07/16/24

PROJECT NO. 2301106
ISSUE DATE 06-21-2024
SUBMITTAL: ISSUE FOR BIDS, PERMITS, AND CONSTRUCTION

MECHANICAL SCHEDULES

M-501

PRIMARY JOB # 23530

IF THE WHEEL PRINTED BELOW IS NOT SHOWN IN COLOR, THIS SET OF PRINTS IS NOT REPRESENTING ALL LINE TYPES CORRECTLY. CONTACT PRIMARY ENGINEERING FOR DIRECTIONS ON HOW TO OBTAIN A FULL COLOR SET OF PRINTS