ADDENDUM NUMBER ONE

To the Drawings and Project Manual

Dated: 26 March 2018
BSU Project No. 2017 – 095.01 WB

Entitled: WHITINGER BUSINESS BUILDING – INTERIOR REMODEL

Client Name: Ball State University

MUNCIE, INDIANA

Prepared By:

Jeremy J. Welu
Indiana Registration No. AR10600206

Addendum Dated: 26 March 2018

DELV Project Number: 2017-047
GENERAL ITEMS / CLARIFICATIONS

1. Pre-bid Attendance:
   a. See attached sign-in sheet.
   b. Pre-Bid Agenda
      (1) Ryan Koenker with Ball State University (BSU) talked through the agenda.
      (2) See attached for agenda.
   c. Important Dates
      (1) RFI questions and/or clarification requests about the bid documents can be submitted until the end-of-business (5:00 pm) on March 27th.
      (2) A final Addendum will be released no later than end-of-business on March 28th.
      (3) Bids are due on April 3rd. See attached agenda for information on time and location.

CHANGES TO THE PROJECT MANUAL

2. SECTION 00 01 10 – TABLE OF CONTENTS
   a. Add Section 01 31 00 – Project Management and Coordination to the Project Manual.
   b. Add Section 01 32 00 – Construction Progress Documentation to the Project Manual
   c. Update Section 01 77 00 to read “Execution.”
   d. Add Section 01 78 23 – Operation and Maintenance to the Project Manual

3. SECTION 00 22 13 – SUPPLEMENTARY INSTRUCTIONS TO BIDDERS – BSU A701 (BID-id)
   a. Replace with updated Section included in Addendum.
   b. Add sub-paragraph 2.1.6 (changes in bold)
4. SECTION 00 43 00 – BID FORM SUPPLEMENTS
   a. Replace with updated Section included in Addendum.
      (1) Appendix A – Receipt of Addenda/Project Completion
         (a) Add item 3. LIQUIDATED DAMAGES (changes in bold)

5. SECTION 00 54 00 – AGREEMENT FORM SUPPLEMENTS – BSU A101 (BID-id)
   a. Replace with updated Section included in Addendum.
   b. Add Article 3 “Date of Commencement and Substantial Completion.” (Changes in bold)

6. SECTION 00 73 13 – SUPPLEMENTARY CONDITIONS – BSU A201 (BID-id)
   a. Replace with updated Section included in Addendum.
   b. Add 9.11 Liquidated Damages to Paragraph 9.11. (Changes in Bold)

7. SECTION 01 31 00 – PROJECT MANAGEMENT AND COORDINATION
   a. Add Section included in Addendum.

8. SECTION 01 32 00 – CONSTRUCTION PROGRESS DOCUMENTATION
   a. Add Section included in Addendum

9. SECTION 01 78 23 – OPERATION AND MAINTENANCE
   a. Add Section included in Addendum

CHANGES TO THE DRAWINGS

ARCHITECTURAL
1. DRAWING A003
   a. Under Interior Wall Types Legend:
      (1) Wall Type L0 to be ½” Gyp Board in lieu of 5/8” Gyp Board.
ELECTRICAL

1. DRAWING E800
   
a. Add the following Design Basis Manufacturers to Sheet E800 Luminaire (Light Fixture) Schedule:

   (1) Fixture Type “D1”: 4. GOTHAM “EVO-35K-10-4AR-MD-LSS-MVOLT”.

   (2) Fixture Type “R1A”: 4. MARK ARCHITECTURAL LIGHTING “WHSPR-2X4-4800LM-35K-80CRI-MIN1”.

   (3) Fixture Type “R1B”: 4. MARK ARCHITECTURAL LIGHTING “WHSPR-2X4-6000LM-35K-80CRI-MIN1”.

   (4) Fixture Type “RLA-8”: 4. MARK ARCHITECTURAL LIGHTING “SL4L-LOP-8FT-FLP-XX-80CRI-35K-800LMF”.

   (5) Fixture Type “RLA-12”: 4. MARK ARCHITECTURAL LIGHTING “SL4L-LOP-12FT-FLP-XX-80CRI-35K-800LMF”.

   (6) Fixture Type “RLB-14”: 4. MARK ARCHITECTURAL LIGHTING “SL4L-LOP-14FT-FLP-XX-80CRI-35K-600LMF-WW”.

   (7) Fixture Type “XC”: 4. LITHONIA “EXG-LED-M6”.

END OF ADDENDUM NUMBER ONE

Revision Specifications:

Section 00 01 10 Table of Contents, 00 22 13 Supplementary Instructions to Bidders a701 (bid-ld), 00 43 00 Bid Form Supplements (bid-ld), 00 54 00 Agreement from Supplements (bid-ld), 00 73 13 Supplementary Conditions (bid-ld), Section 01 31 00 Project Management and Coordination, Section 01 32 00 Construction Progress Documentation, 01 77 00 Closeout Procedures, Section 01 78 23 Operation and Maintenance Data

Revision Drawings:

None at this time
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<tr>
<th>NAME</th>
<th>REPRESENTING</th>
<th>PHONE NUMBER</th>
<th>EMAIL ADDRESS</th>
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</thead>
<tbody>
<tr>
<td>Ryan Kamber</td>
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<td>Jon Wiley</td>
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<tr>
<td>Brad Carney</td>
<td>Monroe Construction</td>
<td>765-210-0088</td>
<td><a href="mailto:monocarneysc@gmail.com">monocarneysc@gmail.com</a></td>
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Ball State University
Facilities Planning & Management
Pre-Bid Conference

AGENDA

Whitinger Business Building Interior Remodel
Ball State University
BSU Project No. 2017-095.01 WB
March 22, 2018

I. Project Team
   A. Owner’s Representative(s):
      Kelly Knable, Facilities Planning & Mgmt, 765-285-0585, email: kknable@bsu.edu
      Ryan Koenker, Facilities Planning & Mgmt, 765-285-2821, email: rkoenker@bsu.edu
      David Post, Facilities Planning & Mgmt, 765-285-2820, email: dpost@bsu.edu
      Ethan Eichhorn, Facilities Planning & Mgmt, 765-285-2835, email: ereichhorn@bsu.edu
      June Sanders, Purchasing, 765-285-1548, email: jasanders3@bsu.edu
   
   B. Consultant’s Representative(s):
      Jeremy Welu, DELV Design, 317-509-3979, email: jeremy@delvdesign.com
      Joyce Jones Meyers, Loftus Engineering, 765-635-7855, email: jmyers@loftusengineering.com

Contract Documents:
   Project Manual and Drawings.
   C. Availability of Contract Documents.
   D. Interpretation of Contract Documents.
   E. Addenda.
   F. Substitutions.

II. Bidding Procedures.
   A. Bidding Date:
      April 3, 2018 @ 11:00 A.M. EDT
      Location: Purchasing Conference Room
               Service & Stores Building
               3401 N. Tillotson Avenue
               Muncie, Indiana 47305
   
   B. Bidding Form and Other Documents.
      1. Indiana Form 96 (Revised 2013).
         a. Fill out Part II, Section I. Experience Questionnaire
         b. Fill out Part II, Section II. Plan and Equipment Questionnaire
         c. Attach Part II, Section III. Contractor’s Financial Statement
         d. Fill out Part II, Section IV. Contractors Non – Collusion Affidavit
         e. Fill out Part II, Section V. Oath and Affirmation
      2. Bid Form Supplements, Document 00 43 00
         Appendix A.
            (1) Acknowledgment of Receipt of Addenda.
            (2) Project Completion
         Appendix B. Alternatives,
         Appendix C. Unit Prices, N/A
         Appendix D. Principal Subcontractors
         Appendix E. Supplementary General Construction Information
         Appendix F. Supplementary Mechanical Information
         Appendix G. Supplementary Electrical Information
         Appendix H. Supplementary Telecommunications Information
      3. Representations and Certifications, Document 00 45 00
         Appendix 1. Nondiscrimination Compliance Statement
         Appendix 2. Contractors Certification of Self Performance
         Appendix 3. Contractors Certification of Authorized Employment
         Appendix 4. Drug Testing Plan
         Appendix 5. Contractors Certification of Training Program Compliance
         Appendix 6. Contractors Certification of Pre-Qualification Compliance
         Appendix 7. Bidder’s Check List
      4. MBE/WBE/Veteran Participation Plan, Document 00 45 39
III. Scope of Project.
   A. Summary of Work.
   B. Project Schedule.
   C. Access to Project Area.
   D. Coordination with Other Projects.
   E. Coordination with Owner Occupancy.

IV. Questions.

V. Tour of Project Site.

End of Agenda
DIVISION 00 – PROCUREMENT AND CONTRACTING REQUIREMENTS

INTRODUCTORY INFORMATION

00 01 01 Project Title Page
00 01 10 Table of Contents
00 01 15 List of Drawing Sheets

PROCUREMENT REQUIREMENTS

00 21 13 Notice to Bid
00 21 14 Instructions to Bidders – AIA A701
00 22 13 Supplementary Instructions to Bidders – BSU A701 (BID-Id)
00 26 26.26 Lead Report – Whitinger Building
00 41 13 Bid Form – Indiana Form 96 – Revised
00 43 00 Bid Form Supplements (BID-Id)
00 43 13 Bid Security Form – AIA A310
00 45 00 Representations and Certifications (BID)
00 45 39 MBE/WBE/Veteran Participation Plan

CONTRACTING REQUIREMENTS

00 52 14 Agreement Form - AIA A101 Owner Contractor Agreement
00 54 00 Agreement Form Supplements – BSU A101 (BID-Id)
00 61 00 Bond Forms – AIA A312 Performance Bond and Payment Bond
00 72 14 General Conditions - AIA A201 General Conditions of the Contract for Construction
00 73 13 Supplementary Conditions – BSU A201 (BID-Id)
00 73 73 Escrow Agreement
00 90 00 Bidding, Contract and Administration Documents and Forms (BID)

DIVISION 01 – GENERAL REQUIREMENTS

01 10 00 Summary
01 23 00 Alternates
01 31 00 Project Management and Coordination
01 32 00 Construction Progress Documentation
01 33 00 Submittal Procedures
01 40 00 Quality Requirements
01 60 00 Product Requirements
01 73 00 Execution
01 77 00 Closeout Procedures
01 78 23 Operation and Maintenance
DIVISION 02 – EXISTING CONDITIONS
Not Applicable

DIVISION 03 – CONCRETE
Not Applicable

DIVISION 04 – MASONRY
Not Applicable

DIVISION 05 – METALS
05 50 00  Metal Fabrications

DIVISION 06 – WOOD, PLASTICS, AND COMPOSITES
06 10 00  Rough Carpentry
06 40 00  Architectural Woodwork

DIVISION 07 – THERMAL AND MOISTURE PROTECTION
07 21 00  Thermal Insulation
07 84 13  Penetration Firestopping
07 92 00  Joint Sealants

DIVISION 08 – OPENINGS
08 11 13  Hollow Metal Doors and Frames
08 14 16  Flush Wood Doors
08 41 26  All-Glass Entrances and Storefronts
08 71 00  Door Hardware
08 81 00  Glass Glazing
08 87 33  Decorative Window Films

DIVISION 09 – FINISHES
09 22 16  Non-Structural Metal Framing
09 29 00  Gypsum Board
09 51 23  Acoustical Tile Ceilings
09 65 13  Resilient Base and Accessories
09 65 19  Resilient Tile Flooring
09 68 13  Tile Carpeting
09 91 23  Interior Painting

DIVISION 10 – SPECIALTIES
Not Applicable
DIVISION 11 – EQUIPMENT
11 52 13  Projection Screens

DIVISION 12 – FURNISHINGS
12 61 00  Fixed Audience Seating

DIVISION 13 – SPECIAL CONSTRUCTION
Not Applicable

DIVISION 14 – CONVEYING EQUIPMENT
Not Applicable

END OF TABLE OF CONTENTS
INTRODUCTION

The following Supplementary Instructions to Bidders amend or supplement the Instructions to Bidders (AIA Document A701, 1997 Edition) and other provisions of the Bidding and Contract Documents as indicated below. All provisions, which are not so amended or supplemented, remain in full force and effect.

The terms used in these Supplementary Instructions which are defined in the Instructions to Bidders (AIA Document A701, 1997 Edition) have the meanings assigned to them in the Instructions to Bidders.

ARTICLE 1: DEFINITIONS

Modify Paragraph 1.1 as follows:

Add the words "Performance and Payment Bonds," after (General, Supplementary and other Conditions), in line four (4).

Add the following Paragraph 1.10 to Article 1:

1.10 The Owner is Ball State University Board of Trustees, Muncie, Indiana 47306.

Add the following Paragraph 1.11 to Article 1:

1.11 The Advertisement or Invitation to Bid shall be the Notice to Bidders.

ARTICLE 2: BIDDER’S REPRESENTATIONS

Add the following Subparagraph 2.1.5. to Paragraph 2.1:

2.1.5 No Bidder, after being awarded a Contract, shall be allowed additional compensation for reason of failure to fully understand and become familiar with the Bidding Documents, prior to bidding, or of all requirements in the Contract Documents and the conditions existing at the Project Site.

2.1.6 The Bidder has read and understands the Contract Documents requirements for Contract completion and provisions for liquidated damages as set forth in the Supplementary Conditions (Document 00 73 13).

ARTICLE 3: BIDDING DOCUMENTS

Delete Subparagraph 3.1.2.

Delete Subparagraph 3.4.4 in its entirety and substitute the following:

3.4.4 Each Bidder shall ascertain prior to submitting a Bid that the Bidder has received all Addenda
issued, and the Bidder shall list by number on the Bid Form all Addenda which have been received prior to submittal of their Bid. The Bid amount shall include all Work described by all Addenda.

ARTICLE 4: BIDDING PROCEDURES

Delete Subparagraph 4.1.1 in its entirety and substitute the following including Clauses 4.1.1.1 and 4.1.1.2:

4.1.1 Bids shall be properly executed, addressed to Ball State University Board of Trustees on Indiana State Board of Accounts Form 96 (current edition), Supplements to Bid Form (if included in Project Manual), and the Non-Collusion Affidavit, together with the other documents required in the Instructions to Bidders. Submit two (2) copies of all required bid documents.

.1 Bids submitted without Bidder's financial statement as required by statute shall be rendered invalid.

.2 Financial data shall be as recent as possible and in no event more than 90 days old, and shall include a balance sheet and income statement.

Delete Subparagraph 4.1.5 in its entirety and substitute the following:

4.1.5 All requested Alternates and Unit Prices shall be bid. Provide additive or deductive amounts in the appropriate space on the Supplements to Bid Form and indicate whether alternate is additive, deductive or "No Change". Failure to comply may be considered justification for rejection of the entire Bid. Voluntary alternates will not be considered.

Add the following Subparagraph 4.1.8 to Paragraph 4.1:

4.1.8 The Owner is not subject to Indiana Retail Sales Tax or to Federal Excise Tax for materials, products, and equipment incorporated into the completed construction, and therefore these taxes should not be included in the Contractor's Bid or costs.

Add the following Subparagraph 4.1.9 to Paragraph 4.1:

4.1.9 In accordance with Indiana Code 4-13-18 as amended, each Contractor that submits a bid for a public works project that is estimated to cost $150,000 or more is required to submit with the bid a written drug plan. Among other things, the law sets forth specific requirements that must be in the plan for a program to test the employees of the Contractor and Subcontractors for drugs. The successful Bidder must comply with all provisions of the statute or the contract is subject to cancellation.

Add the following Subparagraph 4.1.10 to Paragraph 4.1:

4.1.10 The Bidder is expected to submit with its Bid proposal a Minority, Women’s and Veteran Business Participation Plan, as described in Section 00 45 39. Participation may be as a subcontractor or lower tier participation with common suppliers (e.g., building materials, equipment). The Bidder must indicate the name of the MBE/WBE/Veteran with which it will work; the contact name and phone number of the MBE/WBE/Veteran; the service supplied by the MBE/WBE/Veteran; and the specific dollar amount from the project that will be directed toward each MBE/WBE/Veteran.

Failure to provide the completed Participation Plan at the time of Bid submission may result in the rejection of the Bid. The Owner, at its discretion, may waive in part or in whole the minority business
enterprise requirement if in the opinion of the Owner it would be impractical, or not in the best interest of the Owner.

Add the following Subparagraph 4.1.11 to Paragraph 4.1:

**4.1.11** In accordance with Indiana Code 5-16-13-10(c) and 4-13.6-4 or 8-23-10 as amended, each Contractor that submits a bid for a public works project that is estimated to cost $300,000 or more, and each subcontractor for work valued at $300,000 or more, shall be pre-qualified by the Indiana Department of Administration (IDOA) or the Indiana Department of Transportation (INDOT) according to the type and value of work to be performed. The Contractor is required to submit with the bid a confirmation that they and proposed principle subcontractors (Tier 2 and below) are pre-qualified. The Bidder shall attach a copy of their certification, including a listing of any limitations to their qualifications and the effective dates of the qualification. The Contractor and subcontractors shall maintain such qualification until the completion of the project. The successful Bidder must comply with all provisions of the statute or the contract is subject to cancellation.

Delete Subparagraph 4.2.2 in its entirety and substitute the following:

**4.2.2** Bids shall be accompanied by bid security in the form of a certified or cashier's check or a surety bond written on AIA Document A310, Bid Bond 2010 Edition, payable to Ball State University Board of Trustees in an amount not less than five percent (5%) of the Bid. Such security shall guarantee that the Bidder will not withdraw their Bid for a period of 60 days after the bid date; that if the Contractor's Bid is accepted, Bidder shall enter into a formal Contract with the Owner in accordance with the Form of Agreement written on AIA Document A101 Standard Form of Agreement Between Owner and Contractor, 2007 Edition, included by reference as part of the Contract Documents; and that the Bidder will provide a Performance and Payment Bonds as specified.

Delete Subparagraph 4.2.3 in its entirety and substitute the following:

**4.2.3** Bid security shall be returned to Bidders except the three (3) lowest Bidders within three (3) days after the Bid opening. The remaining Bid securities shall be promptly returned after the Owner and the accepted Bidder have executed the Agreement and Performance and Payment Bonds have been received. If no award has been made after the specified time has elapsed for Bid withdrawal, bid security will be returned upon demand of the Bidder at any time thereafter, so long as they have not been notified of the acceptance of their Bid. Bid security shall also be returned in the event that all Bids are rejected.

Delete Subparagraph 4.3.1 in its entirety and substitute the following:

**4.3.1** All copies of the Bid Forms, bid security, and any other documents required to be submitted with the Bid shall be enclosed in a sealed opaque envelope. The envelope shall be marked "Bid Document", and be identified with the Project name, the Bidder's name and address and be addressed to Ball State University Board of Trustees, Muncie, Indiana 47306 and delivered to location as stated in the Notice to Bidders. If the Bid is sent by mail, the sealed envelope shall be enclosed in a separate mailing envelope with the notation “SEALED BID ENCLOSED” on the face thereof.

Add the following Clause 4.3.2.1 and 4.3.2.2 to Subparagraph 4.3.2:

.1 Bids shall be delivered to the location stated in the Notice to Bidders; the Bidder shall be responsible for delivery to the specific location and office as listed.

.2 Owner will not be responsible for Bids accepted at another location or office than that listed in the Notice to Bidders. Receipt by employees of the Owner at their Central Mailing, Central Receiving
Artículo 5: Procedimientos de licitación

Delete Subparagraph 5.3.1 in its entirety and substitute the following:

5.3.1 It is the intent of the Owner to award a Contract to the lowest and best Bidder provided the Bid has been submitted in accordance with the requirements of the Bidding Documents and does not exceed the funds available. The Owner shall have the right to waive informalities and irregularities in a Bid received and to accept the Bid which, in the Owner’s judgment, is in the Owner’s own best interests.

Artículo 6: Información post-licitación

Delete Paragraph 6.1 in its entirety and substitute the following:

6.1 Bidders, including the Principal Subcontractors identified in The Supplements to Bid Form, to whom award of a Contract is under consideration shall submit to the Architect, upon request, a properly executed AIA Document A305, Contractor’s Qualification Statement.

Add the following subparagraph 6.1.1 to Paragraph 6.1:

6.1.1 Within 48 hours of bid, Bidders to whom award of a Contract with a value greater than $300,000 is under consideration shall submit to the Architect and Owner confirmation of pre-qualification from the Indiana Department of Administration (IDOA) or the Indiana Department of Transportation (INDOT), according to the type of Work to be performed, for all lower tier contractors with a proposed subcontract value greater than $300,000. Confirmation shall include any limitations on qualification and the effective dates of the pre-qualification.

Delete Paragraph 6.2.

Delete Subparagraph 6.3.1 in its entirety and substitute the following:

6.3.1 The Bidder shall, as stipulated in the Bidding Documents, furnish to the Owner through the Architect in writing:

Retain Clauses 6.3.1.1, 6.3.1.2 and 6.3.1.3 without modification.

Add the following clause 6.3.1.4 to Paragraph 6.3.1:

.4 completed MBE/WBE/Veteran Letter of Intent to Perform, included in Section 00 45 39.

Delete Subparagraph 6.3.3 in its entirety and substitute the following:

6.3.3 Prior to the execution of the Contract, the Architect will notify the Bidder in writing if either the Owner or Architect, after due investigation, has reasonable objection to a person or entity proposed by the Bidder. Such reasonable objection may be based upon a lack of similar successful project experience, qualifications, or having adequate resources to execute the Work, or for other conditions that may negatively affect the completion of the Contract. If the Owner or Architect has a reasonable objection to a
proposed person or entity, the Bidder may, at the Bidder's option, (1) withdraw the Bid, or (2) submit an acceptable substitute person or entity with no adjustment in the Base Bid or Alternate Bid(s) costs. The Owner reserves the right to accept the substitute person or entity or disqualify the Bidder. If the Bidder withdraws their Bid, that Contractor's bid security will be forfeited.

Modify Subparagraph 7.2.1 as follows:

Omit the words "evidence satisfactory", the word "that" and the words "will be furnished and delivered" in line three (3).

END OF SUPPLEMENTARY INSTRUCTIONS TO BIDDERS
DOCUMENT 00 43 00  
BID FORM SUPPLEMENTS (BID-LD)

This form must be submitted with the Bid along with additional copies as requested in the Project Manual.

To: Ball State University Board of Trustees  
Ball State University  
Muncie, IN 47306

Project: Whiting Business Building  
Interior Remodel

BSU Project No. 2017 – 095.01 WB

Date: April 03, 2018 @ 11:00 AM EDT

Submitted by:

(Bidder - please print the full name of your Proprietorship, Partnership, or Corporation)

(full address)

In accordance with Document 00 21 14 - Instructions to Bidders (AIA A701) and Document 00 22 13 - Supplementary Instructions to Bidders (BSU A701), we include the Bid Form Supplements Appendices listed below. The information provided shall be considered an integral part of the Bid Form.

These Appendices are as follows:

Appendix A  Receipt of Addenda/Project Completion: If applicable, acknowledge receipt of all Addenda and fill in or acknowledge Completion time/Project Schedule.

Appendix B  Alternatives: When used, include the Cost variation to the Bid Price applicable to the Work described in the Contract Documents.

Appendix C  Unit Prices: When used, include a listing of unit prices specifically requested by the Contract Documents.

Appendix D  Principal Subcontractors: When used, include the names of all Primary Subcontractors and the portions of the Work they will perform.

Appendix E  Supplementary General Construction Information: When used, list the requested Supplementary General Construction Information.

Appendix F  Supplementary Mechanical Information: When used, list the requested Supplementary Mechanical Information.

Appendix G  Supplementary Electrical Information: When used, list the requested Supplementary Electrical Information.

Appendix H  Supplementary Telecommunication Information: When used, list the requested Supplementary Telecommunication Information.
SUBMITTAL SCHEDULE OF APPENDICES

a. All bidders shall submit with their Bid the following Appendices:
   APPENDIX A – Receipt of Addenda/Project Completion
   APPENDIX B – Alternatives
   APPENDIX C – Unit Prices
   APPENDIX D – Principal Subcontractors

b. The Low bidder, and the second and third bidders if requested, shall execute and submit to the Owner the remaining SUBCONTRACTOR AND MATERIAL QUESTIONNAIRES.

Submit to the Owner: Finance Office, 2000 West University Avenue, Muncie, Indiana, 47306; the following appendices within forty-eight (48) hours after date and time for receiving bids:

APPENDIX E – Supplementary General Construction Information
APPENDIX F – Supplementary Mechanical Information
APPENDIX G – Supplementary Electrical Information
APPENDIX H – Supplementary Telecommunication Information

BID FORM SUPPLEMENTS SIGNATURE(S)

(Bidder - please print the full name of your Proprietorship, Partnership, or Corporation)

__________________________________________
(Authorized signing officer)

__________________________________________
(Title of Person Signing)

ACKNOWLEDGEMENT

STATE OF ____________________________ ss: (seal)
COUNTY OF ____________________________

__________________________________________ being duly sworn, deposes and says
that he/she is
__________________________________________ of the above ____________________________ and that the
(Title) ____________________________ (Name of Organization)

statements contained in the foregoing Bid Form Supplements are true and correct.

Subscribed and sworn to before me this __________ day of __________ , __________ .

__________________________________________
Notary Public
My Commission Expires: ____________________________
County of Residence: ____________________________
APPENDIX A - RECEIPT OF ADDENDA/PROJECT COMPLETION

1. ADDENDA

The Bidder acknowledges receipt of the following Addenda:

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<th>Dated</th>
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2. PROJECT COMPLETION

If this Bid is accepted, we will:

Commence on site work on the 7th of May 2018 and

Substantially Complete the Work by the 3rd of August 2018.

3. LIQUIDATED DAMAGES

The Bidder has read Paragraph 2, Appendix A, Bid Form Supplements, Document 00 43 00 and understands the Contract Documents requirements for project schedule and provisions for liquidated damages as set forth in the Supplementary Conditions (Document 00 73 13), Paragraph 9.11 of Article 9.

(Initialed by signing officer)
APPENDIX B - ALTERNATIVES

The following amounts shall be added to or deducted from the Base Bid Sum. Refer to Section 01 23 00 - Alternates: Schedule of Alternates.

Alternate No. 1

Manual projection screens in lieu of motorized

(Add) (Deduct) $ __________________
APPENDIX C - UNIT PRICES

Not applicable to this project.
### APPENDIX D - PRINCIPAL SUBCONTRACTORS

A. The following Work will be performed (or provided) by subcontractors and their performance of the Work will be coordinated by us:

B. The Bidder will make no changes to this list after submission, without a written request by the bidder and approval by the Owner.

C. Provide additional copies of this page as needed for a complete listing.

D. Indicate YES/NO if Subcontractor is required to be pre-qualified (contract value is greater than $300,000). If yes, indicate certification expiration date.

<table>
<thead>
<tr>
<th>WORK SUBJECT</th>
<th>SUBCONTRACTOR</th>
<th>Pre-Qualified</th>
<th>Pre-Qualification Certification Expiration Date</th>
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<tr>
<td>HVAC</td>
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<tr>
<td>ELECTRICAL</td>
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</table>
**APPENDIX E – SUPPLEMENTARY GENERAL CONSTRUCTION INFORMATION**

A. The following Work will be performed (or provided) by subcontractors and their performance of the Work will be coordinated by us:

B. We submit the following list of manufacturers (or fabricators) of materials, applications, and specialties. All such materials, appliances, and specialties to be of such characteristics, design and construction will meet the requirements of the Construction Documents. The Bidder will make no changes to this list after submission, without a written request by the bidder and approval by the Owner.

C. Provide additional copies of this page as needed for a complete listing.

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<th>ITEM</th>
<th>SUBCONTRACTOR</th>
<th>MANUFACTURER/SUPPLIER</th>
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<tr>
<td>Demolition</td>
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<td>Interior Partitions</td>
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<td>Doors and windows</td>
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<td>Door Hardware</td>
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<td>Painting</td>
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<td>Carpet and Flooring</td>
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<td>Lay-in Ceiling</td>
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<tr>
<td>Millwork</td>
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</tbody>
</table>
**APPENDIX F - SUPPLEMENTARY MECHANICAL INFORMATION**

A. The following Work will be performed (or provided) by subcontractors and their performance of the Work will be coordinated by us:

B. We submit the following list of manufactures (or fabricators) of materials, applications, and specialties. All such materials, appliances, and specialties to be of such characteristics, design and construction will meet the requirements of the Construction Documents. The Bidder will make no changes to this list after submission, without a written request by the bidder and approval by the Owner.

C. Provide additional copies of this page as needed for a complete listing.

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<th>ITEM</th>
<th>SUBCONTRACTOR</th>
<th>MANUFACTURER/SUPPLIER</th>
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<tbody>
<tr>
<td>Fire Suppression Systems</td>
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<tr>
<td>TAB – Testing, Adjusting &amp; Balancing</td>
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<td>HVAC Instrumentation &amp; Controls</td>
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<td>Hydronic Piping</td>
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<td>Insulation</td>
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<td>Metal Ducts</td>
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<td>Duct Accessories</td>
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<td>Diffusers, Registers &amp; Grilles</td>
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<tr>
<td>Ceiling Radiant Panels</td>
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</tbody>
</table>
APPENDIX G – SUPPLEMENTARY ELECTRICAL INFORMATION

A. The following Work will be performed (or provided) by subcontractors and their performance of the Work will be coordinated by us:
B. We submit the following list of manufactures (or fabricators) of materials, applications, and specialties. All such materials, appliances, and specialties to be of such characteristics, design and construction will meet the requirements of the Construction Documents. The Bidder will make no changes to this list after submission, without a written request by the bidder and approval by the Owner.
C. Provide additional copies of this page as needed for a complete listing.

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<th>ITEM</th>
<th>SUBCONTRACTOR</th>
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<tr>
<td>Firestopping</td>
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<td>Raceways &amp; Fittings</td>
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<td>Occupancy Sensor Lighting Controls</td>
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<td>Conductors &amp; Cables</td>
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<td>Low Voltage Transformers</td>
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<td>Enclosed Switches &amp; Circuit Breakers</td>
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<td>Panelboards</td>
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<td>Boxes &amp; Enclosures</td>
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<td>Wiring Devices</td>
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<td>Fuses</td>
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<td>Luminaire Type ‘RLA-12’</td>
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<td>Luminaire Type 'DL-1'</td>
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<tr>
<td>Luminaire Type 'XC'</td>
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<tr>
<td>Drivers</td>
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</table>
APPENDIX H – SUPPLEMENTARY TELECOMMUNICATION INFORMATION

A. The following Work will be performed (or provided) by subcontractors and their performance of the Work will be coordinated by us:

B. We submit the following list of manufactures (or fabricators) of materials, applications, and specialties. All such materials, appliances, and specialties to be of such characteristics, design and construction will meet the requirements of the Construction Documents. The Bidder will make no changes to this list after submission, without a written request by the bidder and approval by the Owner.

C. Provide additional copies of this page as needed for a complete listing.

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INTRODUCTION

This Supplementary Owner - Contractor Agreement amends or supplement the Standard Form of Agreement Between Owner and Contractor (AIA Document A101, 2007 Edition) and other provisions of the Contract Documents as indicated below. All provisions which are not so amended or supplemented remain in full force and effect.

ARTICLE 3 DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION

Add the following provision to Article 3, as Paragraph 3.4:

The Contractor and the Contractor’s surety shall be liable for and pay the Owner the sums hereinafter stipulated as liquidated damages for each calendar day of delay until the Work is substantially complete: Two Thousand Dollars ($2,000.00).

ARTICLE 4: CONTRACT SUM

Delete Paragraph 4.4 in its entirety and substitute the following:

4.4 Allowances included in the Contract Sum, if any, are listed in Division 01 – General Requirements of the project specifications.

ARTICLE 5: PAYMENTS

Delete Subparagraph 5.1.3 in its entirety and substitute the following:

5.1.3 Provided that an Application for Payment is received by the Architect not later than the seventh (7th) day of a month, the Owner shall make payment to the Contractor not later than the thirtieth (30th) day of the same month. If an Application for Payment is received by the Architect after the application date fixed above, payment shall be made by the Owner not later than thirty (30) days after the Architect receives the Application for Payment. The Owner reserves the right to modify the payment amount for errors and omissions contained in the Application for Payment.

Delete Clauses 5.1.6.1 and 5.1.6.2 in their entirety and substitute the following:

.1 Take that portion of the Contract Sum properly allocable to completed Work as determined by multiplying the percentage completion of each portion of the Work by the share of the total Contract Sum allocated to that portion of the Work in the schedule of values, less retainage of ten percent (10%). Fully executed Change Orders approved by the Owner and signed by the Architect and Contractor may be included in application for payments.

.2 Add that portion of the Contract Sum properly allocable to materials and equipment delivered and suitably stored at the site for subsequent incorporation in the completed construction (or, if approved in advance by the Owner, suitably stored off the site at a location agreed upon in writing), less retainage of ten percent (10%);
Add the following sentence to Subparagraph 5.1.7.1:

If any minor items remain uncompleted at Substantial Completion of the Work, the Owner may, per Indiana Code 5-16-5.5-6, withhold an amount equal to two hundred percent (200%) of the value of each item as determined by the Architect until said item or items are completed.

Add the following sentence to Subparagraph 5.1.8:

The Owner at any time after fifty percent (50%) of the Work has been completed, if the Owner finds that satisfactory progress is being made, may make any of the remaining partial payments in full.

Add the following Clause 5.1.10 to Paragraph 5.1:

5.1.10 Per Indiana Code 5-16-13-11-2, the Contractor shall not pay cash to any individual employed by the Contractor for work performed by the individual on the project.

Delete Subparagraph 5.2.2 in its entirety and substitute the following:

5.2.2 The final portion of the Contract Sum shall be paid within sixty-one (61) days after the date of Substantial Completion provided that all Work is fully completed and the Contract fully performed.

ARTICLE 6:  DISPUTE RESOLUTION

Delete Paragraph 6.2 in its entirety.

ARTICLE 8:  MISCELLANEOUS PROVISIONS

Add the following sentence to Paragraph 8.2:

No interest shall be paid.

Add the following Clauses 8.6.1, 8.6.2, and 8.6.3 to Paragraph 8.6:

8.6.1 Per Indiana Code 5-16-13-11 and 22-5-1.7 as amended, the Contractor and its subcontractors at all tiers shall not knowingly employ unauthorized aliens. The Contractor and its subcontractors at all tiers shall enroll in and verify the employment eligibility of all employees hired after June 30, 2015 using the U.S. Citizenship and Immigration Services (USCIS) E-Verify system. The Contractor shall obtain and retain the case verification number for each individual prior to their employment on the project. An individual whose E-Verify case result is “final nonconfirmation” shall not be employed on the project.

1 The Contractor is not required to verify the work eligibility status of employees through the E-Verify program if the E-Verify program no longer exists.

2 The Contractor shall provide an affidavit affirming that the Contractor does not knowingly employ unauthorized aliens.

3 The Contractor shall provide, upon the Owner’s request, documentation verifying the employment eligibility of employees in accordance with this section. Records shall be maintained a minimum of three (3) years after the completion of the project work.

8.6.2 Per Indiana Code 5-16-13-11, as amended, the Contractor and its subcontractors at all tiers shall comply with the following:

.2 Indiana Code 22-3-5-1 and 22-3-7-34 (Worker’s Compensation).
.3 Indiana Code 22-4-1 through 22-4-39.5 (Unemployment Compensation).
.4 Indiana Code 4-13-18-1 through 4-13-18-7 (Drug Testing).

8.6.3 The Contractor shall preserve payroll records and open them for inspection by the Indiana Department of Work Force Development for a period of three (3) years after the completion of the project work, in accordance with Indiana Code 5-16-13-13, as amended.

8.6.4 Training Programs
.1 Contractors at any tier level having ten (10) or more employees shall provide access to a training program applicable to the tasks to be performed in the normal course of the employee’s employment. The training program shall comply with the requirements of Indiana Code 5-16-13-12, as amended.
.2 Contractors at Tier 1 or Tier 2 employing fifty (50) or more journeymen shall participate in an apprenticeship or training program complying with Indiana Code 5-16-13-12(d), as amended.
.3 The Contractor shall provide, upon the Owner’s request, documentation verifying the number of eligible employees and of training program(s) provided in accordance with this section.

8.6.5 Contractor Pre-Qualification
.1 In accordance with Indiana Code 5-16-13-10(c), the Contractor and its subcontractors at any tier level with a contract value of $300,000 or more shall maintain qualification with the Indiana Department of Administration or Indiana Department of Transportation, as applicable to their scope of work, for the duration of the project.

ARTICLE 9: ENUMERATION OF CONTRACT DOCUMENTS

Add Clause 9.1.7.3 to Subparagraph 9.1.7

.3 The Contractor’s bid shall be part of the Contract Documents

END OF SUPPLEMENTARY OWNER - CONTRACTOR AGREEMENT
INTRODUCTION

These Supplementary Conditions amend or supplement the General Conditions of the Contract for Construction, (AIA Document A201, 2007 Edition), and other provisions of the Contract Documents as indicated below. All provisions which are not so amended or supplemented remain in full force and effect.

The terms used in these Supplementary Conditions which are defined in the General Conditions of the Contract for Construction (AIA A201 2007 Edition) have the meanings assigned to them in the General Conditions.

ARTICLE 1: GENERAL PROVISIONS

Delete the first sentence of Subparagraph 1.1.1, and substitute the following:

The Contract Documents are enumerated in the Agreement Between the Owner and Contractor (AIA Document A101) and consist of the Agreement (including Supplementary Owner – Contractor Agreements), Conditions of the Contract (General, Supplementary and other conditions), Performance Bond and Payment Bond (AIA Document A312); Drawings, Specifications, Addenda issued prior to execution of the Contract, other documents listed in the Agreement and Modifications issued after execution of the Contract.

Add the following Subparagraphs 1.1.9, 1.1.10, to Paragraph 1.1:

1.1.9 The listed terms used in the Contract Documents shall have the meanings as follows:

- **Products**: Means new material, machinery, components, equipment, fixtures, and systems forming the Work, but does not include machinery and equipment used for preparation, fabrication, conveying and erection of the Work. Products may also include existing materials or components required for reuse.
- **Furnish or Supply**: To supply and deliver, unload, inspect for damage.
- **Install**: To unpack, assemble, erect, apply, place, finish, cure, protect, clean, and ready for use.
- **Provide**: To furnish or supply, plus install.

1.1.10 The Escrow Agreement is a contractual document that shall be executed when the Contract amount exceeds $100,000. This document stipulates that interest may be earned on retainage funds.

Add the following Subparagraph 1.2.4 to Paragraph 1.2:

1.2.4 In general, mechanical and electrical drawings are diagrammatic and schematic, and cannot indicate every offset, fitting, and accessory required to avoid all conflict with other trades. Contractor shall check drawings of all trades to verify spaces available and make reasonable modifications, as directed, without extra cost to Owner; maintain headroom and other requirements in all areas; and where such requirements appear inadequate, notify Architect before proceeding.

ARTICLE 2: OWNER

Delete Subparagraph 2.2.1.

Add the following to the end of subparagraph 2.2.4:

"The Owner makes no representations as to the relevance, accuracy, or completeness of information in the Owner's records made available to the Contractor."

Delete Paragraph 2.4 in its entirety and substitute the following:

2.4 If the Contractor defaults or neglects to carry out the Work in any respect in accordance with the Contract Documents and fails to commence to correct such default or neglect within seventy-two (72) hours after receiving written notice thereof from the Architect or Owner, and thereafter fails to use its best efforts to correct such default or neglect to the satisfaction of the Owner and the Architect, then the Owner may, without prejudice to the other remedies the Owner may have, make good such deficiencies. If the notice is given before final payment, an appropriate Change Order shall be issued deducting the payments then or
thereafter due the Contractor the costs of correcting such deficiencies, including compensation for the Architect’s additional services made necessary by such default, neglect, failure and the Owner’s administrative and legal expense, including the time of the Owner’s personnel in dealing with such default. If payment then or thereafter due the Contractor is not sufficient to cover such amount, the Contractor shall promptly pay the difference to the Owner.

ARTICLE 3: CONTRACTOR

Add the following Clauses 3.1.1.1 and 3.1.1.2 to Subparagraph 3.1.1:

.1 Contract Tier Structure: Contractor shall comply with the tiered structure requirements of Indiana Code IC 5-16-13-4. Contractor shall include pass-through provisions in sub-contracts at all tiers requiring compliance with the applicable provisions of Indiana Code IC 5-16-13.

.2 Contract Tiers:

.1 Tier 1: Person or entity having a contract with the Public Entity to perform some part of the Work, generally known as a “Prime Contractor”, herein referred to as “Contractor”.

.2 Tier 2: Person or entity having a contract with the Tier 1 Contractor to perform some part of the Work, generally known as a “Subcontractor”.

.3 Tier 3: Person or entity having a contract with the Tier 2 contractor to perform some part of the Work, generally known as a “Sub-subcontractor”.

.4 Lower Tier: Person or entity having a contract with the Tier 3 or lower contractor to perform some part of the Work, generally known as a “Lower Tier Subcontractor”.

Delete the last sentence of Subparagraph 3.3.1 in its entirety.

Add the following Clause 3.4.1.1 to Subparagraph 3.4.1:

.1 The Contractor shall directly contribute a minimum of 15 percent (15%) of the total Contract sum of labor and materials at the time the contract is awarded. Contribution shall consist of one or more of the following: Work performed by the Contractor’s employees, materials supplied directly by the Contractor, or services provided by the Contractor’s employees.

Add the following Clause 3.4.3.1 to Subparagraph 3.4.3:

.1 The University Weapons Policy for their employees shall also be followed by the Contractor’s employees and other persons carrying out the Contract. A copy of the University Weapons Policy will be available upon written request by the Contractor.

Add the following Subparagraphs 3.4.4 and 3.4.5 to Paragraph 3.4:

3.4.4 If the Contract Documents indicate that the Owner is to furnish certain items of materials, equipment or appliances that the Contractor is to install, the Contractor shall check each shipment, sign a receipt for the same, and be entirely responsible for breakage or loss after receipt by the Contractor.

3.4.5 When specified in the Contract Documents that materials, equipment or appliances are to be installed in accordance with the manufacturer's specifications, instructions, or directions, the Contractor shall submit copies of such specifications, instructions, or directions as required by Paragraph 3.12. These specifications, instructions or directions will then be a part of the Contract Documents and shall be followed carefully in the execution of the Work.

Add the following Subparagraphs 3.6.1, 3.6.2, and Clause 3.6.2.1 to Paragraph 3.6:

3.6.1 The Contractor shall pay all unemployment, social security, and other such taxes imposed by local, state, or federal government.

3.6.2 The Owner is not subject to Indiana Retail Sales Tax or to Federal Excise Tax for material, products, and equipment incorporated into the project, and therefore these taxes should not be included in the Contractor's Bid or costs.

.1 Contractor shall submit Indiana General Sales Tax Exemption Certificate, Form ST-105, with purchases, indicating purchase is for “Sales to Indiana Governmental Units”.
Add the following Clause 3.7.1.1 to Subparagraph 3.7.1:

.1 The Contractor shall obtain the local building permit for this project from the City of Muncie and/or any other governmental bodies exercising appropriate jurisdiction over the project. A copy of the building permit shall be submitted to the Owner prior to the start of on-site work.

Add the following Clause 3.7.2.1 to Subparagraph 3.7.2:

.1 The Contractor and subcontractors at all tier levels, with a contract for work valued at $300,000 or more, shall, in accordance with Indiana Code 5-16-13-10(c), maintain qualification with the Indiana Department of Administration or the Indiana Department of Transportation, according to the type of work to be performed, until the completion of the project.

Add the following Subparagraph 3.7.6 to Paragraph 3.7:

3.7.6 The Work, shall comply with all Rules and Regulations of the Fire Prevention and Building Safety Commission, local ordinances, and such other statutory provisions pertaining to this class of work, such rules and regulations and local ordinances shall be considered as part of these Specifications. The Contractor entering into Contract with the Owner shall be knowledgeable of known ordinances and regulations, and shall notify the Architect of any deviation in the Contract Documents from such rules and regulations.

Delete Subparagraph 3.9.2 in its entirety and substitute the following:

3.9.2 The Contractor upon Owners request shall furnish in writing to the Owner through the Architect the name and qualifications of a proposed superintendent. The Architect may reply within 14 days to the Contractor in writing stating (1) whether the Owner or the Architect has reasonable objection to the proposed superintendent or (2) that the Architect requires additional time to review. Failure of the Architect to reply within the 14 day period shall constitute notice of no reasonable objection.

Add the following Subparagraph 3.13.1 to Paragraph 3.13:

3.13.1 Contractor shall control sediment produced from Work activities in compliance with City, State and Federal requirements.

Delete Subparagraph 3.17 in its entirety and substitute the following:

3.17 The Contractor shall pay all royalties and license fees. The Contractor shall defend suits or claims for infringement of copyrights and patent rights and shall hold the Owner and Architect harmless from loss on account thereof, including costs and fees incurred by the Owner.

Delete Subparagraph 3.18.1 in its entirety and substitute the following:

3.18.1 The Contractors and Subcontractors (hereinafter "Indemnitors") hereby agree to indemnify, save and hold harmless, and defend at their own expense the Owner and Architect, their respective partners, agents, employees and any other person or entity for whom any of them may be legally responsible (herein collectively called "Indemnities") against all claims, losses, damages, suits, costs and expenses, including attorney's fees, or actions of any nature whatsoever which arise out of, or are alleged to arise out of, the Work to be performed by the Indemnitor; including without limiting the generality of the foregoing; all liability for claims for death or damage to property, including the loss of use thereof and consequential damages therefrom, or damages from economic loss, or damage to any Indemnitor or Indemnitor or its employees, servants and agents, whether such claims are based upon, or claimed to be based upon, statutory, contractual, tort or other liability of any Indemnitor, or even though caused, or alleged to be caused by the joint, several, or comparative, but not sole, negligence, breach of contract, breach of warranty, strict liability, or other breach of duty by any Indemnitor. If any part of this provision is adjudged to be contrary to law, the remaining parts of the provision shall in all other respects be and remain legally effective and binding. Moreover, this provision shall not be construed to eliminate or in any way reduce any other indemnification or right which the Owner or the Architect has by law.

ARTICLE 4: ARCHITECT

Add the following Clause 4.1.1.1 to Subparagraph 4.1.1:

.1 The term "Architect" used in these Documents shall include the primary design professional
designated by the Owner for this project, and may include Engineer, Landscape Architect or other professionals licensed in the State of Indiana to perform those services.

Delete Subparagraph 4.2.1 in its entirety and substitute the following:

4.2.1 The Architect will provide administration of the Contract as described in the Contract Documents and will be an Owner's representative during construction until 180 days after the Owner has approved the final Certificate for Payment and with the Owner's concurrence, from time to time during the one year period for correction of Work described in Section 12.2. The Architect will have authority to act on behalf of the Owner only to the extent provided in the Contract Documents.

Delete Subparagraph 4.2.5 in its entirety and substitute the following:

4.2.5 Based on the Architect's evaluations of the Contractor's Applications for Payment, the Architect will review and certify the amounts due the Contractor and will issue Certificates for Payment in such amounts. The Owner reserves the right to modify the payment amount for errors and omissions contained in the Application for Payment.

Delete Subparagraph 4.2.13 in its entirety and substitute the following:

4.2.13 The Architect's shall have the authority to determine compliance of matters of esthetic effect consistent with the intent expressed in the Contract Documents. The Owner shall be the final authority on the acceptance of or modification of esthetic effects.

ARTICLE 7: CHANGES IN THE WORK

Add the following Subparagraph 7.1.4 to Paragraph 7.1:

7.1.4 The Contractor shall record all changes in the Work in the Contract Record Documents, indicating the effective date of the change and the change instrument designation.

Delete Subparagraph 7.3.6 in its entirety and substitute the following:

7.3.6 A Construction Change Directive signed by the Contractor indicates the Contractor's agreement therewith, including adjustment in Contract Sum and Contract Time or the method of determining them. Such agreement shall be effective immediately and a Change Order shall be executed when the final cost for the Changes in Work is known.

Delete Subparagraph 7.3.9 in its entirety.

Add the following Subparagraph 7.3.11 to Paragraph 7.3:

7.3.11 Only after execution of a Change Order may an amount be included in an Application for Payment.

Add the following Paragraph 7.5, Subparagraph 7.5.1 and Clauses 7.5.1.1, 7.5.1.2, 7.5.1.3, 7.5.1.4, 7.5.1.5 and 7.5.1.6 to Article 7:

7.5 CHANGE ORDER CALCULATION

7.5.1 In Subparagraphs 7.3.3 and 7.3.7 the allowance for overhead and profit combined, included in the total cost to the Owner, shall be based on the following schedule:

.1 For the Contractor, for Work performed by the Contractor's own forces, fifteen percent (15%) of the cost.

.2 For the Contractor, for Work performed by their Subcontractor(s), five percent (5%) of the amount due the Subcontractor(s).

.3 For each Subcontractor or Sub-subcontractor involved, for Work performed by their own forces, fifteen percent (15%) of the cost.

.4 For each Subcontractor, for Work performed by their Sub-subcontractor(s), five percent (5%) of the amount due the Sub-subcontractor(s).

.5 Cost to which overhead and profit is to be applied shall be determined in accordance with subparagraph 7.3.7.
In order to facilitate checking of quotations for extras or credits, all proposals, except those so minor that their propriety can be seen by inspection, shall be accompanied by a complete itemization of costs including labor, materials, and subcontracts. Labor and materials shall be itemized separately, indicating the added and deleted quantities of work, and unit prices for labor and materials with extensions and totals. Where major cost items are subcontracts, they shall also be accompanied by a complete itemization of costs.

ARTICLE 8: TIME

Delete Subparagraph 8.3.1 in its entirety and substitute the following:

8.3.1 If the Contractor is delayed at any time in the commencement or progress of the Work by an act or neglect of the Owner or Architect, or of an employee of either, or of a separate contractor employed by the Owner; or by changes ordered in the Work; or by fire, unavoidable casualties, or by other causes that the Architect determines may justify delay, then the Contract Time shall be extended by Change Order for such reasonable time as the Architect may determine. Nothing in this section shall permit the Contractor to seek additional time or additional compensation for adverse or unusual weather conditions. The Contractor shall expect such conditions when making its bid.

ARTICLE 9: PAYMENTS AND COMPLETION

Delete Paragraph 9.2 in its entirety and substitute the following:

9.2 SCHEDULE OF VALUES

Within 7 days after receipt of the Award and Notice to Proceed letter or at the preconstruction meeting, whichever occurs first, the Contractor shall submit to the Architect a Schedule of Values allocating the entire Contract Sum to the various portions of the Work and prepared in such form and supported by such data to substantiate its accuracy as the Architect may require. This schedule, unless objected to by the Architect, shall be used as a basis for reviewing the Contractor's Applications for Payment.

Add the following Subparagraphs 9.2.1 and 9.2.2 to Paragraph 9.2:

9.2.1 The Schedule of Values shall be prepared in such a manner that each major item of work and each subcontracted item of work is shown as a single line item on AIA Document G703, Continuation Sheet for G702.

9.2.2 The Contractor shall submit a schedule of the estimated amount of each monthly Application for Payment based on the Contractor's Construction Schedule and Schedule of Values.

Delete Subparagraph 9.3.1 in its entirety and substitute the following:

9.3.1 At least ten days before the date established for each progress payment, the Contractor shall submit to the Architect an itemized Application for Payment (AIA Document G702 and G703) prepared in accordance with the schedule of values. Such application shall be notarized, and supported by such data substantiating the Contractor's right to payment as the Owner or Architect may require, such as copies of requisitions from Subcontractors and material suppliers. Monthly payments shall be based on 90 percent (90%) of the true value of the work in place and materials, except cement, suitably stored on the premises. The Owner, at any time after 50 percent (50%) of the work has been completed, if the Owner finds that satisfactory progress is being made, may make any of the remaining partial payments in full providing the Contractor has obtained the consent of his Surety to a reduction in or partial release of retainage. The form for Contractor's obtaining consent of Surety shall be Consent of Surety to Final Reduction in or Partial Release of Retainage (AIA Document G707A). The remaining portion of the Contract Sum shall be paid 61 days after the date of Substantial Completion, provided that all Work is fully completed and the Contract fully performed.

Delete Clause 9.3.1.1.

Add the following Clauses 9.3.1.3, 9.3.1.4, 9.3.1.5, 9.3.1.6, and 9.3.1.7 to Subparagraph 9.3.1:

9.3.1.3 As applicable, Contractor shall include a Partial Waiver of Lien form which covers all of its Work from the prior Application and Certificate for Payment Documents.
9.3.1.4 As applicable, Contractor shall include a Partial Waiver of Lien form from its Subcontractors and major suppliers when requesting reduction in retainage, which covers all of its Work from prior Application and Certificate for Payment Documents.

9.3.1.5 Requests for payment that reduce the amount of retainage below 5% of the Total Contract Sum to Date are required to have final or partial Waivers of Lien from all subcontractors and major suppliers which, when totaled, do not exceed the amount remaining to be paid.

9.3.1.6 Upon Owners request, Contractor shall attach Compliance Affidavit related to Drug Testing Program (see Supplementary Conditions item 13.9) to each Application and Certificate for Payment as follows:

This is to certify that in the performance of this Contract, neither the undersigned Contractor nor, upon information and belief, any of its Subcontractors has violated the “Drug Testing Program” provision of the General Conditions of the Contract.

9.3.1.7 Upon Owners request, Contractor shall attach Compliance Affidavit and supporting documents related to Self-performance of the Work (see Supplementary Conditions item 3.4.1.1) to each Application and Certificate for Payment as follows:

This is to certify that in the performance of this Contract, that the Contractor has not violated the “Self-Performance” provision of the General Conditions of the Contract.

Add the following Subparagraph 9.6.8 to Paragraph 9.6:

9.6.8 Upon commencement of the Work, an escrow agreement and escrow account shall be established by the Owner on all contracts in excess of $100,000.00.

.1 The escrow agreement shall provide that the Owner act as Escrow Agent, will pay interest on funds deposited in such account in accordance with the provisions of the escrow agreement, and disburse funds from the account as set forth below.

.2 As each progress payment is made, the retainage with respect to that payment shall be deposited by the Owner in the escrow account.

.3 The interest earned on funds in the account shall accrue for the benefit of the Contractor until the completion of the project.

.4 When the work has been fully completed in a satisfactory manner, and the Contractor has fulfilled all of the requirements of the Contract providing for reduction of retained funds, and the Architect has issued a final Application and Certificate for Payment, the Owner shall release to the Contractor the retained funds owed but none of the interest earned. The Owner will then calculate the interest earned on the retainage held, less five percent which represents the Owner's portion of the interest earned, and make the interest payment to the Contractor within sixty (60) days of making the final payment.

Delete Paragraph 9.7 in its entirety and substitute the following:

9.7 If the Architect does not issue a Certificate for Payment, through no fault of the Contractor, within seven days after receipt of the Contractor's Application for Payment, or if the Owner does not pay the Contractor within fourteen days after the date established in the Contract Documents the amount certified by the Architect, then the Contractor may, upon seven additional days' written notice to the Owner and Architect, stop the Work until payment of the amount owing has been received. The Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable costs of shut-down, delay and start-up, plus interest as provided for in the Contract Documents.

Delete Subparagraph 9.8.5 in its entirety and substitute the following:

9.8.5 The Certificate of Substantial Completion shall be submitted to the Owner and Contractor for their written acceptance of responsibilities assigned to them in such Certificate. Upon such acceptance and consent of surety, if any, the Owner shall make payment of retainage applying to such Work or designated portion thereof. Such payment shall be adjusted to withhold 200% of the value (reference: IC 5-16-5.5-6) for Work that is incomplete or not in accordance with the requirements of the Contract Documents.
Add the following Subparagraph 9.8.6 to Paragraph 9.8:

9.8.6 An Application for Final Payment shall be submitted within thirty (30) days after Substantial Completion of the Work unless otherwise stipulated in the Certificate of Substantial Completion provided the Work has then been completed and the Contract fully performed.

Delete Subparagraph 9.10.2 in its entirety and substitute the following:

9.10.2 Neither Final Payment nor any remaining retained percentage shall become due until the Contractor submits to the Architect the following: (1) Contractor's Affidavit of Payment of Debts and Claims (AIA Document G706); (2) Contractor's Affidavit of Release of Liens (AIA Document G706A), (3) Final waiver of lien forms for the Contractor, all Subcontractors and major Suppliers; (4) Consent of Surety to Final Payment (AIA Document 707); (5) approved Project record Documents; (6) submission of Contractor provided documentation required for LEED certification, if sought for the project; (7) approved Operation & Maintenance Manuals; (8) Finish Manual, if project includes interior finishes; (9) executed warranties.

Add the following Paragraph 9.11 to Article 9:

9.11 Liquidated Damages
9.11.1 The Contractor and the Contractor's surety shall be liable for and pay the Owner liquidated damages for each day that Substantial Completion is delayed beyond the Contract Time as adjusted for time extensions provided by the Contract Documents, as stipulated in the Owner-Contractor Agreement as amended by Section 00 54 00 – AGREEMENT FORM SUPPLEMENTS – BSU A101 (BID-LD).

ARTICLE 10: PROTECTION OF PERSONS AND PROPERTY

Add the following Clause 10.3.1.1 to Paragraph 10.3.1:

.1 Asbestos-containing material (ACM): shall be as defined by the Occupational Safety & Health Administration (OSHA) Regulation (Standards – 29 CFR) Section 1926.1101 (b).

Add the following Paragraph 10.5, Subparagraph 10.5.1 and Clause 10.5.1.1 to Article 10:

10.5 OCCUPATIONAL SAFETY AND HEALTH ACTS

10.5.1 General. The Contractor shall administer and comply with all the rules, standards and regulations of the Construction Safety Act (40 U.S.C. 333) and the Williams-Steiger Occupational Safety and Health Act (OSHA) of 1970 (29 U.C.C. 650 et. seq.) as administered and enforced by the Occupational Safety and Health Administration, Department of Labor.

.1 Regulation: The Contractor shall not require or permit any laborer or mechanic, including apprentices and trainees, employed in the performance of this contract to work in surroundings or conditions which are unsanitary, hazardous, or dangerous to his health as determined under construction safety and health standards promulgated by the Secretary of Labor by regulation (29 CFR Part 1926, 36FR 7340, April 17, 1971) pursuant to Section 107 of the Contract Work Hours and Safety Standards Act.

ARTICLE 11: INSURANCE AND BONDS

Delete Subparagraph 11.1.2 in its entirety and substitute the following:

11.1.2 The insurance required by Subparagraph 11.1.1 shall be written for not less than the limits described in Clauses 11.1.2.1 to 11.1.2.6 or required by law whichever is greater. Coverages, whether written on an occurrence or claims-made basis, shall be maintained from the date of commencement of the Work to the date of final completion of Work unless otherwise specified by the Owner.

.1 The Contractor and/or Subcontractors at all Tiers shall take out and maintain during the life of this Contract Workers’ Compensation and Occupational Disease Insurance, Employers Liability, Disability Benefits, Unemployment Compensation as required by all applicable Indiana and Federal laws with limits in full compliance with those laws.

.2 The Contractor and/or Subcontractors at all Tiers shall take out and maintain during the life of this
Contract a standard Commercial General Liability Policy with limits of $2,000,000 per aggregate and $1,000,000 per occurrence for bodily injury and property damage, personal injury and advertising injury, and products and completed operations. In addition medical payments coverage in the amount of $5,000 must also be provided under this policy.

.3 The Contractor and/or Subcontractors shall take out and maintain during the life of this Contract Contractual Liability Coverage with limits of $1,000,000 per aggregate and $1,000,000 per occurrence.

.4 The Contractor and/or Subcontractors shall take out and maintain during the life of this Contract Automobile Liability Coverage with limits of $1,000,000 per aggregate and $1,000,000 per occurrence for bodily injury and property damage for all autos, hired autos, and non-owned autos.

.5 The Contractor and/or Subcontractors shall take out and maintain during the life of this Contract Excess Liability Coverage to cover insurance described in Clauses 11.1.2.2 to 11.1.2.4 with limits of $2,000,000 per aggregate and $2,000,000 per occurrence when the cost of construction is less than $5,000,000; limits of $4,000,000 per aggregate and $4,000,000 per occurrence when the cost of construction is between $5,000,000 and $10,000,000; limits of $7,000,000 per aggregate and $7,000,000 per occurrence when the cost of construction is over $10,000,000.

.6 The Contractor and/or Subcontractors will take out and maintain during the life of this Contract a Builder’s Risk Policy or installation floater or other such policy approved by the Owner in an amount equal to the lesser of the deductible, currently at $100,000, under the Owner’s property insurance or the cost of construction. The deductible under this Policy will be an amount no greater than $5,000.

.7 The Owner will be named as an Additional insured, except for Workers Compensation, on the coverage required above with respect to work performed on the Project by the Contractor.

Add the following Clauses 11.1.3.1 and 11.1.3.2 to Subparagraph 11.1.3:

11.1.3.1 The form of Certificates of Insurance shall be the current ACORD 25-S submitted in duplicate. The Contractor shall furnish to the Owner copies of endorsements that are subsequently issued amending coverage or limits.

11.1.3.2 Certificates of such insurance shall be submitted to the Owner and Architect prior to start of Work.

Add the following Subparagraph 11.1.5 to Paragraph 11.1:

11.1.5 The Owner shall not be liable to any person for the failure of the Contractor or of any Subcontractor to carry any specified insurance or to furnish proof of the carriage thereof to the Owner.

Add the following Subparagraph 11.1.6 to Paragraph 11.1:

11.1.6 When the Contractor is required to provide delegated design services by registered professional engineers or architects, the engineers or architects who provide such design services shall procure and maintain professional liability insurance during the term of this Agreement and for a period of ten (10) years following Substantial Completion of the Work, covering claims arising out of or related to an error, omission or negligent act with respect to such design services, with a minimum per claim limit of $1,000,000, a minimum aggregate limit of $2,000,000 and a self-insured retention or deductible not to exceed $50,000. Such insurance shall be procured from an insurance company licensed in the State of Indiana and the Contractor shall provide to the Owner, prior to commencement of the design or installation of the delegated design Work, a Certificate of Insurance evidencing that the required coverages and limits are in effect. The Contractor shall also provide a Certificate of Insurance confirming that such coverage and limits remain in place as of Substantial Completion of the Work and at other times during the ten (10) year period thereafter as may periodically be requested by Owner.

Delete Subparagraph 11.3.1 in its entirety and substitute the following:

11.3.1 At the Owner's discretion, property insurance shall be purchased and maintained by the Owner, in a company or companies lawfully authorized to do business in the jurisdiction in which the Project is located, whether in the form of Builder's Risk coverage or an Installation Floater. The amount of coverage shall be equal to at least 100 percent of the insurable portion of the project. Such property insurance shall be maintained until final payment has been made as provided in Paragraph 9.10 or until no person or entity other than the Owner has an insurable interest in the property required by Paragraph 11.3 to be covered.
whichever is later. This insurance shall include the interest of the Owner, the Contractor, Subcontractors and Sub-subcontractors in the project. The Owner shall provide Contractor with a copy of insurance coverage as requested.

Delete Clause 11.3.1.3

Add the following Clause 11.3.1.6 to Paragraph 11.3:

11.3.1.6 The Contractor and/or Subcontractors will take out and maintain during the life of this Contract a Builder’s Risk Policy or installation floater or other such policy approved by the Owner in an amount equal to the lesser of the deductible, currently at $100,000, under the Owner’s property insurance or the cost of construction. The deductible under this Policy will be an amount no greater than $5,000.

Delete Subparagraph 11.3.6.

Delete Subparagraph 11.3.9 in its entirety and substitute the following:

11.3.9 If required in writing by any party in interest, the Owner as fiduciary shall, upon the occurrence of an insured loss, give bond for the proper performance of the Owner’s duties. The Owner shall deposit in a separate account proceeds so received, which the Owner shall distribute in accordance with such agreement as the parties in interest may reach. If after such loss no other special agreement is made and unless the Owner terminates the Contract for convenience, replacement of damaged property shall be performed by the Contractor after notification of a Change in the Work in accordance with Article 7.

Delete Subparagraph 11.3.10 in its entirety and substitute the following:

11.3.10 The Owner as fiduciary shall have power to adjust and settle a loss with insurers.

Add the following Subparagraphs 11.3.11 and 11.3.12 to Paragraph 11.3:

11.3.11 The Contractor shall insure separately all materials destined to become a part of the Work when such materials are stored away from the site of the Work. Such insurance shall include the interest of the Owner and shall be subject to review and inspection by the Owner.

11.3.12 The Contractor shall insure separately or be responsible for all of its equipment, tools, scaffolding, staging, towers, forms and temporary buildings, owned, borrowed or rented by the Contractor and Subcontractors, and all materials and systems that are not intended to become a part of the Work.

Delete Subparagraph 11.4.1 in its entirety and substitute the following:

11.4.1 The Owner shall require the Contractor to furnish bonds covering faithful performance of the Contract and payment of obligations arising thereunder as stipulated in bidding requirements or specifically required in the Contract Documents prior to the start of Work on site or on the date of execution of the Contract, whichever occurs first. If the Owner at any time, for justifiable cause shall be or become dissatisfied with any surety or sureties related to the currently held Performance and/or Payment Bonds, the Contractor shall within five (5) days after written notice from the Owner, substitute an acceptable bond (or bonds) in such form and sum and signed by such other surety or sureties that may be satisfactory to the Owner. The Premiums on such bond(s) shall be paid by the Contractor. No further payments shall be deemed due or shall be made until the new surety or sureties shall have furnished such an acceptable bond to the Owner.

Add the following Clause 11.4.1.1 to Subparagraph 11.4.1:

11.4.1.1 The Contractor shall furnish a Performance and Payment Bond (AIA Document A312), in an amount at least equal to one hundred percent (100%) of this Contract price as security for the faithful performance of this Contract. The Contractor will be responsible for payment of such bonds as a part of the Contract.

ARTICLE 12: AFTER SUBSTANTIAL COMPLETION

Add the following Clause 12.2.2.4 to Subparagraph 12.2.4:

12.2.2.4 Upon request by the Owner and a minimum of two (2) months prior to the expiration of the one year period for correction of Work, the Architect will conduct and the Contractor and subcontractors shall attend a meeting with the Owner to review the facility operations and performance. The Contractor shall
correct deficiencies identified in writing during and pursuant to the meeting before the expiration of the one year period for correction of Work.

ARTICLE 13: MISCELLANEOUS PROVISIONS
Delete Paragraph 13.1 in its entirety and substitute the following:

13.1 GOVERNING LAW
This Agreement shall be governed by, construed and interpreted in accordance with the laws of the State Of Indiana. Any action or judicial proceeding for the enforcement of this Agreement shall be instituted only in the Circuit Courts of Delaware County Indiana or the United States District Court for the Southern District of Indiana.

Delete Paragraph 13.6.
Add the following Paragraph 13.8, 13.9 and 13.10 to Article 13:

13.8 NON-DISCRIMINATION PROVISIONS
13.8.1 The Contractor shall maintain policies as follows:
1. The Contractor and their Subcontractors and Suppliers shall perform, observe and comply with all applicable state, municipal, and federal laws, rules, regulations and Executive Orders pertaining to nondiscrimination against employees or applicants for employment for reasons including, but not limited to, race, color, religion, national origin, sex, disability, or ancestry. When required by such laws, rules, regulations and Executive Orders, the Contractor shall include nondiscrimination provisions in all contracts and purchase orders.

13.9 DRUG TESTING PROGRAM
In accordance with Indiana Code 4-13-18 as amended, each Contractor that submits a bid for a public works project that is estimated to cost $150,000 or more is required to submit with the bid a written drug plan. Among other things, the law sets forth specific requirements that must be in the plan for a program to test the employees of the Contractor and Subcontractors for drugs. The successful Bidder must comply with all provisions of the statute or the contract is subject to cancellation. In addition, upon Owners request, Contractor will attach a Compliance Affidavit to each Application and Certification for Payment in accordance with 9.3.1.6.

13.10 UNIVERSITY TOBACCO-FREE CAMPUS POLICY
In accordance with Ball State University Tobacco-Free Campus policy, all contractors, their subcontractors, suppliers and employees shall comply with the University’s policy regarding tobacco use on campus. This policy (Item No. 8) was adopted by the Board of Trustees on May 3, 2013. Tobacco use is prohibited in all university buildings and outdoor campus areas, except in fully enclosed personal vehicles and in the designated outdoor smoking area at the southwest corner of the R2 parking lot. The complete policy is available at http://cms.bsu.edu/-/media/WWW/DepartmentalContent/SmokeFree/TobaccoFreePolicy.pdf

ARTICLE 15: CLAIMS AND DISPUTES
Delete Clause 15.1.5.2. in its entirety.
Delete Subparagraph 15.2.1 in its entirety and substitute the following:

15.2.1 Claims, excluding those arising under Paragraphs 10.3, 10.4, 11.3.9, and 11.3.10 shall be referred to the Initial Decision Maker for initial decision. The Architect will serve as the Initial Decision Maker, unless otherwise indicated in the Agreement. Except for those Claims excluded by this Section 15.2.1 an initial decision, shall be required as a condition precedent to litigation of any arising prior to the date final payment is due, unless 30 days have passed after the Claim has been referred to the Initial Decision Maker with no decision having been rendered. Unless the Initial Decision Maker and all affected parties agree, the Initial Decision Maker will not decide disputes between the Contractor and persons or entities other than the Owner.
Delete Subparagraph 15.2.5 in its entirety and substitute the following subparagraph 15.2.5 and Clause 15.2.5.1:

15.2.5 The Initial Decision Maker will render an initial decision approving or rejecting the Claim or indicating that the Initial Decision Maker is unable to resolve the Claim. This initial decision shall (1) be in writing; (2) state the reasons therefor; and (3) notify the parties and the Architect, if the Architect is not serving as the Initial Decision Maker, of any change in the Contract Sum or Contract Time or both. The Initial decision shall be final and binding on the parties but subject to litigation.

Delete Subparagraph 15.2.6
Delete Clause 15.2.6.1
Delete Paragraph 15.4 including Subparagraphs 15.4.1, 15.4.1.1, 15.4.2, and 15.4.3.
Delete Subparagraph 15.4.4 including Clauses 15.4.4.1, 12.4.4.2 and 15.4.4.3

END OF SUPPLEMENTARY CONDITIONS
SECTION 013100 - PROJECT MANAGEMENT AND COORDINATION

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 provisions for coordinating construction operations on Project including, but not limited to, the following:

1. General coordination procedures.
2. Coordination drawings.
3. Requests for Information (RFIs).
4. Project meetings.

B. Each contractor shall participate in coordination requirements. Certain areas of responsibility are assigned to a specific contractor.

C. Related Requirements:
   1. Section 013200 "Construction Progress Documentation" for preparing and submitting Contractor's construction schedule.
   2. Section 017300 "Execution" for procedures for coordinating general installation and field-engineering services, including establishment of benchmarks and control points.

1.3 DEFINITIONS

A. RFI: Request from Owner, Architect, or Contractor seeking information required by or clarifications of the Contract Documents.

1.4 INFORMATIONAL SUBMITTALS

A. Subcontract List: Prepare a written summary identifying individuals or firms proposed for each portion of the Work, including those who are to furnish products or equipment fabricated to a special design. Include the following information in tabular form:

   1. Name, address, and telephone number of entity performing subcontract or supplying products.
   2. Number and title of related Specification Section(s) covered by subcontract.
   3. Drawing number and detail references, as appropriate, covered by subcontract.

B. Key Personnel Names: Within 15 days of starting construction operations, submit a list of key personnel assignments, including superintendent and other personnel in attendance at Project site. Identify individuals and their duties and responsibilities; list addresses and telephone numbers, including home, office, and cellular telephone numbers and e-mail addresses. Provide names, addresses, and telephone numbers of individuals assigned as alternates in the absence of individuals assigned to Project.

   1. Post copies of list in project meeting room, in temporary field office, on Project Web site, and by each temporary telephone. Keep list current at all times.
1.5 GENERAL COORDINATION PROCEDURES

A. Coordination: Coordinate construction operations included in different Sections of the Specifications to ensure efficient and orderly installation of each part of the Work. Coordinate construction operations, included in different Sections, that depend on each other for proper installation, connection, and operation.

1. Schedule construction operations in sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
2. Coordinate installation of different components to ensure maximum performance and accessibility for required maintenance, service, and repair.
3. Make adequate provisions to accommodate items scheduled for later installation.

B. Coordination: Each contractor shall coordinate its construction operations with those of other contractors and entities to ensure efficient and orderly installation of each part of the Work. Each contractor shall coordinate its operations with operations, included in different Sections, that depend on each other for proper installation, connection, and operation.

1. Schedule construction operations in sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
2. Coordinate installation of different components with other contractors to ensure maximum performance and accessibility for required maintenance, service, and repair.
3. Make adequate provisions to accommodate items scheduled for later installation.

C. Prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and list of attendees at meetings.

1. Prepare similar memoranda for Owner and separate contractors if coordination of their Work is required.

D. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities and activities of other contractors to avoid conflicts and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:

1. Preparation of Contractor's construction schedule.
2. Preparation of the schedule of values.
3. Installation and removal of temporary facilities and controls.
4. Delivery and processing of submittals.
5. Progress meetings.
6. Preinstallation conferences.
7. Project closeout activities.
8. Startup and adjustment of systems.

E. Conservation: Coordinate construction activities to ensure that operations are carried out with consideration given to conservation of energy, water, and materials. Coordinate use of temporary utilities to minimize waste.

1. Salvage materials and equipment involved in performance of, but not actually incorporated into, the Work. See other Sections for disposition of salvaged materials that are designated as Owner's property.
1.6 COORDINATION DRAWINGS

A. Coordination Drawings, General: Prepare coordination drawings according to requirements in individual Sections, and additionally where installation is not completely shown on Shop Drawings, where limited space availability necessitates coordination, or if coordination is required to facilitate integration of products and materials fabricated or installed by more than one entity.

1. Content: Project-specific information, drawn accurately to a scale large enough to indicate and resolve conflicts. Do not base coordination drawings on standard printed data. Include the following information, as applicable:

   a. Use applicable Drawings as a basis for preparation of coordination drawings. Prepare sections, elevations, and details as needed to describe relationship of various systems and components.
   b. Coordinate the addition of trade-specific information to the coordination drawings by multiple contractors in a sequence that best provides for coordination of the information and resolution of conflicts between installed components before submitting for review.
   c. Indicate functional and spatial relationships of components of architectural, structural, civil, mechanical, and electrical systems.
   d. Indicate space requirements for routine maintenance and for anticipated replacement of components during the life of the installation.
   e. Show location and size of access doors required for access to concealed dampers, valves, and other controls.
   f. Indicate required installation sequences.
   g. Indicate dimensions shown on the Drawings. Specifically note dimensions that appear to be in conflict with submitted equipment and minimum clearance requirements. Provide alternate sketches to Architect indicating proposed resolution of such conflicts. Minor dimension changes and difficult installations will not be considered changes to the Contract.

B. Coordination Drawing Organization: Organize coordination drawings as follows:

1. Floor Plans and Reflected Ceiling Plans: Show architectural and structural elements, and mechanical, plumbing, fire-protection, fire-alarm, and electrical Work. Show locations of visible ceiling-mounted devices relative to acoustical ceiling grid. Supplement plan drawings with section drawings where required to adequately represent the Work.
2. Plenum Space: Indicate subframing for support of ceiling and wall systems, mechanical and electrical equipment, and related Work. Locate components within ceiling plenum to accommodate layout of light fixtures indicated on Drawings. Indicate areas of conflict between light fixtures and other components.
3. Mechanical Rooms: Provide coordination drawings for mechanical rooms showing plans and elevations of mechanical, plumbing, fire-protection, fire-alarm, and electrical equipment.
4. Structural Penetrations: Indicate penetrations and openings required for all disciplines.
5. Slab Edge and Embedded Items: Indicate slab edge locations and sizes and locations of embedded items for metal fabrications, sleeves, anchor bolts, bearing plates, angles, door floor closers, slab depressions for floor finishes, curbs and housekeeping pads, and similar items.
6. Mechanical and Plumbing Work: Show the following:
   a. Sizes and bottom elevations of ductwork, piping, and conduit runs, including insulation, bracing, flanges, and support systems.
   b. Dimensions of major components, such as dampers, valves, diffusers, access doors, cleanouts and electrical distribution equipment.
   c. Fire-rated enclosures around ductwork.
7. Electrical Work: Show the following:
   a. Runs of vertical and horizontal conduit 1-1/4 inches in diameter and larger.
   b. Light fixture, exit light, emergency battery pack, smoke detector, and other fire-alarm locations.
   c. Panel board, switch board, switchgear, transformer, busway, generator, and motor control center locations.
   d. Location of pull boxes and junction boxes, dimensioned from column center lines.

8. Fire-Protection System: Show the following:
   a. Locations of standpipes, mains piping, branch lines, pipe drops, and sprinkler heads.

9. Review: Architect will review coordination drawings to confirm that the Work is being coordinated, but not for the details of the coordination, which are Contractor's responsibility. If Architect determines that coordination drawings are not being prepared in sufficient scope or detail, or are otherwise deficient, Architect will so inform Contractor, who shall make changes as directed and resubmit.

10. Coordination Drawing Prints: Prepare coordination drawing prints according to requirements in Section 013300 "Submittal Procedures."

1.7 REQUESTS FOR INFORMATION (RFIs)

A. General: Immediately on discovery of the need for additional information or interpretation of the Contract Documents, Contractor shall prepare and submit an RFI in the form specified.

   1. Architect will return RFIs submitted to Architect by other entities controlled by Contractor with no response.
   2. Coordinate and submit RFIs in a prompt manner so as to avoid delays in Contractor's work or work of subcontractors.

B. Content of the RFI: Include a detailed, legible description of item needing information or interpretation and the following:

   1. Project name.
   2. Project number.
   3. Date.
   4. Name of Contractor.
   5. Name of Architect
   6. RFI number, numbered sequentially.
   7. RFI subject.
   8. Specification Section number and title and related paragraphs, as appropriate.
   9. Drawing number and detail references, as appropriate.
   10. Field dimensions and conditions, as appropriate.
   11. Contractor's suggested resolution. If Contractor's suggested resolution impacts the Contract Time or the Contract Sum, Contractor shall state impact in the RFI.
   12. Contractor's signature.
   13. Attachments: Include sketches, descriptions, measurements, photos, Product Data, Shop Drawings, coordination drawings, and other information necessary to fully describe items needing interpretation.

      a. Include dimensions, thicknesses, structural grid references, and details of affected materials, assemblies, and attachments on attached sketches.
C. RFI Forms: AIA Document G716
   
   1. Attachments shall be electronic files in Adobe Acrobat PDF format.

D. Architect's Action: Architect will review each RFI, determine action required, and respond. Allow seven working days for Architect's response for each RFI. RFIs received by Architect after 1:00 p.m. will be considered as received the following working day.

   1. The following Contractor-generated RFIs will be returned without action:
      
      a. Requests for approval of submittals.
      b. Requests for approval of substitutions.
      c. Requests for approval of Contractor's means and methods.
      d. Requests for coordination information already indicated in the Contract Documents.
      e. Requests for adjustments in the Contract Time or the Contract Sum.
      f. Requests for interpretation of Architect's actions on submittals.
      g. Incomplete RFIs or inaccurately prepared RFIs.

   2. Architect's action may include a request for additional information, in which case Architect's time for response will date from time of receipt of additional information.

E. RFI Log: Prepare, maintain, and submit a tabular log of RFIs organized by the RFI number. Submit log weekly. Include the following:

   1. Project name.
   2. Name and address of Contractor.
   3. Name and address of Architect and Construction Manager.
   4. RFI number including RFIs that were returned without action or withdrawn.
   5. RFI description.
   6. Date the RFI was submitted.
   7. Date Architect's response was received.

F. On receipt of Architect's action, update the RFI log and immediately distribute the RFI response to affected parties. Review response and notify Architect within seven days if Contractor disagrees with response.

   1. Identification of related Minor Change in the Work, Construction Change Directive, and Proposal Request, as appropriate.
   2. Identification of related Field Order, Work Change Directive, and Proposal Request, as appropriate.

1.8 PROJECT MEETINGS

A. General: Schedule and conduct meetings and conferences at Project site unless otherwise indicated.

   1. Attendees: Inform participants and others involved, and individuals whose presence is required, of date and time of each meeting. Notify Owner and Architect of scheduled meeting dates and times.
   2. Agenda: Prepare the meeting agenda. Distribute the agenda to all invited attendees.
   3. Minutes: Entity responsible for conducting meeting will record significant discussions and agreements achieved. Distribute the meeting minutes to everyone concerned, including Owner and Architect, within three days of the meeting.
B. Preconstruction Conference: Schedule and conduct a preconstruction conference before starting construction, at a time convenient to Owner and Architect, but no later than 15 days after execution of the Agreement.

   1. Conduct the conference to review responsibilities and personnel assignments.
   2. Attendees: Authorized representatives of Owner, Architect, and their consultants; Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the conference. Participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
   3. Agenda: Discuss items of significance that could affect progress, including the following:
      a. Tentative construction schedule.
      b. Phasing.
      c. Critical work sequencing and long-lead items.
      d. Designation of key personnel and their duties.
      e. Lines of communications.
      f. Procedures for processing field decisions and Change Orders.
      g. Procedures for RFIs.
      h. Procedures for testing and inspecting.
      i. Procedures for processing Applications for Payment.
      j. Distribution of the Contract Documents.
      k. Submittal procedures.
      l. Preparation of record documents.
      m. Use of the premises and existing building.
      n. Work restrictions.
      o. Working hours.
      p. Owner's occupancy requirements.
      q. Responsibility for temporary facilities and controls.
      r. Procedures for moisture and mold control.
      s. Procedures for disruptions and shutdowns.
      t. Construction waste management and recycling.
      u. Parking availability.
      v. Office, work, and storage areas.
      w. Equipment deliveries and priorities.
      x. First aid.
      y. Security.
      z. Progress cleaning.

   4. Minutes: Entity responsible for conducting meeting will record and distribute meeting minutes.

C. Preinstallation Conferences: Conduct a preinstallation conference at Project site before each construction activity that requires coordination with other construction.

   1. Attendees: Installer and representatives of manufacturers and fabricators involved in or affected by the installation and its coordination or integration with other materials and installations that have preceded or will follow, shall attend the meeting. Advise Architect of scheduled meeting dates.
   2. Agenda: Review progress of other construction activities and preparations for the particular activity under consideration, including requirements for the following:
      b. Options.
      c. Related RFIs.
      d. Related Change Orders.
e. Purchases.
f. Deliveries.
g. Submittals.
h. Possible conflicts.
i. Compatibility requirements.
j. Time schedules.
k. Weather limitations.
l. Manufacturer's written instructions.
m. Warranty requirements.
n. Compatibility of materials.
o. Acceptability of substrates.
p. Temporary facilities and controls.
q. Space and access limitations.
r. Regulations of authorities having jurisdiction.
s. Testing and inspecting requirements.
t. Installation procedures.
u. Coordination with other work.
v. Required performance results.
w. Protection of adjacent work.
x. Protection of construction and personnel.

3. Record significant conference discussions, agreements, and disagreements, including required corrective measures and actions.
4. Reporting: Distribute minutes of the meeting to each party present and to other parties requiring information.
5. Do not proceed with installation if the conference cannot be successfully concluded. Initiate whatever actions are necessary to resolve impediments to performance of the Work and reconvene the conference at earliest feasible date.

D. Project Closeout Conference: Schedule and conduct a project closeout conference, at a time convenient to Owner and Architect, but no later than 15 days prior to the scheduled date of Substantial Completion.

1. Conduct the conference to review requirements and responsibilities related to Project closeout.
2. Attendees: Authorized representatives of Owner, Architect, and their consultants; Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the meeting. Participants at the meeting shall be familiar with Project and authorized to conclude matters relating to the Work.
3. Agenda: Discuss items of significance that could affect or delay Project closeout, including the following:

   a. Preparation of record documents.
   b. Procedures required prior to inspection for Substantial Completion and for final inspection for acceptance.
   c. Submittal of written warranties.
   d. Requirements for preparing operations and maintenance data.
   e. Requirements for delivery of material samples, attic stock, and spare parts.
   f. Requirements for demonstration and training.
   g. Preparation of Contractor's punch list.
   h. Procedures for processing Applications for Payment at Substantial Completion and for final payment.
   i. Submittal procedures.
   j. Coordination of separate contracts.
   k. Owner's partial occupancy requirements.
   l. Installation of Owner's furniture, fixtures, and equipment.
   m. Responsibility for removing temporary facilities and controls.
4. Minutes: Entity conducting meeting will record and distribute meeting minutes.

E. Progress Meetings: Conduct progress meetings at biweekly intervals.

1. Coordinate dates of meetings with preparation of payment requests.
2. Attendees: In addition to representatives of Owner, and Architect, each contractor, subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the meeting shall be familiar with Project and authorized to conclude matters relating to the Work.
3. Agenda: Review and correct or approve minutes of previous progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to status of Project.

   a. Contractor's Construction Schedule: Review progress since the last meeting. Determine whether each activity is on time, ahead of schedule, or behind schedule, in relation to Contractor's construction schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.

      1) Review schedule for next period.

   b. Review present and future needs of each entity present, including the following:

      1) Interface requirements.
      2) Sequence of operations.
      3) Resolution of BIM component conflicts.
      4) Status of submittals.
      5) Deliveries.
      6) Off-site fabrication.
      7) Access.
      8) Site utilization.
      9) Temporary facilities and controls.
     10) Progress cleaning.
     11) Quality and work standards.
     12) Status of correction of deficient items.
     13) Field observations.
     14) Status of RFIs.
     15) Status of proposal requests.
     16) Pending changes.
     17) Status of Change Orders.
     18) Pending claims and disputes.
     19) Documentation of information for payment requests.

4. Minutes: Entity responsible for conducting the meeting will record and distribute the meeting minutes to each party present and to parties requiring information.

   a. Schedule Updating: Revise Contractor's construction schedule after each progress meeting where revisions to the schedule have been made or recognized. Issue revised schedule concurrently with the report of each meeting.
PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 013100
SECTION 013200 - CONSTRUCTION PROGRESS DOCUMENTATION

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 documenting the progress of construction during performance of the Work, including the following:

1. Contractor's construction schedule.
2. Special reports.

B. Related Requirements:

1. Section 013300 "Submittal Procedures" for submitting schedules and reports.
2. Section 014000 "Quality Requirements" for submitting a schedule of tests and inspections.

1.3 DEFINITIONS

A. Activity: A discrete part of a project that can be identified for planning, scheduling, monitoring, and controlling the construction project. Activities included in a construction schedule consume time and resources.

1. Critical Activity: An activity on the critical path that must start and finish on the planned early start and finish times.
2. Predecessor Activity: An activity that precedes another activity in the network.
3. Successor Activity: An activity that follows another activity in the network.

B. Cost Loading: The allocation of the schedule of values for the completion of an activity as scheduled. The sum of costs for all activities must equal the total Contract Sum unless otherwise approved by Architect.

C. CPM: Critical path method, which is a method of planning and scheduling a construction project where activities are arranged based on activity relationships. Network calculations determine when activities can be performed and the critical path of Project.

D. Critical Path: The longest connected chain of interdependent activities through the network schedule that establishes the minimum overall Project duration and contains no float.

E. Event: The starting or ending point of an activity.

F. Float: The measure of leeway in starting and completing an activity.

1. Float time is not for the exclusive use or benefit of either Owner or Contractor, but is a jointly owned, expiring Project resource available to both parties as needed to meet schedule milestones and Contract completion date.
2. Free float is the amount of time an activity can be delayed without adversely affecting the early start of the successor activity.
3. Total float is the measure of leeway in starting or completing an activity without adversely affecting the planned Project completion date.

G. Resource Loading: The allocation of manpower and equipment necessary for the completion of an activity as scheduled.

1.4 INFORMATIONAL SUBMITTALS

A. Format for Submittals: Submit required submittals in the following format:
   1. Working electronic copy of schedule file, where indicated.
   2. PDF electronic file.
   3. Two paper copies only if accompanied by color charts and of material samples.

B. Startup construction schedule.
   1. Approval of cost-loaded, startup construction schedule will not constitute approval of schedule of values for cost-loaded activities.

C. Startup Network Diagram: Of size required to display entire network for entire construction period. Show logic ties for activities.

D. Contractor's Construction Schedule: Initial schedule, of size required to display entire schedule for entire construction period.
   1. Submit a working electronic copy of schedule, using software indicated, and labeled to comply with requirements for submittals. Include type of schedule (initial or updated) and date on label.

E. CPM Reports: Concurrent with CPM schedule, submit each of the following reports. Format for each activity in reports shall contain activity number, activity description, cost and resource loading, original duration, remaining duration, early start date, early finish date, late start date, late finish date, and total float in calendar days.
   1. Activity Report: List of all activities sorted by activity number and then early start date, or actual start date if known.
   2. Logic Report: List of preceding and succeeding activities for all activities, sorted in ascending order by activity number and then early start date, or actual start date if known.
   3. Total Float Report: List of all activities sorted in ascending order of total float.

F. Construction Schedule Updating Reports: Submit with Applications for Payment.

G. Daily Construction Reports: Submit at weekly intervals.

H. Material Location Reports: Submit at bi-weekly intervals.

I. Site Condition Reports: Submit at time of discovery of differing conditions.

J. Special Reports: Submit at time of unusual event.

K. Qualification Data: For scheduling consultant.

1.5 QUALITY ASSURANCE

A. Scheduling Consultant Qualifications: An experienced specialist in CPM scheduling and reporting, with capability of producing CPM reports and diagrams within 24 hours of Architect's request.
B. Prescheduling Conference: Conduct conference at Project site to comply with requirements in Section 013100 "Project Management and Coordination." Review methods and procedures related to the preliminary construction schedule and Contractor's construction schedule, including, but not limited to, the following:

1. Review software limitations and content and format for reports.
2. Verify availability of qualified personnel needed to develop and update schedule.
3. Discuss constraints, including work stages, interim milestones and Owner occupancy.
4. Review delivery dates for Owner-furnished products.
5. Review schedule for work of Owner's separate contracts.
6. Review submittal requirements and procedures.
7. Review time required for review of submittals and resubmittals.
8. Review requirements for tests and inspections by independent testing and inspecting agencies.
9. Review time required for Project closeout and Owner startup procedures.
10. Review and finalize list of construction activities to be included in schedule.
11. Review procedures for updating schedule.

1.6 COORDINATION

A. Coordinate Contractor's construction schedule with the schedule of values, list of subcontracts, submittal schedule, progress reports, payment requests, and other required schedules and reports.

1. Secure time commitments for performing critical elements of the Work from entities involved.
2. Coordinate each construction activity in the network with other activities and schedule them in proper sequence.

PART 2 - PRODUCTS

2.1 CONTRACTOR'S CONSTRUCTION SCHEDULE, GENERAL

A. Time Frame: Extend schedule from date established for commencement of the Work.

1. Contract completion date shall not be changed by submission of a schedule that shows an early completion date, unless specifically authorized by Change Order.

B. Activities: Treat each story or separate area as a separate numbered activity for each main element of the Work. Comply with the following:

1. Activity Duration: Define activities so no activity is longer than 20 days, unless specifically allowed by Architect.
2. Procurement Activities: Include procurement process activities for the following long lead items and major items, requiring a cycle of more than 60 days, as separate activities in schedule. Procurement cycle activities include, but are not limited to, submittals, approvals, purchasing, fabrication, and delivery.
   a. Solid Core Wood Doors
   b. Lecture hall tablet armchairs
   c. Lighting
4. Startup and Testing Time: Include no fewer than 15 days for startup and testing.
5. **Substantial Completion**: Indicate completion in advance of date established for Substantial Completion, and allow time for Architect's administrative procedures necessary for certification of Substantial Completion.

6. **Punch List and Final Completion**: Include not more than 14 days for completion of punch list items and final completion.

C. **Constraints**: Include constraints and work restrictions indicated in the Contract Documents and as follows in schedule, and show how the sequence of the Work is affected.

1. **Work under More Than One Contract**: Include a separate activity for each contract.
2. **Work by Owner**: Include a separate activity for each portion of the Work performed by Owner.
3. **Products Ordered in Advance**: Include a separate activity for each product. Include delivery date indicated in Section 011000 "Summary." Delivery dates indicated stipulate the earliest possible delivery date.
4. **Owner-Furnished Products**: Include a separate activity for each product. Include delivery date indicated in Section 011000 "Summary." Delivery dates indicated stipulate the earliest possible delivery date.
5. **Work Restrictions**: Show the effect of the following items on the schedule:
   a. Seasonal variations.
   b. Environmental control.

6. **Work Stages**: Indicate important stages of construction for each major portion of the Work, including, but not limited to, the following:
   a. Subcontract awards.
   b. Submittals.
   c. Purchases.
   d. Mockups.
   e. Fabrication.
   f. Sample testing.
   g. Deliveries.
   h. Installation.
   i. Tests and inspections.
   j. Adjusting.
   k. Curing.
   l. Building flush-out.
   m. Startup and placement into final use and operation.

D. **Milestones**: Include milestones indicated in the Contract Documents in schedule, including, but not limited to, the Notice to Proceed, Substantial Completion, and final completion.

E. **Upcoming Work Summary**: Prepare summary report indicating activities scheduled to occur or commence prior to submittal of next schedule update. Summarize the following issues:

1. Unresolved issues.
2. Unanswered Requests for Information.
3. Rejected or unreturned submittals.
4. Notations on returned submittals.

F. **Recovery Schedule**: When periodic update indicates the Work is 14 or more calendar days behind the current approved schedule, submit a separate recovery schedule indicating means by which Contractor intends to regain compliance with the schedule. Indicate changes to working hours, working days, crew sizes, and equipment required to achieve compliance, and date by which recovery will be accomplished.
G. Computer Scheduling Software: Prepare schedules using current version of a program that has been developed specifically to manage construction schedules.

2.2 CONTRACTOR'S CONSTRUCTION SCHEDULE (CPM SCHEDULE)

A. General: Prepare network diagrams using AON (activity-on-node) format.

B. Startup Network Diagram: Submit diagram within 14 days of date established for the Notice to Proceed. Outline significant construction activities for the first 90 days of construction. Include skeleton diagram for the remainder of the Work and a cash requirement prediction based on indicated activities.

C. CPM Schedule: Prepare Contractor's construction schedule using a time-scaled CPM network analysis diagram for the Work.

1. Develop network diagram in sufficient time to submit CPM schedule so it can be accepted for use no later than 60 days after date established for the Notice to Proceed.
   a. Failure to include any work item required for performance of this Contract shall not excuse Contractor from completing all work within applicable completion dates, regardless of Architect's approval of the schedule.

2. Conduct educational workshops to train and inform key Project personnel, including subcontractors' personnel, in proper methods of providing data and using CPM schedule information.

3. Establish procedures for monitoring and updating CPM schedule and for reporting progress. Coordinate procedures with progress meeting and payment request dates.

4. Use "one workday" as the unit of time for individual activities. Indicate nonworking days and holidays incorporated into the schedule in order to coordinate with the Contract Time.

D. CPM Schedule Preparation: Prepare a list of all activities required to complete the Work. Using the startup network diagram, prepare a skeleton network to identify probable critical paths.

1. Activities: Indicate the estimated time duration, sequence requirements, and relationship of each activity in relation to other activities. Include estimated time frames for the following activities:
   a. Preparation and processing of submittals.
   b. Mobilization and demobilization.
   c. Purchase of materials.
   d. Delivery.
   e. Fabrication.
   f. Utility interruptions.
   g. Installation.
   h. Work by Owner that may affect or be affected by Contractor's activities.
   i. Testing.
   j. Punch list and final completion.
   k. Activities occurring following final completion.

2. Critical Path Activities: Identify critical path activities, including those for interim completion dates. Scheduled start and completion dates shall be consistent with Contract milestone dates.

3. Processing: Process data to produce output data on a computer-drawn, time-scaled network. Revise data, reorganize activity sequences, and reproduce as often as necessary to produce the CPM schedule within the limitations of the Contract Time.

4. Format: Mark the critical path. Locate the critical path near center of network; locate paths with most float near the edges.
a. Subnetworks on separate sheets are permissible for activities clearly off the critical path.

E. Contract Modifications: For each proposed contract modification and concurrent with its submission, prepare a time-impact analysis using a network fragment to demonstrate the effect of the proposed change on the overall project schedule.

F. Initial Issue of Schedule: Prepare initial network diagram from a sorted activity list indicating straight "early start-total float." Identify critical activities. Prepare tabulated reports showing the following:

1. Contractor or subcontractor and the Work or activity.
2. Description of activity.
3. Main events of activity.
4. Immediate preceding and succeeding activities.
5. Early and late start dates.
6. Early and late finish dates.
7. Activity duration in workdays.
8. Total float or slack time.
10. Dollar value of activity (coordinated with the schedule of values).

G. Schedule Updating: Concurrent with making revisions to schedule, prepare tabulated reports showing the following:

1. Identification of activities that have changed.
2. Changes in early and late start dates.
3. Changes in early and late finish dates.
5. Changes in the critical path.
6. Changes in total float or slack time.

H. Value Summaries: Prepare two cumulative value lists, sorted by finish dates.

1. In first list, tabulate activity number, early finish date, dollar value, and cumulative dollar value.
2. In second list, tabulate activity number, late finish date, dollar value, and cumulative dollar value.
3. In subsequent issues of both lists, substitute actual finish dates for activities completed as of list date.
4. Prepare list for ease of comparison with payment requests; coordinate timing with progress meetings.

a. In both value summary lists, tabulate "actual percent complete" and "cumulative value completed" with total at bottom.

b. Submit value summary printouts one week before each regularly scheduled progress meeting.

2.3 REPORTS

A. Daily Construction Reports: Prepare a daily construction report recording the following information concerning events at Project site:

1. List of subcontractors at Project site.
2. List of separate contractors at Project site.
3. Approximate count of personnel at Project site.
4. Equipment at Project site.
5. Material deliveries.
6. High and low temperatures and general weather conditions, including presence of rain or snow.
7. Accidents.
8. Meetings and significant decisions.
9. Unusual events (see special reports).
10. Stoppages, delays, shortages, and losses.
11. Meter readings and similar recordings.
13. Orders and requests of authorities having jurisdiction.
14. Change Orders received and implemented.
15. Services connected and disconnected.
16. Equipment or system tests and startups.
17. Partial completions and occupancies.
18. Substantial Completions authorized.

B. Material Location Reports: At bi-weekly intervals, prepare and submit a comprehensive list of materials delivered to and stored at Project site. List shall be cumulative, showing materials previously reported plus items recently delivered. Include with list a statement of progress on and delivery dates for materials or items of equipment fabricated or stored away from Project site. Indicate the following categories for stored materials:

1. Material stored prior to previous report and remaining in storage.
2. Material stored prior to previous report and since removed from storage and installed.
3. Material stored following previous report and remaining in storage.

C. Site Condition Reports: Immediately on discovery of a difference between site conditions and the Contract Documents, prepare and submit a detailed report. Submit with a Request for Information. Include a detailed description of the differing conditions, together with recommendations for changing the Contract Documents.

PART 3 - EXECUTION

3.1 CONTRACTOR'S CONSTRUCTION SCHEDULE

A. Scheduling Consultant: Engage a consultant to provide planning, evaluation, and reporting using CPM scheduling.

1. In-House Option: Owner may waive the requirement to retain a consultant if Contractor employs skilled personnel with experience in CPM scheduling and reporting techniques. Submit qualifications.
2. Meetings: Scheduling consultant shall attend all meetings related to Project progress, alleged delays, and time impact.

B. Contractor's Construction Schedule Updating: At bi-weekly intervals, update schedule to reflect actual construction progress and activities. Issue schedule 2 days before each regularly scheduled progress meeting.

1. Revise schedule immediately after each meeting or other activity where revisions have been recognized or made. Issue updated schedule concurrently with the report of each such meeting.
2. Include a report with updated schedule that indicates every change, including, but not limited to, changes in logic, durations, actual starts and finishes, and activity durations.
3. As the Work progresses, indicate final completion percentage for each activity.
C. Distribution: Distribute copies of approved schedule to Architect, Owner, separate contractors, testing and inspecting agencies, and other parties identified by Contractor with a need-to-know schedule responsibility.

1. Post copies in Project meeting rooms and temporary field offices.
2. When revisions are made, distribute updated schedules to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in performance of construction activities.

END OF SECTION 013200
SECTION 017700 - CLOSEOUT 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 contract closeout, including, but not limited to, the following:

1. Substantial Completion procedures.
2. Final completion procedures.
3. Warranties.
4. Final cleaning.
5. Repair of the Work.

B. Related Requirements:

1. Section 017300 "Execution" for progress cleaning of Project site.
2. Section 017823 "Operation and Maintenance Data" for operation and maintenance manual requirements.
3. Section 017839 "Project Record Documents" for submitting record Drawings, record Specifications, and record Product Data.

1.3 ACTION SUBMITTALS

A. Product Data: For cleaning agents.

B. Contractor's List of Incomplete Items: Initial submittal at Substantial Completion.

C. Certified List of Incomplete Items: Final submittal at Final Completion.

1.4 CLOSEOUT SUBMITTALS

A. Certificates of Release: From authorities having jurisdiction.

B. Certificate of Insurance: For continuing coverage.

C. Field Report: For pest control inspection.

1.5 MAINTENANCE MATERIAL SUBMITTALS

A. Schedule of Maintenance Material Items: For maintenance material submittal items specified in other Sections.

1.6 SUBSTANTIAL COMPLETION PROCEDURES

A. Contractor's List of Incomplete Items: Prepare and submit a list of items to be completed and corrected (Contractor's punch list), indicating the value of each item on the list and reasons why the Work is incomplete.
B. Submittals Prior to Substantial Completion: Complete the following a minimum of 10 days prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request.

1. Certificates of Release: Obtain and submit releases from authorities having jurisdiction permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
2. Submit closeout submittals specified in other Division 01 Sections, including project record documents, operation and maintenance manuals, final completion construction photographic documentation, damage or settlement surveys, property surveys, and similar final record information.
3. Submit closeout submittals specified in individual Sections, including specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
4. Submit maintenance material submittals specified in individual Sections, including tools, spare parts, extra materials, and similar items, and deliver to location designated by Architect. Label with manufacturer's name and model number where applicable.
   a. Schedule of Maintenance Material Items: Prepare and submit schedule of maintenance material submittal items, including name and quantity of each item and name and number of related Specification Section. Obtain Architect's signature for receipt of submittals.
5. Submit test/adjust/balance records.
6. Submit changeover information related to Owner's occupancy, use, operation, and maintenance.

C. Procedures Prior to Substantial Completion: Complete the following a minimum of 10 days prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request.

1. Advise Owner of pending insurance changeover requirements.
2. Make final changeover of permanent locks and deliver keys to Owner. Advise Owner's personnel of changeover in security provisions.
3. Complete startup and testing of systems and equipment.
4. Perform preventive maintenance on equipment used prior to Substantial Completion.
5. Instruct Owner's personnel in operation, adjustment, and maintenance of products, equipment, and systems. Submit demonstration and training video recordings specified in Section 017900 "Demonstration and Training."
6. Advise Owner of changeover in heat and other utilities.
7. Participate with Owner in conducting inspection and walkthrough with local emergency responders.
8. Terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.
9. Complete final cleaning requirements, including touchup painting.
10. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.

D. Inspection: Submit a written request for inspection to determine Substantial Completion a minimum of 10 days prior to date the work will be completed and ready for final inspection and tests. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare the Certificate of Substantial Completion after inspection or will notify Contractor of items, either on Contractor's list or additional items identified by Architect, that must be completed or corrected before certificate will be issued.

1. Re-inspection: Request re-inspection when the Work identified in previous inspections as incomplete is completed or corrected.
2. Results of completed inspection will form the basis of requirements for final completion.
1.7 FINAL COMPLETION PROCEDURES

A. Submittals Prior to Final Completion: Before requesting final inspection for determining final completion, complete the following:

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

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

1. Re-inspection: Request re-inspection when the Work identified in previous inspections as incomplete is completed or corrected.

1.8 LIST OF INCOMPLETE ITEMS (PUNCH LIST)

A. Organization of List: Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction.

1. Organize list of spaces in sequential order.
2. Organize items applying to each space by major element, including categories for ceiling, individual walls, floors, equipment, and building systems.
3. Include the following information at the top of each page:
   a. Project name.
   b. Date.
   c. Name of Architect.
   d. Name of Contractor.
   e. Page number.
4. Submit list of incomplete items in the following format:

1.9 SUBMITTAL OF PROJECT WARRANTIES

A. Time of Submittal: Submit written warranties on request of Architect for designated portions of the Work where commencement of warranties other than date of Substantial Completion is indicated, or when delay in submittal of warranties might limit Owner's rights under warranty.

B. Partial Occupancy: Submit properly executed warranties within 15 days of completion of designated portions of the Work that are completed and occupied or used by Owner during construction period by separate agreement with Contractor.
C. Organize warranty documents into an orderly sequence based on the table of contents of Project Manual.

1. Bind warranties and bonds in heavy-duty, three-ring, vinyl-covered, loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2-by-11-inch paper.
2. Provide heavy paper dividers with plastic-covered tabs for each separate warranty. Mark tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product and the name, address, and telephone number of Installer.
3. Identify each binder on the front and spine with the typed or printed title "WARRANTIES," Project name, and name of Contractor.
4. Warranty Electronic File: Scan warranties and bonds and assemble complete warranty and bond submittal package into a single indexed electronic PDF file with links enabling navigation to each item. Provide bookmarked table of contents at beginning of document.

D. Provide additional copies of each warranty to include in operation and maintenance manuals.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.

1. Use cleaning products that comply with Green Seal's GS-37, or if GS-37 is not applicable, use products that comply with the California Code of Regulations maximum allowable VOC levels.

PART 3 - EXECUTION

3.1 FINAL CLEANING

A. General: Perform final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.

B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.

1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a designated portion of Project:

a. Clean Project site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.

b. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.

c. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.

d. Remove tools, construction equipment, machinery, and surplus material from Project site.

e. Remove snow and ice to provide safe access to building.

f. Clean exposed exterior and interior hard-suraced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.

g. Remove debris and surface dust from limited access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.

h. Sweep concrete floors broom clean in unoccupied spaces.
CLOSEOUT PROCEDURES

i. Vacuum carpet and similar soft surfaces, removing debris and excess nap; clean according to manufacturer's recommendations if visible soil or stains remain.

j. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compounds and other noticeable, vision-obscuring materials. Polish mirrors and glass, taking care not to scratch surfaces.

k. Remove labels that are not permanent.

l. Wipe surfaces of mechanical and electrical equipment and similar equipment. Remove excess lubrication, paint and mortar droppings, and other foreign substances.

m. Clean plumbing fixtures to a sanitary condition, free of stains, including stains resulting from water exposure.

n. Replace disposable air filters and clean permanent air filters. Clean exposed surfaces of diffusers, registers, and grills.

o. Clean ducts, blowers, and coils if units were operated without filters during construction or that display contamination with particulate matter on inspection.


p. Clean light fixtures, lamps, globes, and reflectors to function with full efficiency.

q. Leave Project clean and ready for occupancy.

C. Pest Control: Comply with pest control requirements in Section 015000 "Temporary Facilities and Controls." Prepare written report.

D. Construction Waste Disposal: Comply with waste disposal requirements in Section 015000 "Temporary Facilities and Controls."

3.2 REPAIR OF THE WORK

A. Complete repair and restoration operations before requesting inspection for determination of Substantial Completion.

B. Repair or remove and replace defective construction. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment. Where damaged or worn items cannot be repaired or restored, provide replacements. Remove and replace operating components that cannot be repaired. Restore damaged construction and permanent facilities used during construction to specified condition.

1. Remove and replace chipped, scratched, and broken glass, reflective surfaces, and other damaged transparent materials.

2. Touch up and otherwise repair and restore marred or exposed finishes and surfaces. Replace finishes and surfaces that that already show evidence of repair or restoration.

   a. Do not paint over "UL" and other required labels and identification, including mechanical and electrical nameplates. Remove paint applied to required labels and identification.

3. Replace parts subject to operating conditions during construction that may impede operation or reduce longevity.

4. Replace burned-out bulbs, bulbs noticeably dimmed by hours of use, and defective and noisy starters in fluorescent and mercury vapor fixtures to comply with requirements for new fixtures.

END OF SECTION 017700
SECTION 017823 - OPERATION AND MAINTENANCE DATA

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 preparing operation and maintenance manuals, including the following:

1. Operation and maintenance documentation directory.
2. Emergency manuals.
3. Operation manuals for systems, subsystems, and equipment.
4. Product maintenance manuals.
5. Systems and equipment maintenance manuals.

B. Related Requirements:

1. Section 013300 "Submittal Procedures" for submitting copies of submittals for operation and maintenance manuals.

1.3 DEFINITIONS

A. System: An organized collection of parts, equipment, or subsystems united by regular interaction.

B. Subsystem: A portion of a system with characteristics similar to a system.

1.4 CLOSEOUT SUBMITTALS

A. Manual Content: Operations and maintenance manual content is specified in individual Specification Sections to be reviewed at the time of Section submittals. Submit reviewed manual content formatted and organized as required by this Section.

1. Architect will comment on whether content of operations and maintenance submittals are acceptable.
2. Where applicable, clarify and update reviewed manual content to correspond to revisions and field conditions.

B. Format: Submit operations and maintenance manuals in the following format:

   a. Name each indexed document file in composite electronic index with applicable item name. Include a complete electronically linked operation and maintenance directory.
   b. Enable inserted reviewer comments on draft submittals.

2. One paper copy. Include a complete operation and maintenance directory. Enclose title pages and directories in clear plastic sleeves. Architect will return 1 copy.
C. Initial Manual Submittal: Submit draft copy of each manual at least 30 days before commencing demonstration and training. Architect will comment on whether general scope and content of manual are acceptable.

D. Final Manual Submittal: Submit each manual in final form prior to requesting inspection for Substantial Completion and at least 15 days before commencing demonstration and training. Architect will return copy with comments.

1. Correct or revise each manual to comply with Architect's comments. Submit copies of each corrected manual within 15 days of receipt of Architect's comments and prior to commencing demonstration and training.

PART 2 - PRODUCTS

2.1 OPERATION AND MAINTENANCE DOCUMENTATION DIRECTORY

A. Directory: Prepare a single, comprehensive directory of emergency, operation, and maintenance data and materials, listing items and their location to facilitate ready access to desired information. Include a section in the directory for each of the following:

1. List of documents.
2. List of systems.
3. List of equipment.
4. Table of contents.

B. List of Systems and Subsystems: List systems alphabetically. Include references to operation and maintenance manuals that contain information about each system.

C. List of Equipment: List equipment for each system, organized alphabetically by system. For pieces of equipment not part of system, list alphabetically in separate list.

D. Tables of Contents: Include a table of contents for each emergency, operation, and maintenance manual.

E. Identification: In the documentation directory and in each operation and maintenance manual, identify each system, subsystem, and piece of equipment with same designation used in the Contract Documents. If no designation exists, assign a designation according to ASHRAE Guideline 4, "Preparation of Operating and Maintenance Documentation for Building Systems."

2.2 REQUIREMENTS FOR EMERGENCY, OPERATION, AND MAINTENANCE MANUALS

A. Organization: Unless otherwise indicated, organize each manual into a separate section for each system and subsystem, and a separate section for each piece of equipment not part of a system. Each manual shall contain the following materials, in the order listed:

1. Title page.
2. Table of contents.

B. Title Page: Include the following information:

1. Subject matter included in manual.
2. Name and address of Project.
3. Name and address of Owner.
4. Date of submittal.
5. Name and contact information for Contractor.
6. Name and contact information for Construction Manager.
7. Name and contact information for Architect.
8. Name and contact information for Commissioning Authority.
9. Names and contact information for major consultants to the Architect that designed the systems contained in the manuals.
10. Cross-reference to related systems in other operation and maintenance manuals.

C. Table of Contents: List each product included in manual, identified by product name, indexed to the content of the volume, and cross-referenced to Specification Section number in Project Manual.

1. If operation or maintenance documentation requires more than one volume to accommodate data, include comprehensive table of contents for all volumes in each volume of the set.

D. Manual Contents: Organize into sets of manageable size. Arrange contents alphabetically by system, subsystem, and equipment. If possible, assemble instructions for subsystems, equipment, and components of one system into a single binder.

E. Manuals, Electronic Files: Submit manuals in the form of a multiple file composite electronic PDF file for each manual type required.

1. Electronic Files: Use electronic files prepared by manufacturer where available. Where scanning of paper documents is required, configure scanned file for minimum readable file size.
2. File Names and Bookmarks: Enable bookmarking of individual documents based on file names. Name document files to correspond to system, subsystem, and equipment names used in manual directory and table of contents. Group documents for each system and subsystem into individual composite bookmarked files, then create composite manual, so that resulting bookmarks reflect the system, subsystem, and equipment names in a readily navigated file tree. Configure electronic manual to display bookmark panel on opening file.

F. Manuals, Paper Copy: Submit manuals in the form of hard copy, bound and labeled volumes.

1. Binders: Heavy-duty, three-ring, vinyl-covered, binders, in thickness necessary to accommodate contents, sized to hold 8-1/2-by-11-inch paper; with clear plastic sleeve on spine to hold label describing contents and with pockets inside covers to hold folded oversize sheets.
   a. If two or more binders are necessary to accommodate data of a system, organize data in each binder into groupings by subsystem and related components. Cross-reference other binders if necessary to provide essential information for proper operation or maintenance of equipment or system.
   b. Identify each binder on front and spine, with printed title "OPERATION AND MAINTENANCE MANUAL," Project title or name, and subject matter of contents. Indicate volume number for multiple-volume sets.
2. Dividers: Heavy-paper dividers with plastic-covered tabs for each section of the manual. Mark each tab to indicate contents. Include typed list of products and major components of equipment included in the section on each divider, cross-referenced to Specification Section number and title of Project Manual.
3. Protective Plastic Sleeves: Transparent plastic sleeves designed to enclose diagnostic software storage media for computerized electronic equipment.
5. Drawings: Attach reinforced, punched binder tabs on drawings and bind with text.
   a. If oversize drawings are necessary, fold drawings to same size as text pages and use as foldouts.
b. If drawings are too large to be used as foldouts, fold and place drawings in labeled envelopes and bind envelopes in rear of manual. At appropriate locations in manual, insert typewritten pages indicating drawing titles, descriptions of contents, and drawing locations.

2.3 EMERGENCY MANUALS

A. Content: Organize manual into a separate section for each of the following:

1. Type of emergency.
2. Emergency instructions.
3. Emergency procedures.

B. Type of Emergency: Where applicable for each type of emergency indicated below, include instructions and procedures for each system, subsystem, piece of equipment, and component:

1. Fire.
2. Flood.
5. Power failure.
7. System, subsystem, or equipment failure.
8. Chemical release or spill.

C. Emergency Instructions: Describe and explain warnings, trouble indications, error messages, and similar codes and signals. Include responsibilities of Owner's operating personnel for notification of Installer, supplier, and manufacturer to maintain warranties.

D. Emergency Procedures: Include the following, as applicable:

1. Instructions on stopping.
2. Shutdown instructions for each type of emergency.
3. Operating instructions for conditions outside normal operating limits.
4. Required sequences for electric or electronic systems.
5. Special operating instructions and procedures.

2.4 OPERATION MANUALS

A. Content: In addition to requirements in this Section, include operation data required in individual Specification Sections and the following information:

2. Performance and design criteria if Contractor has delegated design responsibility.
3. Operating standards.
4. Operating procedures.
5. Operating logs.
6. Wiring diagrams.
7. Control diagrams.
8. Piped system diagrams.
9. Precautions against improper use.
10. License requirements including inspection and renewal dates.

B. Descriptions: Include the following:
1. Product name and model number. Use designations for products indicated on Contract Documents.
2. Manufacturer's name.
3. Equipment identification with serial number of each component.
4. Equipment function.
5. Operating characteristics.
6. Limiting conditions.
7. Performance curves.
8. Engineering data and tests.
9. Complete nomenclature and number of replacement parts.

C. Operating Procedures: Include the following, as applicable:

1. Startup procedures.
2. Equipment or system break-in procedures.
3. Routine and normal operating instructions.
4. Regulation and control procedures.
5. Instructions on stopping.
7. Seasonal and weekend operating instructions.
8. Required sequences for electric or electronic systems.
9. Special operating instructions and procedures.

D. Systems and Equipment Controls: Describe the sequence of operation, and diagram controls as installed.

E. Piped Systems: Diagram piping as installed, and identify color-coding where required for identification.

2.5 PRODUCT MAINTENANCE MANUALS

A. Content: Organize manual into a separate section for each product, material, and finish. Include source information, product information, maintenance procedures, repair materials and sources, and warranties and bonds, as described below.

B. Source Information: List each product included in manual, identified by product name and arranged to match manual's table of contents. For each product, list name, address, and telephone number of Installer or supplier and maintenance service agent, and cross-reference Specification Section number and title in Project Manual and drawing or schedule designation or identifier where applicable.

C. Product Information: Include the following, as applicable:

1. Product name and model number.
2. Manufacturer's name.
3. Color, pattern, and texture.
5. Reordering information for specially manufactured products.

D. Maintenance Procedures: Include manufacturer's written recommendations and the following:

1. Inspection procedures.
2. Types of cleaning agents to be used and methods of cleaning.
3. List of cleaning agents and methods of cleaning detrimental to product.
4. Schedule for routine cleaning and maintenance.
5. Repair instructions.
E. Repair Materials and Sources: Include lists of materials and local sources of materials and related services.

F. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.

1. Include procedures to follow and required notifications for warranty claims.

2.6 SYSTEMS AND EQUIPMENT MAINTENANCE MANUALS

A. Content: For each system, subsystem, and piece of equipment not part of a system, include source information, manufacturers' maintenance documentation, maintenance procedures, maintenance and service schedules, spare parts list and source information, maintenance service contracts, and warranty and bond information, as described below.

B. Source Information: List each system, subsystem, and piece of equipment included in manual, identified by product name and arranged to match manual's table of contents. For each product, list name, address, and telephone number of Installer or supplier and maintenance service agent, and cross-reference Specification Section number and title in Project Manual and drawing or schedule designation or identifier where applicable.

C. Manufacturers' Maintenance Documentation: Manufacturers' maintenance documentation including the following information for each component part or piece of equipment:

1. Standard maintenance instructions and bulletins.
2. Drawings, diagrams, and instructions required for maintenance, including disassembly and component removal, replacement, and assembly.
3. Identification and nomenclature of parts and components.
4. List of items recommended to be stocked as spare parts.

D. Maintenance Procedures: Include the following information and items that detail essential maintenance procedures:

1. Test and inspection instructions.
2. Troubleshooting guide.
3. Precautions against improper maintenance.
4. Disassembly; component removal, repair, and replacement; and reassembly instructions.
5. Aligning, adjusting, and checking instructions.
6. Demonstration and training video recording, if available.

E. Maintenance and Service Schedules: Include service and lubrication requirements, list of required lubricants for equipment, and separate schedules for preventive and routine maintenance and service with standard time allotment.

1. Scheduled Maintenance and Service: Tabulate actions for daily, weekly, monthly, quarterly, semiannual, and annual frequencies.
2. Maintenance and Service Record: Include manufacturers' forms for recording maintenance.

F. Spare Parts List and Source Information: Include lists of replacement and repair parts, with parts identified and cross-referenced to manufacturers' maintenance documentation and local sources of maintenance materials and related services.

G. Maintenance Service Contracts: Include copies of maintenance agreements with name and telephone number of service agent.
H. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.

1. Include procedures to follow and required notifications for warranty claims.

PART 3 - EXECUTION

3.1 MANUAL PREPARATION

A. Operation and Maintenance Documentation Directory: Prepare a separate manual that provides an organized reference to emergency, operation, and maintenance manuals.

B. Emergency Manual: Assemble a complete set of emergency information indicating procedures for use by emergency personnel and by Owner's operating personnel for types of emergencies indicated.

C. Product Maintenance Manual: Assemble a complete set of maintenance data indicating care and maintenance of each product, material, and finish incorporated into the Work.

D. Operation and Maintenance Manuals: Assemble a complete set of operation and maintenance data indicating operation and maintenance of each system, subsystem, and piece of equipment not part of a system.

1. Engage a factory-authorized service representative to assemble and prepare information for each system, subsystem, and piece of equipment not part of a system.

2. Prepare a separate manual for each system and subsystem, in the form of an instructional manual for use by Owner's operating personnel.

E. Manufacturers' Data: Where manuals contain manufacturers' standard printed data, include only sheets pertinent to product or component installed. Mark each sheet to identify each product or component incorporated into the Work. If data include more than one item in a tabular format, identify each item using appropriate references from the Contract Documents. Identify data applicable to the Work and delete references to information not applicable.

1. Prepare supplementary text if manufacturers' standard printed data are not available and where the information is necessary for proper operation and maintenance of equipment or systems.

F. Drawings: Prepare drawings supplementing manufacturers' printed data to illustrate the relationship of component parts of equipment and systems and to illustrate control sequence and flow diagrams. Coordinate these drawings with information contained in record Drawings to ensure correct illustration of completed installation.

1. Do not use original project record documents as part of operation and maintenance manuals.

2. Comply with requirements of newly prepared record Drawings in Section 017839 "Project Record Documents."

G. Comply with Section 017700 "Closeout Procedures" for schedule for submitting operation and maintenance documentation.

END OF SECTION 017823