



HURST-ROSCHE, INC.

PROJECT MANUAL FOR

NEW OFFICE
CHRISTIAN COUNTY SHERIFF'S DEPARTMENT
214 WEST MARKET STREET
TAYLORVILLE, CHRISTIAN COUNTY, ILLINOIS
HR# 390-1533

Prepared for

County of Christian
Taylorville, Illinois



Karl G. Tabor

MARCH 15, 2024

Bid Package No. _____

HURST – ROSCHE INC.

1400 E. Tremont St.

Hillsboro, IL 62049

217-532-3959

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CHRISTIAN COUNTY SHERIFF'S DEPARTMENT
214 WEST MARKET STREET
TAYLORVILLE, CHRISTIAN COUNTY, ILLINOIS

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SPECIFIERS:

Architectural: Karl G. Tabor, AIA

Signed: 3-15-2024
Expiration: 11-30-2024

DOCUMENT 001116 - INVITATION TO BID

Project: **NEW OFFICE
CHRISTIAN COUNTY SHERIFF'S DEPARTMENT
214 WEST MARKET STREET
TAYLORVILLE, CHRISTIAN COUNTY, ILLINOIS
HR# 390-1533**

Owner: **COUNTY OF CHRISTIAN
TAYLORVILLE, ILLINOIS**

Architect/Engineer: Hurst-Rosche, Inc.
200 N. Market Street
Marion, Illinois 62959

Date: **MARCH 15, 2024**

The Owner will receive Bids until **11:00 AM** local prevailing time on **Thursday the 18th day of APRIL 2024**, at **Christian County Courthouse, 101 S. Main Street, Taylorville, IL 62568** for the following work:

SCOPE OF WORK: The work consists of interior remodel of existing office space, with new walls, doors, flooring, and painting – and modifications to HVAC and Electrical in coordination with wall and room changes. Hardware upgrades for some existing interior doors to remain.

A Pre-bid Meeting will be held on **TUESDAY, the 2nd day of APRIL 2024, at 11:00 AM**, prevailing time, at **214 West Market Street, Taylorville, Illinois 62568**.

Drawings and specifications may be obtained at the office of Hurst-Rosche, Inc., 1400 E. Tremont Street, Hillsboro, Illinois, **after March 18, 2024** by paying a non-refundable of \$100.00 (\$125.00 if mailed) for each set of drawings and specifications.

Bidding Documents, Drawings and Specifications, may be examined by prospective bidders and material suppliers at the offices of Hurst-Rosche, Inc., 1400 E. Tremont Street, Hillsboro, Illinois, and the following Plan Rooms:

Central Illinois Plan Room
1620 S. 5th Street
Springfield, IL 62703

Greater Peoria Contractors & Suppliers Association
1811 West Altorfer Drive
Peoria, IL 61615

Southern Illinois Builders Association
1468 Green Mount Road
O'Fallon, Illinois 62269

McGraw Hill Construction
www.dodgeprojects.construction.com

Drawings and specifications will be available for viewing on the internet at: www.hurst-rosche.com. The documents are being provided for reference purposes only. Bidders are encouraged to obtain a signed and sealed hard set of the bidding documents. At a minimum, bidders must obtain clean copies of the bid

forms from the offices of Hurst-Rosche Inc. by paying a non-refundable amount of \$10.00 to submit a bid for this project.

The Owner requires the project to be substantially complete by July 15, 2024. Should the Contractor fail to complete the work within such time, contractor agrees to compensate and will apply to the Owner for each and every day of such delay in completion of the work beyond the contract time in the sum of one hundred dollars (\$100.00) per day for work not completed by the substantial completion date as liquidated damages.

Bid security – Bids shall be accompanied by a bid security in the form of a bid bond, certified check, cashier's check, or bank draft in the amount of 10% of the bid amount. Bid bonds shall meet the acceptance of the County of Christian, and that acceptance shall be at the sole discretion of the County. In general, bond acceptance will be based by the County upon

- 1) coverage on performance of the contract and the payment of all obligations arising thereunder;
- 2) the bond amount matching the full amount of the bid; and
- 3) execution by a surety acceptable to the County. In general, acceptance of the surety will be based by the County by the bond company having a current Best's rating of any level of "B" or better and a current Best's financial class of "V" or higher.

Submit two copies of your Bid on the Bid Form provided. Bidders may supplement this form as appropriate.

Your Bid will be required to be submitted under a condition of irrevocability for a period of 60 days after submission.

The County of Christian reserves the right to reject any or all bids or waive any informality in any bid and to accept any bid considered advantageous to the County. Further, the County of Christian, when its opinion is in the best interest of the County, reserves the right to:

- 1) accept any bid;
- 2) wave technical deficiencies and irregularities;
- 3) allow bidder to remedy technical deficiencies or irregularities within a stated time;
- 4) rescind any notice of award if the County of Christian determines the notice of award was issued in error;
- 5) re-bid any contract.

William R. Kennedy, or successor appointed by the chairman of the board, will act as Construction Inspector for the County.

COUNTY OF CHRISTIAN

Bryan Sharp, Board Chairman

END OF DOCUMENT

DOCUMENT 002114 - INSTRUCTIONS TO BIDDERS – AIA

1.1 SUMMARY

- A. Document Includes:
 - 1. Instructions to Bidders.
 - 2. Site examination.
 - 3. Prebid conference.

- B. Related Documents:
 - 1. Document 001116 - Invitation To Bid.
 - 2. Document 003100 - Available Project Information.
 - 3. Document 004113 - Bid Form - Stipulated Sum.
 - 4. Document 004300 - Procurement Form Supplements: Appendices A and B.
 - 5. Document 007214 - General Conditions – AIA Stipulated Sum.
 - 6. Document 007313 - Supplementary Conditions – AIA.

1.2 INSTRUCTIONS TO BIDDERS

- A. These Instructions to Bidders amend or supplement AIA Document A701-1997 - Instructions to Bidders and other provisions of Bidding Documents and Contract Documents.

- B. To be considered all bids must in accordance with these Instructions to Bidders.

- C. Those interested parties may obtain sets of Drawings and Specifications from the Architect / Engineer upon non-refundable deposit of \$60.00 per set (\$80.00 if mailed).

1.3 SITE EXAMINATION

- A. Bidders shall carefully examine the specifications herein and perform a reasonable inspection of the project site to obtain first-hand knowledge of existing conditions. Each bidder shall promptly report, in writing, any errors or inconsistencies that they detect in the specifications to the Chairman of the Board for the attention of the Construction Inspector prior to bidding. By submitting their bid, each bidder represents that they have examined the bidding documents and inspected the site, that they understand the provisions of the bidding documents, and that they have familiarized themselves with the local conditions under which the work is to be performed. Bidders will not be given extra payment or contract time for conditions which could have been discovered by such examination.

- B. Contact Chief Deputy Jim Baker at the following address and phone number to arrange date and time to visit Project site:
 - 1. Address: 301 West Jackson, Taylorville, IL
 - 2. Telephone: 217-824-4961.

- C. A visit to Project site has been arranged for Bidders following the Pre-Bid Meeting at 11:00 AM on Thursday, March 21, 2024.

1.4 BID CONDITIONS

- A. By submitting a bid, the Contractor agrees to accept all of the County of Christian's terms herein as a legal and binding contract. Submittal of conditions or qualifying statements contrary to the County of Christian's terms herein are not acceptable and unless rescinded, the bid shall be rejected.
- B. Bidders shall be responsible for the delivery of bids during regular business hours to the Christian County Clerk's office on the second floor of the Christian County courthouse. This shall be prior to the bid opening time stated in the advertisement for bids.
- C. Bids shall be sealed and properly identified.
- D. Each bid shall be sealed preferably in an opaque envelope.
- E. The bid envelope shall be properly identified on the outside of the sealed envelope as to the project and Contractor.
- F. Bidders should not address or deliver bids to the Construction Inspector.
- G. In the case of identical bids, the County may pick the contractor they believe to best be suited to their needs, or in the absence of that decision may instigate a coin toss for the award or may use other means to select the Contractor. In the event of a coin toss, the coin shall be supplied by and the toss executed by the Chairman of the Board of the County of Christian. In any case, the decision shall be at the sole discretion of the County.
- H. Bid Opening Checklist – At the bid opening the bids will be checked against at least the following check list and could be checked against other criteria as well. The determination of the status of the following items at the bid opening is only provisional and may be changed based on further study by the County.
 - 1. () Was the bid delivered before the deadline? (Yes required.)
 - 2. () Is bid sealed (not unsealed or sent via fax, etc.)? (Yes required.)
 - 3. () Does the bid have the bidder's name on the outside of the envelope? (Yes required.)
 - 4. () Does the bid have the job identified on the outside of the envelope? (Yes required.)
 - 5. () Does the bid have a discernable bid amount? (Yes required.)
 - 6. () Does the bid contain conditions or qualifying statements contrary to the County of Christian's terms in the specifications herein? (No required.)
 - 7. () Is the bid otherwise non-conforming or unresponsive to these specifications? (No required.)

8. () Does the bid propose a binding contract that is connate with these specification? (Yes required.)
9. () Is the bid signed by the proprietor or a duly authorized officer of the bidding organization with an original signature? (Yes required.)
10. () Is the bid accompanied by bid bond (100% of bid amount), or certified check, cashier's check, or bank draft in the amount of 10% of the bid amount? (Yes required.)
11. () Does the bid bond (if any) contain original signature(s)? (Yes required.)
12. () Does the bond company (if any) meet the required criteria? (Yes required.)

1.5 THE SCHEDULE FOR BIDDING THIS PROJECT IS AS FOLLOWS

- | | | |
|-----------|----------------------------------------------------------|---------------------------------------------------------------------------------------------------|
| A. | Plans Available: | <u>Monday, March 18, 2024</u> |
| B. | Pre-Bid Meeting: | <u>Tuesday, April 2, 2024</u>
<u>11:00 AM</u>
<u>214 West Market Site</u> |
| C. | Latest Time to Submit Request for Interpretation: | <u>Friday, April 12, 2024</u> |
| D. | Latest Time to Issue an Addendum: | <u>Monday, April 15, 2024</u> |
| E. | Bid Opening | <u>Thursday, April 18, 2024</u>
<u>11:00 AM</u>
<u>Christian County Courthouse</u> |
- F. All requests for interpretations shall be in writing via mail or e-mail addressed to the Architect/Engineer and must be received by the date and time identified in Article 1.4 of this section in order to be given consideration. All questions must be submitted on the "Request for Interpretation Pre-Bid Question and Comment Form" included at the end of this section, and questions not submitted in accordance with this form and specified time frame will not be accepted. Any and all interpretations and supplemental instructions will be made by addendum to the Drawings and Specifications and forwarded to all bidders either by certified mail or e-mail. All responses by the Architect/Engineer must be in writing to be binding. Any response general in nature or affecting these Instructions to Bidders shall be sent via addendum as previously described. All bidders are required to return the signature page of the addendum signed to the Architect within 24 hours after receipt. Failure of any bidder to receive any such addendum or interpretations shall not relieve such bidder from an obligation under the bid as submitted. All addenda so issued shall become part of the Contract Documents. No addendum will be issued later than the date and time identified in Article 1.4 of this section except one withdrawing the request

for Bids or one postponing date for receiving Bids. Oral interpretations, changes or corrections will not be binding and Bidders shall not rely upon such interpretations, changes and corrections. Each Bidder shall ascertain prior to submitting Bid that all addenda issued have been received and shall acknowledge receipt in Bid.

**Questions shall be directed to:
e-mail: ktabor@hurst-rosche.com**

- G. Materials, products and equipment described in Bidding Documents establish a standard of required function, dimension, appearance and quality to be met by any proposed substitution. No substitution will be considered prior to receipt of Bids unless written request for approval has been received by the Architect at least ten days prior to the date for receipt of Bids. Each such request shall include name of material or equipment for which it is to be substituted and a complete description of the proposed substitute including drawings, cuts, performance and test data and any other information necessary for an evaluation. A statement setting forth any changes in other materials, equipment or other work that incorporation of the substitute would require shall be included. The burden of proof of the merit of proposed substitute is upon the proposer. Architect's decision of approval or disapproval of a proposed substitution shall be final. If the Architect approves any proposed substitution prior to receipt of Bids, such approval will be set forth in an addendum. Bidders shall not rely upon approvals made in any other manner. No substitutions will be considered after the contract award unless specifically provided in the Contract Documents.
- H. Bids shall be made on unaltered Bid Forms furnished by the Architect. Fill in all blank spaces and submit two (2) copies. Bids shall be signed with name typed below signature. Where bidder is a corporation, bids must be signed with legal name of corporation followed by name of state of incorporation and legal signature of an officer authorized to bind the corporation to a contract.
- I. Each bidder submitting a bid shall submit on form provided a list of any subcontractors and major suppliers he proposes to use with the bid. Failure to do so could disqualify the bid.
- J. Each bidder shall designate on the attached bid form one person who shall serve as the bidder's contact person for all matters pertaining to the bid. In absence of such designation, the person who signs the bid shall be deemed the bidder contact.
- K. For those projects which are bid on a unit price basis, in the event in which a bidder does not fill out the extension of the unit price, or a math error has occurred in calculation, the unit prices listed shall govern.
- L. Bid security – Bids shall be accompanied by a bid security in the form of a bid bond, certified check, cashier's check, or bank draft in the amount of 10% of the bid amount. Bid bonds shall meet the acceptance of the County of Christian, and that acceptance shall be at the sole discretion of the County. In general, bond acceptance will be based by the County upon
1. coverage on performance of the contract and the payment of all obligations arising thereunder;

2. the bond amount matching the full amount of the bid; and
 3. execution by a surety acceptable to the County. In general, acceptance of the surety will be based by the County by the bond company having a current Best's rating of any level of "B" or better and a current Best's financial class of "V" or higher.
- M. All costs associated with the preparation and submission of a bid are the sole responsibility of the bidder. These costs shall not be chargeable to the Owner by any successful or unsuccessful bidder. All bids become the property of the Owner and shall not be returned except in the case of a late submission.
- N. Bonds – Upon acceptance of the Contractors bid the Contractor shall be required to procure and pay for a Performance Bond, and Labor and Material Payment Bond in an amount equal to 100 percent of the bid amount. Bonds shall comply with all laws of the State of Illinois governing public contracts let by government units.

The County of Christian shall receive the Performance Bond, and Labor and Material Payment Bond, both required herein, prior to work commencement.

- O. All copies of the bid, bid security and any other documents required to be submitted with bid shall be enclosed in a sealed opaque envelope. Envelope shall be addressed to OFFICE OF THE COUNTY CLERK, CHRISTIAN COUNTY COURTHOUSE, 101 S. MAIN STREET, TAYLORVILLE, ILLINOIS 62568, and shall be identified with project name, bidder's name and address. Mailed bid envelopes shall be enclosed in a separate mailing envelope with the notation "SEALED BID ENCLOSED" on the face thereof. Oral, telephonic or telegraphic Bids are invalid and will not receive consideration. Bids shall be deposited at the location designated in the Invitation to Bid prior to time and date designated for opening, or any extension thereof made by addendum. Bidder shall assume full responsibility for timely delivery at location designated for receipt of Bids. Bids received after time and date for receipt of bids will be returned unopened.
- P. A bid may not be modified, withdrawn or canceled during the thirty (30) days immediately following bid opening, and each bidder so agrees in submitting his Bid. Any bidder may withdraw, cancel or modify its bid, at any time prior to scheduled time for opening of bids, by letter or telegram actually received by Owner prior to bid time, or, with proper identification, by personally securing bid submitted; if by telegram, written confirmation over signature of bidder shall be mailed and postmarked on or before date and time of bid opening. Withdrawn bids may be resubmitted up to bid opening time provided that they are in full compliance with these Instructions to Bidders.
- Q. When for any reason the bidder fails to comply with all post award requirements, such defaulting bidder and its surety shall pay to the County of Christian all costs incurred by the County for procuring the performance of the work, including the difference between the dollar amount of the defaulting bidder's bid and the accepted bid if the accepted bid is higher. Such costs shall include, but not be limited to, the additional contract price paid for the work and additional costs for advertising and other services, and shall include additional costs to complete the project at the specified date. When such costs are less than the bid security, the defaulting bidder shall be entitled to the excess of its bid security. When the defaulting bidder is the sole bidder and, after an attempt to secure

other bids by re-advertising none can be obtained, the County shall be entitled to the full amount of the bid security as liquidated damages.

R. Protests

1. Any bidder who submitted a bid and believes the bid was improperly rejected or that the bid selected by the Owner is not in the best interest of the Owner may submit a written notice of intent to protest the bid to the Owner within seven (7) days. The Owner shall consider all protests before execution of a contract. Each protest must specify the reasons supporting the protest. The Owner may require that additional information be provided. Failure to supply such required information shall be cause for dismissal of the protest.
2. The Owner shall immediately investigate the allegations against the Owners actions and shall issue a written response to the protest.
3. This provision allowing for the submission of protest shall not confer any right on any bidder but is intended solely to assist the Owner in determining the best responsible bid.

S. Any complaint or protest of the bidding procedure must be filed by the bidder to the Owner. Within 7 days of bid opening the bidder shall notify the Owner in writing of his intent to protest bidding. The bidder shall perfect this notice of intent within 7 days.

T. Owner reserves right to disqualify bids and bidders, before or after opening, upon evidence of collusion with intent to defraud or other illegal practices upon part of bidder, lack of responsibility as evidenced by poor workmanship and progress of past work, incomplete work which, in judgment of Owner, might hinder or prevent prompt completion of additional work if awarded, for being in arrears on existing contracts, in litigation with the Owner, or having defaulted on a previous contract.

U. Bids will be rejected for the following material deficiencies:

1. submission of a bid late;
2. submission of a bid in a manner that reveals the bid price prior to the bid opening (e.g. via fax);
3. use of a bid envelope which is received by the County unsealed or in a manner that does not reasonably identify the project and/or specification for which it is intended;
4. omission of a bid price;
5. submission of a bid price that cannot be determined;
6. deletion of original signatures to the extent that an intent to be bound by the bid is not apparent;
7. bids and bonds not containing original signatures in ink of the Contractor and an officer of the surety, and including a notary statement authenticating signatures and appropriate power attorney of the surety;
8. bids not in substantial conformance with the specification and /or whose non-conformance is determined to be material and unresponsive.

V. Bidder's attention is directed to the fact that all Federal and Illinois State Laws, municipal ordinances and regulations of any and all authority having jurisdiction over construction of the project shall apply to the contract throughout, and they will be deemed to be included in the contract the same as though herein written out in full. Successful Bidders

shall be required to comply with 775 ILCS 10 concerning equal employment opportunities; comply with 30 ILCS 570 concerning the employment of citizens of the State of Illinois; comply with 820 ILCS 265 concerning substance abuse prevention on public works projects; and comply with 820 ILCS 130 concerning prevailing wages.

- W. Prevailing Wage – All trades (HVAC, plumbing, electrical, etc.) shall be paid prevailing wages and benefits according to Illinois law, and shall provide proof of compliance by supplying certified payroll records at job completion.
- X. Any successful bidder that is a corporation organized in a state other than Illinois shall furnish to the Owner, upon request, a properly certified copy of its current Certificate of Authority to do business in the State of Illinois, such certificate is to remain on file with the Owner.
- Y. Any successful bidder that is a corporation organized in the State of Illinois shall furnish at its own cost to the Owner, if requested, a Certificate of Good Standing issued by the Secretary of State, such certificate is to remain on file with the Owner.
- Z. Owner is exempt from payment of Federal & Illinois Department of Revenue's Use and Sales Tax on material entering permanently into structure. Retail sales tax shall not be included in the bid amount.
- AA. Bids will be opened as announced in Invitation for Bids.
- BB. The County of Christian reserves the right to reject any or all bids or waive any informality in any bid and to accept any bid considered advantageous to the County. Further, the County of Christian, when its opinion is in the best interest of the County, reserves the right to:
 - 1. accept any bid;
 - 2. wave technical deficiencies and irregularities;
 - 3. allow bidder to remedy technical deficiencies or irregularities within a stated time;
 - 4. rescind any notice of award if the County of Christian determines the notice of award was issued in error;
 - 5. re-bid any contract.
- CC. Notwithstanding any delay in preparation and execution of the formal Contract Agreement, each bidder shall be prepared, upon written notice of bid acceptance, to commence work within ten (10) days following receipt of official written Notice to Proceed, or on date stipulated in such notice.
- DD. Any work in providing or preparing to provide the services specified herein that is commenced by the successful bidder prior to execution of a written contract agreement shall be at the bidder's expense.
- EE. Accepted bidder shall assist and cooperate with the Owner in preparing the formal Contract Agreement, and, within fifteen (15) days following its presentation, shall execute same and return it to Owner.

- FF. This project must be complete and ready to operate by July 15, 2024. A penalty of \$100.00 shall be deducted from the final payment for EACH CALENDAR DAY the system is not able to operate after July 15, 2024. Further, the final payment shall be withheld until the Construction Inspector agrees that all provisions of these specifications have been satisfactorily accomplished.
- GG. All permits and licenses that are required by governing authorities for the performance of the work shall be procured and paid for by the Contractor.
- HH. All work shall be performed in compliance with all applicable and governing safety regulations including the regulations of the Occupational Health and Safety Act. All safety lights, signs and guards required for the performance of the work shall be provided by the Contractor.
- II. All work shall conform to the requirements of all applicable codes, including but not limited to those specifically called out herein, unless specifically exempted herein.
- JJ. Laws, codes, ordinances and regulations shall take precedent with exception only where the work called for by the specifications exceeds by quality and/or quantity, unless specifically exempted herein.
- KK. All work shall be performed by trained mechanics of the particular trade involved and done in a neat and workmanlike manner as approved by the Construction Inspector.
- LL. All materials and equipment shall be new and shall bear the manufacturer's name, model number, serial number, date of manufacture and other identification marking.
- MM. All materials and equipment shall be the standard product of the manufacturer regularly engaged in the production of the required type of material or equipment for at least 5 years (unless specifically exempted by the Construction Inspector), and shall be manufacturer's latest design having published properties.
- NN. The County of Christian shall have the right to exclude any person from the job site and deny that person entry and future access to the job site when the County, through or absent the Construction Inspector, determines that the person is performing work not in a workmanlike manner, is causing disruption or conflicts, appears to be intoxicated or under the influence of drugs, has violated any State or Federal law or regulation or has behaved violently or in a threatening manner in any way related to the project. If the person is an employee of the Contractor or a subcontractor, the County may instruct the Contractor to exclude such person and the Contractor shall comply.
- OO. In addition to the County's rights under these specifications and other rights under law, the County may periodically evaluate the performance and responsibility of the Contractor and may suspend the contractor if the County determines it to be in the best interest of the County. Upon notification of suspension to the Contractor and its surety (if any), the Contractor shall stop all work on the contract except for the work the Construction Inspector directs in writing to be completed. The Contractor will be paid for all work completed under the contract. The Contractor will receive a percentage of the contract sum equal to the percentage of the work completed on the project prior to

termination of the contract in the event the County and the Contractor cannot agree on the amount of payment due the Contractor. This may occur at any time prior to or after submission of the bid. Suspension may include termination of the contract in progress or bid rejection. In the event of termination of the contract with the Contractor, the surety shall complete the work upon request by the County in accordance with the contract documents. Such completion may include, but not be limited to, the use of a completing contractor selected by the surety and approved by the County pursuant to a written takeover agreement, or payment of a sum of money required to allow the County to complete the work, or other arrangements agreed to by the County and the surety. If within 10 calendar days the surety fails to exercise its right to undertake the work, the County may take over the work and take possession of all the Contractor's tools, appliances, construction equipment and machinery at the site and use the same to the full extent they could have been used by the Contractor (without liability for trespass or conversion), incorporate into the work all materials and equipment stored at the site or for which the County has paid the Contractor but which are stored elsewhere, and finish the work as the County may deem expedient by a contract publicly advertised or otherwise. In such case the Contractor shall not be entitled to receive any further payment until the work is finished. If the County's expenses in completing the work exceed the unpaid balance of the contract sum, the Contractor and/or surety shall pay the difference to the County.

1.6 REQUIRED CONTRACTOR/SUBCONTRACTOR BACKGROUND SCREENING

- A. County of Christian requires background screening to be completed on all contractor/subcontractor employees. All employees must have documentation that a background screening has been completed on them prior to working on any district projects. All costs associated with the background screening are to be the responsibility of the contractor. The background screening must be conducted by a company acceptable to the County of Christian.
- B. All contractor/subcontractor employees working on the grounds of the County of Christian are required to submit to background screening. Each employee must complete, sign, and date the Consent and Waiver Release form. These forms will be submitted and the applicant cleared before the applicant may work on any part of the grounds.
- C. The contractor is responsible for submitting the forms to a company acceptable to the County of Christian, and for any costs involved in the screening. All information received as a result of a background check will be strictly confidential. A notice of automatic disqualification will be sent to the hiring or using entity. After the screenings, the contractor is also responsible for sending the County of Christian copies of approved background checks for their records.

1.7 CONTRACTOR'S DUTIES

- A. The Contractor shall furnish all labor, materials, equipment, tools, construction equipment, and specialty items as well as provide supervision, direct the work, inspect, test and provide whatever effort, service or materials that may be required to complete the work as specified.
 - 1. Nothing beyond the scope of work shall be disturbed.

2. All work must be done in a workmanlike manner.
3. The entire work area and site must be left in a clean and orderly manner. No leftover equipment, materials, supplies, tools, trash etc. may be left on the county property. Disposal of all equipment removed, trash, etc. is the responsibility of the contractor and is a specific condition of the bid.
4. No structural member shall be cut without the WRITTEN approval of the Construction Inspector, and all such cutting shall be done in a manner directed by him.
5. No electric arc welding or cutting torch cutting shall be done in the building.
6. Decisions regarding the acceptability of the project and with regard to any discrepancies with these specifications shall be at the sole discretion of William R. Kennedy, the Construction Inspector.

END OF DOCUMENT

REQUEST FOR INTERPRETATION PRE-BID QUESTION AND COMMENT FORM

(All information entered shall be typed in black).

PROJECT NAME: NEW OFFICE, CHRISTIAN COUNTY SHERIFF'S DEPARTMENT, 214 WEST MARKET, TAYLORVILLE, CHRISTIAN COUNTY, ILLINOIS

BIDDER: SUBMITTED BY (Name): _____ Date: _____

ADDRESS: CITY: _____ STATE: _____ PHONE: _____ Sheet _____ of _____

Question No.	Page (or Drawing Sheet) Number	Drawing No. or Spec. Section Article & Paragraph Number	Question by Bidder

NOTE: ANY AND ALL QUESTIONS PERTAINING TO THIS BID MUST BE TYPED AND SUBMITTED ON THIS FORM AND MAILED OR E-MAILED TO RECEIVE A RESPONSE.

DOCUMENT 004113 - BID FORM - STIPULATED SUM

To: **COUNTY OF CHRISTIAN
TAYLORVILLE, ILLINOIS**

Project: **NEW OFFICE
CHRISTIAN COUNTY SHERIFF'S DEPARTMENT
214 WEST MARKET STREET
TAYLORVILLE, CHRISTIAN COUNTY, ILLINOIS
HR# 390-1533**

Date: _____

Submitted by: _____
(full name)

(full address) _____

Contact Name: _____

1. OFFER

Having examined the Place of The Work and all matters referred to in the Instructions to Bidders and the Contract Documents prepared by Hurst-Rosche, Inc. for the above-mentioned project, we, the undersigned, hereby offer to enter into a Contract to perform the Work for the Sum of _____ dollars, (\$_____), in lawful money of the United States of America.

We have included the security Deposit as required by the Instruction to Bidders.

All applicable federal taxes are excluded, and State of Illinois and City of Taylorville taxes are excluded from the Bid Sum.

2. REVIEW OF BID DOCUMENTS

The bidder represents that he is skilled and experienced in the use and interpretation of drawings and specifications such as those included in the bid documents for this contract. He has carefully reviewed the drawings, specifications and other bid documents, and has found them free of ambiguities and sufficient for bid purposes. Further, the Bidder has carefully examined the site of the work and, from his own observations, has satisfied himself as to the nature and location of the work; the character, quality and quantity of materials; the difficulties likely to be encountered; and any other items which may affect the performance of the Work. He has based his bid solely on these documents and observations and has not relied in any way on any explanation or interpretation, oral or written, from any other source.

3. CONTRACTOR'S FEE FOR CHANGES IN WORK

Undersigned herein indicates a single percentage, not to exceed 12% for own forces and not to exceed 8% for subcontractors, for overhead and profit to be added to net extra job cost for changes in the work required to be performed by:

- a) Own Forces ____%
- b) Subcontractors ____%

Undersigned herein indicates a single percentage, not less than 10% for own forces and not less than 5% for subcontractors, for overhead and profit to be added to net credit for job costs for changes in the work required to be performed by:

- a) Own Forces ____%
- b) Subcontractors ____%

Percentages named above shall not include any items of insurance, bond or taxes since these are considered job cost items in contractor's quotations for changes in the work.

Any percentages indicated which are higher or lower than the maximum or minimum in the typewritten language herewith, shall be disregarded and typewritten figure used.

4. CONTRACT TIME

Undersigned agrees that, if awarded the Contract for Work bid upon herein, work will start on date designated in a written Notice to Proceed order issued by the Architect and will be completed in accordance with the contract documents, with all phases of work completed and operational and ready for acceptance by the Owner no later than as required by the Contract Agreement.

5. ADDENDA

The following Addenda have been received. The modifications to the Bid Documents noted below have been considered and all costs are included in the Bid Sum.

Addendum # _____ Dated _____; Addendum # _____ Dated _____
 Addendum # _____ Dated _____; Addendum # _____ Dated _____

6. APPENDICES

The following documents are attached to and made a condition of the Bid:

- Bid Bond in form of
- Bidder's qualifications statement and supporting data.
- Document 004300 - Procurement Form Supplements including:
 - Appendix A - List of Subcontractors.

7. EQUAL EMPLOYMENT OPPORTUNITY

During performance of this contract, Contractor agrees as follows:

- a. The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex or national origin. Such action shall include, but not be limited to, the following: Employment, upgrading, demotion, or transfer, recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the contracting officer setting forth the provisions of this nondiscrimination clause.
- b. The contractor will in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex or national origin.
- c. The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract of understanding, notice advising the labor union or worker's representative of the contractor's commitments under Section 202 of Executive Order 11246 of September 24, 1965, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
- d. The contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and by the rules, regulations, and relevant orders of the Secretary of Labor.
- e. The contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by the rules, regulations, and order of the Secretary of Labor pursuant thereto, and will permit access to his books, records and accounts by the Department of the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations and orders.
- f. In the event of the contractor's non-compliance with the nondiscrimination clauses of this contract or with any such rules, regulations or orders, this contract may be canceled, terminated or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies involved as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation or order of the Secretary of Labor, or as otherwise provided by law.

- g. The contractor will include the provisions of paragraphs (1) through (7) in every subcontract or purchase order unless exempted by rules, regulations or orders of the Secretary of Labor issued pursuant to Section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the Department may direct as a means of enforcing such provisions including sanctions for noncompliance: Provided, however, that in the event the contractor becomes involved in, or is threatened with, litigation with the subcontractor or vendor as a result of such direction by the Department, the contractor may request the United States to enter into such litigation to protect the interest of the United States.

8. NOT BARRED

The contractor by submitting its bid certifies that the Contractor is not barred from bidding on the contract as a result of a conviction for either bid-rigging or bid-rotating. 720 ILCS 5/33/E-11.

9. DRUG FREE WORKPLACE

The Contractor by submitting its bid certifies that it will provide a drug free workplace and that it is in compliance with the requirements of the Drug Free Workplace Act 30 ILCS 580.1 et. seq., and the Substance Abuse Prevention on Public Works Projects Act PA095-0635.

10. SEXUAL HARASSMENT POLICY

The Contractor by submitting its bid certifies that it has a written sexual harassment, (ii) a description of sexual harassment, utilizing examples; (iv) an internal complaint process including penalties (v) the legal resource, investigative and compliant process through the Illinois Department of Human Rights; (vi) directions on how to contact the Department and Commission; and (vii) protection against retaliation for exercising rights under the policy in accordance with 775 ILCS 5/2-105(A)(4).

11. DEBARMENT AND SUSPENSION

Contracts funded with Federal grant monies may not be awarded to contractors that have been debarred or suspended from receiving Federal monies pursuant to the Federal Excluded Parties List System.

12. BYRD ANTI-LOBBYING AMENDMENT

Contractors that apply or bid for an award of \$100,000 must certify that they have not used Federal funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant or any other award.

13. REQUIRED CONTRACTOR/SUBCONTRACTOR BACKGROUND SCREENING

- a. County of Christian requires background screening to be completed on all contractor/subcontractor employees. All employees must have documentation that a background screening has been completed on them prior to working on any district projects. All costs associated with the background screening are to be the responsibility of the contractor. The background screening must be conducted by a company acceptable to the County of Christian.
- b. All contractor/subcontractor employees working on the grounds of the County of Christian are required to submit to background screening. Each employee must complete, sign, and date the Consent and Waiver Release form. These forms will be submitted and the applicant cleared before the applicant may work on any part of the grounds.
- c. The contractor is responsible for submitting the forms to a company acceptable to the County of Christian, and for any costs involved in the screening. All information received as a result of a background check will be strictly confidential. A notice of automatic disqualification will be sent to the hiring or using entity. After the screenings, the contractor is also responsible for sending the County of Christian copies of approved background checks for their records.

14. BID FORM SIGNATURES

The Corporate Seal of

(Bidder - print the full name of your firm)
was hereunto affixed in the presence of:

(Authorized signing officer Title)

(Seal)

(Authorized signing officer Title)

(Seal)

If the Bid is a joint venture or partnership, add additional forms of execution for each member of the joint venture in the appropriate form or forms as above.

END OF DOCUMENT

DOCUMENT 004300 - PROCUREMENT FORM SUPPLEMENTS

To: **COUNTY OF CHRISTIAN
TAYLORVILLE, ILLINOIS**

Project: **NEW OFFICE
CHRISTIAN COUNTY SHERIFF'S DEPARTMENT
214 WEST MARKET STREET
TAYLORVILLE, CHRISTIAN COUNTY, ILLINOIS
HR# 390-1533**

Date: _____

Submitted by: _____
(full name)

(full address) _____

Contact Name: _____

In accordance with Document 002114 - Instructions to Bidders - AIA and Document 004113 - Bid Form - Stipulated Sum, we include the Appendices to Bid Form Supplements listed below. The information provided shall be considered an integral part of the Bid Form.

The following Appendices are attached to this document:

Appendix A - List of Subcontractors: Include names of all Subcontractors and portions of the Work each Subcontractor will perform.

BID FORM SUPPLEMENTS SIGNATURES

The Corporate Seal of

(Bidder - print the full name of your firm)

was hereunto affixed in the presence of:

(Authorized signing officer Title)

(Seal)

(Authorized signing officer Title)

(Seal)

DO NOT COPY

DOCUMENT 005214 - AGREEMENT FORM - AIA

1.1 SUMMARY

- A. Document Includes:
 - 1. Contract Agreement.
- B. Related Documents:
 - 1. Document 007214 - General Conditions – AIA Stipulated Sum.
 - 2. Document 007313 - Supplementary Conditions - AIA.

1.2 CONTRACT AGREEMENT BETWEEN OWNER AND CONTRACTOR

- A. THIS AGREEMENT, made and entered into as of the _____ day of _____ in the year of Two Thousand and ____ by and between _____ hereinafter and in the Contract Documents called "Contractor" and the COUNTY OF CHRISTIAN, hereinafter and in the Contract Documents called "Owner."
- B. WITNESSETH: That for and in consideration of the mutual covenants and agreements, hereinafter stated, Contractor and Owner covenant and agree as follows:
- C. THE CONTRACT WORK:
 - 1. Contractor covenants and agrees to furnish all labor, materials, equipment, transportation, construction plant and facilities necessary to perform all Work required by the Contract Documents, for the Project entitled:
 - a. NEW OFFICE
CHRISTIAN COUNTY SHERIFF'S DEPARTMENT
214 WEST MARKET STREET
TAYLORVILLE, CHRISTIAN COUNTY, ILLINOIS
HR# 390-1533

as shown on Drawings and described in Specifications prepared by Hurst-Rosche, Inc., Hillsboro, Illinois, acting as, and in these Contract Documents referred to as Architect/Engineer and covenants and agrees to do and perform all acts and things required of Contractor by this Contract and the Contract Documents.
- D. TIME OF COMPLETION:
 - 1. The project must be complete and ready to operate by July 15, 2024. A penalty of \$100 shall be deducted from the final payment for EACH CALENDAR DAY the system is not able to operate after July 15, 2024. Further, the final payment shall be withheld until the Construction Inspector agrees that all provisions of these specifications have been satisfactorily accomplished.

E. CONTRACT SUM AND TERMS OF PAYMENT:

1. Contract Sum: The Owner, if Contractor shall faithfully fulfill and perform this Contract, covenants and agrees to pay Contractor in current funds, subject to additions and deductions by Change Order as provided in the Contract Documents, the sum of _____ Dollars (\$ _____), which sum shall constitute the Contract Sum, said Contract Sum being derived from Contractor's Bid dated _____. It is understood and agreed that should there be any increase in wage rates, or in cost of materials or equipment, or in any other of Contractor's costs or should Contractor be compelled to pay premium wages, or for overtime work, during the life of this Contract and/or prior to completion of Contractor's work thereunder, Contractor shall absorb all such increased costs, without addition to the Contract Sum except when otherwise expressly provided in Contract Documents.
2. Payments: Owner shall make payments for work performed under the Contract as provided in Article Nine of the General Conditions and in accordance with other applicable articles of the Supplementary Conditions and Contract Documents.
3. Contractor's Fees for Changes in Work: In accordance with Contractor's bid, it is agreed that the following percentages for overhead and profit shall be applied on work added to or omitted from the Contract by written Change Order approved by Architect and Owner in advance of performance of the work.

Additional Work performed by:

- | | |
|---------------------|-------------------------|
| 1. Own Forces ____% | 2. Subcontractors ____% |
|---------------------|-------------------------|

Omitted Work originally required by:

- | | |
|---------------------|-------------------------|
| 1. Own Forces ____% | 2. Subcontractors ____% |
|---------------------|-------------------------|

Note: Taxes (when applicable) are considered as incidentals, as well as bonds and insurance costs and are not included in the percentages listed above nor should they be added to change orders submitted.

F. CONTRACT DOCUMENTS:

1. Contract Documents include the Contract Agreement, Contractor's Bid as accepted by Owner, Conditions of the Contract (General, Supplementary, and other Conditions), Drawings, Specifications, and all Addenda issued prior to, and all Modifications issued after execution of the Contract Agreement.
2. Bidder's attention is directed to the fact that all Federal and Illinois State Laws, municipal ordinances and regulations of any and all authority having jurisdiction over construction of the project shall apply to the contract throughout, and they will be deemed to be included in the contract the same as though herein written out in full. Successful Bidders shall be required to comply with 777 ILCS 10 concerning equal employment opportunities; comply with 30 ILCS 570 concerning the employment of citizens of the State of Illinois; comply with 820 ILCS 265 concerning substance abuse prevention on public works projects; and comply with 820 ILCS 130 concerning prevailing wages.
3. Prevailing Wage – All trades (HVAC, plumbing, electrical, etc.) shall be paid prevailing wages and benefits according to Illinois law and shall provide proof of compliance by supplying certified payroll records at job completion.

G. ILLINOIS LABOR:

Contractor shall comply with all Illinois statutory requirements regarding labor, including, but not limited to, the following:

1. Illinois Public Act 77-1552 and Chapter 48, Sections 39S-1 through 39S-12 of the Illinois Revised Statutes regulating wages of laborers, mechanics and other workers employed in any public works and known as the "Prevailing Wage Act," which provides in part that all laborers, mechanics and workers performing work under the Contract shall be paid not less than the prevailing rate of wages as determined by the Illinois Department of Labor (820 ILCS 130).
2. Illinois Public Act 83-1472, Article 2 and Chapter 48, Sections 2201 through 2207, 1984 of the Illinois Revised Statutes pertaining to hiring of Illinois labor and known as the "Illinois Preference Act (30 ILCS 570)."
3. "Illinois Human Rights Act of 1980," Chapter 68, Illinois Revised Statutes, and the Rules and Regulations, Title 44, Section 750 of the Illinois Administrative Code, Illinois Department of Human Rights; pertaining to equal employment opportunity (777 ILCS 10).

H. PERFORMANCE BOND AND LABOR AND MATERIAL PAYMENT BOND:

- 1. Upon acceptance of the Contractors bid the Contractor shall be required to procure and pay for a Performance Bond, and Labor and Material Payment Bond in an amount equal to 100 percent of the bid amount. Bonds shall comply with all laws of the State of Illinois governing public contracts let by government units.
- 2. The County of Christian shall receive the Performance Bond, and Labor and Material Payment Bond, both required herein, prior to work commencement.

I. IN WITNESS HEREOF, the parties hereto have executed this agreement as of the day and year first written above.

OWNER:

COUNTY OF CHRISTIAN

BY _____

TITLE _____

CONTRACTOR:

Attest:

BY _____

Secretary

BY _____

TITLE _____

(Corporate Seal)

END OF DOCUMENT

CONTRACTOR'S AFFIDAVIT FOR FINAL COMPLETION
(To be filed with final request for payment)

STATE OF _____)

COUNTY OF _____)

_____, being
first duly sworn upon oath deposes and says:

That he/she is _____ of _____

hereinafter termed "The Contractor" for all work upon the hereinafter termed "Said Project," work for the COUNTY OF CHRISTIAN, under that certain contract between said Contractor and said Owner, bearing date of _____ pertaining to said work.

Affiant further states, of his/her own knowledge, that all bills incurred by the Contractor, for services, labor and material furnished, for work done by the Contractor under said Contract, or in connection with said project have been paid and all subcontractors who have furnished services, labor or materials have no claim or demand against Owner for any services, labor and/or materials furnished and/or work done by them upon said Project.

Affiant further states that this affidavit is made on behalf of the Contractor for the purpose of obtaining payment of the sum of

_____ (\$ _____) dollars, which affiant states, upon his/her own knowledge, constitutes the full balance due the Contractor for all services, labor and materials furnished and work done to and upon Said Project by the Contractor whether under and pursuant to provisions of said Contract and all subsequent modifications thereof and changes therein or otherwise; and that payment of the sum to the Contractor will constitute payment in full on everything due for such services, labor, materials and work, and will fully satisfy any and all claims or demands which Contractor may have or assert against said Owner, arising out of anything done or furnished by the Contractor or occurring in connection with said Project and/or Contract.

CONTRACTOR

By _____

Title _____

Subscribed and Sworn to before me the _____ day of _____, 20____.

NOTARY PUBLIC

(PARTIAL) (FINAL)
WAIVER OF LIEN

STATE OF _____

COUNTY OF _____

TO WHOM IT MAY CONCERN:

WHEREAS the undersigned has been employed by the COUNTY OF CHRISTIAN, hereinafter known as the OWNER,

To Furnish: _____

For the project known as: NEW OFFICE

For the premises known as: CHRISTIAN COUNTY SHERIFF'S DEPARTMENT

Address: 214 WEST MARKET STREET, TAYLORVILLE, ILLINOIS

THE undersigned, for and in consideration of the dollar amount shown below and other good and valuable considerations, do(es) hereby waive and release under the mechanics' lien statutes of the State where the project premises are located, to the extent of the payment recited below is received by the undersigned and is applicable to lienable labor, services, materials, fixtures, or apparatus, any and all lien or claim or right of lien on the above-described premises and the improvements, fixtures and appurtenances thereon, and on the monies or other considerations due or to become due from the Owner and on all other project-related monies from whatever source, on the account of the above-mentioned labor, services, materials, fixtures, or apparatus furnished by the undersigned for or in connection with the above-described premises.

(Payment amount written in long form)

PAYMENT AMOUNT _____

(Company Name)

(Address)

(City/State/Zip)

(Signature of Officer)

Sworn to and subscribed before me this ___ day of _____.

(Notary Public)

My commission expires: _____

AFFIDAVIT OF PAYMENT TO MATERIAL SUPPLIERS AND SUBCONTRACTORS

STATE OF _____

COUNTY OF _____

_____, being first duly sworn upon oath
deposes and says, that he/she entered into a Contract with the COUNTY OF CHRISTIAN, known as the
Owner, for furnishing of labor, work services, materials, fixtures, and supplies for NEW OFFICE at the
following described real estate: CHRISTIAN COUNTY SHERIFF'S DEPARTMENT, 214 WEST
MARKET STREET, TAYLORVILLE, ILLINOIS.

That for the purpose of said Contract, the following persons, firms or corporations have been contracted
with to furnish, have furnished or prepared, or will furnish or prepare labor, services, materials, fixtures,
apparatus, machinery or supplies, or are furnishing and preparing material for said construction; that there
are due or to become due to them respectively, the amounts set opposite their names for said labor,
services, materials, fixtures, apparatus, machinery and supplies as stated; that there are no other
contractors outstanding and there is nothing due or to become due any person, firm, or corporation, for
labor, services, materials, fixtures, machinery, apparatus, or supplies, other than as stated herewith.

MATERIAL SUPPLIER AND/OR SUBCONTRACTOR	CONTRACT ITEM	CONTRACT AMOUNT	AMOUNT PAID TO DATE	AMOUNT DUE OR TO BECOME DUE
----------------------------------------------	------------------	--------------------	---------------------------	-----------------------------------

CONTRACTOR

Subscribed and sworn to before me, a Notary Public, this _____ day of _____; A.D.
20____.

NOTARY PUBLIC

CONSENT OF SURETY COMPANY TO FINAL PAYMENT
(To be filed with final request for payment)

PROJECT:

TO (Owner):
(Name, address)

CONTRACTOR:
(Name, address)

CONTRACT DATE:

BOND NO.:

In accordance with the provisions between Owner and Contractor indicated above, _____

_____, SURETY COMPANY, hereby
approves of final payment to Contractor, and agrees that final payment to Contractor shall not relieve
Surety Company of any of its obligations to Owner, as set forth in Surety Company's bond.

IN WITNESS WHEREOF, Surety Company has hereunto set its hand this _____ day of
_____, 20____.

Attest:

(Seal):

Surety Company

Signature of Authorized Representative

Title

DOCUMENT 007214 - GENERAL CONDITIONS – AIA STIPULATED SUM

1.1 SUMMARY

- A. Document Includes:
 - 1. General Conditions.
- B. Related Documents:
 - 1. Document 005214 – Agreement Form – AIA Stipulated Sum.
 - 2. Document 007313 – Supplementary Conditions - AIA.

1.2 GENERAL CONDITIONS

- A. AIA Document A201-2007, General Conditions of the Contract for Construction, is the General Conditions of the Contract.

1.3 SUPPLEMENTARY CONDITIONS

- A. Refer to Document 007313 for modifications to General Conditions.

END OF DOCUMENT

DOCUMENT 007313 - SUPPLEMENTARY CONDITIONS - AIA

1.1 SUMMARY

- A. Document Includes:
 - 1. General Conditions.
 - 2. Supplementary Conditions.
- B. Related Documents:
 - 1. Document 004113 – Bid Form – Stipulated Sum
 - 2. Document 005214 – Agreement Form - AIA

1.2 GENERAL CONDITIONS

- A. The General Conditions of the Contract for Construction, AIA Document A201, Sixteenth Edition, 2007, Articles 1 through 15, is a part of this Contract and is incorporated herein as fully as if here set forth. Copies of the General Conditions are on file and may be reviewed at the offices of the Architect, or may be obtained from the American Institute of Architects, St. Louis Chapter, 911 Washington St., #225, St. Louis, Missouri 63101-1203.

1.3 SUPPLEMENTARY CONDITIONS

- A. The following supplements modify, change, delete from or add to the "General Conditions of the Contract for Construction," AIA Document A201, Sixteenth Edition, 2007. Where any Article of the General Conditions is modified or changed or any Paragraph, Subparagraph or Clause thereof is modified, changed or deleted by these supplements, the unaltered provisions of that Article, Paragraph, Subparagraph or Clause shall remain in effect.

1.4 REFERENCE TO DIVISION 01

- A. Where provisions of General Conditions relate to project administrative or work-related requirements of the Contract, and those provisions differ from those specified in Division 01, provisions outlined in Division 01 shall prevail.

1.5 ARTICLE 1: GENERAL PROVISIONS

- A. 1.5.1 In the second line following the word "Specifications" insert the words "and Project Manual,".
- B. 1.6 TRANSMISSION OF DATA IN DIGITAL FORM: Add new subparagraph 1.6.1:

1.6.1 Electronic drawings provided by the Owner or Architect are for informational purposes only and are not intended for any other use. The paper copies provided are a true representation of the completed design and if discrepancies should exist

between the paper copy and the electronic copy, the paper copy shall govern.

- C. Delete Subparagraph 1.1.8 its entirety and substitute the following:

1.1.8 INITIAL DECISION MAKER

The Initial Decision Maker is the person identified in the Agreement to render initial decisions on Claims in accordance with Section 15.2 and certify termination of the Agreement under Section 14.2.2. If the Initial Decision Maker is not specifically identified in the Agreement, the responsibilities of the Initial Decision Maker shall default to the Architect.

- D. DEFINITIONS: Add Paragraph 1.1.9

1.1.9 PROJECT MANUAL

The Project Manual is the collection of documents which includes the bidding requirements, sample forms and, certain Contract Documents such as the Conditions of the Contract and the Specifications.

1.6 ARTICLE 2: OWNER

- A. 2.2 INFORMATION AND SERVICES REQUIRED OF THE OWNER:

- B. Delete Subparagraphs 2.2.3 and 2.2.5 in their entireties and substitute the following:

2.2.3 The Owner shall, at the request of the Contractor, furnish to Contractor any survey or other similar descriptive information of project site that Owner has in his possession. Upon demonstration of need by Contractor for specific additional survey information, Owner shall obtain and furnish such information to Contractor.

2.2.5 Contractor will be furnished, free of charge, 4 copies of Drawings, Specifications, and Project Manual as set forth in Division 1 of the Specifications. Additional copies will be furnished to Contractor at cost of reproduction, postage and handling.

1.7 ARTICLE 3: CONTRACTOR

- 3.2. REVIEW OF CONTRACT DOCUMENTS AND FIELD CONDITIONS BY CONTRACTOR: Add Subparagraphs 3.2.5 and 3.2.6:

3.2.5 The Contractor by executing the Contract represents that he has carefully examined the Site of the Work at each location and that he has full knowledge of and fully understands the facilities, site conditions, difficulties and restrictions attending performance of the Work. Contractor further represents that he has taken all required measurements and carefully inspected existing constructions, irregularities and interferences which may affect the Work. No additional compensation will be allowed for conditions increasing Contractor's cost which were not known to or appreciated by him prior to executing the Contract if they

could have been discovered by him following the foregoing procedures and thoroughly informing himself of all existing conditions affecting the Work.

3.2.6 Contractor will not, however, be required to excavate, penetrate or demolish any constructions or other work and conditions prior to executing the Contract in order to uncover and/or expose concealed conditions that affect the Work. If, during course of construction, Contractor uncovers conditions that affect the work that could not have been known and understood by the above described careful examination of conditions affecting the Work, he shall promptly notify the Architect, in writing, who will determine if claims for additional costs or extensions of time are justified. If such claims are found to be justified, Contract will be modified in accordance with Article 7 of the General Conditions.

1.8 ARTICLE 4: ARCHITECT

A. 4.1 GENERAL: Delete Subparagraph 4.1.1 in its entirety and substitute the following:

4.1.1 The Owner shall retain an architect or engineer lawfully licensed to practice architecture or engineering or an entity lawfully practicing architecture or engineering in the jurisdiction where the Project is located. That person or entity is identified as the Architect in the Agreement and is referred to throughout the Contract Documents as if singular in number.

1.9 ARTICLE 5: SUBCONTRACTORS

A. 5.2 AWARD OF SUBCONTRACTS AND OTHER CONTRACTS FOR PORTIONS OF THE WORK: Add new Subparagraph 5.2.1.1.:

5.2.1.1. Within ten (10) days of notification of acceptance of his proposal, Contractor shall submit the names of those to whom he intends to award a Subcontract.

1.10 ARTICLE 6: CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

A. 6.1 OWNER'S RIGHT TO PERFORM CONSTRUCTION AND TO AWARD SEPARATE CONTRACTS: Delete Subparagraph 6.1.3 in its entirety and substitute the following:

6.1.3 General Contractor shall have responsibility of coordinating efforts of all contractors and to maintain overall direction of job progress. Each Contractor shall coordinate operational methods with other contractors and encourage communications among all trades. All Contractors shall make other contractors aware of any problems, delays in materials shipments or lack of work force, and assist other contractors in maintaining job momentum and direction of overall project.

1.11 ARTICLE 9: PAYMENTS AND COMPLETION

A. 9.3 APPLICATIONS FOR PAYMENT: Add new Subparagraph 9.3.1.3:

9.3.1.3.: Until Substantial Completion, the Owner will pay 90 percent of the amount due Contractor on account of approved progress payments.

1.12 ARTICLE 11: INSURANCE AND BONDS

A. 11.1.1 In the first line following the word "maintain," insert the words "in a company or companies licensed to do business in the state in which the project is located and rated 'A' or better by A.M. Best Co.."

B. Add new Subparagraph 11.1.1.9:

11.1.1.9 General Liability Insurance shall be comprehensive, on occurrence, and shall include:

- Premises and Operations.
- Independent Contractors.
- Products and Completed Operations.
- Broad Form Property Damage.
- Personal Injury.
- Explosion, Collapse and Underground damage where the hazard exists.
- Contractual liability.

C. Add the following Sub-Subparagraphs to Subparagraph 11.1.2:

11.1.2.1 The insurance required by Subparagraph 11.1.1 shall be on a project specific basis and written for not less than the following, or greater if required by law:

1. Worker's Compensation:

- a. State: Statutory
- b. Applicable Federal: Statutory
- c. Employer's Liability: \$500,000

2. Comprehensive General Liability:

a. Bodily Injury:

\$1,000,000 Combined Single Limit

b. Property Damage:

\$1,000,000 Combined Singled Limit

Limit Coverage for bodily injury and property damage per occurrence and in the same aggregate limit will be accepted in lieu of the separate limits specified above.

3. Personal Injury:

\$ 1,000,000 Combined single limit including owned non-owned, and hired motor vehicle.

4. Comprehensive Automobile Liability:

a. Bodily Injury:

\$1,000,000 Combined single limit including owned, non-owned, and hired motor vehicle.

b. Property Damage:

\$1,000,000 Combined single limit including owned, non-owned, and hired motor vehicle

c. \$1,000,000 Combined Single

Limit coverage for bodily injury and property damage per occurrence and in the same aggregate limit will be accepted in lieu of the separate limits specified above.

11.1.2.2 Umbrella Form Liability Coverage:

An Umbrella Form Liability coverage to not less than \$2,000,000 for any one occurrence and subject to the same aggregate over the Employer's Liability, Comprehensive General Liability, and Comprehensive Automobile Liability coverage is required.

D. Add the following Subparagraph 11.1.3.1:

11.1.3.1 Contractor shall furnish one copy each of Certificates of Insurance herein required for each copy of the Agreement which shall specifically set forth evidence of all coverage required by Paragraph 11.1. The Certificate of Insurance is to be accompanied by AIA Document G715TM-1997 (Supplemental Attachment for ACORD Certificate of Insurance 25-S). Contractor shall furnish to the Owner copies of any endorsements that are subsequently issued amending coverage or limits. The Contractor shall furnish to the Owner notice of any policy cancellation at least 30 days (10 days for non payment of premiums) prior to the effective date of cancellation. The Contractor shall submit copies of subcontractor's Certificates of Insurance prior to the beginning of work.

E. Add the following Subparagraph 11.1.4.1:

11.1.4.1 The Owner and Architect shall be named as additional insureds on ISO form 20331001 by endorsement for the purpose of coverage only with no liability for premium payments. All policies and coverages shall include a waiver of subrogation in favor of the Owner, Architect, and all subconsultants.

F. 11.3. PROPERTY INSURANCE: Delete Subparagraph 11.3.1 in its entirety and substitute the following:

11.3.1: The General Contractor shall be responsible to maintain property (builder's risk) insurance upon the completed value of all work at the site under this contract to the full insurable value thereof. This insurance shall include the interests of the Owner, the General Contractor, Subcontractors, and Sub-subcontractors in the work and as their interests may appear in the work, and shall be an all-risk type policy, including theft, subject to the exclusions generally accepted in the insurance industry. This coverage is not intended to, and shall not, provide coverage for tools, equipment, scaffolding, forms, or other devices used by the Contractors or Subcontractors in performing work under this contract.

11.3.1.2 Delete this Paragraph in its entirety.

G. Delete Subparagraphs 11.3.1.3 in its entirety and substitute the following:

11.3.1.3 If the property insurance requires deductibles, the Contractor shall pay costs not covered because of such deductibles.

1.13 ARTICLE 13: MISCELLANEOUS PROVISIONS

A. Add new paragraph 13.8 as follows:

13.8 REFERENCED STANDARDS

13.8.1 No provision of any referenced standard specification, manual or code; whether or not specifically incorporated by reference in the Contract Documents; shall be effective to change the duties and responsibilities of Owner, Contractor or Architect, or any of their consultants, agents or employees from those set forth in the Contract Documents, nor shall it be effective to assign to Architect, or any of Architect's consultants, agents or employees, any duty or authority to supervise or direct the furnishing or performance of the Work or any duty or authority to undertake responsibility contrary to the provisions of Articles 1 through 15.

END OF SECTION

BIDDING & CONTRACT REQUIREMENTS
Document 008250 - Prevailing Rate of Wages

ARTICLE 25: PREVAILING RATE OF WAGES

25.1 Pursuant to Illinois Compiled Statutes 820 ILCS 130/0.01 et seq., these specifications list on the following pages, the Illinois Department of Labor prevailing rate of wages for the county where the contract is being performed and for each craft or type of worker needed to execute the contract.

Prevailing Wage – All trades (HVAC, plumbing, electrical, etc.) shall be paid prevailing wages and benefits according to Illinois law and shall provide proof of compliance by supplying certified payroll records at job completion.

END OF SECTION

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Trade Title	Rg	Type	C	Base	Foreman	Overtime						Pension	Vac	Trng	Other Ins	Add OT 1.5x owed	Add OT 2.0x owed
						M-F	Sa	Su	Hol	H/W							
ASBESTOS ABT-GEN	All	BLD		33.98	35.23	1.5	1.5	2.0	2.0	7.75	20.20	0.00	0.90	0.00	0.00	0.00	
ASBESTOS ABT-MEC	All	BLD		34.30	35.30	1.5	1.5	2.0	2.0	10.20	6.80	0.00	0.50	0.00	0.00	0.00	
BOILERMAKER	All	BLD		42.50	46.00	1.5	1.5	2.0	2.0	7.07	27.21	0.00	1.06		0.00	0.00	
BRICK MASON	All	BLD		36.62	38.82	1.5	1.5	2.0	2.0	9.60	16.60	0.00	1.00	0.00	0.00	0.00	
CARPENTER	All	BLD		35.15	37.40	1.5	1.5	2.0	2.0	9.45	21.50	0.00	0.79	0.00	15.48	30.95	
CARPENTER	All	HWY		37.82	39.57	1.5	1.5	2.0	2.0	9.45	21.50	0.00	0.76	0.00	0.00	0.00	
CEMENT MASON	All	BLD		31.80	33.30	1.5	1.5	2.0	2.0	10.00	16.16	0.00	0.73	0.00	0.00	0.00	
CEMENT MASON	All	HWY		32.03	34.03	1.5	1.5	2.0	2.0	10.00	17.60	0.00	0.66	0.00	0.00	0.00	
CERAMIC TILE FINISHER	All	BLD		34.27		1.5	1.5	2.0	2.0	9.60	12.70	0.00	0.55	0.00	0.00	0.00	
ELECTRIC PWR EQMT OP	All	ALL		52.63	62.45	1.5	1.5	2.0	2.0	8.58	14.74	0.00	0.79	0.00	0.00	0.00	
ELECTRIC PWR GRNDMAN	All	ALL		35.76	62.45	1.5	1.5	2.0	2.0	8.07	10.01	0.00	0.54	0.00	0.00	0.00	
ELECTRIC PWR LINEMAN	All	ALL		58.58	62.45	1.5	1.5	2.0	2.0	8.76	16.40	0.00	0.88	0.00	0.00	0.00	
ELECTRIC PWR TRK DRV	All	ALL		37.53	62.45	1.5	1.5	2.0	2.0	8.13	10.51	0.00	0.57	0.00	0.00	0.00	
ELECTRICIAN	All	BLD		43.30	47.63	1.5	1.5	2.0	2.0	8.66	12.30	0.00	0.65	0.00	0.98	1.95	
ELECTRONIC SYSTEM TECH	All	BLD		37.50	40.50	1.5	1.5	2.0	2.0	9.10	9.25	0.00	0.40		0.57	1.13	
ELEVATOR CONSTRUCTOR	All	BLD		55.57	62.52	2.0	2.0	2.0	2.0	16.17	20.96	4.45	0.75		0.00	0.00	
GLAZIER	All	BLD		38.60	40.60	1.5	1.5	2.0	2.0	7.85	13.77	0.00	0.68	0.00	0.00	0.00	
HEAT/FROST INSULATOR	All	BLD		41.73	42.73	1.5	1.5	2.0	2.0	11.74	13.50	0.00	1.05		0.00	0.00	
IRON WORKER	All	BLD		35.20	37.20	1.5	1.5	2.0	2.0	10.55	18.50	0.00	1.00		0.00	0.00	
IRON WORKER	All	HWY		36.84	38.59	1.5	1.5	2.0	2.0	10.55	20.09	0.00	1.00		0.00	0.00	
LABORER	All	BLD		30.98	32.23	1.5	1.5	2.0	2.0	7.75	20.20	0.00	0.80	0.00	0.00	0.00	
LABORER	All	HWY		32.78	33.53	1.5	1.5	2.0	2.0	7.75	20.20	0.00	0.80	0.00	0.00	0.00	
LATHER	All	BLD		35.15	37.40	1.5	1.5	2.0	2.0	9.45	21.50	0.00	0.79	0.00	15.48	30.95	
MACHINIST	All	BLD		55.74	59.74	1.5	1.5	2.0	2.0	9.93	8.95	1.85	1.47		0.00	0.00	
MARBLE FINISHER	All	BLD		34.27		1.5	1.5	2.0	2.0	9.60	12.70	0.00	0.55	0.00	0.00	0.00	
MARBLE MASON	All	BLD		35.83		1.5	1.5	2.0	2.0	9.60	12.70	0.00	0.55	0.00	0.00	0.00	
MILLWRIGHT	All	BLD		35.58	37.83	1.5	1.5	2.0	2.0	9.45	21.54	0.00	0.79	0.00	15.50	30.99	

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MILLWRIGHT	All	HWY		40.10	41.85	1.5	1.5	2.0	2.0	9.45	22.34	0.00	0.76	0.00	0.00	0.00
OPERATING ENGINEER	All	BLD	1	40.71	42.32	1.5	1.5	2.0	2.0	12.00	14.25	0.00	2.50	0.00	0.00	0.00
OPERATING ENGINEER	All	BLD	2	38.18	42.32	1.5	1.5	2.0	2.0	12.00	14.25	0.00	2.50	0.00	0.00	0.00
OPERATING ENGINEER	All	BLD	3	34.30	42.32	1.5	1.5	2.0	2.0	12.00	14.25	0.00	2.50	0.00	0.00	0.00
OPERATING ENGINEER	All	BLD	4	42.32	42.32	1.5	1.5	2.0	2.0	12.00	14.25	0.00	2.50	0.00	0.00	0.00
OPERATING ENGINEER	All	HWY	1	47.21		1.5	1.5	2.0	2.0	12.00	15.70	0.00	2.50	0.00	0.00	0.00
OPERATING ENGINEER	All	HWY	2	41.88		1.5	1.5	2.0	2.0	12.00	15.70	0.00	2.50	0.00	0.00	0.00
OPERATING ENGINEER	All	HWY	3	33.67		1.5	1.5	2.0	2.0	12.00	15.70	0.00	2.50	0.00	0.00	0.00
OPERATING ENGINEER	All	HWY	4	48.81		1.5	1.5	2.0	2.0	12.00	15.70	0.00	2.50	0.00	0.00	0.00
PAINTER	All	ALL		32.23	33.73	1.5	1.5	2.0	2.0	7.85	14.88	0.00	0.65	0.00	0.00	0.00
PAINTER OVER 30 FT.	All	ALL		33.23	34.73	1.5	1.5	2.0	2.0	7.85	14.88	0.00	0.65	0.00	0.00	0.00
PAINTER PWR EQMT	All	ALL		33.23	34.73	1.5	1.5	2.0	2.0	7.85	14.88	0.00	0.65	0.00	0.00	0.00
PILEDRIVER	All	BLD		36.15	38.40	1.5	1.5	2.0	2.0	9.45	21.50	0.00	0.79	0.00	15.48	30.95
PILEDRIVER	All	HWY		38.82	40.57	1.5	1.5	2.0	2.0	9.45	21.50	0.00	0.76	0.00	0.00	0.00
PIPEFITTER	E	BLD		41.10	45.10	1.5	1.5	2.0	2.0	9.25	13.11	0.00	1.30	0.00	0.00	0.00
PIPEFITTER	W	BLD		43.48	47.48	1.5	1.5	2.0	2.0	9.25	13.11	0.00	1.30	0.00	0.00	0.00
PLASTERER	All	BLD		35.41	37.16	1.5	1.5	2.0	2.0	9.00	17.33	0.00	0.98	0.00	0.00	0.00
PLUMBER	E	BLD		41.10	45.10	1.5	1.5	2.0	2.0	9.25	13.11	0.00	1.30	0.00	0.00	0.00
PLUMBER	W	BLD		43.48	47.48	1.5	1.5	2.0	2.0	9.25	13.11	0.00	1.30	0.00	0.00	0.00
ROOFER	All	BLD		34.11	37.21	1.5	1.5	2.0	2.0	10.40	13.31	0.00	0.56	0.00	0.00	0.00
SHEETMETAL WORKER	All	BLD		37.73	41.53	1.5	1.5	2.0	2.0	10.80	17.53	0.00	1.00	1.99	0.00	0.00
SPRINKLER FITTER	All	BLD		47.09	50.09	1.5	1.5	2.0	2.0	11.45	14.92	0.00	0.52		0.00	0.00
STONE MASON	All	BLD		36.62	38.82	1.5	1.5	2.0	2.0	9.60	16.60	0.00	1.00	0.00	0.00	0.00
TERRAZZO FINISHER	All	BLD		34.27		1.5	1.5	2.0	2.0	9.60	12.70	0.00	0.55	0.00	0.00	0.00
TERRAZZO MASON	All	BLD		35.83		1.5	1.5	2.0	2.0	9.60	12.70	0.00	0.55	0.00	0.00	0.00
TILE MASON	All	BLD		35.83		1.5	1.5	2.0	2.0	9.60	12.70	0.00	0.55	0.00	0.00	0.00
TRUCK DRIVER	All	ALL	1	42.25	46.61	1.5	1.5	2.0	2.0	15.39	7.73	0.00	0.25	0.00	0.00	0.00
TRUCK DRIVER	All	ALL	2	42.83	46.61	1.5	1.5	2.0	2.0	15.39	7.73	0.00	0.25	0.00	0.00	0.00
TRUCK DRIVER	All	ALL	3	43.15	46.61	1.5	1.5	2.0	2.0	15.39	7.73	0.00	0.25	0.00	0.00	0.00
TRUCK DRIVER	All	ALL	4	43.50	46.61	1.5	1.5	2.0	2.0	15.39	7.73	0.00	0.25	0.00	0.00	0.00

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TRUCK DRIVER	All	ALL	5	44.61	46.61	1.5	1.5	2.0	2.0	15.39	7.73	0.00	0.25	0.00	0.00	0.00
TRUCK DRIVER	All	O&C	1	33.80	37.26	1.5	1.5	2.0	2.0	15.39	7.73	0.00	0.25	0.00	0.00	0.00
TRUCK DRIVER	All	O&C	2	34.26	37.26	1.5	1.5	2.0	2.0	15.39	7.73	0.00	0.25	0.00	0.00	0.00
TRUCK DRIVER	All	O&C	3	34.52	37.26	1.5	1.5	2.0	2.0	15.39	7.73	0.00	0.25	0.00	0.00	0.00
TRUCK DRIVER	All	O&C	4	34.80	37.26	1.5	1.5	2.0	2.0	15.39	7.73	0.00	0.25	0.00	0.00	0.00
TRUCK DRIVER	All	O&C	5	35.69	37.26	1.5	1.5	2.0	2.0	15.39	7.73	0.00	0.25	0.00	0.00	0.00
TUCKPOINTER	All	BLD		36.62	38.82	1.5	1.5	2.0	2.0	9.60	16.60	0.00	1.00	0.00	0.00	0.00

Legend

Rg Region

Type Trade Type - All,Highway,Building,Floating,Oil & Chip,Rivers

C Class

Base Base Wage Rate

OT M-F Unless otherwise noted, OT pay is required for any hour greater than 8 worked each day, Mon through Fri. The number listed is the multiple of the base wage.

OT Sa Overtime pay required for every hour worked on Saturdays

OT Su Overtime pay required for every hour worked on Sundays

OT Hol Overtime pay required for every hour worked on Holidays

H/W Health/Welfare benefit

Vac Vacation

Trng Training

Other Ins Employer hourly cost for any other type(s) of insurance provided for benefit of worker.

Explanations CHRISTIAN COUNTY

PLUMBERS & PIPEFITTERS (WEST) - That area lying west of a north/south line running from the western edge of Macon County to the town of Ohlman (Montgomery County).

The following list is considered as those days for which holiday rates of wages for work performed apply: New Years Day, Memorial Day, Fourth of July, Labor Day, Thanksgiving Day, Christmas Day and Veterans Day in some classifications/counties. Generally, any of these holidays which fall on a Sunday is celebrated on the following Monday. This then makes work performed on that Monday payable at the appropriate overtime rate for holiday pay. Common practice in a given local may alter certain days of celebration. If in doubt, please check with IDOL.

Oil and chip resealing (O&C) means the application of road oils and liquid asphalt to coat an existing road surface, followed by application of aggregate chips or gravel to coated surface, and subsequent rolling of material to seal the surface.

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EXPLANATION OF CLASSES

ASBESTOS - GENERAL - removal of asbestos material/mold and hazardous materials from any place in a building, including mechanical systems where those mechanical systems are to be removed. This includes the removal of asbestos materials/mold and hazardous materials from ductwork or pipes in a building when the building is to be demolished at the time or at some close future date.

ASBESTOS - MECHANICAL - removal of asbestos material from mechanical systems, such as pipes, ducts, and boilers, where the mechanical systems are to remain.

CERAMIC TILE FINISHER, MARBLE FINISHER, TERRAZZO FINISHER

Assisting, helping or supporting the tile, marble and terrazzo mechanic by performing their historic and traditional work assignments required to complete the proper installation of the work covered by said crafts. The term "Ceramic" is used for naming the classification only and is in no way a limitation of the product handled. Ceramic takes into consideration most hard tiles.

ELECTRONIC SYSTEMS TECHNICIAN

Installation, service and maintenance of low-voltage systems which utilizes the transmission and/or transference of voice, sound, vision, or digital for commercial, education, security and entertainment purposes for the following: TV monitoring and surveillance, background/foreground music, intercom and telephone interconnect, field programming, inventory control systems, microwave transmission, multi-media, multiplex, radio page, school, intercom and sound burglar alarms and low voltage master clock systems.

Excluded from this classification are energy management systems, life safety systems, supervisory controls and data acquisition systems not intrinsic with the above listed systems, fire alarm systems, nurse call systems and raceways exceeding fifteen feet in length.

TRUCK DRIVER - BUILDING, HEAVY AND HIGHWAY CONSTRUCTION Class 1. Drivers on 2 axle trucks hauling less than 9 ton. Air compressor and welding machines and brooms, including those pulled by separate units, truck driver helpers, warehouse employees, mechanic helpers, greasers and tiremen, pickup trucks when hauling materials, tools, or workers to and from and on-the-job site, and fork lifts up to 6,000 lb. capacity.

Class 2. Two or three axle trucks hauling more than 9 ton but hauling less than 16 ton. A-frame winch trucks, hydrolift trucks, vector trucks or similar equipment when used for transportation purposes. Fork lifts over 6,000 lb. capacity, winch trucks, four axle combination units, and ticket writers.

Class 3. Two, three or four axle trucks hauling 16 ton or more. Drivers on water pulls, articulated dump trucks, mechanics and working forepersons, and dispatchers. Five axle or more combination units.

Class 4. Low Boy and Oil Distributors.

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Class 5. Drivers who require special protective clothing while employed on hazardous waste work.

TRUCK DRIVER - OIL AND CHIP RESEALING ONLY.

This shall encompass laborers, workers and mechanics who drive contractor or subcontractor owned, leased, or hired pickup, dump, service, or oil distributor trucks. The work includes transporting materials and equipment (including but not limited to, oils, aggregate supplies, parts, machinery and tools) to or from the job site; distributing oil or liquid asphalt and aggregate; stock piling material when in connection with the actual oil and chip contract. The Truck Driver (Oil & Chip Resealing) wage classification does not include supplier delivered materials.

OPERATING ENGINEERS - BUILDING

CLASS 1. Asphalt Screed Man; Aspc Concrete Spreaders; Asphalt Pavers; Asphalt Plant Engineer; Asphalt Rollers on Bituminous Concrete; Athey Loaders; Backfillers, Crane Type; Backhoes; Barber Green Loaders; Bulldozers; Cableways; Cherry Pickers; Clam Shells; C.M.I. & similar type autograde formless paver, autograde placer & finisher; Concrete Breakers; Concrete Pumps; Derricks; Derrick Boats; Draglines; Earth Auger or Boring Machines; Elevating Graders; Engineers on Dredges; Gravel Processing Machines; Head Equipment Greaser; High Lifts or Fork Lifts; Hoists with two or more drums or two or more load lines; Locomotives, All; Mechanics; Motor Graders or Auto Patrols; Operators or Leverman on Dredges; Operators, Power Boat; Operator, Pug Mill (Asphalt Plants); Orange Peels; Overhead Cranes; Paving Mixers; Piledrivers; Pipe Wrapping and Painting Machines; Pushdozers, or Push Cats; Robotic Controlled Equipment in this Classification; Rock Crushers; Ross Carrier or Similar Machines; Rotomill; Scoops, Skimmer, two cu. yd. capacity and under; Scoops, All or Tournapull; Sheep-Foot Roller (Self Propelled); Shovels; Skid Steer; Skimmer Scoops; Temporary Concrete Plant Operators; Test Hole Drilling Machines; Tower Machines; Tower Mixers; Track Type End Loaders; Track Type Fork Lifts or High Lifts; Track Jacks and Tampers; Tractors, Sideboom; Trenching or Ditching Machine; Tunnelluggers; Vermeer Type Saws; Water Blaster Cutting Head; Wheel Type End Loaders; Winch Cat.

CLASS 2. Air Compressors (six to eight)*; Asphalt Boosters and Heaters; Asphalt Distributors; Asphalt Plant Fireman; Oiler on Two Paving Mixers When Used in Tandem; Boom or Winch Trucks; Bull Floats or Flexplanes; Concrete Finishing Machine; Concrete Saws, Self-Propelled; Concrete Spreading Machines; Conveyors (six to eight)*; Generators (six to eight)*; Gravel or Stone Spreader, Power Operated; Hoist (with One Drum and One Load Line); Light Plants (six to eight)*; Mechanical Heaters (six to eight)*; Mud Jacks; Post Hole Digger, Mechanical; Pug Mills when used for other than Asphalt operation; Robotic Controlled Equipment in this Classification; Road or Street Sweeper, Self Propelled; Rollers (except bituminous concrete); Seaman Tiller; Straw Machine; Vibratory Compactor; Water Blaster, Power Unit; Welding Machines (six to eight)*; Well Drill Machines.

CLASS 3. Air Compressors(one to five)*; Air Compressors, Track or Self-Propelled; Automatic Hoist; Building Elevators; Bulk Cement Batching Plants; Conveyors (one to five)*; Concrete Mixers (Except Plant, Paver, or Tower); Firemen; Generators (one to five)*; Greasers; Helper on Single Paving Mixer; Hoist, Automatic; Light Plants (one to five)*; Mechanic Helpers; Mechanical Heaters (one to five)*; Oilers; Power Form Graders; Power Sub-Graders; Robotic Controlled Equipment in this Classification; Scissors Hoist; Tractors without power attachments regardless of size or type; Truck Crane Oiler and Driver (1 man); Vibratory Hammer (power source); Water Pumps (one to five)*; Welding Machines (1/300 Amp. or over)*; Welding machines (one to five)*

CLASS 4. Lattice Boom Crawler Cranes; Lattice Boom Truck Cranes; Telescopic Truck-Mounted Cranes; Tower Cranes.

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* Combinations of one to eight of any Air Compressors, Conveyors, Welding Machines, Water Pumps, Light Plants, or Generators shall be in batteries or within 400 feet and shall be paid as per the Classification Schedule contained in this Article.

OPERATING ENGINEERS - HIGHWAY

CLASS 1. Asphalt Screed Man; Asphco Concrete Spreaders; Asphalt Pavers; Asphalt Plant Engineer; Asphalt Rollers on Bituminous Concrete; Athey Loaders; Backhoes; Barber Green Loaders; Bulldozers; Cableways; Carry Deck Pickers; Cherry Pickers (Rough Terrain); C.M.I. & similar type-autograde formless paver, autograde placer & finisher; Concrete Breakers; Concrete Plant Operators; Concrete Pumps; Derricks; Derrick Boats; Dewatering Systems; Earth Auger or Boring Machines; Elevating Graders; Engineers on Dredges; Gravel Processing Machines; Grout Pump; Head Equipment Greaser; High Lifts or Fork Lifts; Hoists with two or more drums or two or more load lines; Hydro Jet or Hydro Laser; Locomotives, All; Mechanics; Motor Graders or Auto Patrols; Multi-Point Power Lifting Equipment; Operators or Leverman on Dredges; Operators, Power Boat; Operators, Pug Mill (Asphalt Plants); Overhead Cranes; Paving Mixers; Piledrivers; Pipe Wrapping and Painting Machines; Push-dozers, or Push Cats; Robotic Controlled Equipment in this Classification; Rock Crushers; Ross Carrier or Similar Machines; Roto-Mill; Scoops, Skimmer, two cu. yd. capacity and under; Sheep-Foot Roller (Self Pro-pelled); Shovels; Skid Steer; Skimmer Scoops; Test Hole Drilling Machines; Tower Machines; Tower Mixers; Track Type End Loaders; Track Type Fork Lifts or High Lifts; Track Jacks and Tampers; Tractors, Side-boom; Trenching or Ditching Machine; Tunnelluggers; Vermeer-Type Saws; Wheel Type End Loaders; Winch Cat; Scoops, All or Tournapull.

CLASS 2. Air Compressors (six to eight)*; Articulated Dumps; Asphalt Boosters and Heaters; Asphalt Distributors; Asphalt Plant Fireman; Boom or Winch Trucks; Building Elevators; Bull Floats or Flexplanes; Concrete Finishing Machine; Concrete Saws, Self-Propelled; Concrete Spreading Machines; Conveyors (six to eight)*; Generators (six to eight)*; Gravel or Stone Spreader, Power Operated; Hoist, Automatic; Hoist with One Drum and One Load Line; Light Plants (six to eight)*; Mechanical Heaters (six to eight)*; Mud Jacks; Off Road Water Wagons; Oiler on Two Paving Mixers When Used in Tandem; Post Hole Digger, Mechanical; Robotic Controlled Equipment in This Classification; Road or Street Sweeper, Self-Propelled; Rollers (except bituminous concrete); Scissor Hoist; Sea-man Tiller; Straw Machine; Vibratory Compactor; Water Pumps (six to eight)*; Well Drill Machines.

CLASS 3. Air Compressors (one to five)*; Air Compressors, Track or Self-Propelled; Bulk Cement Batching Plants; Conveyors (one to five)*; Concrete Mixers (Except Plant, Paver, or Tower); Firemen; Generators (one to five)*; Greasers; Helper on Single Paving Mixer; Light Plants (one to five)*; Mechanic Helpers; Mechanical Heaters (one to five)*; Oilers; Power Form Graders; Power Sub-Graders; Pug Mills when used for other than Asphalt operation; Robotic Controlled Equipment in This Classification; Tractors without power attachments, regardless of size or type; Truck Crane Oiler and Driver (1 man); Vibratory Hammer (power source); Water Pumps (one to five)*; Welding Machines (one 300 Amp. or over)*; Welding Machines (one to five)*. CLASS 4. Lattice Boom Crawler Crane; Lattice Boom Truck Crane; Telescopic Truck-Mounted Crane; Tower Crane.

*Combinations of one to eight of any Air Compressors, Conveyors, Welding Machines, Water Pumps, Light Plants or Generators shall be in batteries or within 400 feet and shall be paid as per the Classification Schedule contained in this Article.

Other Classifications of Work:

For definitions of classifications not otherwise set out, the Department generally has on file such definitions which are available. If a task to be performed is not subject to one of the classifications of pay set out, the Department will upon being contacted state

Christian County Prevailing Wage Rates posted on 3/4/2024

which neighboring county has such a classification and provide such rate, such rate being deemed to exist by reference in this document. If no neighboring county rate applies to the task, the Department shall undertake a special determination, such special determination being then deemed to have existed under this determination. If a project requires these, or any classification not listed, please contact IDOL at 217-782-1710 for wage rates or clarifications.

LANDSCAPING

Landscaping work falls under the existing classifications for laborer, operating engineer and truck driver. The work performed by landscape plantsman and landscape laborer is covered by the existing classification of laborer. The work performed by landscape operators (regardless of equipment used or its size) is covered by the classifications of operating engineer. The work performed by landscape truck drivers (regardless of size of truck driven) is covered by the classifications of truck driver.

BIDDING & CONTRACT REQUIREMENTS

Document 008600 - Drawings, Schedules, and Details

<u>DRAWING NO.</u>	<u>TITLE</u>
G-101	COVER SHEET
G-102	GENERAL NOTES
G-103	HEALTH/LIFE SAFETY PLAN AND CODE ANALYSIS
D-101	DEMOLITION PLANS
A-101	FLOOR PLANS
A-110	REFLECTED CEILING PLANS
A-601	SCHEDULES, ELEVATIONS, AND DETAILS
MD-101	MECHANICAL DEMOLITION PLANS
M-101	MECHANICAL FLOOR PLANS
M-601	MECHANICAL SCHEDULES AND DETAILS
ED-101	ELECTRICAL DEMOLITION PLANS
E-101	ELECTRICAL FLOOR PLANS
E-601	ELECTRICAL SCHEDULES

All Drawings dated 03-15-2024.

END OF SECTION

SECTION 011000 - SUMMARY

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Contract description.
- B. Contractor's use of site and premises.
- C. Owner occupancy.
- D. Specification Conventions.
- E. Contractor's Duties.
- F. Contract Documents.

1.2 CONTRACT DESCRIPTION

- A. Work of the Project includes:
SCOPE OF WORK: The work consists of interior remodel of existing office space, with new walls, doors, flooring, and painting – and modifications to HVAC and Electrical in coordination with wall and room changes. Hardware upgrades for some existing interior doors to remain.
- B. Perform Work of Contract under stipulated sum contract with Owner in accordance with Conditions of Contract.

1.3 CONTRACTOR'S USE OF SITE AND PREMISES

- A. Limit use of site and premises to allow:
 - 1. Owner occupancy.
 - 2. Work by Others.
 - 3. Use of site and premises by the public.
- B. Construction Operations: Limited to areas noted on Drawings.
- C. Allow for public use of all adjoining streets and sidewalks.
- D. Light duty vehicle parking is permitted. All parking lots and sidewalks are to be restored to their original condition.

1.4 OWNER OCCUPANCY

- A. The Owner will occupy the site and premises during the entire period of construction.
- B. Cooperate with Owner to minimize conflict, and to facilitate Owner's operations.

- C. Schedule the Work to accommodate Owner occupancy.

1.5 SPECIFICATION CONVENTIONS

- A. These specifications are written in imperative mood and streamlined form. This imperative language is directed to the Contractor, unless specifically noted otherwise. The words “shall be” are included by inference where a colon (:) is used within sentences or phrases.
- B. No changes, additions or deletions to these specifications are permitted without the written permission of the Construction Inspector, and in no case will the Contractor be eligible for additional payment for any change, addition or deletion of any work without a separate written change order agreement executed by the County of Christian.

1.6 CONTRACTOR’S DUTIES

- A. The Contractor shall furnish all labor, materials, equipment, tools, construction equipment, and specialty items as well as provide supervision, direct the work, inspect, test and provide whatever effort, service or materials that may be required to complete the work as specified.
 - 1. All work must be done in a workmanlike manner.
 - 2. The entire work area and site must be left in a clean and orderly manner. No leftover equipment, materials, supplies, tools, trash etc. may be left on the county property. Disposal of all equipment removed, trash, etc. is the responsibility of the contractor and is a specific condition of the bid.
 - 3. No structural member shall be cut without the WRITTEN approval of the Construction Inspector, and all such cutting shall be done in a manner directed by him.
 - 4. No electric arc welding or cutting torch cutting shall be done in the building.
 - 5. Decisions regarding the acceptability of the project and with regard to any discrepancies with these specifications shall be at the sole discretion of William R. Kennedy, the Construction Inspector.
- B. Subcontractors – No Subcontractors shall be permitted without the express written permission of the Construction Inspector. In the unlikely and discouraged event of the use of a Subcontractor, said Subcontractor must meet each and every requirement to which the Contractor is bound by these specifications.
- C. Except as specifically noted, Contractor shall provide and pay for:
 - 1. All labor, materials, and equipment used for construction of and/or incorporated into the project.
 - 2. All tools, construction equipment and machinery.
 - 3. Required building permits, and all inspection fees by governmental authorities.
 - 4. Other facilities and services necessary for proper execution and complete of work.
- D. Owner is exempt from sales tax on product permanently incorporated in work.
 - 1. Obtain sales tax exemption certificate number from Owner.

2. Place exemption certificate number on invoices for materials incorporated in work.
 3. Upon completion of work, file with Owner a notarized statement that all purchases made under exemption certificate were entitled to be exempt and furnish copies of invoice to Owner.
 4. Pay legally assessed penalties for improper use of exemption certificate number.
- E. Comply with codes, ordinances, rules, regulations, orders, and other legal requirements of public authorities which bear on performance of work.
- F. Promptly submit written notice to Architect/Engineer of observed variance of contract documents from legal requirements.
1. It is not the Contractor's responsibility to make certain that drawings and specifications comply with codes and regulations.
 - a. Appropriate modifications to contract documents will account for/reflect necessary changes.
 - b. Assume responsibility for work known to be contrary to such requirements if written notice is not provided by the Contractor to the Architect.
- G. Enforce strict discipline and good order among employees.
- H. Do not unreasonably encumber site with materials or equipment.
- I. Do not load structure with weight that will endanger structure.
- J. Assume full responsibility for protection and safe-keeping of products stored on premises.
- K. Move any stored products which interfere with operations of Owner or other Contractors.
- L. Obtain and pay for use of additional storage or work areas needed for operations.
- M. The County of Christian shall prohibit the use of tobacco on property when the property is being used. Tobacco shall mean cigarette, cigar, pipe or tobacco in any other form including smokeless tobacco which is any loose, cut, shredded, ground, powdered, compressed or leaf tobacco that is intended to be placed in the mouth without being smoked. All members of work crews must remain fully clothed and refrain from using obscene or profane language during these same time parameters.
- N. Contractor shall maintain building free from entrance of water at all times during construction.
- O. Contractor shall furnish, erect and maintain temporary ladders, ramps, or hoists as may be required for performance of his work.
1. All such equipment shall be substantially designed, constructed, and maintained in accordance with applicable federal, state, and local laws, ordinances, and regulations, and shall be promptly removed when no longer needed.

- P. Contractor shall design, furnish, erect, maintain, and move all ladders and scaffolding required for this work.
 - 1. All ladders and scaffolding shall be designed, constructed, and maintained in accordance with applicable federal, state, and local law, ordinances, and regulations, and shall be promptly removed when no longer needed.

1.7 CONTRACT DOCUMENTS

- A. Contractor will be furnished free of charge two (2) copies of drawings and specifications.
- B. On request, additional copies will be furnished to Contractor at cost of reproduction, postage and handling.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

END OF SECTION

SECTION 012000 - PRICE AND PAYMENT PROCEDURES

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Schedule of values.
- B. Applications for payment.
- C. Change procedures.
- D. Defect assessment.
- E. Alternates.

1.2 SCHEDULE OF VALUES

- A. Submit printed schedule on AIA Form G703 - Continuation Sheet for G702.
- B. Submit Schedule of Values in duplicate within 15 days after date of Owner-Contractor Agreement.
- C. Format: Utilize Table of Contents of this Project Manual. Identify each line item with number and title of major specification Section. Identify site mobilization, bonds and insurance.
- D. Include in each line item, amount of Allowances specified in this section.
- E. Each line item shall be broken out to represent labor and materials cost separately.
- F. Include separately from each line item, direct proportional amount of Contractor's overhead and profit.
- G. Revise schedule to list approved Change Orders, with each Application For Payment.

1.3 APPLICATIONS FOR PAYMENT

- A. Submit three copies of each application on AIA Form G702-Application and Certificate for Payment.
- B. Content and Format: Utilize Schedule of Values for listing items in Application for Payment.
- C. Submit updated construction schedule with each Application for Payment.
- D. Payment Period: Submit applications for payment to Architect/Engineer for processing no later than 10 days prior to date established for progress payment meeting.

- E. Submit with transmittal letter as specified for Submittals in Section 013300.
- F. Submit lien waivers.
1. The Contractor shall provide Waivers of Lien satisfactory to the County of Christian covering all labor and material suppliers related to the job. Partial (Interim) Lien Waivers are required for the first two payments and are required for all subcontractors and suppliers who were included in the payment application, to the extent of that payment as reflected on the Christian County CASS form. Lien Waivers are to be in the amount reflected on the CASS form and shall be on Christian County Lien Waiver forms.
 2. The Contractor's request for final payment shall include final lien waivers on Christian County forms for the Contractor and for all subcontractors and suppliers in the full amount of their contracts as reflected on the CASS form. Final lien waivers are not required for subcontractors and suppliers whose subcontracts and purchase orders or agreements are less than \$500 unless otherwise requested by the County.
- G. Substantiating Data: When Architect/Engineer requires substantiating information, submit data justifying dollar amounts in question. Include the following with Application for Payment:
1. Partial release of liens from major subcontractors and vendors.
 2. Affidavits attesting to off-site stored products.
 3. Construction progress schedules revised and current.
- H. Application for Progress Payment No. 1 shall be accompanied by a notarized statement on Contractor's letterhead as follows:
1. I certify that the funds requested for the accompanying Pay Request No. 1 will be used to pay all just and lawful bills against the undersigned and his subcontractors for labor, material and equipment employed in the performance of the work. I further certify that such bills will be paid no later than ten (10) calendar days from date of receipt of the Owner's disbursement.
 2. Execute statement with signature of a responsible officer of contracting firm.
- I. Each subsequent application for progress payment shall be accompanied by the following supporting documents:
1. Partial or final waivers of lien in monetary amount from Contractor, each material supplier and/or subcontractor reflecting amounts incorporated into preceding request for progress payment.
 2. A notarized Affidavit of Payment to Material Suppliers and Subcontractors.
 - a. Affidavit shall be submitted in exact text as exhibit furnished by Architect/Engineers, signed by Contractor or Subcontractor.
 - b. Include unit item, actual amount of contract without overhead or profit, amount paid to date, and amount to become due (balance of account).
- J. Progress payments will be made for materials and equipment not incorporated in the work provided that:
1. Such materials and equipment have been delivered to and suitable stored at site or some other location approved in writing by Owner and Architect/Engineer.

All such materials stored off-site shall be marked or tagged with identification of project to which they are assigned.

2. Contractor submits evidence of title to such materials and equipment.
 3. Care and custody of such materials and equipment and all costs incurred for movement and storage shall be responsibility of Contractor.
 4. Such materials and equipment are suitably insured by Contractor. Contractor shall submit a certificate of insurance showing the Owner as an additional insured and showing amount of insurance coverage of suitable proof that material and equipment are stored in a bonded warehouse.
- K. Final payment, including remaining balance of the contract and retainage, will be made upon acceptance of all work on final completion. The following documentation is to be provided in conjunction with request for final payment.
1. Application for final payment.
 2. Certificate of Final Acceptance.
 3. Contractor's Final Declaration, including Surety's Power of Attorney and Jurat (Notary's Statement Authenticating Signature).
 4. Final Waiver(s) of Lien from Contractor in full amount of contract as reflected on the application for final payment, and from subcontractor(s)/supplier(s) in the full amount of their contract as reflected on the application for final payment.
 5. Construction Schedule of Values reflecting final allowances.
 6. Submit with transmittal letter as specified for Submittals in Section 013300.
- L. Refer to Section 017000 for additional and related closeout procedures and requirements.

1.4 CHANGE PROCEDURES

- A. Submittals: Submit name of individual authorized to receive change documents, and be responsible for informing others in Contractor's employ or Subcontractors of changes to the Work.
- B. The Architect/Engineer will advise of minor changes in the Work not involving adjustment to Contract Sum/Price or Contract Time by issuing supplemental instructions in writing.
- C. The Architect/Engineer may issue a Proposal Request including a detailed description of proposed change with supplementary or revised Drawings and specifications, a change in Contract Time for executing the change and the period of time during which the requested price will be considered valid. Contractor will prepare and submit estimate within seven days.
- D. Contractor may propose changes by submitting a request for change to Architect/Engineer, describing proposed change and its full effect on the Work. Include a statement describing reason for the change, and effect on Contract Sum/Price and Contract Time with full documentation and a statement describing effect on Work by separate or other Contractors.

- E. Stipulated Sum/Price Change Order: Based on Proposal Request and Contractor's fixed price quotation or Contractor's request for Change Order as approved by Architect/Engineer.
- F. Architect/Engineer may issue directive, on Hurst-Rosche, Inc. Change Order form signed by Owner, instructing Contractor to proceed with change in the Work, for subsequent inclusion in a Change Order. Document will describe changes in the Work, and designate method of determining any change in Contract Sum/Price or Contract Time. Promptly execute change.
- G. Time and Material Change Order: Submit itemized account and supporting data after completion of change, within time limits indicated in Conditions of the Contract. Architect/Engineer will determine change allowable in Contract Sum/Price and Contract Time as provided in Contract Documents.
- H. Maintain detailed records of work done on Time and Material basis. Provide full information required for evaluation of proposed changes, and to substantiate costs for changes in the Work.
- I. Document each quotation for change in cost or time with sufficient data to allow evaluation of quotation.
- J. Execution of Change Orders: Architect/Engineer will issue Change Orders for signatures of parties as provided in Conditions of the Contract.
- K. Correlation Of Contractor Submittals:
 1. Promptly revise Schedule of Values and Application for Payment forms to record each authorized Change Order as separate line item and adjust Contract Sum/Price.
 2. Promptly revise progress schedules to reflect change in Contract Time, revise sub-schedules to adjust times for other items of work affected by the change, and resubmit.
 3. Promptly enter changes in Project Record Documents.

1.5 DEFECT ASSESSMENT

- A. Replace the Work, or portions of the Work, not conforming to specified requirements.
- B. If, in the opinion of the Architect/Engineer, it is not practical to remove and replace the Work, the Architect/Engineer will direct appropriate remedy or adjust payment.
- C. The defective Work may remain, but unit sum/price will be adjusted to new sum/price at discretion of Architect/Engineer.
- D. Defective Work will be partially repaired to instructions of Architect/Engineer, and unit sum/price will be adjusted to new sum/price at discretion of Architect/Engineer.
- E. Individual specification sections may modify these options or may identify specific formula or percentage sum/price reduction.

- F. Authority of Architect/Engineer to assess defects and identify payment adjustments, is final.
- G. Non-Payment For Rejected Products: Payment will not be made for rejected products for any of the following:
 - 1. Products wasted or disposed of in a manner that is not acceptable.
 - 2. Products determined as unacceptable before or after placement.
 - 3. Products not completely unloaded from transporting vehicle.
 - 4. Products placed beyond lines and levels of required Work.
 - 5. Products remaining on hand after completion of the Work.
 - 6. Loading, hauling, and disposing of rejected products.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

END OF SECTION

SECTION 013000 - ADMINISTRATIVE REQUIREMENTS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Coordination and project conditions.
- B. Preconstruction meeting.
- C. Progress meetings.
- D. Pre-installation meetings.
- E. Cutting and patching.
- F. Special procedures.

1.2 COORDINATION AND PROJECT CONDITIONS

- A. Coordinate scheduling, submittals, and Work of various sections of Project Manual to ensure efficient and orderly sequence of installation of interdependent construction elements.
- B. Verify utility requirements and characteristics of operating equipment are compatible with building utilities. Coordinate work of various sections having interdependent responsibilities for installing, connecting to, and placing in service, operating equipment.
- C. Coordinate space requirements, supports, and installation of mechanical and electrical Work indicated diagrammatically on Drawings. Follow routing shown for pipes, ducts, and conduit, as closely as practicable; place runs parallel with lines of building. Utilize spaces efficiently to maximize accessibility for other installations, for maintenance, and for repairs.
- D. In finished areas except as otherwise indicated, conceal pipes, ducts, and wiring within construction. Coordinate locations of fixtures and outlets with finish elements.
- E. Coordinate completion and clean-up of Work of separate sections in preparation for Substantial Completion and for portions of Work designated for Owner's occupancy.
- F. After Owner occupancy of premises, coordinate access to site for correction of defective Work and Work not in accordance with Contract Documents, to minimize disruption of Owner's activities.

1.3 PRECONSTRUCTION MEETING

- A. Architect/Engineer will schedule meeting after Notice of Award.

- B. Attendance Required: Owner, Architect/Engineer, and Contractor.
- C. Agenda:
 - 1. Execution of Owner-Contractor Agreement.
 - 2. Submission of executed bonds and insurance certificates.
 - 3. Distribution of Contract Documents.
 - 4. Submission of list of Subcontractors, list of products, schedule of values, and progress schedule.
 - 5. Designation of personnel representing parties in Contract and Architect/Engineer.
 - 6. Procedures and processing of field decisions, submittals, substitutions, applications for payments, proposal request, Change Orders, and Contract closeout procedures.
 - 7. Scheduling.
- D. Architect/Engineer will record minutes and distribute copies with reasonable promptness after meeting to participants, with copies to Owner, and those affected by decisions made.

1.4 PROGRESS MEETINGS

- A. Schedule and administer meetings throughout progress of the Work at maximum monthly intervals.
- B. Architect/Engineer will make arrangements for meetings, prepare agenda with copies for participants, preside at meetings.
- C. Attendance Required: Job superintendent, major subcontractors and suppliers, Owner, Architect/Engineer, as appropriate to agenda topics for each meeting.
- D. Agenda:
 - 1. Review minutes of previous meetings.
 - 2. Review of Work progress.
 - 3. Field observations, problems, and decisions.
 - 4. Identification of problems impeding planned progress.
 - 5. Review of submittals schedule and status of submittals.
 - 6. Review of off-site fabrication and delivery schedules.
 - 7. Maintenance of progress schedule.
 - 8. Corrective measures to regain projected schedules.
 - 9. Planned progress during succeeding work period.
 - 10. Coordination of projected progress.
 - 11. Maintenance of quality and work standards.
 - 12. Effect of proposed changes on progress schedule and coordination.
 - 13. Other business relating to Work.
- E. Architect/Engineer will record minutes and distribute copies with reasonable promptness after meeting to participants, with copies to Owner, and those affected by decisions made.

1.5 PRE-INSTALLATION MEETINGS

- A. When required in individual specification sections, convene pre-installation meetings at Project site prior to commencing work of specific section.
- B. Require attendance of parties directly affecting, or affected by, Work of specific section.
- C. Notify Architect/Engineer four days in advance of meeting date.
- D. Prepare agenda and preside at meeting:
 - 1. Review conditions of installation, preparation and installation procedures.
 - 2. Review coordination with related work.
- E. Architect/Engineer will record minutes and distribute copies with reasonable promptness after meeting to participants, with copies to Owner, and those affected by decisions made.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

3.1 CUTTING AND PATCHING

- A. Employ skilled and experienced installer to perform cutting and patching.
- B. Submit written request in advance of cutting or altering elements affecting:
 - 1. Structural integrity of element.
 - 2. Integrity of weather-exposed or moisture-resistant elements.
 - 3. Efficiency, maintenance, or safety of element.
 - 4. Visual qualities of sight exposed elements.
 - 5. Work of Owner or separate contractor.
- C. Execute cutting, fitting, and patching including excavation and fill, to complete Work, and to:
 - 1. Fit the several parts together, to integrate with other Work.
 - 2. Uncover Work to install or correct ill-timed Work.
 - 3. Remove and replace defective and non-conforming Work.
 - 4. Remove samples of installed Work for testing.
 - 5. Provide openings in elements of Work for penetrations of mechanical and electrical Work.
- D. Execute work by methods to avoid damage to other Work, and to provide proper surfaces to receive patching and finishing.
- E. Cut masonry and concrete materials using masonry saw or core drill.

- F. Restore Work with new products in accordance with requirements of Contract Documents.
- G. Fit Work tight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.
- H. Maintain integrity of wall, ceiling, or floor construction; completely seal voids.
- I. At penetrations of fire rated walls, partitions, ceiling, or floor construction, completely seal voids with fire rated material, to full thickness of penetrated element.
- J. Refinish or restore surfaces and finished to match existing finishes. For continuous surfaces, refinish to nearest intersection; for assembly, refinish entire unit.
- K. Identify hazardous substances or conditions exposed during the Work to Architect/Engineer for decision or remedy.

3.2 SPECIAL PROCEDURES

- A. Materials: As specified in product sections; match existing with new products and salvaged products for patching and extending work.
- B. Employ skilled and experienced installer to perform alteration work.
- C. Cut, move, or remove items as necessary for access to alterations and renovation Work. Replace and restore at completion.
- D. Remove unsuitable material not marked for salvage, including rotted wood, corroded metals, and deteriorated masonry and concrete. Replace materials as specified for finished Work.
- E. Remove debris and abandoned items from area and from concealed spaces. See Drawings for more specifics on abandoned items and work required to existing insulation in the attic space.
- F. Prepare surface and remove surface finishes to permit installation of new work and finishes.
- G. Close openings in exterior surfaces to protect existing work from weather and extremes of temperature and humidity.
- H. Remove, cut, and patch Work in manner to minimize damage and to permit restoring products and finishes to original condition.
- I. Refinish existing visible surfaces to remain in renovated rooms and spaces, to renewed condition for each material, with neat transition to adjacent finishes.
- J. Where new Work abuts or aligns with existing, provide smooth and even transition. Patch Work to match existing adjacent Work in texture and appearance.

- K. When finished surfaces are cut so that smooth transition with new Work is not possible, terminate existing surface along straight line at natural line of division and submit recommendation to Architect/Engineer for review.
- L. Where change of plane of 1/4 inch or more occurs, submit recommendation for providing smooth transition; to Architect/Engineer for review.
- M. Patch or replace portions of existing surfaces which are damaged, lifted, discolored, or showing other imperfections.
- N. Finish surfaces as specified in individual product sections.

END OF SECTION

SECTION 013300 - SUBMITTAL PROCEDURES

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Submittal procedures.
- B. Construction progress schedules.
- C. Proposed products list.
- D. Product data.
- E. Shop drawings.
- F. Design data.
- G. Test reports.
- H. Certificates.
- I. Manufacturer's instructions.

1.2 SUBMITTAL PROCEDURES

- A. Transmit each submittal with shop drawing submittal form found at the end of this section. A copy of the submittal form must be attached to each copy of the submittal; if not, the submittal will be rejected and returned to the Contractor.**
- B. Sequentially number transmittal forms. Mark revised submittals with original number and sequential alphabetic suffix.
- C. Identify Project, Contractor, subcontractor and supplier; pertinent drawing and detail number, and specification section number, appropriate to submittal.
- D. Apply Contractor's stamp, signed or initialed certifying that review, approval, verification of products required, field dimensions, adjacent construction Work, and coordination of information is in accordance with requirements of the Work and Contract Documents.
- E. Schedule submittals to expedite Project, and deliver to Architect/Engineer at business address. Coordinate submission of related items.
- F. For each submittal for review, allow 15 days excluding delivery time to and from Contractor.
- G. Identify variations from Contract Documents and product or system limitations which may be detrimental to successful performance of completed Work.

- H. Allow space on submittals for Contractor and Architect/Engineer review stamps.
- I. When revised for resubmission, identify changes made since previous submission.
- J. Distribute copies of reviewed submittals as appropriate. Instruct parties to promptly report inability to comply with requirements.
- K. Submittals not requested will not be recognized or processed.

1.3 CONSTRUCTION PROGRESS SCHEDULES

- A. Submit initial schedules within 15 days after date of Owner-Contractor Agreement. After review, resubmit required revised data within ten days.
- B. Submit revised Progress Schedules with each Application for Payment.
- C. Distribute copies of reviewed schedules to Project site file, subcontractors, suppliers, and other concerned parties.
- D. Instruct recipients to promptly report, in writing, problems anticipated by projections indicated in schedules.
- E. Submit computer generated horizontal bar chart with separate line for each major portion of Work or operation, identifying first work day of each week.
- F. Show complete sequence of construction by activity, identifying Work of separate stages and other logically grouped activities. Indicate early and late start, early and late finish, float dates, and duration.
- G. Indicate estimated percentage of completion for each item of Work at each submission.
- H. Submit separate schedule of submittal dates for shop drawings, product data, and samples, including products identified under Allowances, and dates reviewed submittals will be required from Architect/Engineer. Indicate decision dates for selection of finishes.
- I. Indicate delivery dates for products identified under Allowances.
- J. Revisions To Schedules:
 - 1. Indicate progress of each activity to date of submittal, and projected completion date of each activity.
 - 2. Identify activities modified since previous submittal, major changes in scope, and other identifiable changes.
 - 3. Prepare narrative report to define problem areas, anticipated delays, and impact on Schedule. Report corrective action taken, or proposed, and its effect including effect of changes on schedules of separate contractors.

1.4 PROPOSED PRODUCTS LIST

- A. Within 15 days after date of Owner-Contractor Agreement, submit list of major products proposed for use, with name of manufacturer, trade name, and model number of each product.
- B. For products specified only by reference standards, give manufacturer, trade name, model or catalog designation, and reference standards.

1.5 PRODUCT DATA

- A. Product Data: Submit to Architect/Engineer for review for limited purpose of checking for conformance with information given and design concept expressed in Contract Documents.
- B. Submit number of copies Contractor requires, plus 3 copies Architect/Engineer will retain.
- C. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information specific to this Project.
- D. Indicate product utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.
- E. After review, produce copies and distribute in accordance with SUBMITTAL PROCEDURES article and for record documents described in Section 017000.

1.6 SHOP DRAWINGS

- A. Shop Drawings: Submit to Architect/Engineer for review for limited purpose of checking for conformance with information given and design concept expressed in Contract Documents.
- B. Indicate special utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.
- C. When required by individual specification sections, provide shop drawings signed and sealed by professional engineer responsible for designing components shown on shop drawings.
 - 1. Include signed and sealed calculations to support design.
 - 2. Submit drawings and calculations in form suitable for submission to and approval by authorities having jurisdiction.
 - 3. Make revisions and provide additional information when required by authorities having jurisdiction.

- D. Submit number of opaque reproductions Contractor requires, plus 3 copies Architect/Engineer will retain.
- E. After review, produce copies and distribute in accordance with SUBMITTAL PROCEDURES article and for record documents described in Section 017000.

1.7 DESIGN DATA

- A. Submit for Architect/Engineer's knowledge as contract administrator or for Owner.
- B. Submit for information for limited purpose of assessing conformance with information given and design concept expressed in Contract Documents.

1.8 TEST REPORTS

- A. Submit for Architect/Engineer's knowledge as contract administrator or for Owner.
- B. Submit test reports for information for limited purpose of assessing conformance with information given and design concept expressed in Contract Documents.

1.9 CERTIFICATES

- A. When specified in individual specification sections, submit certification by manufacturer, installation/application subcontractor, or Contractor to Architect/Engineer, in quantities specified for Product Data.
- B. Indicate material or product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.
- C. Certificates may be recent or previous test results on material or Product, but must be acceptable to Architect/Engineer.

1.10 MANUFACTURER'S INSTRUCTIONS

- A. When specified in individual specification sections, submit printed instructions for delivery, storage, assembly, installation, start-up, adjusting, and finishing, to Architect/Engineer for delivery to Owner in quantities specified for Product Data.
- B. Indicate special procedures, perimeter conditions requiring special attention, and special environmental criteria required for application or installation.

1.11 ERECTION DRAWINGS

- A. Submit drawings for Architect/Engineer's benefit as contract administrator or for Owner.
- B. Submit for information for limited purpose of assessing conformance with information given and design concept expressed in Contract Documents.
- C. Data indicating inappropriate or unacceptable Work may be subject to action by Architect/Engineer or Owner.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

END OF SECTION



SHOP DRAWING SUBMITTAL

PROJECT: NEW OFFICE
CHRISTIAN COUNTY SHERIFF'S DEPARTMENT
214 WEST MARKET STREET
TAYLORVILLE, CHRISTIAN COUNTY, ILLINOIS

DATE: _____

A/E PROJECT NO: HR# 390-1533

CONTRACTOR: _____

PRESENTED BY: _____
(Subcontractor/Supplier) Company Name

Address

Phone/Fax

Contact Person

ITEM: _____

SPEC SECTION: _____

By approving and submitting these shop drawings, product data and samples, we represent that we have determined and verified all materials, field measurements and field construction criteria related thereto, or will do so, and that we have checked and coordinated information contained within submittal with requirements of the work and contract documents.

Contractor's Signature

Date

SECTION 014000 - QUALITY REQUIREMENTS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Quality control and control of installation.
- B. Tolerances.
- C. References.
- D. Examination.
- E. Preparation.

1.2 QUALITY CONTROL AND CONTROL OF INSTALLATION

- A. Monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce Work of specified quality.
- B. Comply with manufacturers' instructions, including each step in sequence.
- C. When manufacturers' instructions conflict with Contract Documents, request clarification from Architect/Engineer before proceeding.
- D. Comply with specified standards as minimum quality for the Work except where more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.
- E. Perform Work by persons qualified to produce required and specified quality.
- F. Verify field measurements are as indicated on Shop Drawings or as instructed by manufacturer.
- G. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, or disfigurement.

1.3 TOLERANCES

- A. Monitor fabrication and installation tolerance control of products to produce acceptable Work. Do not permit tolerances to accumulate.
- B. Comply with manufacturers' tolerances. When manufacturers' tolerances conflict with Contract Documents, request clarification from Architect/Engineer before proceeding.
- C. Adjust products to appropriate dimensions; position before securing products in place.

1.4 REFERENCES

- A. For products or workmanship specified by association, trade, or other consensus standards, comply with requirements of standard, except when more rigid requirements are specified or are required by applicable codes.
- B. Conform to reference standard by date of issue current on date of Contract Documents, except where specific date is established by code.
- C. Obtain copies of standards where required by product specification sections.
- D. When specified reference standards conflict with Contract Documents, request clarification from Architect/Engineer before proceeding.
- E. Neither contractual relationships, duties, nor responsibilities of parties in Contract nor those of Architect/Engineer shall be altered from Contract Documents by mention or inference otherwise in reference documents.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify existing site conditions and substrate surfaces are acceptable for subsequent Work. Beginning new Work means acceptance of existing conditions.
- B. Verify existing substrate is capable of structural support or attachment of new Work being applied or attached.
- C. Examine and verify specific conditions described in individual specification sections.
- D. Verify utility services are available, of correct characteristics, and in correct locations.

3.2 PREPARATION

- A. Clean substrate surfaces prior to applying next material or substance.
- B. Seal cracks or openings of substrate prior to applying next material or substance.
- C. Apply manufacturer required or recommended substrate primer, sealer, or conditioner prior to applying new material or substance in contact or bond.

END OF SECTION

SECTION 015000 - TEMPORARY FACILITIES AND CONTROLS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Temporary Utilities:
 - 1. Temporary electricity.
 - 2. Temporary water service.
 - 3. Temporary sanitary facilities.
- B. Construction Facilities:
 - 1. Vehicular access.
 - 2. Parking.
 - 3. Progress cleaning and waste removal.
- C. Temporary Controls:
 - 1. Barriers.
 - 2. Enclosures and fencing.
 - 3. Security.
 - 4. Water control.
 - 5. Dust control.
 - 6. Erosion and sediment control.
 - 7. Noise control.
 - 8. Pest control.
 - 9. Pollution control.
 - 10. Rodent control.
- D. Removal of utilities, facilities, and controls.

1.2 TEMPORARY ELECTRICITY

- A. Owner will pay cost of energy used. Exercise measures to conserve energy. Utilize Owner's existing power service.
- B. Complement existing power service capacity and characteristics as required for construction operations.
- C. Permanent convenience receptacles may not be utilized during construction.
- D. Provide flexible power cords as required for portable construction.

1.3 TEMPORARY WATER SERVICE

- A. Owner will pay cost of temporary water. Exercise measures to conserve energy. Utilize Owner's existing water system, extend and supplement with temporary devices as needed to maintain specified conditions for construction operations.

1.4 TEMPORARY SANITARY FACILITIES

- A. Existing facility use is permitted. Contractor to keep clean throughout project and perform final cleaning upon project completion.

1.5 VEHICULAR ACCESS

- A. Use designated existing on-site roads for construction traffic.

1.6 PARKING

- A. Use of designated existing on-site streets and driveways used for construction traffic is permitted. Tracked vehicles not allowed on paved areas.
- B. Use of designated areas of existing parking facilities used by construction personnel is permitted.
- C. Do not allow heavy vehicles or construction equipment in parking areas.
- D. Maintenance:
 - 1. Maintain traffic and parking areas in sound condition.
 - 2. Maintain existing and permanent paved areas used for construction; promptly repair breaks, potholes, low areas, standing water, and other deficiencies, to maintain paving and drainage in original, or specified, condition.

1.7 PROGRESS CLEANING AND WASTE REMOVAL

- A. Maintain areas free of waste materials, debris, and rubbish. Maintain site in clean and orderly condition.
- B. Remove debris and rubbish from pipe chases, plenums, attics, crawl spaces, and other closed or remote spaces, prior to enclosing spaces.
- C. Broom and vacuum clean interior areas prior to start of surface finishing, and continue cleaning to eliminate dust.
- D. Collect and remove waste materials, debris, and rubbish from site weekly and dispose off-site.
- E. Open free-fall chutes are not permitted. Terminate closed chutes into appropriate containers with lids.

1.8 BARRIERS

- A. Provide barriers to prevent unauthorized entry to construction areas to allow for Owner's use of site, and to protect existing facilities and adjacent properties from damage from construction operations and demolition.
- B. Provide barricades and covered walkways required by authorities having jurisdiction for public rights-of-way and for public access to existing building.
- C. Provide protection for plants designated to remain. Replace damaged plants.
- D. Protect non-owned vehicular traffic, stored materials, site, and structures from damage.

1.9 WATER CONTROL

- A. Grade site to drain. Maintain excavations free of water. Provide, operate, and maintain pumping equipment.
- B. Protect site from puddling or running water.

1.10 DUST CONTROL

- A. Execute Work by methods to minimize raising dust from construction operations.
- B. Provide positive means to prevent air-borne dust from dispersing into atmosphere.

1.11 EROSION AND SEDIMENT CONTROL

- A. Plan and execute construction by methods to control surface drainage from cuts and fills, from borrow and waste disposal areas. Prevent erosion and sedimentation.
- B. Minimize surface area of bare soil exposed at one time.
- C. Provide temporary measures including berms, dikes, drains, and other devices to prevent water flow.
- D. Construct fill and waste areas by selective placement to avoid erosive surface silts or clays.
- E. Periodically inspect earthwork to detect evidence of erosion and sedimentation; promptly apply corrective measures.

1.12 NOISE CONTROL

- A. Provide methods, means, and facilities to minimize noise produced by construction operations.

1.13 PEST CONTROL

- A. Provide methods, means, and facilities to prevent pests and insects from damaging the Work or entering facility.

1.14 POLLUTION CONTROL

- A. Provide methods, means, and facilities to prevent contamination of soil, water, and atmosphere from discharge of noxious, toxic substances, and pollutants produced by construction operations.

1.15 RODENT CONTROL

- A. Provide methods, means, and facilities to prevent rodents from accessing or invading premises.

1.16 REMOVAL OF UTILITIES, FACILITIES, AND CONTROLS

- A. Remove temporary utilities, equipment, facilities, materials, prior to Substantial Completion inspection.
- B. Clean and repair damage caused by installation or use of temporary work.
- C. Restore existing and permanent facilities used during construction to original condition. Restore permanent facilities used during construction to specified condition.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

END OF SECTION

SECTION 016000 - PRODUCT REQUIREMENTS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Products.
- B. Product delivery requirements.
- C. Product storage and handling requirements.
- D. Product options.
- E. Product substitution procedures.
- F. Equipment electrical characteristics and components.

1.2 PRODUCTS

- A. Furnish products of qualified manufacturers suitable for intended use. Furnish products of each type by single manufacturer unless specified otherwise.
- B. Do not use materials and equipment removed from existing premises, except as specifically permitted by Contract Documents.
- C. Furnish interchangeable components from same manufacturer for components being replaced.

1.3 PRODUCT DELIVERY REQUIREMENTS

- A. Transport and handle products in accordance with manufacturer's instructions.
- B. Promptly inspect shipments to ensure products comply with requirements, quantities are correct, and products are undamaged.
- C. Provide equipment and personnel to handle products by methods to prevent soiling, disfigurement, or damage.

1.4 PRODUCT STORAGE AND HANDLING REQUIREMENTS

- A. Store and protect products in accordance with manufacturers' instructions.
- B. Store with seals and labels intact and legible.
- C. Store sensitive products in weather tight, climate controlled, enclosures in an environment favorable to product.
- D. For exterior storage of fabricated products, place on sloped supports above ground.

- E. Provide bonded off-site storage and protection when site does not permit on-site storage or protection.
- F. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to prevent condensation and degradation of products.
- G. Store loose granular materials on solid flat surfaces in well-drained area. Prevent mixing with foreign matter.
- H. Provide equipment and personnel to store products by methods to prevent soiling, disfigurement, or damage.
- I. Arrange storage of products to permit access for inspection. Periodically inspect to verify products are undamaged and are maintained in acceptable condition.

1.5 PRODUCT OPTIONS

- A. Products Specified by Reference Standards or by Description Only: Any product meeting those standards or description.
- B. Products Specified by Naming One or More Manufacturers: Products of one of manufacturers named and meeting specifications, no options or substitutions allowed.
- C. Products Specified by Naming One or More Manufacturers with Provision for Substitutions: Submit request for substitution for any manufacturer not named in accordance with the following article.

1.6 PRODUCT SUBSTITUTION PROCEDURES

- A. Instructions to Bidders specify time restrictions for submitting requests for Substitutions during bidding period to requirements specified in this section.
- B. Substitutions may be considered when a product becomes unavailable through no fault of Contractor.
- C. Document each request with complete data substantiating compliance of proposed Substitution with Contract Documents.
- D. A request constitutes a representation that Contractor:
 1. Has investigated proposed product and determined that it meets or exceeds quality level of specified product.
 2. Will provide same warranty for Substitution as for specified product.
 3. Will coordinate installation and make changes to other Work which may be required for the Work to be complete with no additional cost to Owner.
 4. Waives claims for additional costs or time extension which may subsequently become apparent.
 5. Will reimburse Owner and Architect/Engineer for review or redesign services associated with re-approval by authorities having jurisdiction.

- E. Substitutions will not be considered when they are indicated or implied on Shop Drawing or Product Data submittals, without separate written request, or when acceptance will require revision to Contract Documents.
- F. Substitution Submittal Procedure:
 - 1. Submit three copies of Request for Substitution for consideration. Limit each request to one proposed Substitution.
 - 2. Submit Shop Drawings, Product Data, and certified test results attesting to proposed product equivalence. Burden of proof is on proposer.
 - 3. Architect/Engineer will notify Contractor in writing of decision to accept or reject request.

PART 2 PRODUCTS

2.1 EQUIPMENT ELECTRICAL CHARACTERISTICS AND COMPONENTS

- A. Wiring Terminations: Furnish terminal lugs to match branch circuit conductor quantities, sizes, and materials indicated. Include lugs for terminal box.
- B. Cord and Plug: Furnish minimum 6-foot cord and plug including grounding connector for connection to electric wiring system. Cord of longer length is specified in individual specification sections.

PART 3 EXECUTION

Not Used.

END OF SECTION

SECTION 017000 - EXECUTION AND CLOSEOUT REQUIREMENTS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Closeout procedures.
- B. Final cleaning.
- C. Starting of systems.
- D. Demonstration and instructions.
- E. Protecting installed construction.
- F. Project record documents.
- G. Operation and maintenance data.
- H. Manual for materials and finishes.
- I. Manual for equipment and systems.
- J. Spare parts and maintenance products.
- K. Product warranties and product bonds.

1.2 CLOSEOUT PROCEDURES

- A. Submit written certification that Contract Documents have been reviewed, Work has been inspected, and that Work is complete in accordance with Contract Documents and ready for Architect/Engineer's review.
- B. Provide submittals to Architect/Engineer required by authorities having jurisdiction.
- C. Submit final Application for Payment identifying total adjusted Contract Sum, previous payments, and sum remaining due.
- D. Provide a notarized Affidavit for Final Completion in exact text as exhibit furnished by Architect/Engineer, signed by Contractor.
- E. Owner will occupy all of building as specified in Section 011000.

1.3 FINAL CLEANING

- A. Execute final cleaning prior to final project assessment.
- B. Clean interior and exterior glass, surfaces exposed to view; remove temporary labels, stains and foreign substances, polish transparent and glossy surfaces, vacuum carpeted and soft surfaces.
- C. Clean equipment and fixtures to sanitary condition with cleaning materials appropriate to surface and material being cleaned.
- D. Replace filters of operating equipment.
- E. Clean debris from roofs, gutters, downspouts, and drainage systems.
- F. Clean site; sweep paved areas, rake clean landscaped surfaces.
- G. Remove waste and surplus materials, rubbish, and construction facilities from site.

1.4 STARTING OF SYSTEMS

- A. Coordinate schedule for start-up of various equipment and systems.
- B. Notify Architect/Engineer and Owner three days prior to start-up of each item.
- C. Verify each piece of equipment or system has been checked for proper lubrication, drive rotation, belt tension, control sequence, and for conditions which may cause damage.
- D. Verify tests, meter readings, and specified electrical characteristics agree with those required by equipment or system manufacturer.
- E. Verify wiring and support components for equipment are complete and tested.
- F. Execute start-up under supervision of applicable manufacturer's representative and Owner's personnel in accordance with manufacturers' instructions.
- G. When specified in individual specification Sections, require manufacturer to provide authorized representative to be present at site to inspect, check, and approve equipment or system installation prior to start-up, and to supervise placing equipment or system in operation.
- H. Submit a written report in accordance with Section 013300 that equipment or system has been properly installed and is functioning correctly.

1.5 DEMONSTRATION AND INSTRUCTIONS

- A. Demonstrate operation and maintenance of products to Owner's personnel one week prior to date of Substantial Completion.
- B. For equipment or systems requiring seasonal operation, perform demonstration for other season within six months.
- C. Utilize operation and maintenance manuals as basis for instruction. Review contents of manual with Owner's personnel in detail to explain all aspects of operation and maintenance.
- D. Demonstrate start-up, operation, control, adjustment, trouble-shooting, servicing, maintenance, and shutdown of each item of equipment at agreed time, at designated location.
- E. Prepare and insert additional data in operations and maintenance manuals when need for additional data becomes apparent during instruction.
- F. Required instruction time for each item of equipment and system is specified in individual sections.

1.6 PROTECTING INSTALLED CONSTRUCTION

- A. Protect installed Work and provide special protection where specified in individual specification sections.
- B. Provide temporary and removable protection for installed products. Control activity in immediate work area to prevent damage.
- C. Provide protective coverings at walls, projections, jambs, sills, and soffits of openings.
- D. Protect finished floors, stairs, and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects, by protecting with durable sheet materials.
- E. Prohibit traffic or storage upon waterproofed or roofed surfaces. When traffic or activity is necessary, obtain recommendations for protection from waterproofing or roofing material manufacturer.
- F. Prohibit traffic from landscaped areas.

1.7 PROJECT RECORD DOCUMENTS

- A. Maintain on site one set of the following record documents; record actual revisions to the Work:
 - 1. Drawings.
 - 2. Specifications.
 - 3. Addenda.
 - 4. Change Orders and other modifications to the Contract.

5. Reviewed Shop Drawings, Product Data, and Samples.
 6. Manufacturer's instruction for assembly, installation, and adjusting.
- B. Ensure entries are complete and accurate, enabling future reference by Owner.
 - C. Store record documents separate from documents used for construction.
 - D. Record information concurrent with construction progress, not less than weekly.
 - E. Specifications: Legibly mark and record at each product section description of actual products installed, including the following:
 1. Manufacturer's name and product model and number.
 2. Product substitutions or alternates utilized.
 3. Changes made by Addenda and modifications.
 - F. Record Drawings and Shop Drawings: Legibly mark each item to record actual construction including:
 1. Measured depths of foundations in relation to finish [first] [main] floor datum.
 2. Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.
 3. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of the Work.
 4. Field changes of dimension and detail.
 5. Details not on original Contract drawings.
 - G. Submit documents to Architect/Engineer with claim for final Application for Payment.

1.8 OPERATION AND MAINTENANCE DATA

- A. Submit data bound in 8-1/2 x 11 inch (A4) text pages, three D side ring binders with durable plastic covers.
- B. Prepare binder cover with printed title "OPERATION AND MAINTENANCE INSTRUCTIONS", title of project, and subject matter of binder when multiple binders are required.
- C. Internally subdivide binder contents with permanent page dividers, logically organized as described below; with tab titling clearly printed under reinforced laminated plastic tabs.
- D. Drawings: Provide with reinforced punched binder tab. Bind in with text; fold larger drawings to size of text pages.
- E. Contents: Prepare Table of Contents for each volume, with each product or system description identified, typed on white paper, in three parts as follows:
 1. Part 1: Directory, listing names, addresses, and telephone numbers of Architect/Engineer, Contractor, Subcontractors, and major equipment suppliers.
 2. Part 2: Operation and maintenance instructions, arranged by system and subdivided by specification section. For each category, identify names,

addresses, and telephone numbers of Subcontractors and suppliers. Identify the following:

- a. Significant design criteria.
 - b. List of equipment.
 - c. Parts list for each component.
 - d. Operating instructions.
 - e. Maintenance instructions for equipment and systems.
 - f. Maintenance instructions for special finishes, including recommended cleaning methods and materials, and special precautions identifying detrimental agents.
3. Part 3: Project documents and certificates, including the following:
- a. Shop drawings and product data.
 - b. Air and water balance reports.
 - c. Certificates.
 - d. Photocopies of warranties and bonds.

1.9 MANUAL FOR MATERIALS AND FINISHES

- A. Submit two copies of preliminary draft or proposed formats and outlines of contents before start of Work. Architect/Engineer will review draft and return one copy with comments.
- B. For equipment, or component parts of equipment put into service during construction and operated by Owner, submit documents within ten days after acceptance.
- C. Submit one copy of completed volumes 15 days prior to final inspection. Draft copy be reviewed and returned after final inspection, with Architect/Engineer comments. Revise content of document sets as required prior to final submission.
- D. Submit two sets of revised final volumes in final form within 10 days after final inspection.
- E. Building Products, Applied Materials, and Finishes: Include product data, with catalog number, size, composition, and color and texture designations. Include information for re-ordering custom manufactured products.
- F. Instructions for Care and Maintenance: Include manufacturer's recommendations for cleaning agents and methods, precautions against detrimental agents and methods, and recommended schedule for cleaning and maintenance.
- G. Moisture Protection and Weather Exposed Products: Include product data listing applicable reference standards, chemical composition, and details of installation. Include recommendations for inspections, maintenance, and repair.
- H. Additional Requirements: As specified in individual product specification sections.
- I. Include listing in Table of Contents for design data, with tabbed fly sheet and space for insertion of data.

1.10 MANUAL FOR EQUIPMENT AND SYSTEMS

- A. Submit two copies of preliminary draft or proposed formats and outlines of contents before start of Work. Architect/Engineer will review draft and return one copy with comments.
- B. For equipment, or component parts of equipment put into service during construction and operated by Owner, submit documents within ten days after acceptance.
- C. Submit one copy of completed volumes 15 days prior to final inspection. Draft copy be reviewed and returned [after final inspection], with Architect/Engineer comments. Revise content of document sets as required prior to final submission.
- D. Submit two sets of revised final volumes in final form within 10 days after final inspection.
- E. Each Item of Equipment and Each System: Include description of unit or system, and component parts. Identify function, normal operating characteristics, and limiting conditions. Include performance curves, with engineering data and tests, and complete nomenclature and model number of replaceable parts.
- F. Panelboard Circuit Directories: Provide electrical service characteristics, controls, and communications; typed.
- G. Include color coded wiring diagrams as installed.
- H. Operating Procedures: Include start-up, break-in, and routine normal operating instructions and sequences. Include regulation, control, stopping, shut-down, and emergency instructions. Include summer, winter, and special operating instructions.
- I. Maintenance Requirements: Include routine procedures and guide for preventative maintenance and trouble shooting; disassembly, repair, and reassembly instructions; and alignment, adjusting, balancing, and checking instructions.
- J. Include servicing and lubrication schedule, and list of lubricants required.
- K. Include manufacturer's printed operation and maintenance instructions.
- L. Include sequence of operation by controls manufacturer.
- M. Include original manufacturer's parts list, illustrations, assembly drawings, and diagrams required for maintenance.
- N. Include control diagrams by controls manufacturer as installed.
- O. Include Contractor's coordination drawings, with color coded piping diagrams as installed.

- P. Include charts of valve tag numbers, with location and function of each valve, keyed to flow and control diagrams.
- Q. Include list of original manufacturer's spare parts, current prices, and recommended quantities to be maintained in storage.
- R. Include test and balancing reports as specified in Section 014000.
- S. Additional Requirements: As specified in individual product specification sections.
- T. Include listing in Table of Contents for design data, with tabbed dividers and space for insertion of data.

1.11 SPARE PARTS AND MAINTENANCE PRODUCTS

- A. Furnish spare parts, maintenance, and extra products in quantities specified in individual specification sections.
- B. Deliver to Project site and place in location as directed by Owner; obtain receipt prior to final payment.

1.12 PRODUCT WARRANTIES AND PRODUCT BONDS

- A. Obtain warranties and bonds executed in duplicate by responsible subcontractors, suppliers, and manufacturers, within ten days after completion of applicable item of work.
- B. Execute and assemble transferable warranty documents and bonds from subcontractors, suppliers, and manufacturers.
- C. Verify documents are in proper form, contain full information, and are notarized.
- D. Co-execute submittals when required.
- E. Include Table of Contents and assemble in three D side ring binder with durable plastic cover.
- F. Submit prior to final Application for Payment.
- G. Time Of Submittals:
 - 1. For equipment or component parts of equipment put into service during construction with Owner's permission, submit documents within ten days after acceptance.
 - 2. Make other submittals within ten days after Date of Substantial Completion, prior to final Application for Payment.
 - 3. For items of Work for which acceptance is delayed beyond Date of Substantial Completion, submit within ten days after acceptance, listing date of acceptance as beginning of warranty or bond period.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

END OF SECTION

SECTION 02 41 19

SELECTIVE DEMOLITION

1. GENERAL

1.1 SUMMARY

- A. Section Includes:
 - A. Demolishing designated building equipment and fixtures.
 - B. Demolishing designated construction.
 - C. Cutting and alterations for completion of the Work.
 - D. Removing designated items for reuse and Owner's retention.
 - E. Protecting items designated to remain.
 - F. Removing demolished materials.

1.2 SUBMITTALS

- A. Section 01 33 00 - Submittal Procedures: Requirements for submittals.
- B. Demolition Schedule: Indicate overall schedule and interruptions required for utility and building services.
- C. Shop Drawings:
 - A. Indicate demolition and removal sequence.
 - B. Indicate location of items designated for reuse and Owner's retention.
 - C. Indicate location and construction of temporary work.

1.3 CLOSEOUT SUBMITTALS

- A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for submittals.
- B. Project Record Documents: Accurately record actual locations of capped utilities, concealed utilities discovered during demolition, subsurface obstructions.
- C. Operation and Maintenance Data: Submit description of system, inspection data, and parts lists.

1.4 QUALITY ASSURANCE

- A. Conform to applicable code and local ordinances for demolition work, dust control, and products requiring electrical disconnection.
- B. Obtain required permits from authorities having jurisdiction.
- C. Perform Work in accordance with State of Illinois Department of Corrections standard.

1.5 SEQUENCING

- A. Section 01 10 00 - Summary: Requirements for sequencing.

- B. Sequence activities in the following stages:
 - A. Construct and fully secure new addition.
 - B. Conduct security inspection with Owner.
 - C. Establish secured building prior to breaching existing facility.

1.6 SCHEDULING

- A. Section 01 30 00 - Administrative Requirements and 01 32 16 - Construction Progress Schedule: Requirements for scheduling.
- B. Schedule Work to coincide with security procedures.
- C. Cooperate with Owner in scheduling noisy operations and waste removal that may impact Owners operation and in adjoining spaces.
- D. Coordinate utility and building service interruptions with Owner.
 - A. Do not disable or disrupt building fire or life safety systems without three days prior written notice to Owner.
 - B. Schedule tie-ins to existing systems to minimize disruption.
 - C. Coordinate Work to ensure fire sprinklers, fire alarms, smoke detectors, emergency lighting, exit signs and other life safety systems remain in full operation in occupied areas.

1.7 PROJECT CONDITIONS

- A. Conduct demolition to minimize interference with adjacent and occupied building areas.
- B. Cease operations immediately if structure appears to be in danger and notify Architect/Engineer. Do not resume operations until directed.

2. PRODUCTS

Not Used.

3. EXECUTION

3.1 PREPARATION

- A. Notify affected utility companies before starting work and comply with their requirements.
- B. Mark location and termination of utilities.
- C. Erect, and maintain temporary barriers and security devices, including warning signs and lights, and similar measures, for protection of the public, Owner, and existing improvements indicated to remain.
- D. Erect and maintain weatherproof closures for exterior openings.
- E. Erect and maintain temporary partitions to prevent spread of dust, odors, and noise to permit continued Owner occupancy.

- F. Prevent movement of structure; provide temporary bracing and shoring required to ensure safety of existing structure.
- G. Provide appropriate temporary signage including signage for exit or building egress.
- H. Do not close or obstruct building egress path.
- I. Do not disable or disrupt building fire or life safety systems without 3 days prior written notice to Owner.

3.2 SALVAGE REQUIREMENTS

- A. Coordinate with Owner to identify building components and equipment required to be removed and delivered to Owner.
- B. Tag components and equipment Owner designates for salvage.
- C. Protect designated salvage items from demolition operations until items can be removed.
- D. Carefully remove building components and equipment indicated to be salvaged.
- E. Disassemble as required to permit removal from building.
- F. Package small and loose parts to avoid loss.
- G. Mark equipment and packaged parts to permit identification and consolidation of components of each salvaged item.
- H. Prepare assembly instructions consistent with disassembled parts. Package assembly instructions in protective envelope and securely attach to each disassembled salvaged item.
- I. Deliver salvaged items to Owner.

3.3 DEMOLITION

- A. Conduct demolition to minimize interference with adjacent and occupied building areas.
- B. Maintain protected egress from and access to adjacent existing buildings at all times.
- C. Do not close or obstruct roadways, sidewalks, and parking without consent from Owner.
- D. Cease operations immediately when structure appears to be in danger and notify Architect/Engineer and Owner.
- E. Cap and identify abandoned utilities at termination points when utility is not completely removed. Annotate Record Drawings indicating location and type of service for capped utilities remaining after demolition.
- F. Demolish in orderly and careful manner. Protect existing improvements, supporting structural members and other items to remain.
- G. Carefully remove building components indicated to be reused.

- A. Disassemble components as required to permit removal.
 - B. Package small and loose parts to avoid loss.
 - C. Mark components and packaged parts to permit reinstallation.
 - D. Store components, protected from construction operations, until reinstalled.
-
- H. Remove demolished materials from site except where specifically noted otherwise. Do not burn or bury materials on site.
 - I. Remove materials as Work progresses. Upon completion of Work, leave areas in clean condition.
 - J. Remove temporary Work.

END OF SECTION

SECTION 06 10 53

MISCELLANEOUS ROUGH CARPENTRY

PART 1 GENERAL

1.1 SUMMARY

- A. Section includes wood blocking at door and window openings, and other miscellaneous wood blocking as required.

1.2 REFERENCES

- A. American Wood-Preservers' Association:
 - 1. AWWPA C20 - Structural Lumber - Fire-Retardant Treatment by Pressure Processes.
- B. ASTM International:
 - 1. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials.
- C. National Fire Protection Association:
 - 1. NFPA 255 - Standard Method of Test of Surface Burning Characteristics of Building Materials.
- D. The Redwood Inspection Service:
 - 1. RIS - Standard Specifications for Grades of California Redwood Lumber.
- E. Southern Pine Inspection Bureau:
 - 1. SPIB - Standard Grading Rules for Southern Pine Lumber.
- F. Underwriters Laboratories Inc.:
 - 1. UL 723 - Tests for Surface Burning Characteristics of Building Materials.
- G. U. S Department of Commerce National Institute of Standards and Technology:
 - 1. DOC PS 20 - American Softwood Lumber Standard.
- H. West Coast Lumber Inspection Bureau:
 - 1. WCLIB - Standard Grading Rules for West Coast Lumber.
- I. Western Wood Products Association:
 - 1. WWPA G-5 - Western Lumber Grading Rules.

1.3 SUBMITTALS

- A. Section 01 33 00 - Submittal Procedures: Submittal procedures.
- B. Product Data: Submit technical data on fire-retardant treatment materials and application instructions.

1.4 QUALITY ASSURANCE

- A. Perform Work in accordance with the following:
 - 1. Lumber Grading Agency: Certified by DOC PS 20.
 - 2. Lumber: DOC PS 20.
- B. Surface Burning Characteristics:
 - 1. Fire Retardant Treated Materials: Maximum 25/450 flame spread/smoke developed index when tested in accordance with ASTM E84 NFPA 255 UL 723.
- C. Apply label from agency approved by authority having jurisdiction to identify each preservative treated and fire-retardant treated material.

PART 2 PRODUCTS

2.1 MATERIALS

- A. Lumber Grading Rules: AP&PA. SPIB. WCLIB.
- B. Miscellaneous Framing: Stress Group D, S/P/F, species, grade 19 percent maximum moisture content after treatment, pressure preservative treat.

2.2 ACCESSORIES

- A. Fasteners and Anchors:
 - 1. Fasteners: Hot dipped galvanized steel for high humidity and treated wood locations, unfinished steel elsewhere.
 - 2. Nails and Staples: ASTM F1667.
 - 3. Anchors: Toggle bolt type for anchorage to hollow masonry. Expansion shield and lag bolt type for anchorage to solid masonry or concrete. Bolt or ballistic fastener for anchorages to steel.

2.3 FACTORY WOOD TREATMENT

- A. Fire Retardant Treatment: Pressure treatment, AWWA C20 for lumber and AWWA C27 for plywood, Interior Type, chemically treated and pressure impregnated; capable of providing a maximum flame spread/smoke development of 25/450.

- B. Moisture Content After Treatment:
 - 1. Lumber: Maximum 19 percent.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Section 01 30 00 - Administrative Requirements: Verification of existing conditions before starting work.
- B. Verify substrate conditions are ready to receive blocking and framing.

3.2 PREPARATION

- A. Coordinate placement of blocking and framing items.

3.3 INSTALLATION

- A. Set members level and plumb, in correct position.
- B. Place horizontal members, crown side up.
- C. Space framing and furring 16 inches on center.

END OF SECTION

SECTION 07 92 00

JOINT SEALANTS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Preparing sealant substrate surfaces.
 - 2. Sealant and backing.
- B. Related Documents: The Contract Documents, as defined in Section 011000 - Summary of Work, apply to the Work of this Section. Additional requirements and information necessary to complete the Work of this Section may be found in other documents.
- C. Related Sections:
 - 1. Section 088000 - Glazing: Sealants used in conjunction with glazing methods.
 - 2. Section 092116 - Gypsum Board Assemblies

1.2 REFERENCES

- A. American Society for Testing and Materials (ASTM):
 - 1. ASTM C717 - Standard Terminology of Building Seals and Sealants.
 - 2. ASTM C834 - Specification for Latex Sealants.
 - 3. ASTM C920 - Specification for Elastomeric Joint Sealants.
 - 4. ASTM D1056 - Flexible Cellular Material- Sponge or Expanded Rubber.
- B. Federal Specifications (FS):
 - 1. FS SS-S-200 - Sealing Compounds, Two Component, Elastomeric, Polymer Type, Jet-Fuel Resistant, Cold Applied.
 - 2. FS TT-S-1657 - Sealing Compound, Single Component Butyl Rubber Based Solvent Release Type (for Buildings and other Types of Construction).

1.3 SUBMITTALS

- A. Section 013300 – Submittal Procedures: Procedures for submittals.
 - 1. Product Data: Product chemical characteristics, performance criteria, substrate preparation, limitations, and color availability.

1.4 WARRANTY

- A. Section 017704 - Closeout Procedures and Training: Procedures for closeout submittals.

- B. Warranty:
1. Submit written warranty signed by sealant manufacturer agreeing to replace sealants and accessories which fail because of loss of cohesion or adhesion or which do not cure.
 2. Warranty Period: 5 years or longer per the manufacturers' standard warranties.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Subject to compliance with project requirements, manufacturers offering specified items which may be incorporated into the work include the following:
1. Bostik, Inc, Huntingdon Valley, PA, (800) 523-2678, (125) 674-5600.
 2. Dow Corning, Midland, MI (517) 496-4000.
 3. GE Silicones, Waterford, NY (518) 233-3330.
 4. Mameco International, Cleveland, OH, (800) 321-6412, (216) 752-4400.
 5. W.R. Meadows, Inc, Elgin, IL (800) 342-5976, (847) 683-4500.
 6. Nomaco, Inc., Zebulon, NC, (919) 269-6500.
 7. Pecora Corporation, Harleysville, PA, (800) 523-6688, (215) 723-6051.
 8. Sika Corporation, Lyndhurst, NJ, (800) 933-7452, (201) 933-8800.
 9. Sonneborn Building Products Div. ChemRex, Inc., Shakopee, MN (800) 243-6739, (612) 496-6000.
 10. Tremco, Beachwood, OH, (800) 852-3821, (216) 292-5000.
 11. USG Corp., Chicago, IL (800) 874-4968, (312) 606-4000.
 12. Sherwin-Williams Co. (The), Cleveland, OH (800) 321-8194

2.2 BUILDING SEALANTS (See Sealant Schedule at the end of this Section for specific use of sealants.)

- A. Urethanes:
1. Type 1: Two-Part Urethane: Self-Leveling, ASTM C920, Type M, Grade P, Class 25.
 - a. Chem-Calk CC-550, by Bostik.
 - b. Vulkem 245, by Mameco.
 - c. Vulkem 255, Wide-Joint, by Mameco.
 - d. NR-200 Urexpan, by Pecora Corporation.
 - e. Loxon 2K SL Multi-Component Polyurethane Sealant, by Sherwin-Williams.
 2. Type 2: Two-Part Urethane: Non-Sag, ASTM C920, Type M, Grade NS, Class 25.
 - a. Chem-Calk 500, by Bostik.
 - b. Vulkem 227, by Mameco.
 - c. Sonolastic NP 2, by Sonneborn Building Products, ChemRex Inc.
 - d. Loxon 2K NS Multi-Component Polyurethane Sealant, by Sherwin-Williams.
 3. Type 3: One-Part Urethane: Self-Leveling, ASTM C920, Type S, Grade P, Class 25.
 - a. Vulkem 45, by Mameco.
 - b. Urexpan NR-201, by Pecora Corporation.
 - c. Sonolastic SL1, by Sonneborn Building Products, ChemRex Inc.
 - d. Sikaflex 1C-SL by Sika.

- e. Loxon 1K SL Polyurethane Sealant, by Sherwin-Williams.
 - 4. Type 4: One-Part Urethane: Non-Sag, ASTM C920, Type S, Grade NS, Class 25.
 - a. Chem-Calk 900, by Bostik.
 - b. Vulkem 116, by Mameco.
 - c. Sonolastic NP I, by Sonneborn Building Products, ChemRex Inc.
 - d. Loxon 1K Smooth Polyurethane Sealant, by Sherwin-Williams.
- B. Silicones:
- 1. Type 1: One-Part Silicones: ASTM C920, Type S, Grade NS, Class 50.
 - a. 795 Silicone Building Sealant, by Dow Corning.
 - b. 864 Architectural Silicone Sealant, by Pecora Corporation.
 - c. White Lightning Silicone Ultra Sealant, by Sherwin-Williams.
 - 2. Type 2: One-Part Silicones: ASTM C920, Type S, Grade NS, Class 25.
 - a. 999-A Silicone Building & Glazing Sealant, Dow Corning.
 - b. Construction 1200 Sealant, General Electric Company.
 - 3. Type 3: One-Part Silicones: ASTM C920, Type S, Grade NS, Class 25. Vertical Surfaces Only.
 - a. Construction 1200 Sealant, General Electric Company.
 - b. 999-A, Dow Corning.
 - c. 860 Glaziers and Contractors Silicone Sealant, by Pecora Corporation. (colors only)
 - 4. Type 4: One-Part Silicones: ASTM C920, Type S, Grade NS, Class 25 or 50.
 - a. 786 Mildew Resistant Silicone Sealant, Dow Corning.
 - b. SCS 1700 Sanitary Sealant, General Electric.
 - c. 898 Silicone Sanitary Sealant, Pecora Corporation.
- C. Acrylics, Latex:
- 1. Type 1: One-Part Acrylic Latex, Non-Sag, ASTM-C-834-76.
 - a. Chem-Calk 600, by Bostik.
 - b. LC-130, by MACCO Adhesives, The Glidden Company.
 - c. Easa-ply ALS, by W. R. Meadows, Inc.
 - d. AC-20+Silicone Acrylic Latex, by Pecora Corporation.
 - e. Sonolac, Sonneborn Building Products, ChemRex Inc
 - f. 950A Siliconized Acrylic Latex Caulk, by Sherwin-Williams.
- D. Acoustical Sealants:
- 1. Type 1: AC-20 FTR Acoustical and Insulation Sealant, by Pecora Corporation.
 - 2. Type 2: 60+ Unicrylic, by Pecora Corporation.
 - 3. Type 3: Sheetrock Acoustical Sealant, by United States Gypsum.
 - 4. Power House Siliconized Latex Caulk, by Sherwin-Williams
- E. Butyls:
- 1. Type 1: One-Part Butyl, Non-Sag, FS TT-S-1657.
 - a. Chem-Calk 300, by Bostik.
 - b. BC-158 Butyl Rubber, by Pecora Corporation. (ASTM C1085)
 - c. White Lightning Butyl Rubber Caulk, by Sherwin-Williams. (ASTM C1311)
- F. Preformed Compressible & Non-Compressible Fillers:
- 1. Type 1: Backer Rod - Closed cell polyethylene foam:

- a. HBR Backer Rod, by Nomaco.
 - b. #92 Greenrod, by Nomaco.
 - c. Sonofoam Closed-Cell Backer Rod, Sonneborn Building Products, ChemRex Inc.
 - 2. Type 2: Backer Rod - Open cell polyurethane foam:
 - a. Denver Foam, by Backer Rod Mfg Inc.
 - b. Foam Pack II, by Nomaco.
 - 3. Type 3: Neoprene compression seals:
 - a. WE, WF, and WG Series, by Watson Bowman & Acme Corp.
 - b. Will-Seal 150 Precompressed Expanding Foam Sealants, by Will-Seal, a Division of Illbruck.
 - 4. Type 4: Butyl Rod: Kirkhill Rubber Co. (714)529-4901.
- G. Bond Breaker Tape: Polyethylene tape of plastic as recommended by sealant manufacturer, to be applied to sealant-contact surfaces where bond to substrate of joint filler must be avoided for proper performance of sealant

2.3 COLORS

- A. Generally, use sealant colors matching color of material joint is located in.
- B. Where a joint occurs between two materials of differing colors and Contractor cannot determine which material to match, contact Architect / Engineer for selection.

2.4 ACCESSORIES

- A. Joint Cleaner: Provide type of joint cleaning compound recommended by sealant manufacturer for joint surfaces to be cleaned.
- B. Primer: As recommended by sealant manufacturer.
- C. Masking tape and similar accessories to protect surfaces from damage.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Section 017300 - Execution: Verification of existing conditions before starting work.
- B. Verification of Conditions: Verify that field measurements, surfaces, substrates and conditions are as required, and ready to receive Work.
 - 1. Verify that joint widths are in conformance with sealant manufacturer allowable limits.
 - 2. Verify that contaminants capable of interfering with adhesion have been cleaned from joint and joint properly prepared.

- C. Report in writing to Contracting Officer prevailing conditions that will adversely affect satisfactory execution of the Work of this Section. Do not proceed with Work until unsatisfactory conditions have been corrected.
- D. By beginning Work, Contractor accepts conditions and assumes responsibility for correcting unsuitable conditions encountered at no additional cost to the United States Postal Service.

3.2 PREPARATION

- A. Prepare and size joints in accordance with manufacturer's instructions. Clean substrates of dirt, laitance, dust, or mortar using solvent, abrasion, or sandblasting as recommended by manufacturer. Remove loose materials and foreign matter which might impair adhesion of sealant.
- B. Verify that joint backing and release tapes are compatible with sealant. Verify sealant is suitable for substrate. Verify that sealant is paintable if painted finish is indicated.
- C. Protect materials surrounding work of this Section from damage or disfiguration.

3.3 INSTALLATION

- A. Install sealant in accordance with manufacturer's published instructions.
- B. Prime or seal joint surfaces where recommended by sealant manufacturer. Do not allow primer or sealer to spill or migrate onto adjoining surfaces.
- C. Install backer rod and bond breaker tape where required by manufacturer.
- D. Install preformed compressible and non-compressible fillers in accordance with manufacturer's published instructions.
- E. Install sealants to depths recommended by sealant manufacturer in uniform, continuous ribbons free of air pockets, foreign embedded matter, ridges, and sags, "wetting" joint bond surfaces equally on both sides.
- F. Tool joints concave unless shown otherwise. Where horizontal joints are between a horizontal surface and a vertical surface, fill joint to form slight cove so that joint will not trap moisture and foreign matter. Dry tool joints. Do not use soap, water, or solvent to tool joints.
- G. Epoxy Floor Joint Sealant: Install sealant at floor construction and control joints in accordance with manufacturer's published instructions and initially under manufacturer's supervision.

3.4 CURING

- A. Cure sealants in compliance with manufacturer's published instructions.

3.5 CLEANING

- A. Remove excess and spillage of sealants promptly as the work progresses, using materials and methods as recommended by sealant and substrate manufacturers. Clean adjoining surfaces to eliminate evidence of spillage without damage to adjoining surfaces or finishes.

3.6 SEALANT SCHEDULE

- A. Interior Joints:
 - 1. Perimeters of interior hollow metal and aluminum frames.
 - 2. Joints at intersection of exterior masonry walls and interior gypsum board partitions.
 - 3. For all of the above interior joints:
 - a. Sealant Urethane Type 2
 - b. Sealant Urethane Type 4
 - c. Sealant Silicone Type 1 (for prefinished materials only)
 - 4. Exposed interior control joints in drywall and concealed joints.
 - a. Sealant Acrylic, Latex, Type 1
 - b. Sealant Acoustical Type 1
 - c. Sealant Acoustical Type 3
 - d. Sealant Butyl Type 1
 - 5. Joints of underside of precast beams or planks.
 - a. Sealant Urethane Type 2
 - b. Sealant Urethane Type 4
 - 6. Interior expansion and control joints in floor surfaces exposed to foot traffic.
 - a. Sealant Urethane Type 2
 - b. Sealant Urethane Type 4
 - c. Preformed Compressible & Non-Compressible Filler Type 1
- B. Glazing:
 - 1. Structural Glazing.
 - a. Sealant Silicone Type 2
 - b. Sealant Silicone Type 3
 - 2. General Purpose Glazing.
 - a. Sealant Silicone Type 3
 - 3. End Damming.
 - a. Sealant Butyl Type 1

END OF SECTION

SECTION 08 11 13

HOLLOW METAL DOORS AND FRAMES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes:
 - 1. Exterior standard steel doors and frames.
 - 2. Fire rated or non-rated interior frames.
- B. Related Requirements:
 - 1. Section 08 14 16 Flush Wood Doors
 - 2. Section 08 71 00 Door Hardware
 - 3. Section 08 80 00 Glazing
 - 4. Section 09 90 00 Painting and Coating

1.2 REFERENCES

- A. American National Standards Institute:
 - 1. ANSI A250.8 – Recommended Specifications for Standard Steel Doors and Frames
- B. ASTM International:
 - 1. ASTM A653 – Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
- C. National Fire Protection Association:
 - 1. NFPA 80 – Standard for Fire Doors, Fire Windows
 - 2. NFPA 105 – Standard for the Installation of Smoke Door Assemblies and other Opening Protectives
 - 3. NFPA 252 – Standard Methods of Fire Tests of Door Assemblies
- D. Underwriters Laboratories Inc.:
 - 1. UL 10B – Fire Tests of Door Assemblies
 - 2. UL 10C – Positive Pressure Fire Tests of Door Assemblies
 - 3. UL 1784 – Air Leakage Tests of Door Assemblies

1.3 COORDINATION

- A. See Section 01 30 00 – Administrative Requirements: Coordination and Project Conditions

- B. Coordinate anchorage installation for hollow-metal frames. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors. Deliver such items to Project site in time for installation.
- C. Coordinate requirements for installation of door hardware, electrified door hardware, and access control and security systems.
- D. Sequence installation to accommodate required door hardware electric wire connections.

1.4 SUBMITTALS

- A. See Section 01 33 00 – Submittal Procedures
- B. Product Data: For each type of product.
 - 1. Include construction details, material descriptions, core descriptions, fire-resistance ratings, and finishes.
- C. Shop Drawings: Include the following:
 - 1. Elevations of each door type.
 - 2. Details of doors, including vertical- and horizontal-edge details and metal thicknesses.
 - 3. Frame details for each frame type, including dimensioned profiles and metal thicknesses.
 - 4. Locations of reinforcement and preparations for hardware.
 - 5. Details of each different wall opening condition.
 - 6. Details of anchorages, joints, field splices, and connections.
 - 7. Details of accessories.
 - 8. Details of moldings, removable stops, and glazing.
- D. Product Schedule: For hollow-metal doors and frames, prepared by or under the supervision of supplier, using same reference numbers for details and openings as those on Drawings. Coordinate with final door hardware schedule.
- E. Manufacturer's Installation Instructions: Submit any required special installation instructions.
- F. Manufacturer's Certificate: Certify products meet or exceed specified requirements.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. See Section 01 60 00 – Product Requirements: Product storage and handling requirements.

- B. Deliver hollow-metal doors and frames palletized, packaged, or crated to provide protection during transit and Project-site storage. Do not use non-vented plastic.
 - 1. Provide additional protection to prevent damage to factory-finished units.
 - 2. Accept frames on site in manufacturer's packaging. Inspect for damage.
 - 3. Break seal on-site to permit ventilation.
- C. Store hollow-metal doors and frames vertically under cover at Project site with head up. Place on minimum 4-inch-high wood blocking. Provide minimum 1/4-inch space between each stacked door to permit air circulation.

1.6 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing products specified in this section with minimum three years documented experience.

1.7 QUALITY ASSURANCE

- A. Conform to the requirements of ANSI A250.8.
- B. Fire Rated Frame Construction: Conform to one of the following:
 - 1. NFPA 252; with neutral pressure level at 40 inches maximum above sill at 5 minutes into test.
 - 2. UL 10C.
- C. Installed Fire Rated Frame Assembly: Conform to NFPA 80 for fire rated class same as fire door.
- D. Attach label form agency approved by authority having jurisdiction to identify each fire rated door frame.

PART 2 - PRODUCTS

2.1 HOLLOW METAL DOORS AND FRAMES

A. MANUFACTURERS

- 1. Amweld Building Products, Inc.
- 2. Ceco Door Products.
- 3. Republic Builders Products.
- 4. Steelcraft
- 5. Curries Company
- 6. Kewanee Corp.

7. Mesker Door Inc.
8. Pioneer Industries
9. Substitutions: Not Permitted.

B. Source Limitations: Obtain hollow-metal work from a single manufacturer.

2.2 INTERIOR STANDARD STEEL DOORS AND FRAMES

- A. Construct hollow-metal doors and frames to comply with standards indicated for materials, fabrication, hardware locations, hardware reinforcement, tolerances, and clearances, and as specified.\
- B. Hardware Locations:
 1. Mounting heights for hardware shall be in accord with Table V of Steel Door Institute "Technical Data Series" S.D.I. 100-80 unless indicated otherwise.
- C. Doors shall be made of commercial quality, level cold rolled steel conforming to ASTM A-366 and free of scale, pitting or other surface defects.
 1. Face sheets for all interior doors shall be not less than 18 gauge and all interior doors shall have a factory painted finish.
 2. Door finish shall be factory applied prime and factory applied painted finish provided by the door manufacturer. Color to be chosen by the Architect / Engineer from the manufacturer's full line of available colors. Contractor shall provide the Architect / Engineer with one gallon of touch-up paint for each door color selected.
- D. Frames for interior openings shall be made of commercial grade cold rolled steel conforming to ASTM Designation A-366, 16 gauge and shall have a factory painted finish.
 1. Fabricate frames as a welded unit. "Knock-down" type frames shall not be acceptable without written permission from Architect / Engineer.
 2. Finish shall be factory applied primer and factory applied painted finish. Color to be chosen by the Architect / Engineer from the manufacturer's full line of available colors.

2.3 FRAME ANCHORS

- A. Jamb Anchors:
 1. Type: Anchors of minimum size and type required by applicable door and frame standard, and suitable for performance level indicated.
 2. Quantity: Minimum of three anchors per jamb, with one additional anchor for frames with no floor anchor.
 3. Post-installed Expansion Anchor: Minimum 3/8-inch- (9.5-mm-) diameter bolts with expansion shields or inserts, with manufacturer's standard pipe spacer.

- B. Floor Anchors: Provide floor anchors for each jamb and mullion that extends to floor.
- C. Steel (CS), 04Z coating designation; mill phosphatized.
 - 1. For anchors built into exterior walls, steel sheet complying with ASTM A1008/A1008M or ASTM A1011/A1011M; hot-dip galvanized in accordance with ASTM A153/A153M, Class B.

2.4 FABRICATION

- A. Hollow-Metal Frames: Fabricate in one piece except where handling and shipping limitations require multiple sections. Where frames are fabricated in sections, provide alignment plates or angles at each joint, fabricated of metal of same or greater thickness as frames.
 - 1. Provide countersunk, flat- or oval-head exposed screws and bolts for exposed fasteners unless otherwise indicated.
- B. Hardware Preparation: Factory prepare hollow-metal doors and frames to receive templated mortised hardware, and electrical wiring; include cutouts, reinforcement, mortising, drilling, and tapping in accordance with ANSI/SDI A250.6, the Door Hardware Schedule, and templates. Provide hardware reinforcement plates, welded in place.
 - 1. Comply with BHMA A156.115 for preparing hollow-metal doors and frames for hardware.
- C. Glazed Lites: Provide stops and moldings around glazed lites where indicated. Form corners of stops and moldings with mitered hairline joints.
 - 1. Provide stops and moldings flush with face of door, and with square stops unless otherwise indicated.
 - 2. Provide fixed frame moldings on outside of exterior and on secure side of interior doors and frames. Provide loose stops and moldings on inside of hollow-metal doors and frames.
 - 3. Coordinate rabbet width between fixed and removable stops with glazing and installation types indicated.
 - 4. Provide stops for installation with countersunk flat- or oval-head machine screws spaced uniformly not more than 9 inches (230 mm) o.c. and not more than 2 inches (51 mm) o.c. from each corner.
- D. Fire Rated Label: Attach to each fire rated door and each fire rated frame.

2.5 STEEL FINISHES

- A. Steel Sheet: Galvannealed to ASTM A653 A60.

- B. Factory Finish: Clean, pretreat, and apply manufacturer's standard two-coat, baked-on finish consisting of prime coat and thermosetting topcoat, complying with ANSI/SDI A250.3.
 - 1. Color and Gloss: As indicated by manufacturer's designations.
- C. Coat inside of frame profile with bituminous coating to minimum thickness of 1/16 inch at all masonry walls.
- D. Field finish per Section 09 90 00.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Section 01 30 00 – Administrative Requirements: Verification of existing conditions before starting work.
- B. Verify opening sizes and tolerances are acceptable.

3.2 INSTALLATION

- A. Install hollow-metal doors and frames plumb, rigid, properly aligned, and securely fastened in place. Comply with approved Shop Drawings and with manufacturer's written instructions.
- B. Hollow-Metal Frames: Comply with SDI A250.11.
 - 1. Set frames accurately in position; plumbed, aligned, and braced securely until permanent anchors are set. After wall construction is complete, remove temporary braces without damage to completed Work.
 - a. Where frames are fabricated in sections, field splice at approved locations by welding face joint continuously; grind, fill, dress, and make splice smooth, flush, and invisible on exposed faces. Touch-up finishes.
 - b. Install frames with removable stops located on secure side of opening.
 - 2. Floor Anchors: Secure with post-installed expansion anchors.
 - a. Floor anchors may be set with power-actuated fasteners instead of post-installed expansion anchors if so indicated and approved on Shop Drawings.
 - 3. Solidly pack mineral-fiber insulation inside frames.
 - 4. Installation Tolerances: Adjust hollow-metal frames to the following tolerances:

- a. Squareness: Plus or minus 1/16 inch (1.6 mm), measured at door rabbet on a line 90 degrees from jamb perpendicular to frame head.
 - b. Alignment: Plus or minus 1/16 inch (1.6 mm), measured at jambs on a horizontal line parallel to plane of wall.
 - c. Twist: Plus or minus 1/16 inch (1.6 mm), measured at opposite face corners of jambs on parallel lines, and perpendicular to plane of wall.
 - d. Plumbness: Plus or minus 1/16 inch (1.6 mm), measured at jambs at floor.
- C. Hollow-Metal Doors: Fit and adjust hollow-metal doors accurately in frames, within clearances specified below.
1. Non-Fire-Rated Steel Doors: Comply with SDI A250.8
 2. Coordinate with installation of hardware specified in Section 08 71 00
 3. Touch-up damaged shop finishes
- D. Glazing: Comply with installation requirements in Section 08 80 00 "Glazing" and with hollow-metal manufacturer's written instructions.

3.3 SCHEDULE

- A. Refer to Door and Frame Schedule on Drawings.

3.4 FIELD QUALITY CONTROL

- A. Inspections:
1. Fire-Rated Door Inspections: Inspect each fire-rated door in accordance with NFPA 80, Section 5.2.
 2. Egress Door Inspections: Inspect each door equipped with panic hardware, each door equipped with fire exit hardware, each door located in an exit enclosure, each electrically controlled egress door, and each door equipped with special locking arrangements in accordance with NFPA 101, Section 7.2.1.15.
- B. Repair or remove and replace installations where inspections indicate that they do not comply with specified requirements.
- C. Reinspect repaired or replaced installations to determine if replaced or repaired door assembly installations comply with specified requirements.

3.5 REPAIR

- A. Factory-Finish Touchup: Clean abraded areas and repair with same material used for factory finish according to manufacturer's written instructions.

END OF SECTION

SECTION 08 14 16

FLUSH WOOD DOORS

PART 1 GENERAL

1.1 SUMMARY

- A. Section includes flush wood doors; flush and flush glazed configuration; fire rated and non-rated.
- B. Related Requirements:
 - 1. Section 08 11 13 – Hollow Metal Doors and Frames
 - 2. Section 08 34 73.16 – Wood Sound Control Door Assemblies
 - 3. Section 08 71 00 - Door Hardware.
 - 4. Section 08 80 00 - Glazing.
 - 5. Section 09 90 00 - Painting and Coating: Touch-up of factory finish.

1.2 REFERENCE STANDARDS

- A. American National Standards Institute:
 - 1. ANSI A135.4 - Basic Hardboard.
- B. ASTM International:
 - 1. E413 - Classification for Rating Sound Insulation.
- C. Architectural Woodwork Institute:
 - 1. AWI AWS - Architectural Woodwork Standards 1st edition (2009).
- D. Hardwood Plywood and Veneer Association:
 - 1. HPVA HP-1 - American National Standard for Hardwood and Decorative Plywood.
- E. Intertek Testing Services (Warnock Hersey Listed):
 - 1. ITS-WH – Certification Listings.
- F. National Fire Protection Association:
 - 1. NFPA 80 - Standard for Fire Doors, Fire Windows.
 - 2. NFPA 252 - Standard Methods of Fire Tests of Door Assemblies.
- G. Underwriters Laboratories Inc.:
 - 1. UL – Building Materials Directory.
 - 2. UL 10B – Fire Tests of Door Assemblies.
 - 3. UL 10C - Positive Pressure Fire Tests of Door Assemblies.
 - 4. UL 1784 - Air Leakage Tests of Door Assemblies.

- H. Wood Window and Door Manufacturers Association:
 - 1. WDMA I.S 1A - Architectural Wood Flush Doors.

1.3 COORDINATION

- A. Section 01 30 00 - Administrative Requirements: Coordination and project conditions.
- B. Coordinate Work with door opening construction, door frame and door hardware installation.

1.4 SUBMITTALS

- A. Section 01 33 00 - Submittal Procedures: Submittal procedures.
- B. Product Data:
 - 1. Submit data for door core materials and construction.
 - 2. Submit data for veneer species, type and characteristics.
 - 3. Submit data for factory finishes.
- C. Shop Drawings:
 - 1. Indicate door opening criteria, elevations, sizes, types, swings, undercuts required, special beveling, special blocking for hardware, and factory machining criteria.
 - 2. Indicate cutouts for glazing.
- D. Samples:
 - 1. Submit two samples of door veneer, 6 x 6 inch in size illustrating wood grain, stain color, and sheen.
- E. Manufacturers' Instructions: Submit special installation instructions.
- F. Manufacturer's Certificate: Certify products meet or exceed specified requirements.

1.5 QUALITY ASSURANCE

- A. Perform Work in accordance with AWI AWS Custom Grade.
- B. Finish doors in accordance with AWI AWS Custom Grade.
- C. Fire Rated Door Construction: Conform to NFPA 252.
- D. Installed Fire Rated Door Assembly: Conform to NFPA 80 for fire rated class as indicated on Drawings.
- E. Attach label from agency approved by authority having jurisdiction to identify each fire rated door.

1.6 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing products specified in this section with minimum three years documented experience.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Section 01 60 00 - Product Requirements: Product storage and handling requirements.
- B. Package, deliver and store doors in accordance with AWI AWS Section 2.
- C. Accept doors on site in manufacturer's packaging. Inspect for damage.
 - 1. Break seal on site to permit ventilation.

1.8 WARRANTY

- A. Section 01 70 00 - Execution and Closeout Requirements: Product warranties and product bonds.
- B. Include coverage for delamination of veneer, warping beyond specified installation tolerances, defective materials, and telegraphing core construction. Include reasonable costs of re-finishing and re-installation.
- C. Interior Doors:
 - 1. Factory Finished Doors: Furnish manufacturer's life of installation warranty.

PART 2 PRODUCTS

2.1 FLUSH WOOD DOORS

- A. Manufacturers:
 - 1. Basis of Design:
 - a. Eggers Industries with stain and finish to match existing doors.
 - 2. Algoma Hardwoods Inc. with custom factory stain to match above finish.
 - 3. Graham Manufacturing Corp. with custom factory stain to match above finish.
 - 4. Marshfield Door Systems with custom factory stain to match above finish.
 - 5. Oshkosh Door Company with custom factory stain to match above finish.
 - 6. VT Industries with custom factory stain to match above finish.
 - 7. Section 01 60 00 – Not Permitted.
- B. Flush Interior Doors: Solid core flush wood doors; wood veneer facing material; fire rated and non-rated types; flush design; without louvers; factory pre-fit; and factory finished.
 - 1. Flush Interior Doors: 1-3/4 inches thick, unless noted otherwise on Drawings; solid core, five ply construction, fire rated as indicated on Drawings.

2.2 MATERIALS

- A. Door Cores: AWI AWS Section 9.
 - 1. Solid Core, Non-Fire Rated:
 - a. Type: PC; particleboard.
 - 2. Solid Core, Fire Rated:
 - a. Type FD; fire resistive composite.
- B. Interior Door Faces: AWI AWS Section 4.
 - 1. Hardwood: species, finish, and cut – all to match existing wood doors.
- C. Facing Adhesive: Type I – water proof.

2.3 FABRICATION

- A. Fabricate doors in accordance with AWI AWS Section 9 requirements.
- B. Furnish blocking as needed to eliminate through bolt holes and maintain warranty.
- C. Vertical Exposed Edge of Stiles: Hardwood of same species and finish as veneer facing.
- D. Bond stiles and rails to core and sand flat prior to application of cross band and face veneer.
- E. Factory machine doors for finish hardware in accordance with hardware requirements and dimensions. Do not machine for surface hardware.
- F. Factory fit doors for frame opening dimensions identified on shop drawings.
- G. Provide edge clearances in accordance with AWI AWS Section 9.

2.4 FINISHES

- A. Finish work in accordance with AWI AWS Section 5; Custom Grade.
- B. Finish System: match existing wood doors.
- C. Provide six-sided sealing of door. Re-seal in field if field fitting is required.

2.5 ACCESSORIES

- A. Door Glazing:
 - 1. Glass: As specified in Section 08 80 00.
 - 2. Glazing Stops: Wood, of same species as door facing with metal clips for rated doors.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for installation examination.
- B. Verify opening sizes and tolerances are acceptable.
- C. Do not install doors in frame openings that are not plumb or are out-of-tolerance for size or alignment.

3.2 INSTALLATION

- A. Install doors in accordance with AWI AWS Section 9, manufacturer's instructions, NFPA 80, and ITS-WH/UL requirements.
- B. Field Fitting and Trimming:
 - 1. Trim non-rated door width by cutting equally on both jamb edges.
 - 2. Trim door height by cutting bottom edges to maximum of 3/4 inch.
 - a. Trim fire door height at bottom edge only, in accordance with fire rating requirements.
 - 3. Machine cut doors for hardware installation.
- C. Coordinate installation of doors with installation of frames specified in Section 08 11 13 and hardware specified in Section 08 71 00.
- D. Coordinate installation of glass and glazing specified in Section 08 80 00.

3.3 TOLERANCES

- A. Section 01 40 00 - Quality Requirements: Tolerances.
- B. Conform to AWI AWS Section 9 requirements for fit and clearance tolerances and WDMA standards and testing methods for warp, cup, bow and telegraphing.

3.4 ADJUSTING

- A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for starting and adjusting.
- B. Adjust door for smooth and balanced door movement. Adjust door closer for full closure.

3.5 SCHEDULE

- A. Refer to Door and Frame Schedule on Drawings.

END OF SECTION

SECTION 083473.16 - WOOD SOUND CONTROL DOOR ASSEMBLIES

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Side-hinged, wood sound control door assemblies. Doors 115-1 and 117-1.

1.2 ACTION SUBMITTALS

A. Product Data:

1. Include information indicating compliance with assembly performance requirements, construction details, material descriptions, and finishes.

B. Shop Drawings:

1. Elevations of each type and style of door; details of doors, frames, anchorages, wall-opening conditions, sound control seals, door bottoms, and thresholds; and locations of reinforcements and preparations for hardware.

C. Samples for Initial Selection: For units with factory-applied finishes, manufacturer's standard finish sheets, showing full range of available finishes.

D. Samples for Verification: For each type of exposed finish not less than 3 by 5 inches.

1. Doors and Frames: Samples approximately 12 by 12 inches.

- a. Doors: Include section of vertical-edge, top, and bottom construction; automatic door bottom or gasket; core construction; and hinge and other applied hardware reinforcement.

- b. Frames: Include profile, corner joint, anchors, and seals.

E. Product Schedule: For wood sound control door assemblies. Use same designations indicated on Drawings.

1.3 INFORMATIONAL SUBMITTALS

A. Product Test Reports: For each sound control door assembly, for tests performed by a qualified testing agency or manufacturer and witnessed by a qualified testing agency.

B. Qualification Statements: For manufacturer and Installer.

C. Sample Warranties: For sound control door assemblies.

1.4 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For sound control door assemblies.

1.5 QUALITY ASSURANCE

- A. Manufacturer Qualifications: A manufacturer capable of fabricating sound control door assemblies that meet or exceed assembly performance requirements indicated and of documenting this performance by test reports and calculations.
- B. Installer Qualifications: An entity that employs installers and supervisors who are trained and approved by manufacturer.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver doors and frames palletized, wrapped, or crated to provide protection during transit and Project-site storage.
 - 1. Welded Frames: Deliver with two temporary shipping spreader bars each, tack welded across bottom of frames.
- B. Upon delivery, remove cardboard and wrappings from doors and frames to promote air circulation.
- C. Do not use non-vented plastic or canvas to cover doors and frames to prevent entrapping moisture.
- D. Store doors and frames vertically under cover at Project site, spaced with blocking that provides a minimum 1/4-inch space between each stacked unit to permit air circulation between components.

1.7 FIELD CONDITIONS

- A. Environmental Limitations: Do not deliver or install sound control door assemblies until spaces are enclosed and weatherproof, wet-work in spaces is complete and dry, and ambient temperature and humidity conditions are maintained at the levels indicated for Project when occupied for its intended use.

1.8 WARRANTY

- A. Special Warranty: Manufacturer agrees to repair or replace components of sound control door assemblies that fail in materials or workmanship within specified warranty period.
 - 1. Failures include, but are not limited to, the following:
 - a. Failure of product materials and workmanship.

- b. Failures of assemblies to have NIC ratings within 5 dB of laboratory STC ratings specified when tested in accordance with ASTM E336, with results calculated in accordance with ASTM E413.
 - c. Faulty operation of sound seals.
 - d. Deterioration of wood doors, hollow-metal frames, finishes, and other materials beyond normal use or weathering.
 - e. Wood doors that are warped (bow, cup, or twist) more than 1/4 inch in a 42-by-84-inch section, or show telegraphing of core construction in face veneers exceeding 0.01 inch in a 3-inch span.
2. Warranty Period: Five years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 SOURCE LIMITATIONS

- A. Obtain sound control door assemblies from single source from single manufacturer.

2.2 PERFORMANCE REQUIREMENTS

- A. Acoustic Performance: Provide sound control door assemblies with minimum STC ratings indicated on Drawings for the entire assembly, calculated in accordance with ASTM E413 when tested in an operable condition in accordance with ASTM E90.

2.3 SIDE-HINGED, WOOD SOUND CONTROL DOOR ASSEMBLIES

- A. Assemblies: Complete with wood doors, hollow-metal frame, sound seals, and specified hardware and accessories.
 - 1. Manufacturer's Nameplate: Affix permanent nameplate to assembly indicating manufacturer's name and STC rating.
- B. Wood Doors: Flush design, complying with requirements in WDMA I.S. 1A.
 - 1. Thickness: As indicated in door schedule.
 - 2. Core: Manufacturer's standard sound control core as required to comply with assembly performance requirements.
 - 3. WDMA I.S. 1A Performance Grade: Standard.
 - 4. WDMA I.S. 1A Quality Grade: Premium.
 - 5. Stiles and Rails: Hardwood.
 - 6. Wood Veneer Faces for Transparent Finish:
 - a. Species, Cut, Match, Assembly, Edges, Top, Bottom, Factory Finish, Stain: Per requirements for other wood doors. See drawings and Section 081416 "Flush Wood Doors".
- C. Hollow-Metal Frames: NAAMM-HMMA 820, continuously welded frames with corners mitered and reinforced.

1. Interior Frames: Provide back bend, gypsum board returns.
 2. Hardware Reinforcement: Comply with requirements in BHMA A156.115 for preparing frames for hardware.
 3. Prime Finish: Apply manufacturer's standard rust-inhibitive primer immediately after cleaning and pretreating metal.
 - a. Shop Primer: Manufacturer's standard, fast-curing, lead- and chromate-free primer complying with requirements in SDI A250.10 for acceptance criteria; recommended in writing by primer manufacturer for substrate; compatible with substrate and field-applied coatings despite prolonged exposure.
 4. Factory-Applied Paint Finish: Manufacturer's standard primer and finish coats, complying with requirements in SDI A250.3 for performance and acceptance criteria.
 - a. Color and Gloss: As indicated on Drawings and in Section 081113 "Hollow Metal Doors and Frames".
- D. Supports and Anchors: After fabricating, galvanize units to be built into exterior walls in accordance with ASTM A153/A153M, Class B.
1. Jamb Anchors: Anchors of minimum size and type required by wall construction and assembly performance requirements.
 2. Floor Anchors: Metallic-coated steel in thickness matching frame but not less than 0.079-inch nominal-thickness.

2.4 HARDWARE

- A. Sound Control Door Hardware: Manufacturer's standard sound control system required to comply with assembly performance requirements.
1. Head and Jamb Seals: Provide one of the following:
 - a. Neoprene Compression Seals: One-piece units consisting of closed-cell sponge neoprene seal held in place by metal retainer, with retainer cover of same material as door frame; attached to door frame with concealed screws.
 - b. Silicone Compression Seals: One-piece units consisting of silicone compression bulb and stabilizer flange; attached to door frame adhesively.
 - c. Magnetic Seals: One-piece units consisting of closed-cell sponge neoprene seal and resiliently mounted magnet held in place by metal retainer, with retainer cover of same material as door frame; attached to door frame with concealed screws.
 2. Door Bottoms: Neoprene or silicone gasket held in place by metal housing; mortised into bottom edge of door.
 3. Cam-Lift Hinges: Manufacturer's standard full-mortise type as required to support weight of door.
 4. Thresholds: Flat, smooth, unfluted type recommended in writing by manufacturer; fabricated from stainless steel.

- a. Finish: Clear anodic finish.
- B. Other Hardware: Comply with requirements in Section 087100 "Door Hardware."

2.5 FABRICATION

- A. Wood Doors: Factory fit doors to frames with uniform clearances and bevels in accordance with WDMA I.S. 1A unless otherwise indicated. Comply with final door hardware schedules and hardware templates.
- B. Hollow-Metal Frames: Fabricate to tolerances indicated in NAAMM-HMMA 865 and to be rigid and free of defects, warp, or buckle. Accurately form metal to required sizes and profiles, with minimum radius for thickness of metal.
 - 1. Weld flush face joints continuously; grind, fill, dress, and make smooth, flush, and invisible.
 - 2. Provide countersunk, flat- or oval-head exposed screws and bolts for exposed fasteners or provide plug buttons to conceal fasteners.
 - 3. Floor Anchors: Weld anchors to bottom of jambs and fixed mullions with at least four spot welds per anchor.
 - 4. Stud-Wall Jamb Anchors: Locate anchors not more than 18 inches from top and bottom of frame. Space anchors not more than 32 inches o.c. and provide minimum quantity as follows:
 - a. Three anchors per jamb up to 60 inches in height.
 - b. Four anchors per jamb from 60 to 90 inches in height.
 - c. Five anchors per jamb from 90 to 96 inches in height.
 - d. Five anchors per jamb plus one additional anchor per jamb for each 24 inches, or fraction thereof, more than 96 inches in height.
 - e. Two anchors per head for frames more than 42 inches wide and mounted in metal-stud partitions.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements and other conditions affecting performance of the Work.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Hollow-Metal Frames: Remove temporary shipping spreader bars installed at factory. Restore exposed finishes by grinding, filling, and dressing, as required to make repaired area smooth, flush, and invisible on exposed faces.

- B. Drill and tap doors and frames to receive non-templated mortised and surface-mounted door hardware.

3.3 INSTALLATION OF SIDE-HINGED, WOOD SOUND CONTROL DOOR ASSEMBLIES

- A. General: Install sound control door assemblies plumb, rigid, properly aligned, and securely fastened in place; comply with manufacturer's written instructions.
- B. Hollow-Metal Frames: Set accurately in position; plumbed, aligned, and braced securely until permanent anchors are set. Check squareness, twist, and plumbness of frames as walls are constructed. Shim as necessary to comply with installation tolerances. After wall construction is complete, remove temporary braces, leaving surfaces smooth and undamaged.
 - 1. Floor Anchors: Secure with postinstalled expansion anchors.
 - a. Floor anchors may be set with powder-actuated fasteners instead of postinstalled expansion anchors if so indicated and approved on Shop Drawings.
 - 2. Metal-Stud Partitions: Fully fill frames with mineral-fiber insulation.
 - 3. Ceiling Struts: Extend struts vertically from top of frame at each jamb to supporting construction above unless frame is anchored to structural support at each jamb. Bend top of struts to provide flush contact for securing to supporting construction above. Provide adjustable wedged or bolted anchorage to frame jamb members.
- C. Wood Doors: Fit doors accurately in frames in accordance with manufacturer's written instructions and to comply with assembly performance requirements.
- D. Sound Control Seals: Where seals have been factory prefit and preinstalled and subsequently removed for shipping, reinstall seals and adjust in accordance with manufacturer's written instructions.
- E. Cam-Lift Hinges: Install in accordance with manufacturer's written instructions.
- F. Thresholds: Set thresholds in full bed of sealant complying with requirements in Section 079200 "Joint Sealants."
- G. Installation Tolerances:
 - 1. Opening Width: Plus 1/16 inch or minus 1/32 inch, measured from rabbet to rabbet at top, middle, and bottom of frame.
 - 2. Opening Height: Plus 1/16 inch or minus 1/32 inch, measured from head rabbet to top of floor or bottom of frame minus jamb extensions at each jamb and across head.
 - 3. Squareness: Plus or minus 1/16 inch, measured at door rabbet on a line 90 degrees from jamb perpendicular to frame head.
 - 4. Alignment: Plus or minus 1/16 inch, measured at jambs on a horizontal line parallel to plane of wall.
 - 5. Twist: Plus or minus 1/16 inch, measured at opposite face corners of jambs on parallel lines and perpendicular to plane of wall.
 - 6. Plumbness: Plus or minus 1/16 inch, measured at jambs on a perpendicular line from head to floor.

- H. Reinspect repaired or replaced installations to determine if replaced or repaired door assembly installations comply with specified requirements.
- I. Inspection Report: Prepared and submitted in writing to Architect and Contractor within 24 hours after testing.

3.4 ADJUSTING AND CLEANING

- A. Hollow-Metal Frames:
 - 1. Metallic-Coated Surface Touchup: Immediately after installation, clean abraded areas of doors and frames and repair with galvanizing repair paint in accordance with manufacturer's written instructions.
 - 2. Prime-Coat Touchup: Immediately after installation, sand smooth rusted or damaged areas of prime coat and apply touchup of compatible, rust-inhibitive, air-drying primer.
 - 3. Factory-Applied Paint Touchup: Immediately after installation, repair damaged areas of factory-applied paint and touchup in accordance with manufacturer's written instructions.
- B. Wood Doors: Immediately after installation, repair damaged areas of factory-applied finishes and touchup in accordance with manufacturer's written instructions.
- C. Remove and replace defective work, including defective or damaged sound seals and doors and frames that are warped, bowed, or otherwise defective.
 - 1. Adjust seals to provide contact required to comply with assembly performance requirements.
- D. Check and adjust seals, door bottoms, and other hardware items immediately before final inspection.

END OF SECTION

SECTION 08 71 00

DOOR HARDWARE

PART 1 - GENERAL

1.01 SUMMARY

A. Section includes:

1. Mechanical and electrified door hardware
2. Electronic access control system components
3. Field verification, preparation and modification of existing doors and frames to receive new door hardware.

B. Section excludes:

1. Windows
2. Cabinets (casework), including locks in cabinets
3. Signage
4. Toilet accessories
5. Overhead doors

C. Related Sections:

1. Division 01 "General Requirements" sections for Allowances, Alternates, Owner Furnished Contractor Installed, Project Management and Coordination.
2. Division 06 Section "Rough Carpentry"
3. Division 07 Section "Joint Sealants" for sealant requirements applicable to threshold installation specified in this section.
4. Division 08 Sections for Doors and Frames.
5. Division 09 sections for touchup, finishing or refinishing of existing openings modified by this section.
6. Division 26 "Electrical" sections for connections to electrical power system and for low-voltage wiring.

1.02 REFERENCES

A. UL, LLC

1. UL 10B - Fire Test of Door Assemblies
2. UL 10C - Positive Pressure Test of Fire Door Assemblies
3. UL 1784 - Air Leakage Tests of Door Assemblies

4. UL 305 - Panic Hardware
- B. DHI - Door and Hardware Institute
1. Sequence and Format for the Hardware Schedule
 2. Recommended Locations for Builders Hardware
 3. Keying Systems and Nomenclature
 4. Installation Guide for Doors and Hardware
- C. NFPA – National Fire Protection Association
1. NFPA 70 – National Electric Code
 2. NFPA 80 – 2016 Edition – Standard for Fire Doors and Other Opening Protectives
 3. NFPA 101 – Life Safety Code
 4. NFPA 105 – Smoke and Draft Control Door Assemblies
 5. NFPA 252 – Fire Tests of Door Assemblies
- D. ANSI - American National Standards Institute
1. ANSI A117.1 – 2017 Edition – Accessible and Usable Buildings and Facilities
 2. ANSI/BHMA A156.1 - A156.29, and ANSI/BHMA A156.31 - Standards for Hardware and Specialties
 3. ANSI/BHMA A156.28 - Recommended Practices for Keying Systems
 4. ANSI/WDMA I.S. 1A - Interior Architectural Wood Flush Doors
 5. ANSI/SDI A250.8 - Standard Steel Doors and Frames.
 6. ANSI/DHI A115.IG – Installation Guide for Doors and Hardware
- E. ICC – International Code Council, Inc
1. ICC/ANSI A117.1 – Accessible and Usable Buildings and Facilities.
 2. ICC IBC – International Building Code
- F. NFPA – National Fire Protection Agency
1. NFPA 101 - Life Safety Code
 2. NFPA 80 - Fire Doors and Windows
- G. Builders Hardware Manufacturing Association (BHMA)

1.03 SUBMITTALS

- A. General:
1. Submit in accordance with Conditions of Contract and Division 01 Submittal Procedures.
 2. Prior to forwarding submittal:

- a. Comply with procedures for verifying existing door and frame compatibility for new hardware, as specified in PART 3, "EXAMINATION" article, herein.
- b. Review drawings and Sections from related trades to verify compatibility with specified hardware.
- c. Highlight, encircle, or otherwise specifically identify on submittals: deviations from Contract Documents, issues of incompatibility or other issues which may detrimentally affect the Work.

B. Action Submittals:

1. Product Data: Submit technical product data for each item of door hardware, installation instructions, maintenance of operating parts and finish, and other information necessary to show compliance with requirements.
2. Riser and Wiring Diagrams: After final approval of hardware schedule, submit details of electrified door hardware, indicating:
 - a. Wiring Diagrams: For power, signal, and control wiring and including:
 - 1) Details of interface of electrified door hardware and building safety and security systems.
 - 2) Schematic diagram of systems that interface with electrified door hardware.
 - 3) Point-to-point wiring.
 - 4) Risers.
3. Samples for Verification: If requested by Architect, submit production sample of requested door hardware unit in finish indicated and tagged with full description for coordination with schedule.
 - a. Samples will be returned to supplier. Units that are acceptable to Architect may, after final check of operations, be incorporated into Work, within limitations of key coordination requirements.
4. Door Hardware Schedule:
 - a. Submit concurrent with submissions of Product Data, Samples, and Shop Drawings. Coordinate submission of door hardware schedule with scheduling requirements of other work to facilitate fabrication of other work critical in Project construction schedule.
 - b. Submit under direct supervision of a Door Hardware Institute (DHI) certified Architectural Hardware Consultant (AHC) or Door Hardware Consultant (DHC) with hardware sets in vertical format as illustrated by Sequence of Format for the Hardware Schedule published by DHI.
 - c. Indicate complete designations of each item required for each opening, include:
 - 1) Door Index: door number, heading number, and Architect's hardware set number.

- 2) Quantity, type, style, function, size, and finish of each hardware item.
- 3) Name and manufacturer of each item.
- 4) Fastenings and other pertinent information.
- 5) Location of each hardware set cross-referenced to indications on Drawings.
- 6) Explanation of all abbreviations, symbols, and codes contained in schedule.
- 7) Mounting locations for hardware.
- 8) Door and frame sizes and materials.
- 9) Degree of door swing and handing.
- 10) Operational Description of openings with electrified hardware covering egress, ingress (access), and fire/smoke alarm connections.

5. Key Schedule:

- a. After Keying Conference, provide keying schedule that includes levels of keying, explanations of key system's function, key symbols used, and door numbers controlled.
- b. Use ANSI/BHMA A156.28 "Recommended Practices for Keying Systems" as guideline for nomenclature, definitions, and approach for selecting optimal keying system.
- c. Provide 3 copies of keying schedule for review prepared and detailed in accordance with referenced DHI publication. Include schematic keying diagram and index each key to unique door designations.
- d. Index keying schedule by door number, keyset, hardware heading number, cross keying instructions, and special key stamping instructions.
- e. Provide one complete bitting list of key cuts and one key system schematic illustrating system usage and expansion. Forward bitting list, key cuts and key system schematic directly to Owner, by means as directed by Owner.
- f. Prepare key schedule by or under supervision of supplier, detailing Owner's final keying instructions for locks.

C. Informational Submittals:

1. Provide Qualification Data for Supplier, Installer and Architectural Hardware Consultant.
2. Provide Product Data:
 - a. Certify that door hardware approved for use on types and sizes of labeled fire-rated doors complies with listed fire-rated door assemblies.
 - b. Include warranties for specified door hardware.

D. Closeout Submittals:

1. Operations and Maintenance Data: Provide in accordance with Division 01 and include:

- a. Complete information on care, maintenance, and adjustment; data on repair and replacement parts, and information on preservation of finishes.
- b. Catalog pages for each product.
- c. Final approved hardware schedule edited to reflect conditions as installed.
- d. Final keying schedule
- e. Copy of warranties including appropriate reference numbers for manufacturers to identify project.
- f. As-installed wiring diagrams for each opening connected to power, both low voltage and 110 volts.

E. Inspection and Testing:

1. Submit written reports to the Owner and Authority Having Jurisdiction (AHJ) of the results of functional testing and inspection for:
 - a. fire door assemblies, in compliance with NFPA 80.
 - b. required egress door assemblies, in compliance with NFPA 101.

1.04 QUALITY ASSURANCE

A. Qualifications and Responsibilities:

1. Supplier: Recognized architectural hardware supplier with a minimum of 5 years documented experience supplying both mechanical and electromechanical door hardware similar in quantity, type, and quality to that indicated for this Project. Supplier to be recognized as a factory direct distributor by the manufacturer of the primary materials with a warehousing facility in the Project's vicinity. Supplier to have on staff, a certified Architectural Hardware Consultant (AHC) or Door Hardware Consultant (DHC) available to Owner, Architect, and Contractor, at reasonable times during the Work for consultation.
2. Installer: Qualified tradesperson skilled in the application of commercial grade hardware with experience installing door hardware similar in quantity, type, and quality as indicated for this Project.
3. Architectural Hardware Consultant: Person who is experienced in providing consulting services for door hardware installations that are comparable in material, design, and extent to that indicated for this Project and meets these requirements:
 - a. For door hardware: DHI certified AHC or DHC.
 - b. Can provide installation and technical data to Architect and other related subcontractors.
 - c. Can inspect and verify components are in working order upon completion of installation.
 - d. Capable of producing wiring diagram and coordinating installation of electrified hardware with Architect and electrical engineers.

4. Single Source Responsibility: Obtain each type of door hardware from single manufacturer.

B. Certifications:

1. Fire-Rated Door Openings:

- a. Provide door hardware for fire-rated openings that complies with NFPA 80 and requirements of authorities having jurisdiction.
- b. Provide only items of door hardware that are listed products tested by UL LLC, Intertek Testing Services, or other testing and inspecting organizations acceptable to authorities having jurisdiction for use on types and sizes of doors indicated, based on testing at positive pressure and according to NFPA 252 or UL 10C and in compliance with requirements of fire-rated door and door frame labels.

2. Smoke and Draft Control Door Assemblies:

- a. Provide door hardware that meets requirements of assemblies tested according to UL 1784 and installed in compliance with NFPA 105
- b. Comply with the maximum air leakage of 0.3 cfm/sq. ft. (3 cu. m per minute/sq. m) at tested pressure differential of 0.3-inch wg (75 Pa) of water.

3. Electrified Door Hardware

- a. Listed and labeled as defined in NFPA 70, Article 100, by testing agency acceptable to authorities having jurisdiction.

4. Accessibility Requirements:

- a. Comply with governing accessibility regulations cited in “REFERENCES” article 087100, 1.02.D3 herein for door hardware on doors in an accessible route. This project must comply with all Federal Americans with Disability Act regulations and all Local Accessibility Regulations.

C. Pre-Installation Meetings

1. Keying Conference

- a. Incorporate keying conference decisions into final keying schedule after reviewing door hardware keying system including:
 - 1) Function of building, flow of traffic, purpose of each area, degree of security required, and plans for future expansion.
 - 2) Preliminary key system schematic diagram.
 - 3) Requirements for key control system.
 - 4) Requirements for access control.
 - 5) Address for delivery of keys.

2. Pre-installation Conference

- a. Not more than 2 weeks prior to beginning door, frame and hardware installation, installing contractor shall meet with the door hardware manufacturer to review installation and adjustment procedures, as well as UL and NFPA compliance, for all major types (locks, closers and exit devices).
- b. Review and finalize construction schedule and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
- c. Inspect and discuss preparatory work performed by other trades.
- d. Inspect and discuss electrical roughing-in for electrified door hardware.
- e. Review sequence of operation for each type of electrified door hardware.
- f. Review required testing, inspecting, and certifying procedures.
- g. Review questions or concerns related to proper installation and adjustment of door hardware.

3. Electrified Hardware Coordination Conference:

- a. Prior to ordering electrified hardware, schedule and hold meeting to coordinate door hardware with security, electrical, doors and frames, and other related suppliers.
- D. Inventory door hardware on receipt and provide secure lock-up for hardware delivered to Project site. Promptly replace products damaged during shipping.
- E. Tag each item or package separately with identification coordinated with final door hardware schedule, and include installation instructions, templates, and necessary fasteners with each item or package. Deliver each article of hardware in manufacturer's original packaging.
- F. Maintain manufacturer-recommended environmental conditions throughout storage and installation periods.
- G. Provide secure lock-up for door hardware delivered to Project. Control handling and installation of hardware items so that completion of Work will not be delayed by hardware losses both before and after installation.
- H. Handle hardware in manner to avoid damage, marring, or scratching. Correct, replace or repair products damaged during Work. Protect products against malfunction due to paint, solvent, cleanser, or any chemical agent.
- I. Deliver keys to manufacturer of key control system for subsequent delivery to Owner.

1.05 COORDINATION

- A. Installation Templates: Distribute for doors, frames, and other work specified to be factory or shop prepared. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing door hardware to comply with indicated requirements.
- B. Security: Coordinate installation of door hardware, keying, and access control with Owner's security consultant.
- C. Electrical System Roughing-In: Coordinate layout and installation of electrified door hardware with connections to power supplies and building safety and security systems.
- D. Existing Openings: Where existing doors, frames and/or hardware are to remain, field verify existing functions, conditions and preparations and coordinate to suit opening conditions and to provide proper door operation.

1.06 WARRANTY

- A. Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of door hardware that fail in materials or workmanship within specified warranty period.
 - 1. Warranty Period: Beginning from date of Substantial Completion, for durations indicated.
 - a. Closers:
 - 1) Mechanical: 30 years
 - b. Exit Devices:
 - 1) Mechanical: 3 years.
 - 2) Electrified: 1 year.
 - c. Locksets:
 - 1) Mechanical: 10years
 - 2) Electrified: 1 year.
 - d. Key Blanks: Lifetime
 - 2. Warranty does not cover damage or faulty operation due to improper installation, improper use or abuse.

1.07 MAINTENANCE

- A. Furnish complete set of special tools required for maintenance and adjustment of hardware, including changing of cylinders.
- B. Turn over unused materials to Owner for maintenance purposes.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

- A. Approval of alternate manufacturers and/or products other than those listed as “Scheduled Manufacturer” or “Acceptable Manufacturers” in the individual article for the product category are only to be considered by official substitution request in accordance in section 01 25 00.
- B. Approval of products from manufacturers indicated in “Acceptable Manufacturers” is contingent upon those products providing all functions and features and meeting all requirements of scheduled manufacturer’s product.
- C. Where specified hardware is not adaptable to finished shape or size of members requiring hardware, furnish suitable types having same operation and quality as type specified, subject to Architect's approval.

2.02 MATERIALS

- A. Fabrication
 - 1. Provide door hardware manufactured to comply with published templates generally prepared for machine, wood, and sheet metal screws. provide screws according to manufacturer’s recognized installation standards for application intended.
 - 2. Finish exposed screws to match hardware finish, or, if exposed in surfaces of other work, to match finish of this other work including prepared for paint surfaces to receive painted finish.
 - 3. Provide concealed fasteners wherever possible for hardware units exposed when door is closed. Coordinate with “Metal Doors and Frames”, “Flush Wood Doors”, “Stile and Rail Wood Doors” to ensure proper reinforcements. Advise the Architect where visible fasteners, such as thru bolts, are required.
- B. Modification and Preparation of Existing Doors: Where existing door hardware is indicated to be removed and reinstalled.

1. Provide necessary fillers, Dutchmen, reinforcements, and fasteners, compatible with existing materials, as required for mounting new opening hardware and to cover existing door and frame preparations.
 2. Use materials which match materials of adjacent modified areas.
 3. When modifying existing fire-rated openings, provide materials permitted by NFPA 80 as required to maintain fire-rating.
- C. Provide screws, bolts, expansion shields, drop plates and other devices necessary for hardware installation.
1. Where fasteners are exposed to view: Finish to match adjacent door hardware material.
- D. Cable and Connectors:
1. Where scheduled in the hardware sets, provide each item of electrified hardware and wire harnesses with number and gage of wires enough to accommodate electric function of specified hardware.
 2. Provide Molex connectors that plug directly into connectors from harnesses, electric locking and power transfer devices.
 3. Provide through-door wire harness for each electrified locking device installed in a door and wire harness for each electrified hinge, electrified continuous hinge, electrified pivot, and electric power transfer for connection to power supplies.

2.03 HINGES

A. Manufacturers and Products:

1. Scheduled Manufacturer and Product:
 - a. Ives 5BB series
2. Acceptable Manufacturers and Products:
 - a. Hager BB1191/1279 series
 - b. McKinney TB series
 - c. Best FBB series

B. Requirements:

1. Provide hinges conforming to ANSI/BHMA A156.1.
2. Provide five knuckle, ball bearing hinges.
3. 1-3/4 inch (44 mm) thick doors, up to and including 36 inches (914 mm) wide:
 - a. Exterior: Standard or heavy weight, bronze or stainless steel, 4-1/2 inches (114 mm) high

- b. Interior: Standard or heavy weight, steel, 4-1/2 inches (114 mm) high
- 4. 1-3/4 inch (44 mm) thick doors over 36 inches (914 mm) wide:
 - a. Exterior: Heavy weight, bronze/stainless steel, 5 inches (127 mm) high
 - b. Interior: Heavy weight, steel, 5 inches (127 mm) high
- 5. 2 inches or thicker doors:
 - a. Exterior: Heavy weight, bronze or stainless steel, 5 inches (127 mm) high
 - b. Interior: Heavy weight, steel, 5 inches (127 mm) high
- 6. Adjust hinge width for door, frame, and wall conditions to allow proper degree of opening.
- 7. Provide minimum three hinges per door leaf for doors 90 inches (2286 mm) or less in height, and one additional hinge for each 30 inches (762 mm) of additional door height.
- 8. Where new hinges are specified for existing doors or existing frames, provide new hinges of identical size to hinge preparation present in existing door or existing frame.
- 9. Hinge Pins: Except as otherwise indicated, provide hinge pins as follows:
 - a. Steel Hinges: Steel pins
 - b. Non-Ferrous Hinges: Stainless steel pins
 - c. Out-Swinging Exterior Doors: Non-removable pins
 - d. Out-Swinging Interior Lockable Doors: Non-removable pins
 - e. Interior Non-lockable Doors: Non-rising pins
- 10. Provide hinges with electrified options as scheduled in the hardware sets. Provide with number and gage of wires enough to accommodate electric function of specified hardware. Locate electric hinge at second hinge from bottom or nearest to electrified locking component. Provide mortar guard for each electrified hinge specified.

2.04 DOOR CORDS

A. Manufacturers:

- 1. Scheduled Manufacturer and Product:
 - a. Schlage 788/798 Series
- 2. Acceptable Manufacturers and Products:
 - a. Securitron TSB Series
 - b. Alarm Controls DL Series
 - c. Camden CM Series
 - d. RCI 9508/9507

e. Locknetics DC Series

B. Requirements:

1. Provide door cords with electrified options as scheduled in the hardware sets. Provide with number and gage of wires enough to accommodate electric function of specified hardware.
2. Locate electric power transfer per manufacturer's template and UL requirements, unless interference with operation of door or other hardware items.

2.05 MORTISE LOCKS

A. Manufacturers and Products:

1. Scheduled Manufacturer and Product:
 - a. Schlage L9000 series
2. Acceptable Manufacturers and Products:
 - a. Accurate 9000/9100 series
 - b. Sargent 8200 series
 - c. Best 45H series
 - d. Corbin-Russwin ML2000 series

B. Requirements:

1. Provide mortise locks conforming to ANSI/BHMA A156.13 Series 1000, Grade 1, and UL Listed for 3-hour fire doors.
2. Indicators: Where specified, provide indicator window measuring a minimum 2-3/5-inch x 3/5 inch with 180-degree visibility. Provide messages color-coded using ANSI Z535 Safety Red with full text and/or symbols, as scheduled, for easy visibility. When applicable allows for lock status indication on both sides of the door.
3. Provide locks manufactured from heavy gauge steel, containing components of steel with a zinc dichromate plating for corrosion resistance.
4. Provide lock case that is multi-function and field reversible for handing without opening case. Cylinders: Refer to "KEYING" article, herein.
5. Provide locks with standard 2-3/4 inches (70 mm) backset with full 3/4 inch (19 mm) throw stainless steel mechanical anti-friction latchbolt. Provide deadbolt with full 1-inch (25 mm) throw, constructed of stainless steel.
6. Provide standard ASA strikes unless extended lip strikes are necessary to protect trim.
7. Provide electrified options as scheduled in the hardware sets. Where scheduled, provide switches and sensors integrated into the locks and latches. Provide motor based electrified locksets that comply with the following requirements:

- a. Universal input voltage – single chassis accepts 12 or 24VDC to allow for changes in the field without changing lock chassis.
 - b. Fail Safe/Fail Secure – changing mode between electrically locked (fail safe) and electrically unlocked (fail secure) is field selectable without opening the lock case
 - c. Low maximum current draw – maximum 0.4 amps to allow for multiple locks on a single power supply.
 - d. Low holding current – maximum 0.01 amps to produce minimal heat, eliminate “hot levers” in electrically locked applications, and to provide reliable operation in wood doors that provide minimal ventilation and air flow.
 - e. Connections – provide quick-connect Molex system standard.
8. Lever Trim: Solid brass, bronze, or stainless steel, cast or forged in design specified, with wrought roses and external lever spring cages. Provide thru-bolted levers with 2-piece spindles.

2.06 CYLINDRICAL LOCKS – GRADE 1

A. Manufacturers and Products:

- 1. Scheduled Manufacturer and Product:
 - a. Schlage ND series
- 2. Acceptable Manufacturers and Products:
 - a. Sargent 11-Line
 - b. Corbin-Russwin CL3100 series

B. Requirements:

- 1. Provide cylindrical locks conforming to ANSI/BHMA A156.2 Series 4000, Grade 1, and UL Listed for 3-hour fire doors.
- 2. Cylinders: Refer to “KEYING” article, herein.
- 3. Provide locks with standard 2-3/4 inches (70 mm) backset, unless noted otherwise, with 1/2-inch latch throw. Provide proper latch throw for UL listing at pairs.
- 4. Provide locksets with separate anti-rotation thru-bolts, and no exposed screws.
- 5. Provide independently operating levers with two external return spring cassettes mounted under roses to prevent lever sag.
- 6. Provide standard ASA strikes unless extended lip strikes are necessary to protect trim.
- 7. Provide electrified options as scheduled in the hardware sets.
- 8. Lever Trim: Solid cast levers without plastic inserts and wrought roses on both sides.

2.07 EXIT DEVICES

A. Manufacturers and Products:

1. Scheduled Manufacturer and Product:
 - a. Von Duprin **99/33A series**
2. Acceptable Manufacturers and Products:
 - a. Detex Advantex series
 - b. Precision APEX 2000 series
 - c. Sargent 19-43-GL-80 series

B. Requirements:

1. Provide exit devices tested to ANSI/BHMA A156.3 Grade 1 and UL listed for Panic Exit or Fire Exit Hardware.
2. Cylinders: Refer to “KEYING” article, herein.
3. Provide grooved touchpad type exit devices, fabricated of brass, bronze, stainless steel, or aluminum, plated to standard architectural finishes to match balance of door hardware.
4. Touchpad must extend a minimum of one half of door width. No plastic inserts are allowed in touchpads.
5. Provide exit devices with dead-latching feature for security and for future addition of alarm kits and/or other electrified requirements.
6. Provide exit devices with weather resistant components that can withstand harsh conditions of various climates and corrosive cleaners used in outdoor pool environments.
7. Provide flush end caps for exit devices.
8. Provide exit devices with manufacturer’s approved strikes.
9. Provide exit devices cut to door width and height. Install exit devices at height recommended by exit device manufacturer, allowable by governing building codes, and approved by Architect.
10. Mount mechanism case flush on face of doors or provide spacers to fill gaps behind devices. Where glass trim or molding projects off face of door, provide glass bead kits.
11. Provide cylinder or hex-key dogging as specified at non fire-rated openings.
12. Removable Mullions: 2 inches (51 mm) x 3 inches (76 mm) steel tube. Where scheduled as keyed removable mullion, provide type that can be removed by use of a keyed cylinder, which is self-locking when re-installed.
13. Provide factory drilled weep holes for exit devices used in full exterior application, highly corrosive areas, and where noted in hardware sets.
14. Provide electrified options as scheduled.

15. Top latch mounting: double- or single-tab mount for steel doors, face mount for aluminum doors eliminating requirement of tabs, and double tab mount for wood doors.
16. Provide exit devices with optional trim designs to match other lever and pull designs used on the project.

2.08 ELECTRIC STRIKES

A. Manufacturers and Products:

1. Scheduled Manufacturer and Product:
 - a. Von Duprin 6000 Series.
2. Acceptable Manufacturers and Products:
 - a. Folger Adam 300 Series
 - b. HES 1006 Series

B. Requirements:

1. Provide electric strikes designed for use with type of locks shown at each opening.
2. Provide electric strikes UL Listed as burglary resistant that are tested to a minimum endurance test of 1,000,000 cycles.
3. Where required, provide electric strikes UL Listed for fire doors and frames.
4. Provide transformers and rectifiers for each strike as required. Verify voltage with electrical contractor.

2.09 POWER SUPPLIES

A. Manufacturers and Products:

1. Scheduled Manufacturer and Product:
 - a. Schlage/Von Duprin PS900 Series
2. Acceptable Manufacturers and Products:
 - a. Precision ELR series
 - b. Sargent 3500 series
 - c. Dynalock 5000 series
 - d. Securitron BPS series
 - e. Security Door Controls 600 series

B. Requirements:

1. Provide power supplies approved by manufacturer of supplied electrified hardware.
2. Provide appropriate quantity of power supplies necessary for proper operation of electrified locking components as recommended by manufacturer of electrified locking components with consideration for each electrified component using power supply, location of power supply, and approved wiring diagrams. Locate power supplies as directed by Architect.
3. Provide regulated and filtered 24 VDC power supply, and UL class 2 listed.
4. Provide power supplies with the following features:
 - a. 12/24 VDC Output, field selectable.
 - b. Class 2 Rated power limited output.
 - c. Universal 120-240 VAC input.
 - d. Low voltage DC, regulated and filtered.
 - e. Polarized connector for distribution boards.
 - f. Fused primary input.
 - g. AC input and DC output monitoring circuit w/LED indicators.
 - h. Cover mounted AC Input indication.
 - i. Tested and certified to meet UL294.
 - j. NEMA 1 enclosure.
 - k. Hinged cover w/lock down screws.
 - l. High voltage protective cover.

2.10 CYLINDERS

A. Manufacturers:

1. Scheduled Manufacturer and Product:
 - a. **Match Owner Standards**
2. **Acceptable Manufacturers and Products:**
 - a. No Substitute

B. Requirements:

1. Provide cylinders/cores to match Owner's existing key system, compliant with ANSI/BHMA A156.5; latest revision; cylinder face finished to match lockset, manufacturer's series as indicated. Refer to "KEYING" article, herein.
2. Confirm keyway and type of cores/cylinders (Conventional, LFIC, SFIC, etc.) with Owner.

2.11 KEYING

A. **Scheduled System:**

- a. Provide cylinders/cores keyed into Owner's existing keying system. Comply with guidelines in ANSI/BHMA A156.28, incorporating decisions made at keying conference.

B. Requirements:

1. Construction Keying:

- a. Replaceable Construction Cores.
 - 1) Provide temporary construction cores replaceable by permanent cores, furnished in accordance with the following requirements.
 - a) 3 construction control keys
 - b) 12 construction change (day) keys.
 - 2) Replace temporary construction cores with permanent cores unless directed otherwise by Owner.

2. Permanent Keying:

- a. Provide permanent cylinders/cores keyed by the manufacturer according to the following key system.
 - 1) Master Keying system as directed by the Owner.
- b. Forward bitting list and keys separately from cylinders, by means as directed by Owner. Failure to comply with forwarding requirements will be cause for replacement of cylinders/cores involved at no additional cost to Owner.
- c. Provide keys with the following features:
 - 1) Material: Nickel silver; minimum thickness of .107-inch (2.3mm)
- d. Identification:
 - 1) Mark permanent cylinders/cores and keys with applicable blind code for identification. Do not provide blind code marks with actual key cuts.
 - 2) Identification stamping provisions must be approved by the Architect and Owner.
 - 3) Stamp cylinders/cores and keys with Owner's unique key system facility code as established by the manufacturer; key symbol and embossed or stamped with "DO NOT DUPLICATE" along with the "PATENTED" or patent number to enforce the patent protection.
 - 4) Failure to comply with stamping requirements will be cause for replacement of keys involved at no additional cost to Owner.
 - 5) Forward permanent cylinders/cores to Owner, separately from keys, by means as directed by Owner.
- e. Quantity: Furnish in the following quantities.
 - 1) Change (Day) Keys: 3 per cylinder/core that is keyed differently.
 - 2) Permanent Control Keys: 3.
 - 3) Master Keys: 6.

- 4) Key Blanks: quantity as determined in the keying meeting.

2.12 DOOR CLOSERS

A. Manufacturers and Products:

1. Scheduled Manufacturer and Product:
 - a. LCN 4040XP series
2. Acceptable Manufacturers and Products:
 - a. Corbin-Russwin DC8000 series
 - b. Sargent 281 series

B. Requirements:

1. Provide door closers conforming to ANSI/BHMA A156.4 Grade 1 requirements by BHMA certified independent testing laboratory. ISO 9000 certify closers. Stamp units with date of manufacture code.
2. Provide door closers with fully hydraulic, full rack and pinion action with high strength cast iron cylinder, and full complement bearings at shaft.
3. Cylinder Body: 1-1/2-inch (38 mm) diameter piston with 5/8-inch (16 mm) diameter double heat-treated pinion journal. QR code with a direct link to maintenance instructions.
4. Hydraulic Fluid: Fireproof, passing requirements of UL10C, and requiring no seasonal closer adjustment for temperatures ranging from 120 degrees F to -30 degrees F.
5. Spring Power: Continuously adjustable over full range of closer sizes, and providing reduced opening force as required by accessibility codes and standards. Provide snap-on cover clip, with plastic covers, that secures cover to spring tube.
6. Hydraulic Regulation: By tamper-proof, non-critical valves, with separate adjustment for latch speed, general speed, and backcheck. Provide graphically labelled instructions on the closer body adjacent to each adjustment valve. Provide positive stop on reg valve that prevents reg screw from being backed out.
7. Provide closers with solid forged steel main arms and factory assembled heavy-duty forged forearms for parallel arm closers.
8. Pressure Relief Valve (PRV) Technology: Not permitted.
9. Finish for Closer Cylinders, Arms, Adapter Plates, and Metal Covers: Powder coating finish which has been certified to exceed 100 hours salt spray testing as described in ANSI Standard A156.4 and ASTM B117, or has special rust inhibitor (SRI).
10. Provide special templates, drop plates, mounting brackets, or adapters for arms as required for details, overhead stops, and other door hardware items interfering with closer mounting.

2.13 DOOR TRIM

A. Manufacturers:

1. Scheduled Manufacturer:

- a. Ives.

2. Acceptable Manufacturers:

- a. Elmes
- b. Trimco
- c. Burns
- d. Rockwood

B. Requirements:

1. Provide push plates, push bars, pull plates, pulls, and hands-free reversible door pulls with diameter and length as scheduled.

2.14 PROTECTION PLATES

A. Manufacturers:

1. Scheduled Manufacturer:

- a. Ives

2. Acceptable Manufacturers:

- a. Burns
- b. Trimco
- c. Rockwood

B. Requirements:

1. Provide protection plates with a minimum of 0.050 inch (1 mm) thick, beveled four edges as scheduled. Furnish with sheet metal or wood screws, finished to match plates.
2. Size plates 2 inches (51 mm) less width of door on single doors, pairs of doors with a mullion, and doors with edge guards. Size plates 1 inch (25 mm) less width of door on pairs without a mullion or edge guards.
3. At fire rated doors, provide protection plates over 16 inches high with UL label.

2.15 OVERHEAD STOPS AND OVERHEAD STOP/HOLDERS

A. Manufacturers:

1. Scheduled Manufacturers:

- a. Glynn-Johnson

2. Acceptable Manufacturers:

- a. Rixson
- b. Sargent
- c. ABH

B. Requirements:

1. Provide overhead stop at any door where conditions do not allow for a wall stop or floor stop presents tripping hazard.

2.16 DOOR STOPS AND HOLDERS

A. Manufacturers:

1. Scheduled Manufacturer:

- a. Ives

2. Acceptable Manufacturers:

- a. Trimco
- b. Burns
- c. Rockwood

B. Provide door stops at each door leaf:

1. Provide wall stops wherever possible. Provide concave type where lockset has a push button or thumbturn.
2. Where a wall stop cannot be used, provide universal floor stops.
3. Where wall or floor stop cannot be used, provide overhead stop.
4. Provide roller bumper where doors open into each other and overhead stop cannot be used.

2.17 THRESHOLDS, SEALS, DOOR SWEEPS, AUTOMATIC DOOR BOTTOMS, AND GASKETING

A. Manufacturers:

1. Scheduled Manufacturer:
 - a. Zero International
2. Acceptable Manufacturers:
 - a. National Guard
 - b. Reese
 - c. DHSI
 - d. Legacy
 - e. Pemko

B. Requirements:

1. Provide thresholds, weather-stripping, and gasketing systems as specified and per architectural details. Match finish of other items.
2. Smoke- and Draft-Control Door Assemblies: Where smoke- and draft-control door assemblies are required, provide door hardware that meets requirements of assemblies tested according to UL 1784 and installed in compliance with NFPA 105.
3. Provide door sweeps, seals, astragals, and auto door bottoms only of type where resilient or flexible seal strip is easily replaceable and readily available.
4. Size thresholds 1/2 inch (13 mm) high by 5 inches (127 mm) wide by door width unless otherwise specified in the hardware sets or detailed in the drawings.

2.18 SILENCERS

A. Manufacturers:

1. Scheduled Manufacturer:
 - a. Ives
2. Acceptable Manufacturers:
 - a. Burns
 - b. Rockwood
 - c. Trimco

B. Requirements:

1. Provide "push-in" type silencers for hollow metal or wood frames.
2. Provide one silencer per 30 inches (762 mm) of height on each single frame, and two for each pair frame.
3. Omit where gasketing is specified.

2.19 DOOR POSITION SWITCHES

A. Manufacturers:

1. Scheduled Manufacturer:

- a. Schlage

2. Acceptable Manufacturers:

- a. GE-Interlogix
- b. Sargent

B. Requirements:

1. Provide recessed or surface mounted type door position switches as specified.
2. Coordinate door and frame preparations with door and frame suppliers. If switches are being used with magnetic locking device, provide minimum of 4 inches (102 mm) between switch and magnetic locking device.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Prior to installation of hardware, examine doors and frames, with Installer present, for compliance with requirements for installation tolerances, labeled fire-rated door assembly construction, wall and floor construction, and other conditions affecting performance. Verify doors, frames, and walls have been properly reinforced for hardware installation.
- B. Field verify existing doors and frames receiving new hardware and existing conditions receiving new openings. Verify that new hardware is compatible with existing door and frame preparation and existing conditions.
- C. Examine roughing-in for electrical power systems to verify actual locations of wiring connections before electrified door hardware installation.
- D. Submit a list of deficiencies in writing and proceed with installation only after unsatisfactory conditions have been corrected.

3.02 PREPARATION

- A. Where on-site modification of doors and frames is required:

1. Carefully remove existing door hardware and components being reused. Clean, protect, tag, and store in accordance with storage and handling requirements specified herein.
2. Field modify and prepare existing doors and frames for new hardware being installed.
3. When modifications are exposed to view, use concealed fasteners, when possible.
4. Prepare hardware locations and reinstall in accordance with installation requirements for new door hardware and with:
 - a. Steel Doors and Frames: For surface applied door hardware, drill and tap doors and frames according to ANSI/SDI A250.6.
 - b. Wood Doors: DHI WDHS.5 "Recommended Hardware Reinforcement Locations for Mineral Core Wood Flush Doors."
 - c. Doors in rated assemblies: NFPA 80 for restrictions on on-site door hardware preparation.

3.03 INSTALLATION

- A. Mount door hardware units at heights to comply with the following, unless otherwise indicated or required to comply with governing regulations.
 1. Standard Steel Doors and Frames: ANSI/SDI A250.8.
 2. Custom Steel Doors and Frames: HMMA 831.
 3. Interior Architectural Wood Flush Doors: ANSI/WDMA I.S. 1A
 4. Installation Guide for Doors and Hardware: DHI TDH-007-20
- B. Install door hardware in accordance with NFPA 80, NFPA 101 and provide post-install inspection, testing as specified in section 1.03.E unless otherwise required to comply with governing regulations.
- C. Install each hardware item in compliance with manufacturer's instructions and recommendations, using only fasteners provided by manufacturer.
- D. Do not install surface mounted items until finishes have been completed on substrate. Protect all installed hardware during painting.
- E. Set units level, plumb and true to line and location. Adjust and reinforce attachment substrate as necessary for proper installation and operation.
- F. Drill and countersink units that are not factory prepared for anchorage fasteners. Space fasteners and anchors according to industry standards.
- G. Install operating parts so they move freely and smoothly without binding, sticking, or excessive clearance.

- H. Hinges: Install types and in quantities indicated in door hardware schedule but not fewer than quantity recommended by manufacturer for application indicated.
- I. Lock Cylinders:
 - 1. Install construction cores to secure building and areas during construction period.
 - 2. Replace construction cores with permanent cores as indicated in keying section.
- J. Wiring: Coordinate with Division 26, ELECTRICAL and Division sections for:
 - 1. Conduit, junction boxes and wire pulls.
 - 2. Connections to and from power supplies to electrified hardware.
 - 3. Connections to fire/smoke alarm system.
 - 4. Connection of wire runs to central room or area, as directed by Architect.
 - 5. Connections to panel interface modules, controllers, and gateways.
- K. Key Control System: Tag keys and place them on markers and hooks in key control system cabinet, as determined by final keying schedule.
- L. Continuous Hinges: Re-locate the door and frame fire rating labels where they will remain visible so that the hinge does not cover the label once installed.
- M. Door Closers & Auto Operators: Mount closers/operators on room side of corridor doors, inside of exterior doors, and stair side of stairway doors from corridors. Mount closers/operators so they are not visible in corridors, lobbies and other public spaces unless approved by Architect.
- N. Overhead Stops/holders: Mount overhead stops/holders on room side of corridor doors, inside of exterior doors, and stair side of stairway doors.
- O. Power Supplies: Locate power supplies as indicated or, if not indicated, above accessible ceilings or in equipment room, or alternate location as directed by Architect.
- P. Thresholds: Set thresholds in full bed of sealant complying with requirements specified in Division 07 Section "Joint Sealants."
- Q. Stops: Provide floor stops for doors unless wall or other type stops are indicated in door hardware schedule. Do not mount floor stops where they may impede traffic or present tripping hazard.
- R. Perimeter Gasketing: Apply to head and jamb, forming seal between door and frame.
- S. Meeting Stile Gasketing: Fasten to meeting stiles, forming seal when doors are closed.
- T. Door Bottoms and Sweeps: Apply to bottom of door, forming seal with threshold when door is closed.

3.04 ADJUSTING

- A. Initial Adjustment: Adjust and check each operating item of door hardware and each door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to operate as intended. Adjust door control devices to compensate for final operation of heating and ventilating equipment and to comply with referenced accessibility requirements.
 - 1. Electric Strikes: Adjust horizontal and vertical alignment of keeper to properly engage lock bolt.
 - 2. Door Closers: Adjust sweep period to comply with accessibility requirements and requirements of authorities having jurisdiction.
- B. Occupancy Adjustment: Approximately three to six months after date of Substantial Completion, examine and readjust each item of door hardware, including adjusting operating forces, as necessary to ensure function of doors and door hardware.

3.05 CLEANING AND PROTECTION

- A. Clean adjacent surfaces soiled by door hardware installation.
- B. Clean operating items per manufacturer's instructions to restore proper function and finish.
- C. Provide final protection and maintain conditions that ensure door hardware is without damage or deterioration at time of Substantial Completion.

3.06 DOOR HARDWARE SCHEDULE

- A. The intent of the hardware specification is to specify the hardware for interior and exterior doors, and to establish a type, continuity, and standard of quality. However, it is the door hardware supplier's responsibility to thoroughly review existing conditions, schedules, specifications, drawings, and other Contract Documents to verify the suitability of the hardware specified.
- B. Discrepancies, conflicting hardware, and missing items are to be brought to the attention of the architect with corrections made prior to the bidding process. Omitted items not included in a hardware set should be scheduled with the appropriate additional hardware required for proper application.
- C. Hardware items are referenced in the following hardware schedule. Refer to the above specifications for special features, options, cylinders/keying, and other requirements.

Hardware Sets:

- 1) The hardware sets listed below represent design intent and direction of the owner and architect. They are a guideline only and should not be considered a detailed hardware schedule. Discrepancies, conflicting hardware and missing items should be brought to the attention of the architect with corrections made prior to the bidding process.

END OF SECTION

BEGINNING OF DOOR HARDWARE SETS

Hardware Group No. 00.1

For use on Door #(s):

109-1	110-1	112-1	114-1	114-3	116-1
120-3	B00-1	B01-1	B05-1	B06-1	B08-1
B10-1					

Provide each SGL door(s) with the following:

QTY	DESCRIPTION	CATALOG NUMBER	ITEMID	FINISH	MFR
1		EXISTING DOOR, FRAME AND HARDWARE TO REMAIN			

Hardware Group No. 00.2

For use on Door #(s):

101-1

Provide each SGL door(s) with the following:

QTY	DESCRIPTION	CATALOG NUMBER	ITEMID	FINISH	MFR
1	EA DEADLATCH PADDLE	4590 DEADLATCH PADDLE			ADA
1	EA DEADLATCH	4900		628	ADA
1	EA MORT CYL HOUSING	AS REQ'D		626	SCH
1	EA FSIC CORE	PERMANENT CORE MATCH OWNER STANDARDS		626	SCH
1	EA FSIC CORE	KEYED CONST CORE		622	SCH
1	EA ELEC STRIKE	7100 SERIES	^		ADA
1	EA POWER SUPPLY	BY OWNER	^	LGR	SCE
1		BALANCE OF HARDWARE EXISTING			
1		CARD READER BY OWNER			

CONFIRM NEW HARDWARE IS COMPATIBLE WITH EXISTING DOOR AND FRAME PREP.
 REMOVE EXISTING HARDWARE AS REQUIRED FOR INSTALLATION OF NEW HARDWARE.
 EXISTING PUSHBAR MAY NEED RELOCATED TO ALLOW FOR NEW DEADLATCH PADDLE
 CONFIRM IF EXISTING LATCH IS A DEADBOLT OR DEADLATCH. DEADLATCH MAY NOT BE REQUIRED
 IF EXISTING.

OPERATIONAL DESCRIPTION.

DEADLATCH - TURN KEY OR PADDLE TO TEMPORARILY RETRACT SPRING LOADED LATCHBOLT. TO
 HOLD BOLT RETRACTED, PUSH IT IN AND SECURE BY REVERSE TURN OF KEY.
 ACCESS CONTROL SOFTWARE OR PRESENTING AUTHORIZED CREDENTIAL SHALL RELEASE ELECT
 STRIKE ALLOWING DOOR TO OPEN.
 SELF CLOSING.

Hardware Group No. 00.3

For use on Door #(s):

120-2

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER	ITEMID	FINISH	MFR
1	EA	Door Cord	798-18 LESS WIRES	^	626	SCE
1	EA	ELEC PANIC HARDWARE	QEL-99-NL-OP-110MD-CON 24 VDC	^	626	VON
1	EA	RIM CYL HOUSING	AS REQUIRED		626	SCH
1	EA	FSIC CORE	PERMANENT CORE MATCH OWNER STANDARDS		626	SCH
1	EA	FSIC CORE	KEYED CONST CORE		622	SCH
1	EA	90 DEG OFFSET PULL	8190EZHD 10" O		630-316	IVE
1	EA	WIRE HARNESS	CON X LENGTH AS REQ'D			SCH
1	EA	POWER SUPPLY	PS902 900-2RS 120/240 VAC	^	LGR	SCE
1			BALANCE OF HARDWARE EXISTING			
1			CARD READER BY OWNER			

CONFIRM NEW HARDWARE IS COMPATIBLE WITH EXISTING DOOR AND FRAME PREP.
REMOVE EXISTING HARDWARE AS REQUIRED FOR INSTALLATION OF NEW HARDWARE.
PATCH EXISTING CYLINDRICAL LOCK AND DEADBOLT LOCK PREPS (LOCKS, LATCH, STRIKE, ETC.) WITH COVER PLATES

OPERATIONAL DESCRIPTION.

RIM EXIT DEVICE. FREE EGRESS AT ALL TIMES BY PRESSING PUSHBAR. ENTRY BY PULL AFTER RETRACTING LATCHBOLT WITH KEY.
LATCHBOLT CAN BE RETRACTED ELECTRICALLY FOR EITHER MOMENTARY OR EXTENDED PERIODS OF TIME ALLOWING DOOR TO BE PUSH/PULL FUNCTION.
ACCESS CONTROL SOFTWARE OR PRESENTING AUTHORIZED CREDENTIAL SHALL RETRACT LATCHBOLT ELECTRICALLY ALLOWING DOOR TO BE OPENED.
SELF CLOSING.

Hardware Group No. 00.5

For use on Door #(s):

113-1

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER	ITEMID	FINISH	MFR
1	EA	PASSAGE SET	ND10S SPA		612	SCH
1			BALANCE OF HARDWARE EXISTING			

CONFIRM NEW HARDWARE IS COMPATIBLE WITH EXISTING DOOR AND FRAME PREP.
CONFIRM EXISTING FINISHES ARE SATIN BRONZE 612 BEFORE ORDERING.

OPERATIONAL DESCRIPTION

PASSAGE LOCK – NEITHER LEVER LOCKABLE. BOTH LEVERS ALWAYS FREE FOR IMMEDIATE INGRESS OR EGRESS.

Hardware Group No. 00.6

For use on Door #(s):

111-1

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER	ITEMID	FINISH	MFR
1	EA	STOREROOM LOCK	ND80JD SPA XN12-012		612	SCH
1	EA	FSIC CORE	CONST/DISP CORE		622	SCH
1	EA	FSIC CORE	PERMANENT CORE MATCH OWNER STANDARDS		606	SCH
1			BALANCE OF HARDWARE EXISTING			

CONFIRM NEW HARDWARE IS COMPATIBLE WITH EXISTING DOOR AND FRAME PREP.
CONFIRM EXISTING DOOR IS 1 3/8" THICK
CONFIRM EXISTING FINISHES ARE SATIN BRONZE 612 BEFORE ORDERING.

OPERATIONAL DESCRIPTION

STOREROOM LOCK - OUTSIDE LEVER FIXED. ENTRANCE BY KEY ONLY. INSIDE LEVER ALWAYS UNLOCKED. INSIDE LEVER IS ALWAYS FREE FOR IMMEDIATE EGRESS.

Hardware Group No. 00.7

For use on Door #(s):

106-1 107-1 108-1 B02-1

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER	ITEMID	FINISH	MFR
1	EA	OFFICE W/SIM RETRACT	L9056J 17A L583-363		612	SCH
1	EA	FSIC CORE	CONST/DISP CORE		622	SCH
1	EA	FSIC CORE	PERMANENT CORE MATCH OWNER STANDARDS		606	SCH
1			BALANCE OF HARDWARE EXISTING			

CONFIRM NEW HARDWARE IS COMPATIBLE WITH EXISTING DOOR AND FRAME PREP.
CONFIRM EXISTING FINISHES ARE SATIN BRONZE 612 BEFORE ORDERING.

OPERATIONAL DESCRIPTION

OFFICE/ENTRY LOCK W AUTO UNLOCKING - LATCHBOLT RETRACTED BY LEVER FROM EITHER SIDE UNLESS OUTSIDE IS MADE INOPERATIVE BY KEY OUTSIDE OR BY ROTATING INSIDE THUMBTURN. OUTSIDE LEVER UNLOCKED BY KEY OUTSIDE, THUMBTURN OR CLOSING DOOR . ROTATING INSIDE LEVER SIMULTANEOUSLY RETRACTS LATCHBOLT AND UNLOCKS OUTSIDE LEVER f AUXILIARY LATCH DEADLOCKS LATCHBOLT WHEN DOOR IS LOCKED f INSIDE LEVER IS ALWAYS FREE FOR IMMEDIATE EGRESS

Hardware Group No. 02.01

For use on Door #(s):

105-1

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER	ITEMID	FINISH	MFR
3	EA	HINGE	5BB1HW 4.5 X 4.5		639	IVE
1	EA	STOREROOM LOCK	ND80JD SPA		612	SCH
1	EA	FSIC CORE	CONST/DISP CORE		622	SCH
1	EA	FSIC CORE	PERMANENT CORE MATCH OWNER STANDARDS		606	SCH
1	EA	ELECTRIC STRIKE	6211 FSE CON 12/16/24/28 VAC/VDC	^	612	VON
1	EA	SURFACE CLOSER	4040XP RW/PA MC		691	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS		US10	IVE
1	EA	WALL STOP	WS406/407CCV		US10	IVE
3	EA	SILENCER HM	SR64		GRY	IVE
1	EA	WIRE HARNESS	CON-6W			SCH
1	EA	POWER SUPPLY	BY OWNER	^	LGR	SCE
			CARD READER BY OWNER			

CONFIRM EXISTING FINISHES ARE SATIN BRONZE 612 BEFORE ORDERING.

OPERATIONAL DESCRIPTION

STOREROOM LOCK - OUTSIDE LEVER FIXED. ENTRANCE BY KEY ONLY. INSIDE LEVER ALWAYS UNLOCKED. INSIDE LEVER IS ALWAYS FREE FOR IMMEDIATE EGRESS.

ACCESS CONTROL SOFTWARE OR PRESENTING AUTHORIZED CREDENTIAL SHALL RELEASE ELECT STRIKE ALLOWING DOOR TO BE PULLED OPEN.
SELF-CLOSING.

Hardware Group No. 02.02

For use on Door #(s):

103-1

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER	ITEMID	FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5 NRP		639	IVE
1	EA	STOREROOM LOCK	ND80JD SPA		612	SCH
1	EA	FSIC CORE	CONST/DISP CORE		622	SCH
1	EA	FSIC CORE	PERMANENT CORE MATCH OWNER STANDARDS		606	SCH
1	EA	ELECTRIC STRIKE	6211 FSE CON 12/16/24/28 VAC/VDC	^	US10	VON
1	EA	SURFACE CLOSER	4040XP SCUSH MC		691	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS		US10	IVE
3	EA	SILENCER HM	SR64		GRY	IVE
1	EA	WIRE HARNESS	CON-6W			SCH
1	EA	POWER SUPPLY	BY OWNER	^	LGR	SCE
			CARD READER BY OWNER			

CONFIRM EXISTING FINISHES ARE SATIN BRONZE 612 BEFORE ORDERING.

OPERATIONAL DESCRIPTION

STOREROOM LOCK - OUTSIDE LEVER FIXED. ENTRANCE BY KEY ONLY. INSIDE LEVER ALWAYS UNLOCKED. INSIDE LEVER IS ALWAYS FREE FOR IMMEDIATE EGRESS. ACCESS CONTROL SOFTWARE OR PRESENTING AUTHORIZED CREDENTIAL SHALL RELEASE ELECT STRIKE ALLOWING DOOR TO BE PULLED OPEN. SELF-CLOSING. SPRING LOADED STOP INCLUDED. PUSH SIDE MOUNTED.

Hardware Group No. 05.01

For use on Door #(s):

B04-1

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER	ITEMID	FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5		639	IVE
1	EA	PASSAGE SET	ND10S SPA		612	SCH
1	EA	WALL STOP	WS406/407CCV		US10	IVE
3	EA	SILENCER HM	SR64		GRY	IVE

CONFIRM EXISTING FINISHES ARE SATIN BRONZE 612 BEFORE ORDERING.

OPERATIONAL DESCRIPTION

PASSAGE LOCK – NEITHER LEVER LOCKABLE. BOTH LEVERS ALWAYS FREE FOR IMMEDIATE INGRESS OR EGRESS.

Hardware Group No. 05.02

For use on Door #(s):

115-1 117-1

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER	ITEMID	FINISH	MFR
3	EA	HINGES/PIVOTS AS REQUIRED	BY DOOR MFR			
1	EA	PASSAGE SET	ND10S SPA		612	SCH
1	EA	WALL STOP	WS406/407CCV		US10	IVE
1	EA	GASKETING, SWEEP, THRESHOLD, ETC	BY DOOR/FRAME MFR			UNK

STC RATED DOOR. CONFIRM ALL HARDWARE REQUIREMENTS WITH DOOR MANUFACTURER.
CONFIRM EXISTING FINISHES ARE SATIN BRONZE 612 BEFORE ORDERING.

OPERATIONAL DESCRIPTION

PASSAGE LOCK – NEITHER LEVER LOCKABLE. BOTH LEVERS ALWAYS FREE FOR IMMEDIATE
INGRESS OR EGRESS.

Hardware Group No. 05.03

For use on Door #(s):

104-1

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER	ITEMID	FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5		639	IVE
1	EA	PASSAGE SET	ND10S SPA		612	SCH
1	EA	OH STOP	100S		US10	GLY
1	EA	SURFACE CLOSER	4040XP MC ST-1630		691	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS		US10	IVE
3	EA	SILENCER HM	SR64		GRY	IVE
1	EA	CLOSER TEMPLATING, BRACKETS, SHOES, SPACERS, ETC	AS REQUIRED			

CONFIRM EXISTING FINISHES ARE SATIN BRONZE 612 BEFORE ORDERING.

OPERATIONAL DESCRIPTION

PASSAGE LOCK – NEITHER LEVER LOCKABLE. BOTH LEVERS ALWAYS FREE FOR IMMEDIATE
INGRESS OR EGRESS.

SELF CLOSING. PULL SIDE MOUNTED.

CONCEALED OVERHEAD STOP

Hardware Group No. 07.01

For use on Door #(s):

102-1

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER	ITEMID	FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5		639	IVE
1	EA	ENTRANCE LOCK	ND53JD SPA		612	SCH
1	EA	FSIC CORE	CONST/DISP CORE		622	SCH
1	EA	FSIC CORE	PERMANENT CORE MATCH OWNER STANDARDS		606	SCH
1	EA	WALL STOP	WS406/407CCV		US10	IVE
3	EA	SILENCER HM	SR64		GRY	IVE

CONFIRM EXISTING FINISHES ARE SATIN BRONZE 612 BEFORE ORDERING.

OPERATIONAL DESCRIPTION

OFFICE LOCK - TURN/PUSH-BUTTON LOCKING; PUSHING AND TURNING BUTTON LOCKS OUTSIDE LEVER, REQUIRING USE OF KEY UNTIL BUTTON IS MANUALLY UNLOCKED. PUSHBUTTON LOCKING; PUSHING BUTTON LOCKS OUTSIDE LEVER UNTIL UNLOCKED BY KEY OR BY TURNING INSIDE LEVER. INSIDE LEVER IS ALWAYS FREE FOR IMMEDIATE EGRESS.

Hardware Group No. 09.01

For use on Door #(s):

B11-1

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER	ITEMID	FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5		639	IVE
1	EA	STOREROOM LOCK	ND80JD SPA		612	SCH
1	EA	FSIC CORE	CONST/DISP CORE		622	SCH
1	EA	FSIC CORE	PERMANENT CORE MATCH OWNER STANDARDS		606	SCH
1	EA	OH STOP	100S		US10	GLY
1	EA	SURFACE CLOSER	4040XP MC ST-1630		691	LCN
3	EA	SILENCER HM	SR64		GRY	IVE
1	EA	CLOSER TEMPLATING, BRACKETS, SHOES, SPACERS, ETC	AS REQUIRED			

CONFIRM EXISTING FINISHES ARE SATIN BRONZE 612 BEFORE ORDERING.

OPERATIONAL DESCRIPTION

STOREROOM LOCK - OUTSIDE LEVER FIXED. ENTRANCE BY KEY ONLY. INSIDE LEVER ALWAYS UNLOCKED. INSIDE LEVER IS ALWAYS FREE FOR IMMEDIATE EGRESS. SELF-CLOSING. PULL SIDE MOUNTED. CONCEALED OVERHEAD STOP.

Hardware Group No. 09.02

For use on Door #(s):

120-1

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER	ITEMID	FINISH	MFR
3	EA	HINGE	5BB1HW 4.5 X 4.5		639	IVE
1	EA	STOREROOM LOCK	ND80JD SPA		612	SCH
1	EA	FSIC CORE	CONST/DISP CORE		622	SCH
1	EA	FSIC CORE	PERMANENT CORE MATCH OWNER STANDARDS		606	SCH
1	EA	SURFACE CLOSER	4040XP SCUSH MC		691	LCN
3	EA	SILENCER HM	SR64		GRY	IVE

CONFIRM EXISTING FINISHES ARE SATIN BRONZE 612 BEFORE ORDERING.

OPERATIONAL DESCRIPTION

STOREROOM LOCK - OUTSIDE LEVER FIXED. ENTRANCE BY KEY ONLY. INSIDE LEVER ALWAYS UNLOCKED. INSIDE LEVER IS ALWAYS FREE FOR IMMEDIATE EGRESS. SELF-CLOSING. SPRING LOADED STOP INCLUDED. PUSH SIDE MOUNTED.

Hardware Group No. 09.03

For use on Door #(s):

114-2 119-1

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER	ITEMID	FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5		639	IVE
1	EA	STOREROOM LOCK	ND80JD SPA		612	SCH
1	EA	FSIC CORE	CONST/DISP CORE		622	SCH
1	EA	FSIC CORE	PERMANENT CORE MATCH OWNER STANDARDS		606	SCH
1	EA	SURFACE CLOSER	4040XP RW/PA MC		691	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS		US10	IVE
1	EA	WALL STOP	WS406/407CCV		US10	IVE
3	EA	SILENCER HM	SR64		GRY	IVE

CONFIRM EXISTING FINISHES ARE SATIN BRONZE 612 BEFORE ORDERING.

OPERATIONAL DESCRIPTION

STOREROOM LOCK - OUTSIDE LEVER FIXED. ENTRANCE BY KEY ONLY. INSIDE LEVER ALWAYS UNLOCKED. INSIDE LEVER IS ALWAYS FREE FOR IMMEDIATE EGRESS. SELF-CLOSING.

=====

END OF HARDWARE SETS

SECTION 08 80 00

GLAZING

PART 1 GENERAL

1.1 SUMMARY

- A. Section includes glass glazing, rated and non-rated for, doors.
 - 1. Glass glazing materials and installation requirements are included in this section for other sections referencing this section.
- B. Related Sections:
 - 1. Section 08 11 13 – Hollow Metal Doors and Frames
 - 2. Section 08 14 16 – Flush Wood Doors: Glazed doors

1.2 REFERENCES

- A. American National Standards Institute:
 - 1. ANSI Z97.1 - Safety Glazing Materials Used in Buildings Safety.
- B. American Society of Civil Engineers:
 - 1. ASCE 7 - Minimum Design Loads for Buildings and Other Structures.
- C. ASTM International:
 - 1. ASTM C864 - Standard Specification for Dense Elastomeric Compression Seal Gaskets, Setting Blocks, and Spacers.
 - 2. ASTM C920 - Standard Specification for Elastomeric Joint Sealants.
 - 3. ASTM C1036 - Standard Specification for Flat Glass.
 - 4. ASTM C1048 - Standard Specification for Heat-Treated Flat Glass-Kind HS, Kind FT Coated and Uncoated Glass.
 - 5. ASTM C1172 - Standard Specification for Laminated Architectural Flat Glass.
 - 6. ASTM C1193 - Standard Guide for Use of Joint Sealants.
 - 7. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials.
 - 8. ASTM E90 - Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements.
 - 9. ASTM E119 - Standard Test Methods for Fire Tests of Building Construction and Materials.
 - 10. ASTM E330 - Standard Test Method for Structural Performance of Exterior Windows, Curtain Walls, and Doors By Uniform Static Air Pressure Difference.
 - 11. ASTM E576 - Standard Test Method for Frost Point of Sealed Insulating Glass Units in the Vertical Position.
 - 12. ASTM E773 - Standard Test Methods for Seal Durability of Sealed Insulating Glass Units.

- 13. ASTM E774 - Standard Specification for Sealed Insulating Glass Units.
- D. Consumer Products Safety Commission:
 - 1. CPSC 16 CFR 1201 - Safety Standard for Architectural Glazing.
- E. Glass Association of North America:
 - 1. GANA - Sealant Manual.
 - 2. GANA - Glazing Manual.
- F. National Fire Protection Association:
 - 1. NFPA 80 - Standard for Fire Doors, Fire Windows.
 - 2. NFPA 252 - Standard Methods of Fire Tests of Door Assemblies.
- G. Underwriters Laboratories Inc.:
 - 1. UL 10C - Positive Pressure Fire Tests of Door Assemblies.
 - 2. UL - Building Materials Directory.

1.3 PERFORMANCE REQUIREMENTS

- A. Interior Glass Deflection: Design glass partition system to withstand live loads in accordance with 2009 International Building Code with maximum L/120 deflection.
- B. Interior glass at full height glazed partitions shall comply with CPSC 16 CFR 1201 Category II.

1.4 SUBMITTALS

- A. Section 01 33 00 - Submittal Procedures: Submittal procedures.
- B. Product Data:
 - 1. Glass: Provide structural, physical, and thermal and solar optical performance characteristics, size limitations, special handling or installation requirements.
 - 2. Glazing Sealants, Compounds and Accessories: Provide chemical, functional, and environmental characteristics, limitations, special application requirements. Identify full range of available colors where exposed.
- C. Design Data:
 - 1. Submit design calculations for glass resisting wind loads and live loads signed and sealed by a professional engineer licensed in the State of Illinois.
- D. Samples:
 - 1. Glass: Submit two samples 12 x 12 inch in size, illustrating each glass unit, coloration and design.
 - 2. Glazing Materials: Submit 12-inch-long bead of glazing sealant and gaskets, color as selected.

- E. Manufacturer's Certificate: Certify sealed insulating glass, meets or exceeds specified requirements.

1.5 QUALITY ASSURANCE

- A. Perform Work in accordance with GANA Glazing Manual for glazing installation methods.

1.6 QUALIFICATIONS

- A. Installer: Company specializing in performing Work of this section with minimum three years experience.
- B. Design glass resisting wind and live loads under direct supervision of Professional Engineer experienced in design of this Work and licensed in State of Illinois.

1.7 PRE-INSTALLATION MEETING

- A. Section 01 30 00 - Administrative Requirements: Pre-installation meeting.
- B. Convene minimum one week before starting Work of this section.

1.8 ENVIRONMENTAL REQUIREMENTS

- A. Section 01 60 00 - Product Requirements.
- B. Do not install glazing when ambient temperature is less than 50 degrees F.
- C. Maintain minimum ambient temperature before, during and 24 hours after installation of glazing compounds.

1.9 WARRANTY

- A. Section 01 70 00 - Execution and Closeout Requirements: Product warranties and product bonds.
- B. Furnish ten-year warranty to include coverage for sealed glass units from seal failure, interpane dusting or misting, and replacement of same.

PART 2 PRODUCTS

2.1 GLAZING

- A. Manufacturers:
 - 1. PPG Industries, Inc.
 - 2. Pilkington LOF.

3. Nippon Electric Glass Company, Ltd.
4. SAFTI *FIRST* Fire Rated Glazing Solutions.
5. Substitutions: Section 01 60 00 – Product Requirements.

2.2 COMPONENTS

- A. Safety Glass (Type SG): CPSC 16 CFR 1201 Category II, minimum thickness 1/4 inch unless otherwise indicated. Safety glass shall be labeled, and label shall be visible after glazing.
 1. Clear Tempered Glass: ASTM C1048, Kind FT Fully tempered, Condition A, uncoated, Type 1 transparent flat, Class 1 clear, Quality q3 glazing select, with horizontal tempering.

2.3 ACCESSORIES

- A. Elastomeric Glazing Sealants: Materials compatible with adjacent materials including glass, insulating glass seals, and glazing channels.
 1. Silicone Glazing Sealant: ASTM C920, Type S, Grade NS, Class and Use suitable for glazing application indicated; single component; chemical curing; capable of water immersion without loss of properties; non-bleeding, non-staining, cured Shore A hardness of 15 to 25.
 - a. Acceptable Manufacturers and products:
 - 1) General Electric – “Silpruf”.
 - 2) General Electric – “Silglaze 2400”.
 - 3) Woodmount Products – “Chem-Caulk 1000”.
 - 4) Dow Corning – “790”.
 - 5) Pecora – “863”.
 - b. Color: As selected by Architect / Engineer.
 - c. Structural Silicone: Furnish high-modulus structural silicone glazing materials where sealant bonds glass to substrate.
- B. Glazing Gaskets: ASTM C864 Option I or II, resilient polyvinyl chloride extruded shape to suit glazing channel retaining slot.
 1. Color: Black.
- C. Pre-Formed Glazing Tape: Size to suit application.
 1. Glazing Tape: Closed cell polyvinyl chloride foam, coiled on release paper over adhesive on two sides, maximum water absorption by volume of 2 percent, designed for compression of 25 percent to affect an air barrier and vapor retarder seal.
- D. Setting Blocks: ASTM C864 Option I, Neoprene, 80 to 90 Shore A durometer hardness, length of 0.1 inch for each square foot of glazing or minimum 4-inch x width of glazing rabbet space minus 1/16-inch x height to suit glazing method and pane weight and area.

- E. Spacer Shims: ASTM C864 Option I, Neoprene, 50 to 60 Shore A durometer hardness, minimum 3-inch-long x one half the height of glazing stop x thickness to suit application, self adhesive on one face.
- F. Fire-Resistant Glazing Materials: Materials used to obtain required fire-resistant rating.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Section 01 30 00 - Administrative Requirements: Coordination and project conditions.
- B. Verify openings for glazing are correctly sized and within acceptable tolerance.
- C. Verify surfaces of glazing channels or recesses are clean, free of obstructions impeding moisture movement, weeps are clear, and ready to receive glazing.

3.2 PREPARATION

- A. Clean contact surfaces with solvent and wipe dry.
- B. Seal porous glazing channels or recesses with substrate compatible primer or sealer.
- C. Prime surfaces scheduled to receive sealant.

3.3 INSTALLATION

- A. Perform installation in accordance with GANA Glazing Manual.
 - 1. Glazing Sealants: Comply with ASTM C1193.
 - 2. Fire Rated Openings: Comply with NFPA 80.
- B. Interior Wet/Dry Method (Tape and Sealant) Installation:
 - 1. Cut glazing tape to length and install against permanent stops, projecting 1/16 inch above sight line.
 - 2. Place setting blocks at 1/4 points with edge block no more than 6 inches from corners.
 - 3. Rest glazing on setting blocks and push against tape to ensure full contact at perimeter of pane or unit.
 - 4. Install removable stops, spacer shims inserted between glazing and applied stops at 24 inch intervals, 1/4 inch below sight line.
 - 5. Fill gaps between pane and applied stop with elastomeric glazing sealant to depth equal to bite on glazing, to uniform and level line.
 - 6. Trim protruding tape edge.
- C. Interior Wet Method (Compound and Compound) Installation:

1. Install glazing resting on setting blocks. Install applied stop and center pane by use of spacer shims at 24-inch centers, kept 1/4 inch below sight line.
2. Locate and secure glazing pane using glazers' clips.
3. Fill gaps between glazing and stops with glazing compound until flush with sight line. Tool surface to straight line.

3.4 FIELD QUALITY CONTROL

- A. Section 01 70 00 - Execution and Closeout Requirements: Field inspecting, testing, adjusting, and balancing.
- B. Monitor quality of glazing.

3.5 CLEANING

- A. Section 01 70 00 - Execution and Closeout Requirements: Final cleaning.
- B. Remove glazing materials from finish surfaces.
- C. Remove labels after Work is complete.
- D. Clean glass and adjacent surfaces.

3.6 PROTECTION OF INSTALLED CONSTRUCTION

- A. Section 01 70 00 - Execution and Closeout Requirements: Protecting installed construction.
- B. After installation, mark pane with an 'X' by using removable plastic tape or paste.

END OF SECTION

SECTION 09 21 16

GYPSUM BOARD ASSEMBLIES

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
1. Metal stud wall framing.
 2. Acoustic insulation.
 3. Gypsum board and joint treatment.

1.2 REFERENCE STANDARDS

- A. ASTM International:
1. ASTM C475/C475M - Standard Specification for Joint Compound and Joint Tape for Finishing Gypsum Board.
 2. ASTM C514 - Standard Specification for Nails for the Application of Gypsum Board.
 3. ASTM C645 - Standard Specification for Nonstructural Steel Framing Members.
 4. ASTM C665 - Standard Specification for Mineral-Fiber Blanket Thermal Insulation for Light Frame Construction and Manufactured Housing.
 5. ASTM C754 - Standard Specification for Installation of Steel Framing Members to Receive Screw-Attached Gypsum Panel Products.
 6. ASTM C840 - Standard Specification for Application and Finishing of Gypsum Board.
 7. ASTM C954 - Standard Specification for Steel Drill Screws for the Application of Gypsum Panel Products or Metal Plaster Bases to Steel Studs from 0.033 in. (0.84 mm) to 0.112 in. (2.84 mm) in Thickness.
 8. ASTM C1002 - Standard Specification for Steel Drill Screws for the Application of Gypsum Panel Products or Metal Plaster Bases.
 9. ASTM C1007 - Standard Specification for Installation of Load Bearing (Transverse and Axial) Steel Studs and Related Accessories.
 10. ASTM C1178/C1178M - Standard Specification for Coated Glass Mat Water-Resistant Gypsum Backing Panel.
 11. ASTM C1280 - Standard Specification for Application of Gypsum Sheathing.
 12. ASTM C1288 - Standard Specification for Discrete Non-Asbestos Fiber-Cement Interior Substrate Sheets.
 13. ASTM C1325 - Standard Specification for Non-Asbestos Fiber-Mat Reinforced Cement Substrate Sheets.
 14. ASTM C1396/C1396M - Standard Specification for Gypsum Board.
 15. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials.

16. ASTM E90 - Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements.
17. ASTM E119 - Standard Test Methods for Fire Tests of Building Construction and Materials.
18. ASTM F1667 - Standard Specification for Driven Fasteners: Nails, Spikes, and Staples.

B. American Society of Civil Engineers:

1. ASCE 7 - Minimum Design Loads for Buildings and Other Structures.

C. Gypsum Association:

1. GA 214 - Recommended Levels of Gypsum Board Finish.
2. GA 216 - Application and Finishing of Gypsum Board.
3. GA 600 - Fire Resistance Design Manual Sound Control.

D. Intertek Testing Services (Warnock Hersey Listed):

1. WH - Certification Listings.

E. National Fire Protection Association:

1. NFPA 265 - Standard Methods of Fire Tests for Evaluating Room Fire Growth Contribution of Textile Coverings on Full Height Panels and Walls, Method B.
2. NFPA 286 - Standard Methods of Fire Tests for Evaluating Room Fire Growth Contribution of Wall and Ceiling Interior Finish.

F. Underwriters Laboratories Inc.:

1. UL - Fire Resistance Directory.

1.3 SUBMITTALS

A. Section 01 33 00 - Submittal Procedures: Requirements for submittals.

B. Product Data: Submit data on metal framing, gypsum board, joint tape, and acoustic accessories.

C. Shop Drawings:

1. Indicate special details associated with acoustic seals.
2. Indicate installation details required for seismic design loads.

1.4 QUALITY ASSURANCE

A. Perform Work in accordance with ASTM C840, ASTM C1280; GA-214, GA-216 and GA-600.

1.5 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing products specified in this section with minimum three years documented experience.
- B. Installer: Company specializing in performing Work of this section with minimum three years experience.

PART 2 PRODUCTS

2.1 GYPSUM BOARD ASSEMBLIES

- A. Manufacturer List:
 - 1. CertainTeed.
 - 2. Georgia-Pacific.
 - 3. National Gypsum Co.
 - 4. United States Gypsum Co.
 - 5. Substitutions: Section 01 60 00 – Product Requirements.
- B. Performance / Design Criteria:
 - 1. Seismic Loads: Design and size components to withstand seismic loads and sway displacement as calculated according to ASCE 7 and applicable codes for Seismic Design Category indicated on Drawings.

2.2 COMPONENTS

- A. Framing Materials:
 - 1. Studs and Tracks: ASTM C645; GA-216 and GA-600; galvanized sheet steel, 20 gauge minimum, unless indicated otherwise on Drawings; C shape, of depth as shown on Drawings.
 - 2. Furring, Framing, and Accessories: ASTM C645, GA-216 and GA-600.
 - 3. Fasteners: ASTM C1002, screws.
 - 4. Anchorage to Substrate: Tie wire, screws, and other metal supports, of type and size to suit application; to rigidly secure materials in place.
 - 5. Seismic Bracing: As required for seismic performance requirements.
- B. Gypsum Board Materials: ASTM C1396.
 - 1. Type 1: Fire-Rated Abuse-Resistant Gypsum Board: (Install to height of 8 feet above floor level at gypsum board partitions throughout building). A gypsum core wall panel with additives to enhance fire resistance, surface indentation resistance, and impact resistance of the core and surfaced with abrasion resistant paper on front and long edges with heavy liner paper bonded to the back side; and complying with ASTM C 36 / C 1396, Type X.
 - a. Thickness: 5/8 inch.
 - b. Width: 4 feet.

- c. Length: 8 feet through 12 feet.
- d. Edges: Tapered.
- e. Abuse Resistance: Not less than the following classification levels when tested in accordance with ASTM C 1629:
 - 1) Surface Abrasion: Classification Level 2.
 - 2) Surface Indention: Classification Level 1.
 - 3) Soft Body Impact Resistance: Classification Level 1.
- 2. Type 2: Mold-Resistant Gypsum Board: ASTM C1396. With moisture- and mold-resistant core and paper surfaces.
 - a. Thickness: 5/8-inch
 - b. Edges: Tapered.
 - c. Mold Resistance: ASTM D3273, score of 10 as rated according to ASTM D3274.

2.3 ACCESSORIES

- A. Acoustic Insulation: ASTM C665; preformed glass fiber, friction fit type, unfaced, 4 inch thick.
- B. Acoustic Sealant: Non-hardening, non-skinning, for use in conjunction with gypsum board.
- C. Gypsum Board Accessories: ASTM C1047; plastic; corner beads, edge trim, and expansion joints.
 - 1. Plastic Accessories: PVC plastic.
- D. Joint Materials: ASTM C475; GA-216; reinforcing tape, joint compound, and water.
- E. Gypsum Board Screws: ASTM C1002; length to suit application.
 - 1. Screws for Steel Framing: Type S.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for installation examination.
- B. Verify site conditions are ready to receive Work and opening dimensions are as indicated on shop drawings and as instructed by manufacturer.

3.2 INSTALLATION

- A. Metal Stud Installation:
 - 1. Install studs in accordance with ASTM C754, ASTM C1007, GA-216 and GA-600.
 - 2. Metal Stud Spacing: 16 inches on center.

3. Refer to Drawings for indication of partitions extending stud framing through ceiling to structure above. Maintain clearance under structural building members to avoid deflection transfer to studs. Provide extended leg ceiling runners.
4. Door Opening Framing: Install double studs at door frame jambs. Install box beam and stud track at frame head height.
5. Blocking: Nail wood blocking to studs.

B. Acoustic Accessories Installation:

1. Place acoustic insulation in partitions tight within spaces, around cut openings, behind and around electrical and mechanical items within or behind partitions, and tight to items passing through partitions.
2. Install acoustic sealant within partitions.

C. Gypsum Board Installation:

1. Install gypsum board in accordance with GA-216 and GA-600.
2. Erect single layer fire rated gypsum board horizontally, with edges and ends occurring over firm bearing.
3. Use screws when fastening gypsum board to metal furring or framing.
4. Double Layer Applications: Use fire rated gypsum backing board for first layer, placed perpendicular to framing or furring members.
 - a. Place second layer perpendicular to first layer. Offset joints of second layer from joints of first layer.
5. Place control joints consistent with lines of building spaces, as per manufacturer's recommendations consistent with lines of building spaces and at all openings.
6. Place corner beads at external corners. Use longest practical length. Place edge trim where gypsum board abuts dissimilar materials as indicated on Drawings.
7. Install abuse-resistant gypsum board, as specified in Paragraph 2.2.C.2, to height of 8 feet above floor level at gypsum board partitions throughout building.
8. Install moisture resistant gypsum board at walls as scheduled on Drawings.

D. Joint Treatment:

1. Tape, fill, and sand exposed joints, edges, and corners to produce smooth surface ready to receive finishes.
2. Feather coats on to adjoining surfaces so that camber is maximum 1/32 inch.

- E. Provide skim coat of joint compound in accordance with GA-214 to provide a Level 5 finish as specified.

3.3 TOLERANCES

- A. Section 01 40 00 - Quality Requirements: Tolerances.

- B. Maximum Variation of Finished Gypsum Board Surface from Flat Surface: 1/8 inch in 10 feet.

3.4 SCHEDULE

- A. Finishes in accordance with GA-214 Level:
 - 1. Level 1: Above finished ceilings concealed from view.
 - 2. Level 5: Walls and ceilings exposed to view.

END OF SECTION

SECTION 09 51 23

ACOUSTIC TILE CEILINGS

PART 1 GENERAL

1.1 SUMMARY

- A. Section includes suspended metal grid ceiling system, perimeter trim and acoustic tiles/panels, and accessories.
- B. Related Requirements:
 - 1. Section 26 51 00 - Interior Lighting: Light fixtures in ceiling system.

1.2 REFERENCE STANDARDS

- A. ASTM International:
 - 1. ASTM C635 - Standard Specification for the Manufacture, Performance, and Testing of Metal Suspension Systems for Acoustical Tile and Lay-in Panel Ceilings.
 - 2. ASTM C636 - Standard Practice for Installation of Metal Ceiling Suspension Systems for Acoustical Tile and Lay-In Panels.
 - 3. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials.
 - 4. ASTM E119 - Standard Test Methods for Fire Tests of Building Construction and Materials.
 - 5. ASTM E580 - Standard Practice for Application of Ceiling Suspension Systems for Acoustical Tile and Lay-in Panels in Areas Requiring Seismic Restraint.
 - 6. ASTM E1264 - Standard Classification for Acoustical Ceiling Products.
- B. Ceilings and Interior Systems Construction Association:
 - 1. CISCA - Acoustical Ceilings: Use and Practice.
- C. Intertek Testing Services (Warnock Hersey Listed):
 - 1. WH - Certification Listings.
- D. National Fire Protection Association:
 - 1. NFPA 255 – Standard Method of Test of Surface Burning Characteristics of Building materials.
 - 2. NFPA 286 - Standard Methods of Fire Tests for Evaluating Contribution of Wall and Ceiling Interior Finish to Room Fire Growth.
- E. Underwriters Laboratories Inc.:
 - 1. UL - Fire Resistance Directory.

2. UL 723 - Tests for Surface Burning Characteristics of Building Materials.

1.3 PERFORMANCE REQUIREMENTS

- A. Suspension System: Rigidly secure acoustic ceiling system including integral mechanical and electrical components with maximum deflection of 1:240.

1.4 SUBMITTALS

- A. Section 01 33 00 - Submittal Procedures: Requirements for submittals.
- B. Product Data: Submit data on metal grid system components and acoustic units.
- C. Shop Drawings:
1. Indicate grid layout and related dimensioning, junctions with other work or ceiling finishes, interrelation of mechanical and electrical items related to system. Indicate method of suspension where interference exists.
 - a. Indicate installation details required for seismic design loads.
- D. Samples:
1. Submit two samples 4 x 4 inch in size illustrating material and finish of acoustic units.
 2. Submit two samples each, 12 inches long, of suspension system main runner, cross runner, perimeter molding.
- E. Manufacturer's Instructions: Submit special procedures, perimeter conditions requiring special attention.

1.5 QUALITY ASSURANCE

- A. Conform to CISCA requirements.

1.6 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing products specified in this section with minimum three years experience.
- B. Installer: Company specializing in performing Work of this section with minimum three years experience.

1.7 PRE-INSTALLATION MEETINGS

- A. Section 01 30 00 - Administrative Requirements: Pre-installation meeting.
- B. Convene minimum one week prior to commencing Work of this section.

1.8 ENVIRONMENTAL REQUIREMENTS

- A. Section 01 60 00 - Product Requirements.
- B. Maintain uniform temperature of minimum 55 degrees F, and maximum humidity of 65 to 70 percent prior to, during, and after acoustic unit installation.

1.9 SEQUENCING

- A. Section 01 10 00 - Summary: Requirements for sequencing.
- B. Sequence Work to ensure acoustic ceilings are not installed until building is enclosed, sufficient heat is provided, dust generating activities have terminated, and overhead work is completed, tested, and approved.
- C. Install acoustic units after interior wet work is dry.

1.10 EXTRA MATERIALS

- A. Section 01 70 00 - Execution and Closeout Requirements: Spare parts and maintenance products.
- B. Furnish 2.5 percent of total acoustic unit area of extra panels to Owner.

PART 2 PRODUCTS

2.1 SUSPENDED ACOUSTICAL CEILINGS

- A. Manufacturers:
 - 1. Armstrong World Industries:
 - a. Type 1 Ceiling: Fine Fissured (1713) panel.
 - 2. CertainTeed Corporation:
 - a. Type 1 Ceiling: Fine Fissured (HHF-457 DP) panel
 - 3. USG Interiors:
 - a. Type 1 Ceiling: Radar ClimaPlus (2211) panel
 - 4. Substitutions: Section 01 60 00 - Product Requirements.

2.2 COMPONENTS

- A. Acoustic Panels (Type 1): ASTM E1264, conforming to the following:
 - 1. Size: 24 x 24 inches.
 - 2. Thickness: 3/4 inch.
 - 3. Composition: Mineral.
 - 4. NRC: 0.70.
 - 5. SAC: 0.70, 0.94, and 0.85 at 500Hz, 1000Hz, and 2000Hz respectively.

6. CAC: Greater than 35.
7. Edge: Angled Tegular 15/16.
8. Surface Color: White.
9. Surface Finish: Non-directional fissured.

B. Grid:

1. Non-fire Rated Grid: ASTM C635, Heavy Duty; exposed T components die cut and interlocking.
 - a. Armstrong: Prelude XL.
 - b. Celotex: Classic Stab System.
 - c. USG: Donn DX .
 - d. Substitutions: Section 01 60 00 - Product Requirements.
2. Grid Materials: Commercial quality cold rolled steel with galvanized coating.
3. Exposed Grid Surface Width: As per applicable code for seismic design category indicated on Drawings.
4. Grid Finish: White color.
5. Accessories: Stabilizer bars, clips, splices, perimeter moldings, and hold down clips, as required for suspended grid system.
6. Support Channels and Hangers: Galvanized Primed steel; size and type to suit application, seismic requirements, and ceiling system flatness requirement specified.

2.3 ACCESSORIES

- A. Gasket For Perimeter Moldings: Closed cell rubber sponge tape.
- B. Touch-up Paint: Type and color to match acoustic and grid units.
- C. Seismic Bracing: As required to meet seismic performance requirements.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for installation examination.
- B. Verify layout of hangers will not interfere with other Work.

3.2 INSTALLATION

- A. Lay-In Grid Suspension System:
 1. Install suspension system in accordance with ASTM C636 and as supplemented in this section.
 2. Install suspension system in accordance with ASTM E580.

3. Install system capable of supporting imposed loads with maximum deflection of 1/240 maximum.
4. Locate system on room axis according to reflected plan.
5. Install after major above ceiling work is complete. Coordinate location of hangers with other work.
6. Install hanger clips during steel deck erection. Install additional hangers and inserts as required.
7. Hang suspension system independent of walls, columns, ducts, pipes and conduit. Where carrying members are spliced, avoid visible displacement of face plane of adjacent members.
8. Where ducts or other equipment prevent regular spacing of hangers, reinforce nearest affected hangers and related carrying channels to span extra distance.
9. Do not support components on main runners or cross runners when weight causes total dead load to exceed deflection capability. Support fixture loads by supplementary hangers located within 6 inches of each corner; or support components independently.
10. Do not eccentrically load system, or produce rotation of runners.
11. Perimeter Molding:
 - a. Install edge molding at intersection of ceiling and vertical surfaces with continuous gasket.
 - b. Use longest practical lengths.
 - c. Miter corners.
 - d. Install at junctions with other interruptions.
12. Install light fixture boxes constructed of acoustic panel above light fixtures in accordance with UL assembly requirements and light fixture ventilation requirements.
13. Laterally brace entire suspended system as required for seismic design category as indicated on Drawings.

B. Acoustic Units:

1. Fit acoustic units in place, free from damaged edges or other defects detrimental to appearance and function.
2. Install units after above ceiling work is complete.
3. Install acoustic units level, in uniform plane, and free from twist, warp, and dents.
4. Cutting Acoustic Units:
 - a. Cut to fit irregular grid and perimeter edge trim.
 - b. Cut square reveal edges to field cut units.
5. Where bullnosed concrete block corners and round obstructions occur, install preformed closures to match perimeter molding.
6. Install hold-down clips to retain panels tight to grid system within 20 feet of exterior door.

3.3 TOLERANCES

A. Section 01 40 00 - Quality Requirements: Tolerances.

- B. Maximum Variation from Flat and Level Surface: 1/8 inch in 10 feet.
- C. Maximum Variation from Plumb of Grid Members Caused by Eccentric Loads: 2 degrees.

END OF SECTION

SECTION 09 65 13

RESILIENT BASE AND ACCESSORIES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes resilient tile flooring and resilient base

1.2 REFERENCES

- A. ASTM International:
 - 1. ASTM F1066 - Standard Specification for Vinyl Composition Floor Tile.
 - 2. ASTM F1861 - Standard Specification for Resilient Wall Base.
- B. Federal Specification Unit:
 - 1. FS L-F-475 - Floor Covering Vinyl, Surface (Tile and Roll), with Backing.
 - 2. FS RR-T-650 - Treads, Metallic and Nonmetallic, Skid Resistant.
- C. National Fire Protection Association:
 - 1. NFPA 253 - Standard Method of Test for Critical Radiant Flux for Floor Covering Systems Using a Radiant Heat Energy Source.
- D. Scientific Certification Systems:
 - 1. SCS EC10.2 - Environmental Certification Program Indoor Air Quality Performance.
- E. South Coast Air Quality Management District:
 - 1. SCAQMD Rule 1113-January 1, 2004 - Architectural Coatings.
 - 2. SCAQMD Rule 1168-January 7, 2005 - Adhesive and Sealant Applications.

1.3 SUBMITTALS

- A. Section 01 33 00 - Submittal Procedures: Submittal procedures.
- B. Product Data: Submit data describing physical and performance characteristics; including sizes, patterns and colors available; and installation instructions.
- C. Samples:
 - 1. Submit manufacturer's complete set of color samples for initial selection.
 - 2. Submit two samples illustrating color and pattern for each resilient flooring product specified.

1.4 CLOSEOUT SUBMITTALS

- A. Section 01 70 00 - Execution and Closeout Requirements: Closeout procedures.
- B. Operation and Maintenance Data: Submit maintenance procedures, recommended maintenance materials, and suggested schedule for cleaning, stripping, and re-waxing.

1.5 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing products specified in this section with minimum three years documented experience.
- B. Installer: Company specializing in performing Work of this section with minimum three years documented experience.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Section 01 60 00 - Product Requirements: Product storage and handling requirements.
- B. Protect roll materials from damage by storing on end.

1.7 ENVIRONMENTAL REQUIREMENTS

- A. Section 01 60 00 - Product Requirements.
- B. Maintain temperature in storage area between 55 degrees F and 90 degrees F.
- C. Store materials for not less than 48 hours prior to installation in area of installation at temperature of 70 degrees F to achieve temperature stability. Thereafter, maintain conditions above 55 degrees F.

1.8 EXTRA MATERIALS

- A. Section 01 70 00 - Execution and Closeout Requirements: Spare parts and maintenance products.
- B. Furnish 10 square feet of flooring and 10 lineal feet of base of each type and color specified.

PART 2 - PRODUCTS

2.1 LUXURY VINYL TILE FLOORING

- A. Manufacturers:

1. Raskin Gorilla: Formations Prodigy.
 2. Toli: Lightwood.
 3. Halo: Wood.
 4. Johnsonite: ID Freedom.
 5. Substitutions: Section 01 60 00 – Product Requirements.
- B. Product Characteristics:
1. Composition: Vinyl – Dry Back.
 2. Size: 4 by 36 inch planks. Alternate sizes by selected manufacturers will be permitted with Architect's approval.
 3. Gauge: 1/8 inch (3 mm).
 4. Wear Layer: 20 mil.
 5. Edge: Bevel or micro-bevel.
 6. Warranty: 10 year light commercial.
- C. Testing:
1. Product Classification: ASTM F1700: Class III, Type B, Embossed surface; meets and exceeds passing requirements.
 2. Radiant Panel: ASTM E648: Meets and exceeds passing requirements (Class 1).
 3. Slip Resistance: Meets and exceeds passing requirements for ADA and OSHA Guidelines (>0.6).

2.2 RESILIENT BASE

- A. Manufacturers:
1. Armstrong.
 2. EF Contract Flooring
 3. Flexco.
 4. Johnsonite Inc.
 5. Roppe Corp.
 6. Inpro.
 7. Substitutions: Not Permitted.
- B. Base: ASTM F1861 Type TS – Vulcanized Rubber; coved style:
1. Height: 4 inch.
 2. Thickness: 0.125 inch thick.
 3. Finish: Matte.
 4. Length: Roll.
 5. Color: As selected by Architect / Engineer.

2.3 ACCESSORIES

- A. Subfloor Filler: Cementitious or premix latex; type recommended by adhesive material manufacturer.

- B. Primers and Adhesives: Waterproof; types recommended by flooring manufacturer for installation over high moisture content concrete slabs.
- C. Sealer and Wax: Types recommended by flooring manufacturer.
- D. Transition Strips: Manufacturer's standard for selected flooring, color chosen by Architect from manufacturer's full color range.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Section 01 30 00 - Administrative Requirements: Verification of existing conditions before starting work.
- B. Verify concrete floors exhibit negative alkalinity, carbonization, and dusting.
- C. Verify floor and lower wall surfaces are free of substances capable of impairing adhesion of new adhesive and finish materials.

3.2 PREPARATION

- A. Remove sub-floor ridges and bumps. Fill minor low spots, cracks, joints, holes, and other defects with sub-floor filler to achieve smooth, flat, hard surface.
- B. Prohibit traffic until filler is cured.
- C. Clean substrate.
- D. Apply primer as required to prevent "bleed-thru" or interference with adhesion by substances cannot be removed.

3.3 INSTALLATION - TILE FLOORING

- A. Mix tile from container to ensure shade variations are consistent when tile is placed.
- B. Lay flooring with joints and seams parallel to building lines to produce symmetrical tile pattern.
- C. Scribe flooring to walls, columns, cabinets, floor outlets, and other appurtenances to produce tight joints.
- D. Where floor finishes are different on opposite sides of door, terminate flooring under centerline of door.

- E. Install edge strips at unprotected or exposed edges, where flooring terminates, and where indicated.

3.4 INSTALLATION - BASE

- A. Fit joints tightly and make vertical. Maintain minimum dimension of 18 inches between joints.
- B. Miter internal corners. At external corners, 'V' cut back of base strip to 2/3 of its thickness and fold. At exposed ends, use pre-molded units.
- C. Install base on solid backing. Bond tightly to wall and floor surfaces.
- D. Scribe and fit to door frames and other interruptions.

3.5 CLEANING

- A. Section 01 70 00 - Execution and Closeout Requirements: Final cleaning.
- B. Remove excess adhesive from floor, base, and wall surfaces without damage.
- C. Clean, seal, and maintain resilient flooring products.

3.6 PROTECTION OF INSTALLED CONSTRUCTION

- A. Section 01 70 00 - Execution and Closeout Requirements: Protecting installed construction.
- B. Prohibit traffic on resilient flooring for 48 hours after installation.

END OF SECTION

SECTION 09 68 13

TILE CARPETING

PART 1 GENERAL

1.1 SUMMARY

- A. Section includes carpet tile, adhered with releasable glue and accessories.
- B. Related Requirements:
 - 1. Section 09 65 00 Resilient Flooring: Base finish and termination edging of adjacent floor finish.

1.2 REFERENCE STANDARDS

- A. ASTM International:
 - 1. ASTM D2859 - Standard Specification for Ignition Characteristics of Finished Textile Floor Covering Materials.
- B. Carpet and Rug Institute:
 - 1. CRI Carpet Installation Standard - Standard for Installation of Commercial Carpet.
 - 2. CRI Green Label Plus Testing Program.
 - 3. CRI Model Specifications for Commercial Carpets.
- C. Consumer Products Safety Commission:
 - 1. CPSC 16 CFR 1630 - Standard for the Surface Flammability of Carpets and Rugs.
- D. National Fire Protection Association:
 - 1. NFPA 253 - Standard Method of Test for Critical Radiant Flux for Floor Covering Systems Using a Radiant Heat Energy Source.

1.3 SUBMITTALS

- A. Section 01 33 00 - Submittal Procedures: Requirements for submittals.
- B. Product Data: Submit data on specified products, describing physical and performance characteristics; sizes, patterns, colors available, and method of installation.
- C. Shop Drawings: Indicate layout of joints, direction of carpet pile, and location of edge moldings.
- D. Samples:
 - 1. Submit two carpet tiles illustrating color and pattern design for each carpet color selected. Full size carpet tile samples may be required for final color and pattern selection. Submit matching roll carpet samples.

2. Submit two, 12-inch-long samples of edge strip.

E. Manufacturer's Instructions: Submit special procedures and perimeter conditions requiring special attention.

1.4 CLOSEOUT SUBMITTALS

A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for submittals.

B. Operation and Maintenance Data: Submit maintenance procedures, recommended maintenance materials, and suggested schedule for cleaning.

1.5 MAINTENANCE MATERIAL SUBMITTALS

A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for maintenance materials.

B. Extra Stock Materials:

1. Furnish an additional 5 percent of installed carpet tiles of each color and pattern selected.

1.6 QUALITY ASSURANCE

A. Surface Burning Characteristics:

1. Floor Finishes: Comply with one of the following:

- a. Class I, minimum 0.45 watts/square centimeter when tested in accordance with NFPA 253.
- b. CPSC 16 CFR 1630.

1.7 QUALIFICATIONS

A. Manufacturer: Company specializing in manufacturing products specified in this section with minimum three years documented experience.

B. Installer: Company specializing in performing Work of this section with minimum years documented experience and approved by manufacturer.

1. FCIB or IFCI certified carpet installers.

1.8 WARRANTY

A. Lifetime Comprehensive Commercial Performance: No failure tuft bind / zippering, edge ravel / fraying, dimensional stability, delamination, structural integrity.

B. Lifetime Comprehensive Commercial Performance Fiber: Soil and stain removal, static dissipation, abrasive wear, colorfastness.

1.9 AMBIENT CONDITIONS

- A. Section 01 50 00 - Temporary Facilities and Controls: Ambient conditions control facilities for product storage and installation.
- B. Store materials in area of installation for 48 hours prior to installation.

PART 2 PRODUCTS

2.1 CARPET TILE

- A. Manufacturer:
 - 1. Shaw Contract Group:
 - a. Light Series Tile: Vibrant, Visible, or Absorbed; Color as selected by Architect / Engineer from manufacturer's full color selection. Different colors may be selected for different spaces, up to four colors.
 - 1) Size: 24 by 24 inch tile.
 - 2) Fiber Product: 100 percent premium branded commercial BCF nylon containing minimum 25 percent post consumer / industrial recycled content and 100 percent sustainable / recyclable.
 - 3) Dye Method: 100 percent solution.
 - 4) Primary Backing: Synthetic.
 - 5) Secondary Backing: Non-PVC thermoplastic composite containing minimum 40 percent post consumer / industrial content and 100% sustainable / recyclable.
 - 6) Gage: 1/12 minimum.
 - 7) Stitches: 9.5 to 10.0 stitches per inch minimum.
 - 8) Tufted Yarn Weight: 20 ounce per square yard minimum.
 - 9) Finish Pile Thickness: 0.103 to 0.116 inches minimum.
 - 10) Average Density: 6,207 to 6,990 ounces per cubic yard.
 - 11) Electrostatic Propensity: Less than 3.5 KV.
 - 2. EF Contract Flooring: as above for Shaw Contract Group.
 - 3. Other manufacturers will be considered if all performance values are equal to or within 5 percent of those listed above and the same aesthetic of the tile listed above is available. See Section 01 60 00 – Product Requirements for additional information.

2.2 ACCESSORIES

- A. Sub-Floor Filler: Type recommended by flooring material manufacturer.
- B. Moldings and Edge Strips: Rubber; color as selected by Architect / Engineer.
- C. Contact Adhesive: Releasable type compatible with carpet material and high moisture content concrete slabs, and as recommended by carpet manufacturer.

- D. Seam Adhesive: Type recommended by flooring material manufacturer.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for installation examination.
- B. Verify floor surfaces are smooth and flat within tolerances acceptable to flooring manufacturer and are ready to receive Work.

3.2 PREPARATION

- A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for installation preparation.
- B. Clean substrate. Remove sub-floor ridges and bumps. Fill minor or local low spots, cracks, joints, holes, and other defects with sub-floor filler.
- C. Apply, trowel, and float filler to achieve smooth, flat, hard surface. Prohibit traffic until filler is cured.

3.3 INSTALLATION

- A. Install carpet tile in accordance with CRI Carpet Installation Standard.
- B. Do not mix carpet from different cartons unless from same dye lot.
- C. Cut carpet tile clean. Fit carpet tight to intersection with vertical surfaces without gaps.
- D. Install carpet tile in pattern as indicated on Drawings, parallel to building lines.
- E. Locate change of color or pattern between rooms under door centerline.
- F. Fully adhere carpet tile to substrate with pressure sensitive releasable adhesive.
- G. Trim carpet tile neatly at walls and around interruptions.
- H. Complete installation of edge strips, concealing exposed edges.

3.4 CLEANING

- A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for cleaning.
- B. Remove excess adhesive from floor, base, and wall surfaces without damage.

C. Clean and vacuum carpet surfaces.

END OF SECTION

SECTION 09 90 00

PAINTING AND COATING

PART 1 GENERAL

1.1 SUMMARY

- A. Section includes surface preparation and field application of paints and other coatings.

1.2 REFERENCES

- A. ASTM International:
 - 1. ASTM D16 - Standard Terminology Relating to Paint, Varnish, Lacquer, and Related Products.
 - 2. ASTM D4442 - Standard Test Methods for Direct Moisture Content Measurement of Wood and Wood-Base Materials.
 - 3. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials.
- B. Green Seal:
 - 1. GC-03 - Anti-Corrosive Paints.
 - 2. GS-11 - Product Specific Environmental Requirements.
- C. National Fire Protection Association:
 - 1. NFPA 255 - Standard Method of Test of Surface Burning Characteristics of Building Materials.
- D. Painting and Decorating Contractors of America:
 - 1. PDCA - Architectural Painting Specification Manual.
- E. South Coast Air Quality Management District:
 - 1. SCAQMD Rule 1113 - Architectural Coatings.
- F. SSPC: The Society for Protective Coatings:
 - 1. SSPC - Steel Structures Painting Manual.
- G. Underwriters Laboratories Inc.:
 - 1. UL 723 - Tests for Surface Burning Characteristics of Building Materials.

1.3 DEFINITIONS

- A. Conform to ASTM D16 for interpretation of terms used in this section.

1.4 SUBMITTALS

- A. Section 01 33 00 - Submittal Procedures: Submittal procedures.
- B. Product Data: Submit data on finishing products and special coatings.

- C. Samples:
 - 1. Submit two paper chip samples illustrating full range of colors available for each surface finishing product scheduled.
- D. Manufacturer's Installation Instructions: Submit special surface preparation procedures, and substrate conditions requiring special attention.

1.5 CLOSEOUT SUBMITTALS

- A. Section 01 70 00 - Execution and Closeout Requirements: Closeout procedures.
- B. Operation and Maintenance Data: Submit data on cleaning, touch-up, and repair of painted and coated surfaces.

1.6 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing products specified in this section with minimum three years documented experience.
- B. Applicator: Company specializing in performing Work of this section with minimum three years documented experience and approved by manufacturer.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Section 01 60 00 - Product Requirements: Product storage and handling requirements.
- B. Deliver products to site in sealed and labeled containers; inspect to verify acceptability.
- C. Container Label: Include manufacturer's name, type of paint, brand name, lot number, brand code, coverage, surface preparation, drying time, cleanup requirements, color designation, and instructions for mixing and reducing.
- D. Paint Materials: Store at minimum ambient temperature of 45 degrees F and maximum of 90 degrees F, in ventilated area, and as required by manufacturer's instructions.

1.8 ENVIRONMENTAL REQUIREMENTS

- A. Section 01 60 00 - Product Requirements.
- B. Do not apply materials when surface and ambient temperatures are outside temperature ranges required by paint product manufacturer.
- C. Minimum Application Temperatures for Latex Paints: 45 degrees F for interiors; 50 degrees F for exterior; unless required otherwise by manufacturer's instructions.
- D. Provide lighting level of 80 foot candle measured mid-height at substrate surface.

1.9 SEQUENCING

- A. Section 01 10 00 - Summary: Work sequence.

- B. Verify existing conditions and requirements of other trades before starting Work.
- C. Sequence application to the following:
 - 1. Do not apply finish coats until paintable sealant is applied.
 - 2. Back prime wood trim before installation of trim.

1.10 WARRANTY

- A. Section 01 70 00 - Execution and Closeout Requirements: Product warranties and product bonds.
- B. Furnish five-year manufacturer warranty for paints and coatings.

1.11 EXTRA MATERIALS

- A. Section 01 70 00 - Execution and Closeout Requirements: Spare parts and maintenance products.
- B. Supply 1 gallon of each color, type, and surface texture; store where directed by Owner.
- C. Label container with color, type, and room locations, in addition to manufacturer's label.

PART 2 PRODUCTS

2.1 PAINTS AND COATINGS

- A. Manufacturers:
 - 1. The Glidden Co.
 - 2. MAB Paints.
 - 3. Benjamin Moore.
 - 4. Sherwin-Williams.
 - 5. Pittsburg Paints.
 - 6. Substitutions: Not permitted.

2.2 COMPONENTS

- A. Coatings: Ready mixed, except field catalyzed coatings. Prepare coatings:
 - 1. To soft paste consistency, capable of being readily and uniformly dispersed to homogeneous coating.
 - 2. For good flow and brushing properties.
 - 3. Capable of drying or curing free of streaks or sags.
- B. Accessory Materials: Linseed oil, shellac, turpentine, paint thinners and other materials not specifically indicated but required to achieve finishes specified; commercial quality.
- C. Patching Materials: Latex filler.
- D. Fastener Head Cover Materials: Latex filler.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify existing conditions and requirements of other trades before starting Work.
- B. Verify surfaces and substrate conditions are ready to receive Work as instructed by product manufacturer.
- C. Examine surfaces scheduled to be finished prior to commencement of Work. Report conditions capable of affecting proper application.
- D. Test shop applied primer for compatibility with subsequent cover materials.
- E. Do not apply paint pavement markings to concrete surfaces until concrete has cured for 28 days.
- F. Measure moisture content of surfaces using electronic moisture meter. Do not apply finishes unless moisture content of surfaces are below the following maximums:
 - 1. Plaster and Gypsum Wallboard: 12 percent.
 - 2. Masonry, Concrete and Concrete Unit Masonry: 12 percent.

3.2 PREPARATION

- A. Surface Appurtenances: Remove electrical plates, hardware, light fixture trim, escutcheons, and fittings prior to preparing surfaces or finishing.
- B. Surfaces: Correct defects and clean surfaces capable of affecting Work of this section. Remove or repair existing coatings exhibiting surface defects.
- C. Marks: Seal with shellac those which may bleed through surface finishes.
- D. Impervious Surfaces: Remove mildew by scrubbing with solution of tri-sodium phosphate and bleach. Rinse with clean water and allow surface to dry.
- E. Gypsum Board Surfaces: Fill minor defects with filler compound. Spot prime defects after repair.
- F. Galvanized Surfaces: Remove surface contamination and oils and wash with solvent. Apply coat of etching primer.
- G. Shop Primed Steel Surfaces: Sand and scrape to remove loose primer and rust. Feather edges to make touch-up patches inconspicuous. Clean surfaces with solvent. Prime bare steel surfaces.
- H. Uncoated Steel and Iron Surfaces: Remove grease, mill scale, weld splatter, dirt, and rust. Where heavy coatings of scale are evident, remove by hand wire brushing or sandblasting; clean by washing with solvent. Apply treatment of phosphoric acid solution, ensuring weld joints, bolts, and nuts are similarly cleaned. Spot prime paint after repairs.

- I. Interior Wood Items Scheduled to Receive Transparent Finish: Wipe off dust and grit prior to sealing, seal knots, pitch streaks, and sappy sections with sealer. Fill nail holes and cracks after sealer has dried; sand lightly between coats.
- J. Metal Doors Scheduled for Painting: Prime metal door top and bottom edge surfaces.
- K. Concrete Floors: Scrape and remove all loose existing floor paint at areas to receive new paint, until remaining floor is smooth. Clean all surfaces to be painted to remove all dirt, grease, chalk, loose paint, and surface contaminates. If surface is found to be contaminated with grease or oil, clean the highly contaminated areas with Great Lakes Laboratories Extra Muscle Pre-Paint Cleaner.

3.3 APPLICATION

- A. Multiple colors might be selected and accent walls might be a component of the Project.
- B. Do not apply finishes to surfaces that are not dry. Allow applied coats to dry before application of next coat.
- C. Apply each coat to uniform appearance. Apply each coat of paint slightly darker than preceding coat unless specified otherwise.
- D. Sand wood and metal surfaces lightly between coats to achieve required finish.
- E. Vacuum clean surfaces of loose particles. Use tack cloth to remove dust and particles just prior to applying next coat.
- F. Where clear finishes are required, tint fillers to match wood. Work fillers into grain before set. Wipe excess from surface.
- G. Prime concealed surfaces of interior wood surfaces scheduled to receive stain or varnish finish with gloss varnish reduced 25 percent with thinner.
- H. Painting Concrete Floors: Use Full Prime Coat and Finish Coat of B90W111 Armorseal Tread-Plex 100% Acrylic Floor Coating.
- I. Finishing Mechanical and Electrical Equipment:
 - 1. Refer to Division 22, Division 23, Division 26, and Division 27 for schedule of color-coding and identification banding of equipment, ductwork, piping, and conduit.
 - 2. Paint shop primed equipment.
 - 3. Remove unfinished louvers, grilles, covers, and access panels on mechanical and electrical components and paint separately.
 - 4. Prime and paint insulated and exposed pipes, conduit, boxes, insulated and exposed ducts, hangers, brackets, collars and supports, except where items are shop finished.
 - 5. Paint interior surfaces of air ducts visible through grilles and louvers with one coat of flat black paint to visible surfaces. Paint dampers exposed behind louvers, and grilles to match face panels.
 - 6. Paint exposed conduit and electrical equipment occurring in finished areas.

7. Paint both sides and edges of plywood backboards for electrical and telephone equipment before installing equipment.
8. Reinstall electrical cover plates, hardware, light fixture trim, escutcheons, and fittings removed prior to finishing.

3.4 FIELD QUALITY CONTROL

- A. Section 01 70 00 - Execution and Closeout Requirements: Field inspecting, testing, adjusting, and balancing.
- B. Inspect and test questionable coated areas.

3.5 CLEANING

- A. Section 01 70 00 - Execution and Closeout Requirements: Final cleaning.
- B. Collect waste material which may constitute fire hazard, place in closed metal containers, and remove daily from site.

3.6 SCHEDULE - SHOP PRIMED ITEMS FOR SITE FINISHING

- A. Hollow Metal Frames (Section 08 11 13): Exposed surfaces.
- B. Hollow Metal Doors (Section 08 11 13): Exposed surfaces.

3.7 SCHEDULE - INTERIOR SURFACES

- A. Gypsum Board Walls:
 1. One coat SW PrepRite 200 Latex Primer; B28W200 or approved equal.
 - a. Four mils wet, 1.2 mils dry.
 2. Two coats SW ProMar 200 Latex Semi-Gloss; B300W200 or approved equal.
 - a. Four mils wet, 1.4 mils dry per coat.
- B. Concrete Floors:
 1. One coat: Floor paint, Latex Primer, matching topcoat.
 2. Intermediate Coat: Floor paint, Latex, matching topcoat.
 3. Topcoat: Floor paint, Latex, low gloss (maximum MPI Gloss Level 3)
- C. Wood Doors:
 1. Finish to match existing wood doors at adjacent openings.
- D. Steel:
 1. One coat SW Pro Industrial Pro-Cyrl Primer; B66-310 or approved equal.
 - a. Two to four mils dry.
 2. Two coats SW ProMar 200 Alkyd Semi-Gloss, B34W200 or approved equal.
 - a. Four mils wet, 1.7 mils dry.

END OF SECTION

SECTION 12 30 40

GENERAL CASEWORK

1. GENERAL

1.1 WORK INCLUDES

A. Base Bid:

1. General Contractor to provide prefabricated plastic laminate countertop, as shown on Drawings.

B. Related Sections:

1. Section 06 10 00 – Rough Carpentry: Wood blocking.
2. Section 09 65 00 - Resilient Flooring: Rubber base.

1.2 REFERENCES

A. American National Standards Institute.

1. ANSI A156.9 - Cabinets Hardware.
2. ANSI A208.1 - Mat formed Particleboard.

B. Architectural Woodwork Institute.

1. AWI - Quality Standards Illustrated.

C. National Electrical Manufacturers Association.

1. NEMA LD3- High Pressure Decorative Laminates.

1.3 SUBMITTALS

- ###### A. Shop drawings shall be submitted for approval within thirty days after formal notification of award of contract. Drawings shall consist of floor plans indicating arrangement and relation to adjacent work and equipment, and complete elevations of casework.

- ###### B. Color samples shall be submitted for selection by Architect/Engineer. Samples of actual material and color shall be available as required. Use same laminate pattern and color for all components.

1.4 QUALITY ASSURANCE

- ###### A. Manufacturer: Company specializing in manufacture of institutional and commercial plastic laminate casework with minimum of five years experience.

- B. Installer Qualifications: Installer with 5 years experience who has successfully completed installations of plastic laminate faced casework similar in material, design, and extent to that indicated for this project.
 - C. Perform work in accordance with AWI Architectural Woodwork Quality Standards Illustrated, Custom Grade.
- 1.5 DELIVERY, STORAGE, AND HANDLING
- A. Protect units from moisture damage.
- 1.6 ENVIRONMENTAL REQUIREMENTS
- A. During and after installation of Work of this section, maintain same temperature and humidity conditions in building spaces as will occur after occupancy.
- 1.7 FIELD MEASUREMENTS
- A. Verify field measurements prior to fabrication.
- 1.8 WARRANTY
- A. Casework manufacturer shall warrant for a period of three years, the product manufactured by it to be free from defects in material and workmanship when properly installed under normal use, including but not limited to delamination, swelling or warping.

2. PRODUCTS

2.1 GENERAL CASEWORK

- A. Manufacturers:
 1. Case Systems, Inc.
 2. LSI Corporation of America, Inc.
 3. Precision Millwork Company.
 4. Reynolds & Doyle, Inc.
 5. Stevens Cabinet Co., Division of Stevens Industries.
 6. TMI Systems Design Corporation.

2.2 CORE MATERIALS

- A. Particleboard: Shall be high performance industrial grade core. Particleboard shall be 45-to-48-pound density 3-ply type formation conforming to ANSI A208.1 and ASTM D1037-91A standards.

- B. Medium Density Fiberboard: Core shall be minimum 48-pound density conforming to ANSI A208.1 MD-130 standards.

2.3 LAMINATE TOPS

- A. Countertops, end panels, and back- or side-splashes, shall be high pressure decorative laminate, thermoset to core using catalyzed PVA glue with minimum average pressure of 80 pounds per square inch and average 180-degree F temperature. Decorative laminate shall meet NEMA LD3-2005 PF-42 specification standards.
- B. Back-splashes and side-splashes to be 4" high x ½" thick, with laminate at all exposed surfaces.
- C. End panels to be minimum ¾" thick, full width of countertop, with laminate at all exposed surfaces.
- D. Laminate tops shall be solid particleboard core structures and laminated with backer sheet.
- E. Selection of pattern and color by Architect, from manufacturer's full line of patterns and colors.

3. EXECUTION

3.1 INSTALLATION

- A. The installer must examine the job site and the conditions under which the work in this section is to be performed. Notify the contractor in writing of any unsatisfactory conditions. Do not proceed with work under this section until unsatisfactory conditions have been corrected in a manner acceptable to the installer.
- B. Countertops, and related materials to be conditioned to average prevailing humidity condition in installation areas prior to start of work.
- C. Install countertops with factory-trained supervision authorized by manufacturer. Countertops shall be installed plumb, level, true and straight with no distortions. (Shim as required). Securely attached to building structure with anchorage devices of appropriate type, size and quantity to meet applicable codes, specifications, and safety conditions. Where countertop abuts other finished work, scribe, and trim to accurate fit.
- D. Repair, or remove and replace, defective work as directed upon completion of installation.

- E. Clean plastic surfaces, repair minor damage per plastic laminate manufacturer's recommendations. Replace other damaged parts of units.
- F. Advise contractor of procedures and precautions for protection of countertops from damage by other trades until acceptance of work by Using Agency.
- G. Cover countertop with 4-mil polyethylene film for protection against soiling and deterioration during remainder of construction period.

END 12 30 40

SECTION 23 37 00
AIR OUTLETS AND INLETS

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Diffusers.

1.2 REFERENCES

- A. Air Movement and Control Association International, Inc.:
 - 1. AMCA 500 - Test Methods for Louvers, Dampers, and Shutters.
- B. American Society of Heating, Refrigerating and Air-Conditioning Engineers:
 - 1. ASHRAE 70 - Method of Testing for Rating the Performance of Air Outlets and Inlets.
- C. Sheet Metal and Air Conditioning Contractors:
 - 1. SMACNA - HVAC Duct Construction Standard - Metal and Flexible.

1.3 SUBMITTALS

- A. Product Data: Submit sizes, finish, and type of mounting. Submit schedule of outlets and inlets showing type, size, location, application, and noise level.

1.4 QUALITY ASSURANCE

- A. Test and rate diffuser, register, and grille performance in accordance with ASHRAE 70.
- B. Test and rate louver performance in accordance with AMCA 500.

PART 2 PRODUCTS

2.1 RECTANGULAR CEILING DIFFUSERS

- A. Manufacturers:
 - 1. Price Company.
 - 2. Krueger.
 - 3. Titus.
- B. Type: Square, architectural plaque style four-way pattern.
- C. Frame: As indicated on plans.
- D. Fabrication: Steel with baked enamel off-white finish.

- E. Accessories: Butterfly damper and multi-louvered equalizing grid with damper adjustable from diffuser face.

2.2 CEILING RETURN REGISTERS/GRILLES

- A. Manufacturers:
 - 1. Price Company.
 - 2. Krueger.
 - 3. Titus.
- B. Type: Streamlined blades, 3/4 inch minimum depth, 3/4 inch maximum spacing, with blades set at 30 degrees, horizontal face.
- C. Frame: 1 inch margin with concealed mounting.
- D. Fabrication: Steel with 20 gage minimum frames and 22 gage minimum blades, steel and aluminum with 20 gage minimum frame, or aluminum extrusions, with factory off-white enamel finish.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify inlet and outlet locations.
- B. Verify ceiling systems are ready for installation.

3.2 INSTALLATION

- A. Install diffusers to ductwork with airtight connection.
- B. Install balancing dampers on duct take-off to diffusers, grilles, and registers, whether or not dampers are furnished as part of diffuser, grille, and register assembly.

3.3 INTERFACE WITH OTHER PRODUCTS

- A. Check location of outlets and inlets and make necessary adjustments in position to conform to architectural features, symmetry, and lighting arrangement.

END OF SECTION

SECTION 23 81 26
SPLIT-SYSTEM AIR-CONDITIONERS

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
1. Split system air conditioning units.
 2. Condensing unit.

1.2 REFERENCES

- A. Air-Conditioning and Refrigeration Institute:
1. ARI 210/240 - Unitary Air-Conditioning and Air-Source Heat Pump Equipment.
- B. American Society of Heating, Refrigerating and Air-Conditioning Engineers:
1. ASHRAE 52.1 - Gravimetric and Dust-Spot Procedures for Testing Air-Cleaning Devices Used in General Ventilation for Removing Particulate Matter.
 2. ASHRAE 90.1 - Energy Standard for Buildings Except Low-Rise Residential Buildings.
- C. National Electrical Manufacturers Association:
1. NEMA MG 1 - Motors and Generators.
- D. National Fire Protection Association:
1. NFPA 90A - Standard for the Installation of Air Conditioning and Ventilating Systems.

1.3 SUBMITTALS

- A. Product Data: Submit data indicating:
1. Cooling and heating capacities.
 2. Dimensions.
 3. Weights.
 4. Rough-in connections and connection requirements.
 5. Duct connections.
 6. Electrical requirements with electrical characteristics and connection requirements.
 7. Controls.
 8. Accessories.
- B. Manufacturer's Installation Instructions: Submit assembly, support details, connection requirements, and include start-up instructions.

1.4 CLOSEOUT SUBMITTALS

- A. Project Record Documents: Record actual locations of controls installed remotely from units.
- B. Operation and Maintenance Data: Submit manufacturer's descriptive literature, operating instructions, installation instructions, and maintenance and repair data.

1.5 QUALITY ASSURANCE

- A. Performance Requirements: Energy Efficiency Rating (EER) not less than prescribed by ASHRAE 90.1 when used in combination with compressors and evaporator coils when tested in accordance with ARI 210/240.
- B. Cooling Capacity: Rate in accordance with ARI 210/240.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Accept units and components on site in factory protective containers, with factory shipping skids and lifting lugs. Inspect for damage.
- B. Comply with manufacturer's installation instruction for rigging, unloading and transporting units.
- C. Protect units from weather and construction traffic by storing in dry, roofed location.

1.7 COORDINATION

- A. Coordinate installation of condensing units with concrete pad.
- B. Coordinate installation of split units with building structure.

1.8 WARRANTY

- A. Furnish five year manufacturers warranty for compressors.

PART 2 PRODUCTS

2.1 SPLIT SYSTEM AIR CONDITIONING UNITS

- A. Manufacturers:
 - 1. Trane
- B. Product Description: Split system consisting of air handling unit and condensing unit including cabinet, evaporator fan, refrigerant cooling coil, compressor, refrigeration circuit, condenser, air filters, controls, air handling unit accessories, condensing unit accessories, and refrigeration specialties.

2.2 CONDENSING UNIT

- A. General: Factory assembled and tested air cooled condensing units, consisting of casing, compressors, condensers, coils, condenser fans and motors, and unit controls.
- B. Unit Casings: Exposed casing surfaces constructed of galvanized steel with manufacturer's standard baked enamel finish. Designed for outdoor installation and complete with weather protection for components and controls, and complete with removable panels for required access to compressors, controls, condenser fans, motors, and drives.

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Split System Air Conditioners
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- C. Compressor: Single refrigeration circuit with rotary or reciprocating type compressors, resiliently mounted, with positive lubrication, and internal motor overload protection.
- D. Condenser Coil: Constructed of copper tubing mechanically bonded to aluminum fins, factory leak and pressure tested.
- E. Controls: Furnish operating and safety controls including high and low pressure cutouts. Control transformer. Furnish magnetic contactors for compressor and condenser fan motors.
- F. Condenser Fans and Drives: Direct drive propeller fans statically and dynamically balanced. Wired to operate with compressor. Permanently lubricated ball bearing type motors with built-in thermal overload protection. Furnish high efficiency fan motors.
- G. Condensing Unit Accessories: Furnish the following accessories:
 - 1. Time delay relay.
 - 2. Anti-short cycle timer.
 - 3. Disconnect switch.
- H. Refrigeration specialties: Furnish the following:
 - 1. Charge of compressor oil.
 - 2. Holding charge of refrigerant.
 - 3. Replaceable core type filter drier.
 - 4. Liquid line solenoid valve.
 - 5. Charging valve.
 - 6. Crankcase heater.
- I. Refrigerant: Furnish charge of refrigerant R-410a.

2.3 CONTROLS

- A. Thermostat: Remote space thermostat with single stage cooling. Furnish system selector switch heat-off-cool and fan control switch auto-on.

2.4 ELECTRICAL CHARACTERISTICS AND COMPONENTS

- A. Electrical Characteristics: As scheduled.
- B. Disconnect Switch: Factory mounted, non-fused type, interlocked with access door, accessible from outside unit, with power lockout capability.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify concrete pad for condensing unit is ready for unit installation.

3.2 INSTALLATION - CONDENSING UNIT

- A. Install condensing units on vibration isolators.
- B. Install units on concrete pad.
- C. Install refrigerant piping from unit to condensing unit. Install refrigerant specialties furnished with unit.
- D. Evacuate refrigerant piping and install initial charge of refrigerant.
- E. Install electrical devices furnished loose for field mounting.
- F. Install control wiring between air handling unit, condensing unit, and field installed accessories.
- G. Install connection to electrical power wiring.

3.3 CLEANING

- A. Vacuum clean coils and inside of unit cabinet.
- B. Install temporary filters during construction period. Replace with permanent filters at Substantial Completion.

3.4 DEMONSTRATION

- A. Demonstrate split unit operation and maintenance.
- B. Demonstrate starting, maintenance, and operation of condensing unit.

3.5 PROTECTION OF FINISHED WORK

- A. Do not operate units until filters are in place and fan has been test run under observation.

END OF SECTION

SECTION 26 05 19

LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES

PART 1 GENERAL

1.1 SUMMARY

- A. Section includes metal clad cable and wiring connectors and connections.

1.2 REFERENCES

- A. International Electrical Testing Association:
 - 1. NETA ATS - Acceptance Testing Specifications for Electrical Power Distribution Equipment and Systems.
- B. National Fire Protection Association:
 - 1. NFPA 70 - National Electrical Code – 2020 Edition.
 - 2. NFPA 262 - Standard Method of Test for Flame Travel and Smoke of Wires and Cables for Use in Air-Handling Spaces.
- C. Underwriters Laboratories, Inc.:
 - 1. UL 1277 - Standard for Safety for Electrical Power and Control Tray Cables with Optional Optical-Fiber Members.

1.3 SYSTEM DESCRIPTION

- A. Product Requirements: Provide products as follows:
 - 1. Solid conductor for feeders and branch circuits 10 AWG and smaller.
 - 2. Stranded conductors for control circuits.
 - 3. Conductor not smaller than 12 AWG for power and lighting circuits.
 - 4. Conductor not smaller than 14 AWG for control circuits.
 - 5. Increase wire size in branch circuits to limit voltage drop to a maximum of 3 percent.
- B. Wiring Methods: Provide the following wiring methods:
 - 1. Concealed Dry Interior Locations: Use only building wire, metal clad cable.
 - 2. Exposed Dry Interior Locations: Use only building wire, Type THHN/THWN insulation, in raceway.
 - 3. Above Accessible Ceilings: Use only building wire, metal clad cable.

1.4 DESIGN REQUIREMENTS

- A. Conductor sizes are based on copper.

1.5 SUBMITTALS

- A. Product Data: Submit for building wire.

1.6 QUALITY ASSURANCE

- A. Provide wiring materials located in plenums with peak optical density not greater than 0.5, average optical density not greater than 0.15, and flame spread not greater than 5 feet (1.5 m) when tested in accordance with NFPA 262.

1.7 FIELD MEASUREMENTS

- A. Verify field measurements are as indicated on Drawings.

1.8 COORDINATION

- A. Where wire and cable destination is indicated and routing is not shown, determine routing and lengths required.
- B. Wire and cable routing indicated is approximate unless dimensioned. Include wire and cable lengths within 10 ft of length shown.

PART 2 PRODUCTS

2.1 BUILDING WIRE

- A. Manufacturers:
 - 1. AETNA.
 - 2. General Cable Co.
 - 3. Republic Wire.
 - 4. Rome Cable.
 - 5. Southwire.
 - 6. Superior Essex.
- B. Product Description: Single conductor insulated wire.
- C. Conductor: Copper.
- D. Insulation Voltage Rating: 600 volts.
- E. Insulation Temperature Rating: 90 degrees C.
- F. Insulation Material: Thermoplastic.

2.2 METAL CLAD CABLE

- A. Conductor: Copper.
- B. Insulation Voltage Rating: 600 volts.
- C. Insulation Temperature Rating: 90 degrees C.

D. Insulation Material: Thermoplastic.

E. Armor Material: Aluminum.

F. Armor Design: Corrugated tube.

2.3 TERMINATIONS

A. Terminal Lugs for Wires 6 AWG and Smaller: Solderless, compression type copper.

PART 3 EXECUTION

3.1 PREPARATION

A. Completely and thoroughly swab raceway before installing wire.

3.2 EXISTING WORK

A. Remove exposed abandoned wire and cable, including abandoned wire and cable above accessible ceiling finishes. Patch surfaces where removed cables pass through building finishes.

B. Disconnect abandoned circuits and remove circuit wire and cable. Remove abandoned boxes when wire and cable servicing boxes is abandoned and removed. Install blank cover for abandoned boxes not removed.

C. Provide access to existing wiring connections remaining active and requiring access. Modify installation or install access panel.

D. Extend existing circuits using materials and methods compatible with existing electrical installations, or as specified.

E. Clean and repair existing wire and cable remaining or wire and cable to be reinstalled.

3.3 INSTALLATION

A. Route wire and cable to meet Project conditions.

B. Neatly train and lace wiring inside boxes, equipment, and panelboards.

C. Identify and color code wire and cable under provisions of Section 26 05 53. Identify each conductor with its circuit number or other designation indicated.

D. Special Techniques--Building Wire in Raceway:
1. Pull conductors into raceway at same time.

E. Special Techniques - Cable:
1. Protect exposed cable from damage.

2. Support cables above accessible ceiling, using spring metal clips or plastic cable ties to support cables from structure. Do not rest cable on ceiling panels.
3. Use suitable cable fittings and connectors.

F. Special Techniques - Wiring Connections:

1. Clean conductor surfaces before installing lugs and connectors.
2. Make splices, taps, and terminations to carry full ampacity of conductors with no perceptible temperature rise.
3. Tape uninsulated conductors and connectors with electrical tape to 150 percent of insulation rating of conductor.
4. Install split bolt connectors for copper conductor splices and taps, 6 AWG and larger.
5. Install solderless pressure connectors with insulating covers for copper conductor splices and taps, 8 AWG and smaller.
6. Install insulated spring wire connectors with plastic caps for copper conductor splices and taps, 10 AWG and smaller.
7. Install suitable reducing connectors or mechanical connector adaptors for connecting aluminum conductors to copper conductors.

- G. Install stranded conductors for branch circuits 10 AWG and smaller. Install crimp on fork terminals for device terminations. Do not place bare stranded conductors directly under screws.

3.4 WIRE COLOR

A. General:

1. For wire sizes 10 AWG and smaller, install wire colors in accordance with the following:
 - a. Black and red for single phase circuits at 120/240 volts.
2. For wire sizes 8 AWG and larger, identify wire with colored tape at terminals, splices and boxes. Colors are as follows:
 - a. Black and red for single phase circuits at 120/240 volts.

- B. Neutral Conductors: White. When two or more neutrals are located in one conduit, individually identify each with proper circuit number.

- C. Branch Circuit Conductors: Install three or four wire home runs with each phase uniquely color coded.

D. Ground Conductors:

1. For 6 AWG and smaller: Green.

END OF SECTION

SECTION 26 05 26

GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Wire.
 - 2. Mechanical connectors.

1.2 REFERENCES

- A. Institute of Electrical and Electronics Engineers:
 - 1. IEEE 142 - Recommended Practice for Grounding of Industrial and Commercial Power Systems.
 - 2. IEEE 1100 - Recommended Practice for Powering and Grounding Electronic Equipment.
- B. International Electrical Testing Association:
 - 1. NETA ATS - Acceptance Testing Specifications for Electrical Power Distribution Equipment and Systems.
- C. National Fire Protection Association:
 - 1. NFPA 70 - National Electrical Code – 2020 Edition.

PART 2

2.1 QUALITY ASSURANCE

- A. Provide grounding materials conforming to requirements of NEC, IEEE 142, and UL labeled.

2.2 COORDINATION

- A. Complete grounding and bonding of building reinforcing steel prior concrete placement.

PART 3 PRODUCTS

3.1 WIRE

- A. Material: Stranded copper.
- B. Foundation Electrodes: 4 AWG.

C. Grounding Electrode Conductor: Copper conductor bare.

D. Bonding Conductor: Copper conductor insulated.

3.2 MECHANICAL CONNECTORS

A. Description: Bronze connectors, suitable for grounding and bonding applications, in configurations required for particular installation.

PART 4 EXECUTION

4.1 EXISTING WORK

A. Modify existing grounding system to maintain continuity to accommodate renovations.

B. Extend existing grounding system using materials and methods compatible with existing electrical installations.

4.2 INSTALLATION

A. Install in accordance with IEEE 142.

B. Equipment Grounding Conductor: Install separate, insulated conductor within each feeder and branch circuit raceway. Terminate each end on suitable lug, bus, or bushing.

C. Permanently attach equipment and grounding conductors prior to energizing equipment.

END OF SECTION

SECTION 26 05 33

RACEWAY AND BOXES FOR ELECTRICAL SYSTEMS

PART 1 GENERAL

1.1 SUMMARY

- A. Section includes conduit and outlet boxes.

1.2 REFERENCES

- A. American National Standards Institute:
 - 1. ANSI C80.3 - Specification for Electrical Metallic Tubing, Zinc Coated.
- B. National Electrical Manufacturers Association:
 - 1. NEMA OS 1 - Sheet Steel Outlet Boxes, Device Boxes, Covers, and Box Supports.

1.3 SYSTEM DESCRIPTION

- A. Raceway and boxes located as indicated on Drawings.

1.4 DESIGN REQUIREMENTS

- A. Minimum Raceway Size: 3/4 inch unless otherwise specified.

1.5 COORDINATION

- A. Coordinate mounting heights, orientation and locations of outlets mounted above counters, benches, and backsplashes.

PART 2 PRODUCTS

2.1 ELECTRICAL METALLIC TUBING (EMT)

- A. Product Description: ANSI C80.3; galvanized tubing.
- B. Fittings and Conduit Bodies: NEMA FB 1; steel, set screw type.

2.2 OUTLET BOXES

- A. Sheet Metal Outlet Boxes: NEMA OS 1, galvanized steel.
 - 1. Luminaire and Equipment Supporting Boxes: Rated for weight of equipment supported; furnish 1/2 inch male fixture studs where required.
 - 2. Concrete Ceiling Boxes: Concrete type.
- B. Nonmetallic Outlet Boxes: NEMA OS 2.

- C. Cast Boxes: NEMA FB 1, Type FD, cast ferrous alloy. Furnish gasketed cover by box manufacturer.
- D. Wall Plates for Finished Areas: As specified in Section 26 27 26.
- E. Wall Plates for Unfinished Areas: Furnish gasketed cover.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify outlet locations and routing and termination locations of raceway prior to rough-in.

3.2 EXISTING WORK

- A. Remove exposed abandoned raceway, including abandoned raceway above accessible ceiling finishes. Cut raceway flush with walls and floors, and patch surfaces.
- B. Remove concealed abandoned raceway to its source.
- C. Disconnect abandoned outlets and remove devices. Remove abandoned outlets when raceway is abandoned and removed. Install blank cover for abandoned outlets not removed.
- D. Maintain access to existing boxes and other installations remaining active and requiring access. Modify installation or provide access panel.
- E. Extend existing raceway and box installations using materials and methods [compatible with existing electrical installations, or] as specified.
- F. Clean and repair existing raceway and boxes to remain or to be reinstalled.

3.3 INSTALLATION

- A. Arrange raceway and boxes to maintain headroom and present neat appearance.

3.4 INSTALLATION - RACEWAY

- A. Raceway routing is shown in approximate locations unless dimensioned. Route to complete wiring system.
- B. Support raceway using coated steel or malleable iron straps, lay-in adjustable hangers, clevis hangers, and split hangers.

3.5 INSTALLATION - BOXES

- A. Install wall mounted boxes at elevations to accommodate mounting heights as indicated on Drawings.

3.6 INTERFACE WITH OTHER PRODUCTS

- A. Route conduit through roof openings for piping and ductwork or through suitable roof jack with pitch pocket.
- B. Locate outlet boxes to allow luminaires positioned as indicated on Drawings.
- C. Align adjacent wall mounted outlet boxes for switches, thermostats, and similar devices.

END OF SECTION

SECTION 26 27 26

WIRING DEVICES

PART 1 GENERAL

1.1 SUMMARY

- A. Section includes occupancy switches; receptacles; and device plates and decorative box covers.

1.2 REFERENCES

- A. National Electrical Manufacturers Association:
 - 1. NEMA WD 1 - General Requirements for Wiring Devices.
 - 2. NEMA WD 6 - Wiring Devices-Dimensional Requirements.

1.3 SUBMITTALS

- A. Division 01 - Submittal Procedures: Submittal procedures.
- B. Product Data: Submit manufacturer's catalog information showing dimensions, colors, and configurations.
- C. Samples: Submit two samples of each wiring device and wall plate illustrating materials, construction, color, and finish.

PART 2 PRODUCTS

2.1 RECEPTACLES

- A. Duplex Receptacle, Conventional Face, 20A-125V, NEMA 5-20R:
 - 1. Leviton Model 5362.
 - 2. Hubbell Model HBL 5362.
 - 3. Pass and Seymour Model 5362.
 - 4. Substitutions: Not permitted.
- B. GFCI Receptacle, Duplex, Rectangular Face, 20A-125V, NEMA 5-20R.
 - 1. End of Life Provision: when a GFCI receptacle is incapable of passing its internal test function (it can no longer provide ground fault protection) it will either:
 - a. Render itself incapable of delivering power
 - or
 - b. Indicate by visual or audible means that the device must be replaced.
 - 2. Duplex GFCI Receptable, Rectangular Face, 20A-125V, NEMA 5-20R.
 - a. Leviton Model 6599.
 - b. Hubbell Model GF5362.

- c. Pass and Seymour Model 2091.

2.2 OCCUPANCY SENSOR AUTOMATIC SWITCHES

- A. Wall Switch Occupancy Sensor Switches
 1. The wall switch will turn lights on, automatically, when someone enters a room. It will turn lights off, automatically, when the room is vacated after a pre-set period of time.
 2. The wall switch is to be dual technology type: ultrasonic and infrared.
 3. The wall switch shall be designed to cover areas up to 2,400 square feet with 180 degree field of view coverage.
 4. The wall switch shall detect the types of minor, at-desk motion.
 5. Time-on after activation shall be user adjustable between 30 seconds and 15 minutes.
 6. The wall switch must be easily installed in any standard single gang junction box.
 7. Acceptable Manufacturers: As indicated on the drawings.
- B. Ceiling Mounted Occupancy Sensors
 1. The sensor will turn lights on, automatically, when someone enters a room. It will turn lights off, automatically, when the room is vacated after a pre-set period of time.
 2. The sensor is to be dual technology type: ultrasonic and infrared.
 3. The sensor shall be designed to cover areas up to 2,000 square feet with 360 degree field of view coverage.
 4. The sensor shall detect the types of minor, at-desk motion.
 5. Time-on after activation shall be user adjustable between 30 seconds and 15 minutes.
 6. Acceptable Manufacturers: As indicated on the drawings.

2.3 WALL PLATES

- A. Finished Areas – Decorative Thermoplastic Cover Plate: As selected by the Architect/Engineer.
- B. Unfinished Areas – Stainless Steel Cover Plate.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify outlet boxes are installed at proper height.
- B. Verify wall openings are neatly cut and completely covered by wall plates.
- C. Verify branch circuit wiring installation is completed, tested, and ready for connection to wiring devices.

3.2 PREPARATION

- A. Clean debris from outlet boxes.

3.3 EXISTING WORK

- A. Disconnect and remove abandoned wiring devices.
- B. Modify installation to maintain access to existing wiring devices to remain active.

3.4 INSTALLATION

- A. Install devices plumb and level close to the latch side of door where possible.
- B. Connect wiring device grounding terminal to outlet box with bonding jumper and or branch circuit equipment grounding conductor.
- C. Connect wiring devices by wrapping solid conductor around screw terminal. Install stranded conductor for branch circuits 10 AWG and smaller. When stranded conductors are used in lieu of solid, use crimp on fork terminals for device terminations. Do not place bare stranded conductors directly under device screws.

3.5 FIELD QUALITY CONTROL

- A. Inspect each wiring device for defects.

3.6 ADJUSTING

- A. Adjust devices and wall plates to be flush and level.

END OF SECTION

SECTION 26 51 00
INTERIOR LIGHTING

PART 1 GENERAL

1.1 SUMMARY

- A. Section includes interior light fixtures and accessories.

1.2 REFERENCES

- A. American National Standards Institute:
 - 1. ANSI C82.15-2021 – American National Standard for Lighting Equipment – LED Drivers Robustness.

1.3 SUBMITTALS

- A. Shop Drawings: Indicate dimensions and components for each luminaire not standard product of manufacturer.
- B. Product Data: Submit dimensions, ratings, and performance data.

PART 2 PRODUCTS

2.1 INTERIOR LUMINAIRES

- A. Product Description: Complete interior/exterior luminaire assemblies, with features, options, and accessories as scheduled.
- B. Fixtures shall have the specified color finish.
- C. All fixtures shall be furnished complete with all the necessary mounting hardware to accommodate the type of mounting as indicated on the drawings for the specific fixture type.
- D. Fixtures shall have a minimum 86 CRI.
- E. Warranty
 - 1. Provide a five-year warranty on all interior light fixtures.
 - 2. Provide a ten-year warranty on all emergency ballasts.

2.2 LED LIGHTS

- A. LED fixture and driver shall be as follows:
 - 1. Shall operate from 50/60 Hz input source of 120V through 277V with sustained variations of +/- 10% (voltage) with no damage to the driver.
 - 2. Output shall be regulated to +/- 5% across published load range.

3. Shall have a power factor greater than 0.90 for primary application to 50% of full load rating.
4. Input current shall have a total harmonic distortion (THD) of less than 10% of full load rating.
5. Shall have a Class A sound rating.
6. Shall have a minimum operating temperature of -20C (-4F).
7. Shall tolerate sustained open circuit and short circuit output conditions without fail and auto-resetting without need for external fuses or trip devices.
8. Driver output ripple current shall be less than 15% measured peak-to-average, with ripple frequency > 100 Hz.
9. Driver performance requirements shall be met when operated to 50% of full load rating.
10. Driver shall be rated for damp and dry locations.
11. Driver shall have integral common mode and differential mode surge protection of 2.5 kV.
12. Driver shall have integral thermal foldback to reduce driver power above rated case temperature to protect the driver if temperatures reach unacceptable levels.
13. Driver shall comply with NEMA 410 for in-rush current limits.
14. Driver shall incorporate an integral means of limiting surges to the LEDs.
15. LED fixtures shall be tested and rated in accordance with IES LM79 & LM80.

PART 3 EXECUTION

3.1 EXISTING WORK

- A. Disconnect and remove abandoned luminaires, lamps, and accessories.
- B. Clean and repair existing interior luminaires to remain or to be reinstalled.

3.2 INSTALLATION

- A. Install suspended luminaires using pendants supported from swivel hangers. Install pendant length required to suspend luminaire at indicated height.
- B. Locate recessed ceiling luminaires as indicated on reflected ceiling plan.
- C. Install surface mounted luminaires plumb and adjust to align with building lines and with each other. Secure to prevent movement.
- D. Install recessed luminaires to permit removal from below.
- E. Install clips to secure recessed grid-supported luminaires in place.
- F. Install accessories furnished with each luminaire.
- G. Make wiring connections to branch circuit using building wire with insulation suitable for temperature conditions within luminaire.

3.3 FIELD QUALITY CONTROL

- A. Operate each luminaire after installation and connection. Inspect for proper connection and operation.

END OF SECTION