

PROJECT MANUAL

ISSUED FOR BIDS: September 7, 2023



University Center / Switchboard Equipment Pre-Purchase

for

McHenry County College

8900 U.S. Hwy 14
Crystal Lake, IL 60012



DEMONICA KEMPER ARCHITECTS

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DKA Project Number: 22-050
MCC Project Number: IFB230907

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SECTION 00 11 13 – ADVERTISEMENT FOR BIDS

1.1 BID INFORMATION

- A. Sealed Bids will be received by McHenry County College, on or before September 21, 2023, at 9:00 a.m., prevailing time for the University Center / Switchboard Equipment Pre-Purchase for McHenry County College.
- B. Lump sum bid proposals will be received for this project at the scheduled time of receipt of bids and will be publicly opened there after in Board Room A217.
- C. Bid security in the form of a bid bond, certified check, or cash in an amount equal to ten percent (10%) of the base bid amount shall be submitted with the bid. Should a bid bond be submitted, the bid bond shall be payable to the Board of Trustees, McHenry County College.
- D. Bids shall be submitted on or before the specified closing time in an opaque sealed envelope addressed to: Mr. James Julison, Director for Business Services, 8900 US Hwy 14, Building A, Room A248, Crystal Lake, Illinois 60012
- E. The College reserves the right to reject any or all bids or parts thereof, or waive any irregularities or informalities, and to make the award in the best interest of the College. Decisions of the College will be final.
- F. Minority and Women Owned Businesses are highly encouraged to participate.
- G. Bidding documents are on file and may be obtained through the following link: www.mchenry.edu/bid/.
- H. This Contract calls for the construction of a “public work,” within the meaning of the Illinois Prevailing Wage Act, 820 ILCS 130/.01 et seq. (“the Act”). The Act Requires contractors and subcontractors to pay laborers, workers and mechanics performing services on public works projects no less than the “prevailing rate of wages” (hourly cash wages plus fringe benefits) in the county where the work is performed. For information regarding current prevailing wage rates, please refer to the Illinois Department of Labor’s website at: <http://www.illinois.gov/idol/Laws-Rules/CONMED/Pages/Rates.aspx>. All contractors and subcontractors rendering services under this contract must comply with all requirements of the Act, including, but not limited to, all wage, notice, record keeping duties, and related Equal Employment Opportunity Laws. Failure to comply with said Act will result in penalties and fines.
- I. All questions regarding any matter concerning this Invitation to Bid must be submitted in writing to Mr. David Sikorski, Demonica Kemper Architects. Questions must be emailed to dsikorski@dka-design.com, with “MCC University Center / Switchboard Equipment Pre-Purchase” in the subject line. No questions will be addressed after 5:00 PM (CST), on September 18, 2023.

END OF SECTION 00 11 13

SECTION 00 21 13 - INSTRUCTIONS TO BIDDERS

Sealed proposals are invited for the University Center / Switchboard Equipment Pre-Purchase for McHenry County College pursuant to specifications.

PROPOSALS:

Proposals will be received at the place, date, and time hereinafter designated.

PLACE: McHenry County College
Room A248
8900 US Hwy 14
Crystal Lake, IL 60012

DATE: September 21, 2023

TIME: 9:00 a.m. prevailing time (FAXES ARE NOT ACCEPTABLE)

Proposals received after this time will not be accepted.

Proposals must be made in accordance with the instructions contained herein. They shall be submitted on the forms furnished in a sealed envelope, plainly marked, with the Bidder's Name and Address and the notation:

BID: University Center / Switchboard Equipment Pre-Purchase
McHenry County College

Bids will be publicly opened and read aloud on September 21, 2023, following the receipt of bids in Board Room A217.

TAX EXEMPTION:

McHenry County College is exempt from Federal, State, and Municipal taxes.

SIGNATURE ON BIDS: McHenry County College requires the signature on bid documents to be that of an authorized representative of said company.

Each bidder, by making his bid, represents that he has read and understands the bidding documents and that these instructions to bidders are a part of the specifications.

BIDDING PROCEDURES:

No bid shall be modified, withdrawn, or cancelled for ninety (90) days after the bid opening date without the consent of the College Board of Trustees.

Changes or corrections may be made in the bid documents after they have been issued and before bids are received. In such case, a written addendum describing the change or correction will be issued by the College to all bidders of record. Such addendum shall take precedence over that portion of the documents concerned, and shall become part of the bid documents. Except in unusual cases, addendum will be issued to reach the bidders at least five (5) days prior to date established for receipt of bids.

Each bidder shall carefully examine all bid documents and all addenda thereto, and shall thoroughly familiarize themselves with the detailed requirements thereof prior to submitting a proposal. Should a bidder find discrepancies or ambiguities in, or omissions from documents, or should they be in doubt as to their meaning, they shall, at once, and in any event, not later than ten (10) days prior to bid due date, notify the College who will, if necessary, send written addendum to all bidders. The college will not be responsible for any oral instructions. After bids are received, no allowance will be made for oversight by bidder.

Bidders shall submit three (3) complete copies (one original and two copies) of the Bid Forms including the following documents:

1. Document 00 41 13 - Bid Form
2. Document 00 43 13 – Bid Bond
3. Document 00 31 00 - Contractor Certification
4. Document 00 43 29 - W-9
5. Document 00 43 39 - Business Enterprise Program Participation and Utilization Plan
6. Document 00 43 43 – Certificate of Compliance with Illinois Prevailing Wage Law
7. Document 00 44 00 - Substitution Sheet

SUBSTITUTIONS:

Each bidder represents that his bid is based upon the materials and equipment described in the bidding documents. Any dealer bidding an equal product must specify brand name, model number, and supply specifications of product. The Board shall be the sole judge of whether an article shall be deemed to be equal. A bidder's failure to meet the minimum specifications as listed may result in disqualification of his bid.

REJECTION OF BIDS: The bidder acknowledges the right of the College Board to reject any or all proposals and to waive informality or irregularity in any proposal received and to award each item to different bidders or all items to a single bidder. In addition, the bidder recognizes the right of the College Board to reject a proposal if the proposal is in any way incomplete or irregular. The College Board may also award, at its discretion, only certain items quoted on. The College Board also reserves the right to reject the proposal of a Bidder who has previously failed to perform properly or complete on time contracts of a similar nature, or a bid of a Bidder when investigation shows that Bidder is not in a position to perform the contract.

ACKNOWLEDGEMENT OF ADDENDA:

Signature of company official on original document shall be construed as acknowledgement of receipt of any and all addenda pertaining to this specific proposal. Identification by number of addenda and date issued should be noted on all proposals submitted. FAILURE TO ACKNOWLEDGE RECEIPT OF ADDENDA ON PROPOSAL SUBMITTED MAY RESULT IN DISQUALIFICATION OF PROPOSAL.

SAMPLES:

Bidder may be required to furnish samples upon request and without charge to the College.

BID SECURITY:

A certified check or bank draft or bid bond, made payable to McHenry County College, shall be submitted with the bid in the amount of ten (10) percent of your total bid. The bid security will be forfeited by the successful bidder in the event of the bidders failure to enter into a contract. Checks or drafts of unsuccessful bidders will be returned as soon as practicable after opening and checking the bids.

INSURANCE:

The successful bidder will be required to furnish a certificate of insurance in accordance with the General Conditions.

PERFORMANCE BONDS:

The successful bidder on this proposal must furnish a labor and material payment bond made out to McHenry County College, prepared on an approved form, as security for the faithful performance of their contract, within ten (10) days of their notification that their bid has been accepted. The surety thereon must be such surety company or companies as are authorized and licensed to transact business in the State of Illinois and have a minimum A-VI best rating. Attorneys in fact who sign bid bonds must file with each bond a certified copy of their power of attorney to sign said bonds. The payment bond shall be issued in an amount equal to one hundred percent (100%) of the contract sum. Such bonds shall be in force from the date of signing of the contract until one year after the issuing of a final certificate of payment. The cost of the bonds shall be included in the bidder's proposal.

LAWS AND ORDINANCES:

In execution of the work, the Contractor shall comply with applicable state and local laws, ordinances and regulation, the rules and regulations of the Board of Fire Underwriters, and OSHA standards.

DAMAGE AND NEGLIGENCE:

The Contractor agrees to indemnify and save harmless the College and employees from and against all loss, including costs and attorney’s fees, by reasons or liability imposed by law upon the College for damages because of bodily injury, including death at any time resulting there from, sustained by any person or persons or on account of damage to property including loss of use thereof as provided in the General Conditions and Supplementary Conditions. College shall not be responsible for damages, delays, or failure to perform on its part resulting from acts or occurrences of force majeure. “Force majeure” means any (a) act of God, landslide, lightning, earthquake, hurricane, tornado, blizzard, floods and other adverse and inclement weather conditions; (b) fire, explosion, flood, acts of a public enemy, war, blockade, insurrection, riot or civil disturbance; (c) labor dispute, strike, work slow down, picketing, primary boycotts, secondary boycotts or boycotts of any kind and nature, or work stoppages; (d) any law, order, regulation ordinance, or requirement of any government or legal body or any representative of any such government or legal body; (e) inability to secure necessary materials, equipment, parts or other components of the project as a result of transportation difficulties, fuel or energy shortages, or acts or omission of any common carriers; or (f) any other similar cause or similar event beyond the reasonable control of College.

INVESTIGATION OF BIDDERS:

The College will make any necessary investigation to determine the ability of the bidder to fulfill the proposal requirements. McHenry County College reserves the right to reject any proposal if it is determined that the bidder is not properly qualified to carry out the obligation of the contract.

PREVAILING WAGE RATE:

The successful bidder must pay not less than the prevailing hourly wage rate determined by the Illinois Department of Labor for the county where the contract is executed and the craft or type of worker needed to execute the contract. See the prevailing wage scale attached. If, during the course of work under this contract, the Department of Labor revises the prevailing rate hourly wages to be paid under this contract for any trade or occupation, Owner will notify Contractor and each Subcontractor of the changes in the prevailing rate of hourly wages. Contractor shall have the sole responsibility and duty to ensure that the revised prevailing rate of hourly wages is paid by contractor and all Subcontractors to each worker to whom a revised rate is applicable. Revisions to the prevailing wage as set forth above shall not result in an increase in the Contract Sum.

ILLINOIS STEEL PRODUCTS PROCUREMENT ACT:

To the extent permitted by law, the project will be subject to all provisions of the "Steel Products Procurement Act" (30 ILCS 565 et. seq.) as it may be amended from time to time.

OTHER:

Sex Offender Registration Requirement Notification: Illinois Compiled Statutes (730 ILCS 150 3) requires that any person who is required by law to register as a sex offender and who is either a student or an employee at an institution of higher education, must also register with the Office of Public Safety of the institution they are employed by or attending. For purposes of this act, a student or employee is defined as anyone working at or attending the institution for a period of five (5) days or an aggregate period of more than thirty (30) days during a calendar year. THIS INCLUDES PERSONS OPERATING AS OR EMPLOYED BY AN OUTSIDE CONTRACTOR AT THE INSTITUTION. Anyone meeting the above requirements is required to register within five (5) days of enrolling or becoming employed. Persons failing to register are subject to criminal prosecution.

Substance Abuse Prevention: The successful bidder must comply with the Substance Abuse Prevention on Public Works Act (Public Act 95-0635.) The Act requires that every party to a public contract and every eligible bidder have a written substance abuse prevention program in place. By signing the bid form, the bidder certifies compliance to the conditions of this Act.

Human Rights Act: The College complies with the Human Rights Act (Public Act 88-1257.) The Act requires that every party to a public contract and every eligible bidder have written sexual harassment policies as described in this Act. By signing the bid form, the bidder certifies compliance to the conditions of this Act.

Concealed Carry Act: The College has established rules and regulations in accordance with the "Illinois Firearm Concealed Carry Act." See section 00 21 00 for detailed information.

BID QUANTITIES:

The College Board will reserve the right to increase or decrease, within reasonable limits, such quantities as need requires and at the unit price stated.

BID AWARDS:

The successful contractor, and/or any contractor shall not proceed on this bid until it receives a Notice to Proceed from the college. Failure to comply is the risk of that contractor.

END OF SECTION 00 21 13

SECTION 00 41 13 - BID FORM

To: McHenry County College
8900 US Hwy 14
Crystal Lake, IL 60012

Project: University Center / Switchboard Equipment Pre-Purchase

Date: _____

Submitted by:

(Full name and address)

PART 1 - OFFER

Having examined the site and having familiarized itself with the conditions affecting the cost of the work associated with the project and with the bidding documents, Bidder hereby proposes to perform everything required and to furnish all labor, materials, necessary tools, expendable equipment, and transportation services necessary to complete in a workmanlike manner the subdivision of work stated above in accordance with the bidding documents for the following sums:

Base Bid:

We have included, attached herewith, the Bid Bond as required by the Instructions to Bidders.

The Bidder agrees to perform the work for the lump sum amount of:

TOTAL BASE BID \$ _____ (in figures)

_____ (in words)

PART 3- ACCEPTANCE

This offer shall be open to acceptance and is irrevocable for thirty (90) days from the Bid closing date.

If the bid is accepted by the Owner within the time period stated above, we will:

- A. Execute the Agreement within ten (10) days of receipt of Notice of Award.
- B. Furnish the required bonds within ten (10) days of receipt of Notice of Award in the form described in the Supplementary Conditions.
- C. Furnish the required Certificate of Insurance within ten (10) days of receipt of Notice of Award in the form and amounts described in the Supplementary Conditions.

D. Commence work as established by the written Notice to Proceed.

If this Bid is accepted within the time stated, and we fail to commence the Work or we fail to provide the required Bonds(s), the Security Deposit shall be forfeited as damages to the Owner by reason of our failures.

In the event our Bid is not accepted within the time stated above, the required security deposit shall be returned to the undersigned, in accordance with the provisions of the Instructions to Bidders; unless a mutually satisfactory arrangement is made for its retention and validity for an extended period of time.

PART 4 - CONTRACT TIME

If the Bid is accepted, we will:

- A. Complete the work in manner consistent to meet the requirements of the schedule.
- B. Contractor has examined the Schedule included in these documents and takes no exception, or records the following exceptions:

PART 5 – LIQUIDATED DAMAGES

Refer to Specification Section 01 10 00 – Summary for the Liquidated Damages provisions included in the bidding documents.

PART 6 - CONTRACTOR'S FEES FOR CHANGES IN THE WORK

Lump Sum or Time and Materials Changes: We, the undersigned bidder, agree that the following percentages for overhead and profit shall be added to costs for the net amount of work added to, or deleted from, the contract by written lump sum or time and material change orders recommended by the Architect and approved by the Owner:

- A. On Contractor's direct net cost: 15%, with a minimum fee of one hundred dollars (\$100.00).
- B. On first-tier Subcontractor's net cost: 5%, with a minimum fee of fifty dollars (\$50.00). Net cost includes all sub-subcontractors work, and excludes subcontractors (all tiers) overhead and profit amounts.

Note: Insurance, bond, and taxes are considered as job cost items and are included in the percentages listed above.

PART 7 - ADDENDA

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

Addendum #	___	Dated	_____	Addendum #	___	Dated	_____
Addendum #	___	Dated	_____	Addendum #	___	Dated	_____

PART 8 - SUBCONTRACTORS

Identify below which work will be completed by the General Contractor's own forces and which work will be completed by first tier Subcontractors. Include Subcontractors name and estimated contract amount.

Scope of Work	GC/Sub.	Name	Est. Contract Amount
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

PART 9 - BID FORM SIGNATURE(S)

The Corporate Seal of:

(Bidder – please print the full name of your Proprietorship or Corporation)

Was hereunto affixed in the presence of:

(Authorized signing officer)

(Title)

(Seal)

END OF SECTION 00 41 13

SECTION 00 43 13 – BID BOND

1.1 BID BOND INFORMATION

- A. KNOW ALL MEN BY THESE PRESENTS, THAT WE _____ as Principal, hereinafter called the Principal, and _____ corporation duly organized under the laws of the State of Illinois as Surety, are held and firmly bound unto _____ as Obligee, hereinafter called Obligee, in the sum of _____ Dollars (\$ _____) for the payment of which sum well and truly to be made, the said Principal and the said Surety, bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.
- B. WHEREAS, the Principal has submitted a bid for: _____
- C. NOW, THEREFORE, if the Obligee shall accept the bid of the Principal and the Principal shall enter into a Contract with the Obligee in accordance with the terms of such bid, and give such bond or bonds as may be specified in the bidding or Contract Documents with good and sufficient surety for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof; or in the event of the failure of the Principal to enter such Contract and give such bond or bonds, if the Principal shall pay to the Obligee the difference not to exceed the penalty hereof between the amount specified in said bid and such larger amount for which the Obligee may in good faith contract with another party to perform the Work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect.
- D. Signed and sealed this ____ day of _____, 2023.
- E. _____ (Principal) (Seal)
- F. _____ (Witness) (Title)
- G. _____ (Surety) (Seal)

END OF SECTION 00 43 13

SECTION 00 43 15 - CONTRACTOR CERTIFICATION - ATTACHMENT B

Illinois Revised Statute 1987
Chapter 38, Sections 33E-3 and 33E-4

The undersigned hereby certifies that it is not barred from bidding on this contract as a result of violation of either Section 33E-3 (bid rigging) or 33E-4 (bid rotating) of the Illinois Revised Statutes 1987, Chapter 38.

Under penalty of perjury, the undersigned Contractor certifies that this bid has not been arrived at collusively or otherwise in violation of Federal or Illinois antitrust laws.

Company Name _____

By * _____

Address _____

City/State/ZIP _____

* Must be actual signature in ink of a representative of Contractor authorized to legally commit the Contractor.

Section 33E-5(b) pertains to disclosure of information related to the terms of a bid and any bidder's responsiveness to a request for bids. Specifically, district officials or employees must not knowingly open a sealed bid at a time or place other than as specified by the district. Also, any official who knowingly discloses any information related to the terms of a sealed bid or any bidder's responsiveness to the request for bids commits a class 3 felony. This section does allow, however, that no violation occurs if any disclosure made to an interested person also is made generally available to the public. **CONSEQUENTLY, COLLEGES SHOULD BE CAUTIOUS NOT TO DISCLOSE ANY INFORMATION THAT IS NOT RELEASED TO THE PUBLIC.**

Section 33E-6 contains several provisions potentially impacting College purchasing procedures. **SPECIFICALLY, A PERSON COMMITS A CLASS 4 FELONY WHEN INFORMATION CONCERNING THE SPECIFICATIONS OF A CONTRACT IS KNOWINGLY CONVEYED TO A BIDDER OR PROSPECTIVE BIDDER OTHER THAN THROUGH THE BID INVITATION, PRE-BID CONFERENCE, OR CONTRACT SOLICITATION PROCEDURE.** Thus, once a IFB for a particular contract is released, MCC cannot respond to individual inquiries from bidders. Likewise, no information may be volunteered concerning potential Subcontractors if the contract involves subcontracting work.

END SECTION 00 43 15

SECTION 00 43 25 – SUBSTITUTION SHEET

1.1 SUBSTITUTION INFORMATION

- A. All bids shall be based upon the provisions of the proposed Contract Documents.
- B. Bidders desiring to make substitutions for "proprietary brands" specified shall list such proposed substitutions below, together with the amount to be added or deducted from the amounts of their base bids.
- C. The Owner reserves the right to reject all such substitutions, and such substitutions will not be used to determine the low bid.
- D. Complete descriptions and technical data shall accompany all proposed substitutions.
- E. Manufacturer's names and material approved by the Architect during the bidding time, but not shown in Addenda, must be listed below if said material is to be considered.

F. PRODUCT SPECIFIED & PROPOSED ADD/DEDUCT AMOUNT

G. Name of Bidder: _____

H. Date: _____

END OF SECTION 00 43 25

SECTION 00 43 29 - ATTACHMENT G – W9 FORM (new vendors only)

Form W-9 (Rev. January 2011) Department of the Treasury Internal Revenue Service	Request for Taxpayer Identification Number and Certification	Give Form to the requester. Do not send to the IRS.																																					
Print or type See Specific Instructions on page 2.	Name (as shown on your income tax return)																																						
	Business name/disregarded entity name, if different from above																																						
	Check appropriate box for federal tax classification (required): <input type="checkbox"/> Individual/sole proprietor <input type="checkbox"/> C Corporation <input type="checkbox"/> S Corporation <input type="checkbox"/> Partnership <input type="checkbox"/> Trust/estate																																						
	<input type="checkbox"/> Limited liability company. Enter the tax classification (C=C corporation, S=S corporation, P=partnership) ▶ _____																																						
	<input type="checkbox"/> Other (see instructions) ▶ _____																																						
Address (number, street, and apt. or suite no.)		Requestor's name and address (optional)																																					
City, state, and ZIP code																																							
List account number(s) here (optional)																																							
Part I Taxpayer Identification Number (TIN)																																							
Enter your TIN in the appropriate box. The TIN provided must match the name given on the "Name" line to avoid backup withholding. For individuals, this is your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the Part I instructions on page 3. For other entities, it is your employer identification number (EIN). If you do not have a number, see <i>How to get a TIN</i> on page 3.																																							
<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td colspan="2" style="text-align: center;">Social security number</td> </tr> <tr> <td style="width:20%; text-align: center;"> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td style="width:20px; height:20px;"></td><td style="width:20px; height:20px;"></td><td style="width:20px; height:20px;"></td><td style="width:20px; height:20px;"></td><td style="width:20px; height:20px;"></td></tr> </table> </td> <td style="width:20%; text-align: center;">-</td> <td style="width:20%; text-align: center;"> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td style="width:20px; height:20px;"></td><td style="width:20px; height:20px;"></td><td style="width:20px; height:20px;"></td><td style="width:20px; height:20px;"></td><td style="width:20px; height:20px;"></td></tr> </table> </td> <td style="width:20%; text-align: center;">-</td> <td style="width:20%; text-align: center;"> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td style="width:20px; height:20px;"></td><td style="width:20px; height:20px;"></td><td style="width:20px; height:20px;"></td><td style="width:20px; height:20px;"></td><td style="width:20px; height:20px;"></td></tr> </table> </td> </tr> </table>			Social security number		<table border="1" style="width:100%; border-collapse: collapse;"> <tr><td style="width:20px; height:20px;"></td><td style="width:20px; height:20px;"></td><td style="width:20px; height:20px;"></td><td style="width:20px; height:20px;"></td><td style="width:20px; height:20px;"></td></tr> </table>						-	<table border="1" style="width:100%; border-collapse: collapse;"> <tr><td style="width:20px; height:20px;"></td><td style="width:20px; height:20px;"></td><td style="width:20px; height:20px;"></td><td style="width:20px; height:20px;"></td><td style="width:20px; height:20px;"></td></tr> </table>						-	<table border="1" style="width:100%; border-collapse: collapse;"> <tr><td style="width:20px; height:20px;"></td><td style="width:20px; height:20px;"></td><td style="width:20px; height:20px;"></td><td style="width:20px; height:20px;"></td><td style="width:20px; height:20px;"></td></tr> </table>																				
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Note. If the account is in more than one name, see the chart on page 4 for guidelines on whose number to enter.																																							
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Part II Certification																																							
Under penalties of perjury, I certify that:																																							
1. The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me), and																																							
2. I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding, and																																							
3. I am a U.S. citizen or other U.S. person (defined below).																																							
Certification Instructions. You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions on page 4.																																							
Sign Here	Signature of U.S. person ▶	Date ▶																																					
General Instructions																																							
Section references are to the Internal Revenue Code unless otherwise noted.																																							
Purpose of Form																																							
A person who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) to report, for example, income paid to you, real estate transactions, mortgage interest you paid, acquisition or abandonment of secured property, cancellation of debt, or contributions you made to an IRA.																																							
Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN to the person requesting it (the requester) and, when applicable, to:																																							
1. Certify that the TIN you are giving is correct (or you are waiting for a number to be issued),																																							
2. Certify that you are not subject to backup withholding, or																																							
3. Claim exemption from backup withholding if you are a U.S. exempt payee. If applicable, you are also certifying that as a U.S. person, your allocable share of any partnership income from a U.S. trade or business is not subject to the withholding tax on foreign partners' share of effectively connected income.																																							
Note. If a requester gives you a form other than Form W-9 to request your TIN, you must use the requester's form if it is substantially similar to this Form W-9.																																							
Definition of a U.S. person. For federal tax purposes, you are considered a U.S. person if you are:																																							
<ul style="list-style-type: none"> • An individual who is a U.S. citizen or U.S. resident alien, • A partnership, corporation, company, or association created or organized in the United States or under the laws of the United States, • An estate (other than a foreign estate), or • A domestic trust (as defined in Regulations section 301.7701-7). 																																							
Special rules for partnerships. Partnerships that conduct a trade or business in the United States are generally required to pay a withholding tax on any foreign partners' share of income from such business. Further, in certain cases where a Form W-9 has not been received, a partnership is required to presume that a partner is a foreign person, and pay the withholding tax. Therefore, if you are a U.S. person that is a partner in a partnership conducting a trade or business in the United States, provide Form W-9 to the partnership to establish your U.S. status and avoid withholding on your share of partnership income.																																							
Call No. 10231X Form W-9 (Rev. 1-2011)																																							

SECTION 00 43 39 – MCC BUSINESS ENTERPRISE PROGRAM - MINORITIES, FEMALES, AND PERSONS WITH DISABILITY PARTICIPATION AND UTILIZATION PLAN

The Business Enterprise Program for Minorities, Females, and Persons with Disabilities Act (BEP) establishes certain goals for community colleges contracting with businesses that are owned and controlled by persons who are minorities (MBE), women (WBE), or persons with disabilities (DBE) (collectively, BEP certified vendor(s)).

Contract Goal to be Achieved by Vendor: This solicitation includes a specific BEP participation goal of 20% of the total dollar amount of the contract.

The BEP participation goal is applicable to all bids or offers. McHenry County College (College) will award this contract to a Vendor that meets the goal or makes good faith efforts to meet the goal. This goal is also applicable to change orders and allowances within the scope of work provided by the BEP certified vendor. If Vendor is a BEP certified vendor, the entire goal is met and no subcontracting with a BEP certified vendor is required; however, Vendor must submit a Utilization Plan indicating that the goal will be met by self-performance. Failure to complete a Utilization Plan or provide good faith effort documentation shall render the bid or offer non-responsive or not responsible and subject to rejection and/or disqualification in the College's sole discretion.

The following are guidelines for Vendor's completion of the Utilization Plan. **Please read the guidelines carefully.** A format for the Utilization Plan is included in this section. Vendor should include any additional information that will add clarity to Vendor's proposed utilization of certified BEP vendors to meet the targeted goal. The Utilization Plan must demonstrate that Vendor has either: (1) met the entire contract goal or (2) made good faith efforts towards meeting the goal. Any submission of good faith efforts by Vendor shall be considered as a request for a full or partial waiver.

To meet the College's BEP participation goals, Vendor, or Vendor's proposed Subcontractor(s), must be certified with the Business Enterprise Council as a BEP certified vendor. If Vendor or Vendor's proposed Subcontractor(s) are not BEP certified vendors but do meet the definition of MBE, WBE, or DBE companies as set forth in 30 ILCS 575/2, Vendor shall have the burden of submitting sufficient evidence of the company's ownership. The College shall have the sole discretion of whether to accept non-BEP certified vendors and applying said contracts towards its BEP participation goals.

1. If applicable where there is more than one prime vendor, the Utilization Plan should include an executed Joint Venture Agreement specifying the terms and conditions of the relationship between the parties and their relationship and responsibilities to the contract. The Joint Venture Agreement must clearly evidence that the BEP certified vendor will be responsible for a clearly defined portion of the work and that its responsibilities, risks, profits and contributions of capital, and personnel are proportionate to its ownership percentage. It must include specific details related to the parties' contributions of capital, personnel, and equipment and share of the costs of insurance and other items; the scopes to be performed by the BEP certified vendor under its supervision; and the commitment of management, supervisory personnel, and operative personnel employed by the BEP certified vendor to be dedicated to the performance of the contract. Established Joint Venture Agreements will only be credited toward BEP goal achievements for specific work performed by the BEP certified vendor. **Each party to the Joint Venture Agreement must execute the bid or offer prior to submission of the bid or offer to the College.** The contract will not be awarded to Vendor unless the College approves the Vendor's Utilization Plan and Joint Venture Agreement, if applicable.

2. **Calculating BEP Certified Vendor Participation:** The Utilization Plan documents work

anticipated to be performed, or goods/equipment provided, by all BEP certified vendors and paid for upon satisfactory completion/delivery. Only the value of payments made for the work actually performed by BEP certified vendors is counted toward the contract goal. Applicable guidelines for counting payments attributable to contract goals are summarized below:

- 2.1. The value of the work actually performed or goods/equipment provided by the BEP certified vendor shall be counted towards the goal. The entire amount of that portion of the contract that is performed by the BEP certified vendor, including supplies purchased or equipment leased by the BEP certified vendor shall be counted, except supplies purchased and equipment rented from the Prime Vendor submitting this bid or offer.
- 2.2. A vendor shall count the portion of the total dollar value of the BEP contract equal to the distinct, clearly defined portion of the work of the contract that the BEP certified vendor performs toward the goal. A vendor shall also count the dollar value of work subcontracted to other BEP certified vendors. Work performed by the non-BEP certified party shall not be counted toward the goal. **Work that a BEP certified vendor subcontracts to a non-BEP certified vendor will not count towards the goal.**
- 2.3. A Vendor shall count toward the goal 100% of its expenditures for materials and supplies required under the contract and obtained from BEP certified vendor manufacturers, regular dealers, or suppliers. A Vendor shall count toward the goal the following expenditures to BEP certified vendors that are not manufacturers, regular dealers, or suppliers:
 - 2.3.1. The fees or commissions charged for providing a bona fide service, such as professional, technical, consultant or managerial services and assistance in the procurement of essential personnel, facilities, equipment, materials or supplies required for performance of the contract, provided that the fee or commission is determined by the College to be reasonable and not excessive as compared with fees customarily allowed for similar services.
 - 2.3.2. The fees charged for delivery of materials and supplies required by the contract (but not the cost of the materials and supplies themselves) when the hauler, trucker, or delivery service is not also the manufacturer or a supplier of the materials and supplies being procured, provided that the fee is determined by the College to be reasonable and not excessive as compared with fees customarily allowed for similar services. The BEP certified vendor's trucking firm must be responsible for the management and supervision of the entire trucking operation for which it is responsible on the contract, and must itself own and operate at least one fully licensed, insured and operational truck used on the contract.
 - 2.3.3. The fees or commissions charged for providing any bonds or insurance specifically required for the performance of the contract, provided that the fee or commission is determined by the College to be reasonable and not excessive as compared with fees customarily allowed for similar services.
- 2.4. BEP certified vendors who are performing the contract as second tier subcontractors may be counted in meeting the established BEP goal for this contract as long as the Prime Vendor can provide documentation indicating the utilization of these vendors.
- 2.5. A Vendor shall count towards the goal only expenditures to firms that perform a commercially useful function in the work of the contract. A Vendor shall not count towards the goal expenditures that are not direct, necessary and related to the work of the

contract. Only the amount of services or goods that are directly attributable to the performance of the contract shall be counted. Ineligible expenditures include general office overhead or other Vendor support activities.

- 3. Good Faith Effort Procedures:** Enclosed and sealed with the Vendor's bid documents, the Vendor must submit a: (1) Utilization Plan and (2) either Letters of Intent or subcontract documents that meet or exceed the published goal. If Vendor cannot meet the stated goal, Vendor must submit documents to support the good faith efforts it undertook to meet the goal. The College has the right to reject Vendor's bid as not-responsible and/or not responsive if the College or the Business Enterprise Council determine, in either of their sole discretion, that Vendor failed to make a good faith effort to meet the MBE goals. The College may also accept and enter into a contract with a Vendor that can provide sufficient evidence of MBE, WBE or DBE status of Vendor or its proposed subcontractors and/or sub-vendors in compliance with the Illinois Business Enterprise for Minorities, Females, and Persons with Disabilities Act. If the College or the Council determine that Vendor has made good faith efforts to meet the goal, the College may award the contract provided that Vendor is otherwise eligible for award.
- 4. Contract Compliance:** Compliance with this section is an essential part of the contract. The following administrative procedures and remedies govern Vendor's compliance with the contractual obligations established by the Utilization Plan. **After approval of the Utilization Plan and award of the contract, the Utilization Plan becomes part of the contract.**

 - 4.1.** The Utilization Plan may not be amended after contract execution without the College's prior written approval. Vendor may not make changes to its contractual BEP certified vendor commitments or substitute BEP certified vendors without the College's prior written approval. The Vendor's request to substitute BEP certified vendors must state the specific reasons for the change or substitutions. Unauthorized changes or substitutions, including performing the work designated for a BEP certified vendor with Vendor's own forces, shall be a violation of the Utilization Plan and a breach of the contract, and shall be cause to terminate the contract, and/or seek other contract remedies or sanctions.
 - 4.2.** Vendor shall maintain a record of all relevant data with respect to the utilization of BEP certified vendors, including but without limitation, payroll records, invoices, canceled checks and books of account for a period of at least three years after the completion of the contract. The College shall have the right to access to these records upon 48 hours written demand. The College shall have the right to obtain from Vendor any additional data reasonably related or necessary to verify any representations by Vendor.
 - 4.3.** The College reserves the right to withhold payment to Vendor to enforce these provisions and Vendor's contractual commitments. Final payment shall not be made pursuant to the contract until Vendor submits sufficient documentation demonstrating compliance with its Utilization Plan.

UTILIZATION PLAN

The Utilization Plan and Letter of Intent must be sealed and submitted with Vendor's Bid Documents.

(Vendor) submits the following Utilization Plan as part of our bid or offer in accordance with the requirements of the BEP Program Status and Participation section of the solicitation for McHenry County College's Greenhouse Project.

Vendor submits the following statement:

- Vendor is a BEP certified firm and plans to fully meet the goal through self-performance.
- Vendor has identified BEP certified subcontractor(s) to fully meet the established goal and submits the attached executed Letter(s) of Intent; or
- Vendor has made good faith efforts towards meeting the entire goal, or a portion of the goal, and hereby requests a waiver (complete checklist below).

Vendor's designee responsible for compliance with this BEP goal:

Name:

Title:

Telephone:

Email:

BEP Utilization Plan

The following firms will be utilized to meet the goals of the BEP Program:

Name of Firm	Contract Value	Description of Work	% of Goal
Total			

DEMONSTRATION OF GOOD FAITH EFFORTS TO ACHIEVE GOAL AND REQUEST FOR WAIVER

If the BEP participation goal was not achieved, Vendors must provide documented evidence of good faith efforts to achieve the goal.

Below is a checklist of actions that will be used to evaluate a Vendor's Demonstration of Good Faith Efforts and Request for Waiver. **Please check the actions which you completed.** If any of the following actions are not completed, please attach a detailed written explanation indicating why such action was not completed. If any other efforts were made to obtain BEP participation in addition to the items listed below, attach a detailed description of such efforts. The College reserves the right to review and audit the results of the Vendor's good faith efforts.

- Utilize the Sell2Illinois website: www2.illinois.gov/cms/business to identify BEP certified vendors within the respective commodity/service codes denoted above and at a minimum email all listed vendors and solicit quotes from all vendors who express an interest via follow-up emails or telephone calls.
- Solicit through all reasonable and available means (e.g., attendance at a vendor conference, advertising and/or written notices) the interest of BEP certified vendors that have the capability to perform the work of the contract. Vendor must solicit this interest within sufficient time to allow the BEP certified vendors to respond to the solicitation. Vendor must determine with certainty if the BEP certified vendors are interested by taking appropriate steps to follow up initial solicitations and encourage them to submit a bid or proposal. Vendor must provide interested BEP certified vendors with adequate information about the plans, specifications, and requirements of the contract in a timely manner to assist them in responding promptly to the solicitation.
- Select portions of the work to be performed by BEP certified vendors in order to increase the likelihood that the goal will be achieved. This includes, where appropriate, breaking out contract work items into economically feasible units to facilitate BEP certified vendor participation, even when Vendor might otherwise prefer to perform these work items with its own forces.
- Make a portion of the work available to BEP certified vendors and selecting those portions of the work or material needs consistent with their availability, so as to facilitate BEP certified vendor participation.
- Negotiate in good faith with interested BEP certified vendors. Evidence of such negotiation must include the names, addresses, email addresses, and telephone numbers of BEP certified vendors that were considered and an explanation as to why an agreement could not be reached.
- Thoroughly investigate the capabilities of BEP certified vendors and not reject them as unqualified without documented reasons.
- Make efforts to assist interested BEP certified vendors in obtaining lines of credit or insurance as required by the College.
- Make efforts to assist interested BEP certified vendors in obtaining necessary equipment, supplies, materials, or related assistance or services.

GOOD FAITH EFFORTS CONTACT LOG

Use this Log to document **all** contacts and responses (telephone, e-mail, fax, etc.) regarding the solicitation of BEP certified vendors within the specific scope of work selected. It is not necessary to show contacts with BEP certified vendors who are identified on the Letter(s) of Intent. Keep and submit copies of all emails sent and received from prospective BEP vendors. Include a copy of the commodity list or scope of work you solicited prospective BEP vendors to perform. Duplicate this log as necessary; do not limit your contacts to the number of spaces shown.

Name of Certified BEP Vendor	Date	Method of Contact	Scope of Work Solicited	Reason Agreement Was Not Reached

END SECTION 00 43 39

**00 43 43 – CERTIFICATE OF COMPLIANCE WITH THE ILLINOIS PREVAILING WAGE LAW
ATTACHMENT C**

Every eligible bidder and contractor/vendor shall comply with the employment section of Public Contracts provision of the Prevailing Wage Act, 820 ILCS 130/1, as amended.

McHenry County College District 528 8900 U.S. Highway 14 Crystal Lake, IL 60012		
INSTRUCTIONS TO BIDDERS AND GENERAL CONDITIONS <u>Certificate of Compliance with the Illinois Prevailing Wage Law</u>		
This letter is to certify that _____ (name of company)		
is in compliance with Section 39A9 of Chapter 48 of the Illinois Revised Statutes and all amendments pertaining to the payment of prevailing wages as established by the department of labor, to all laborers, workers, and mechanics performing work under this agreement/contract.		
Company street address _____		
City _____		
County _____ State _____ Zip _____		
Contact name _____ contact phone _____		
Sworn and subscribed to me on this _____ day of _____, 20____; before me, notary public appointed in _____ County for the state of Illinois.		
_____ Signature of Notary		_____ printed name
_____ Seal		
_____ Commission expiration date	_____ city of residence	_____ county of residence

END SECTION 00 43 43

MCHENRY COUNTY COLLEGE
University Center / Switchboard Equipment Pre-
Purchase
DKA Project No.: 22-050

CERTIFICATE OF COMPLIANCE
Section 00 43 43
Page 1 of 1

SECTION 00 73 43 - PREVAILING WAGE REQUIREMENTS

1.1 REQUIREMENTS

- A. Each Contractor shall comply with requirements of "An Act regulating wages of laborers, mechanics and other workmen employed in any public works by the State, County, City or by any public body or any political subdivision or by anyone under contract for public works".
- B. If, during the course of work under this contract, the Department of Labor revises the prevailing rate hourly wages to be paid under this contract for any trade or occupation, Owner, will notify Contractor and each Subcontractor of the changes in the prevailing rate of hourly wages. Contractor shall have the sole responsibility and duty to ensure that the revised prevailing rate of hourly wages is paid by Contractor and all Subcontractors to each worker to whom a revised rate is applicable. Revisions to the prevailing wage as set forth above shall not result in an increase in the Contract Sum.

1.2 ACT AND ORDINANCES

- A. "An Act requiring wages of laborers, mechanics and other workmen employed in any public works by the State, County, City of any public body or any political subdivision or by anyone under contract for public works . . . ", Illinois Revised Statutes, 1981, Chapter 48, Sections 39s1 through 39s.
 - 1. A copy of the Illinois Department of Labor Prevailing Wages for McHenry County is included herein. The current rates are effective as of August 15, 2023 on IDOL website.

McHenry County Prevailing Wage Rates posted on 8/15/2023

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	ALL		48.90	49.90	1.5	1.5	2.0	2.0	15.28	18.00	0.00	0.91		0.00	0.00
ASBESTOS ABT-MEC	All	BLD		40.59	43.84	1.5	1.5	2.0	2.0	15.22	15.16	0.00	0.88		2.80	5.60
BOILERMAKER	All	BLD		54.71	59.63	2.0	2.0	2.0	2.0	6.97	25.06	0.00	2.83		0.00	0.00
BRICK MASON	All	BLD		50.81	55.89	1.5	1.5	2.0	2.0	12.50	23.01	0.00	1.16	0.00	0.00	0.00
CARPENTER	All	ALL		53.51	55.51	1.5	1.5	2.0	2.0	12.29	25.77	1.20	0.81		0.00	0.00
CEMENT MASON	All	ALL		50.70	52.70	2.0	1.5	2.0	2.0	11.89	27.82	0.00	0.80	0.00	0.00	0.00
CERAMIC TILE FINISHER	All	BLD		45.62	45.62	1.5	1.5	2.0	2.0	12.75	15.64	0.00	1.04	0.00	0.00	0.00
CERAMIC TILE LAYER	All	BLD		53.14	58.14	1.5	1.5	2.0	2.0	12.75	19.41	0.00	1.12	0.00	0.00	0.00
COMMUNICATION TECHNICIAN	All	BLD		44.56	46.96	1.5	1.5	2.0	2.0	14.08	17.14	0.00	0.89	0.00	0.00	0.00
ELECTRIC PWR EQMT OP	All	ALL		49.22	67.16	1.5	1.5	2.0	2.0	7.00	13.79	0.00	1.47	1.48	0.00	0.00
ELECTRIC PWR GRNDMAN	All	ALL		37.81	67.16	1.5	1.5	2.0	2.0	7.00	10.58	0.00	1.14	1.13	0.00	0.00
ELECTRIC PWR LINEMAN	All	ALL		59.17	67.16	1.5	1.5	2.0	2.0	7.00	16.57	0.00	1.77	1.78	0.00	0.00
ELECTRIC PWR TRK DRV	All	ALL		39.19	67.16	1.5	1.5	2.0	2.0	7.00	10.98	0.00	1.17	1.18	0.00	0.00
ELECTRICIAN	All	ALL		54.61	59.01	1.5	1.5	2.0	2.0	16.24	21.75	0.00	1.64	0.00	0.00	0.00
ELEVATOR CONSTRUCTOR	All	BLD		65.12	73.26	2.0	2.0	2.0	2.0	16.08	20.56	5.20	0.70		0.00	0.00
FENCE ERECTOR	E	ALL		48.48	50.48	1.5	1.5	2.0	2.0	13.68	18.32	0.00	0.75	0.00	0.00	0.00
FENCE ERECTOR	S	ALL		48.83	52.74	2.0	2.0	2.0	2.0	13.31	25.25	0.00	1.28		0.00	0.00
GLAZIER	All	BLD		49.75	51.25	1.5	2.0	2.0	2.0	15.44	25.36	0.00	2.07	0.00	0.00	0.00
HEAT/FROST INSULATOR	All	BLD		54.12	57.37	1.5	1.5	2.0	2.0	15.22	17.86	0.00	0.88		4.15	8.30
IRON WORKER	E	ALL		57.00	59.00	2.0	2.0	2.0	2.0	17.05	25.56	0.00	0.49		0.00	0.00
IRON WORKER	S	ALL		48.83	52.74	2.0	2.0	2.0	2.0	13.31	25.25	0.00	1.28		0.00	0.00
IRON WORKER	W	ALL		45.18	50.60	2.0	2.0	2.0	2.0	13.06	32.22	0.00	1.80	0.00	0.00	0.00
LABORER	All	ALL		48.90	49.65	1.5	1.5	2.0	2.0	15.28	18.00	0.00	0.91		0.00	0.00
LATHER	All	ALL		53.51	55.51	1.5	1.5	2.0	2.0	12.29	25.77	1.20	0.81		0.00	0.00
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	ALL		38.75	52.46	1.5	1.5	2.0	2.0	12.50	20.95	0.00	0.66	0.00	0.00	0.00

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MARBLE SETTER	All	BLD		49.96	54.96	1.5	1.5	2.0	2.0	12.50	22.31	0.00	0.85	0.00	0.00	0.00
MATERIAL TESTER I	All	ALL		38.90		1.5	1.5	2.0	2.0	15.28	18.00	0.00	0.91		0.00	0.00
MATERIALS TESTER II	All	ALL		43.90		1.5	1.5	2.0	2.0	15.28	18.00	0.00	0.91		0.00	0.00
MILLWRIGHT	All	ALL		53.51	55.51	1.5	1.5	2.0	2.0	12.29	25.77	1.20	0.81		0.00	0.00
OPERATING ENGINEER	All	BLD	1	56.60	60.60	2.0	2.0	2.0	2.0	22.95	20.05	2.00	2.70		0.00	0.00
OPERATING ENGINEER	All	BLD	2	55.30	60.60	2.0	2.0	2.0	2.0	22.95	20.05	2.00	2.70		0.00	0.00
OPERATING ENGINEER	All	BLD	3	52.75	60.60	2.0	2.0	2.0	2.0	22.95	20.05	2.00	2.70		0.00	0.00
OPERATING ENGINEER	All	BLD	4	51.00	60.60	2.0	2.0	2.0	2.0	22.95	20.05	2.00	2.70		0.00	0.00
OPERATING ENGINEER	All	BLD	5	60.35	60.60	2.0	2.0	2.0	2.0	22.95	20.05	2.00	2.70		0.00	0.00
OPERATING ENGINEER	All	BLD	6	57.60	60.60	2.0	2.0	2.0	2.0	22.95	20.05	2.00	2.70		0.00	0.00
OPERATING ENGINEER	All	BLD	7	59.60	60.60	2.0	2.0	2.0	2.0	22.95	20.05	2.00	2.70		0.00	0.00
OPERATING ENGINEER	All	FLT		41.00	41.00	1.5	1.5	2.0	2.0	20.90	17.85	2.00	2.15		0.00	0.00
OPERATING ENGINEER	All	HWY	1	54.80	58.80	1.5	1.5	2.0	2.0	22.95	20.05	2.00	2.70		0.00	0.00
OPERATING ENGINEER	All	HWY	2	54.25	58.80	1.5	1.5	2.0	2.0	22.95	20.05	2.00	2.70		0.00	0.00
OPERATING ENGINEER	All	HWY	3	52.20	58.80	1.5	1.5	2.0	2.0	22.95	20.05	2.00	2.70		0.00	0.00
OPERATING ENGINEER	All	HWY	4	50.80	58.80	1.5	1.5	2.0	2.0	22.95	20.05	2.00	2.70		0.00	0.00
OPERATING ENGINEER	All	HWY	5	49.60	58.80	1.5	1.5	2.0	2.0	22.95	20.05	2.00	2.70		0.00	0.00
OPERATING ENGINEER	All	HWY	6	57.80	58.80	1.5	1.5	2.0	2.0	22.95	20.05	2.00	2.70		0.00	0.00
OPERATING ENGINEER	All	HWY	7	55.80	58.80	1.5	1.5	2.0	2.0	22.95	20.05	2.00	2.70		0.00	0.00
ORNAMENTAL IRON WORKER	E	ALL		55.01	57.51	2.0	2.0	2.0	2.0	14.23	26.00	0.00	2.00	0.00	0.00	0.00
ORNAMENTAL IRON WORKER	S	ALL		48.83	52.74	2.0	2.0	2.0	2.0	13.31	25.25	0.00	1.28		0.00	0.00
PAINTER	All	ALL		51.55	53.55	1.5	1.5	1.5	2.0	17.98	7.15	0.00	1.55	0.00	0.00	0.00
PAINTER - SIGNS	All	BLD		41.55	46.67	1.5	1.5	2.0	2.0	3.04	3.90	0.00	0.00	0.00	0.00	0.00
PILEDRIVER	All	ALL		53.51	55.51	1.5	1.5	2.0	2.0	12.29	25.77	1.20	0.81		0.00	0.00
PIPEFITTER	All	BLD		55.00	58.00	1.5	1.5	2.0	2.0	12.65	22.85	0.00	3.12	0.00	0.00	0.00
PLASTERER	All	BLD		48.75	51.68	1.5	1.5	2.0	2.0	17.33	20.33	0.00	1.15	0.00	0.00	0.00
PLUMBER	All	BLD		56.80	60.20	1.5	1.5	2.0	2.0	17.00	17.29	0.00	1.73		0.00	0.00
ROOFER	All	BLD		49.00	54.00	1.5	1.5	2.0	2.0	11.83	15.56	0.00	0.99	0.00	0.00	0.00
SHEETMETAL WORKER	All	BLD		54.25	56.96	1.5	1.5	2.0	2.0	13.60	19.43	0.00	1.59	2.62	0.00	0.00

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SPRINKLER FITTER	All	BLD		56.70	59.45	1.5	1.5	2.0	2.0	14.45	18.70	0.00	0.75	0.00	0.00	0.00
STEEL ERECTOR	E	ALL		57.00	59.00	2.0	2.0	2.0	2.0	17.05	25.56	0.00	0.49	0.00	0.00	0.00
STEEL ERECTOR	S	ALL		48.83	52.74	2.0	2.0	2.0	2.0	13.31	25.25	0.00	1.28		0.00	0.00
STONE MASON	All	BLD		50.81	55.89	1.5	1.5	2.0	2.0	12.50	23.01	0.00	1.16	0.00	0.00	0.00
TERRAZZO FINISHER	All	BLD		46.94	46.94	1.5	1.5	2.0	2.0	12.75	17.73	0.00	1.07	0.00	0.00	0.00
TERRAZZO MECHANIC	All	BLD		50.85	54.35	1.5	1.5	2.0	2.0	12.75	19.12	0.00	1.10	0.00	0.00	0.00
TRAFFIC SAFETY WORKER I	All	HWY		40.10	41.70	1.5	1.5	2.0	2.0	10.60	9.35	0.00	1.00	0.00	0.00	0.00
TRAFFIC SAFETY WORKER II	ALL	HWY		41.10	42.70	1.5	1.5	2.0	2.0	10.60	9.35	0.00	1.00	0.00	0.00	0.00
TRUCK DRIVER	All	ALL	1	43.54	44.09	1.5	1.5	2.0	2.0	12.40	12.50	0.00	0.15	0.00	0.00	0.00
TRUCK DRIVER	All	ALL	2	43.69	44.09	1.5	1.5	2.0	2.0	12.40	12.50	0.00	0.15	0.00	0.00	0.00
TRUCK DRIVER	All	ALL	3	43.89	44.09	1.5	1.5	2.0	2.0	12.40	12.50	0.00	0.15	0.00	0.00	0.00
TRUCK DRIVER	All	ALL	4	44.09	44.09	1.5	1.5	2.0	2.0	12.40	12.50	0.00	0.15	0.00	0.00	0.00
TUCKPOINTER	All	BLD		50.53	51.53	1.5	1.5	2.0	2.0	9.55	21.72	0.00	1.11	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 MCHENRY COUNTY

FENCE ERECTOR (EAST) - That part of the county East and Northeast of a line following Route 31 North to Route 14, northwest to Route 47 north to the Wisconsin State Line.

IRONWORKERS (EAST) - That part of the county East of Rts. 47 and 14.

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IRONWORKERS (SOUTH) - That part of the county South of Route 14 and East of Route 47.

IRONWORKERS (WEST) - That part of the county West of Route 47.

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.

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

The grouting, cleaning, and polishing of all classes of tile, whether for interior or exterior purposes, all burned, glazed or unglazed products; all composition materials, granite tiles, warning detectable tiles, cement tiles, epoxy composite materials, pavers, glass, mosaics, fiberglass, and all substitute materials, for tile made in tile-like units; all mixtures in tile like form of cement, metals, and other materials that are for and intended for use as a finished floor surface, stair treads, promenade roofs, walks, walls, ceilings, swimming pools, and all other places where tile is to form a finished interior or exterior. The mixing of all setting mortars including but not limited to thin-set mortars, epoxies, wall mud, and any other sand and cement mixtures or adhesives when used in the preparation, installation, repair, or maintenance of tile and/or similar materials. The handling and unloading of all sand, cement, lime, tile, fixtures, equipment, adhesives, or any other materials to be used in the preparation, installation, repair, or maintenance of tile and/or similar materials. Ceramic Tile Finishers shall fill all joints and voids regardless of method on all tile work, particularly and especially after installation of said tile work. Application of any and all protective coverings to all types of tile installations including, but not be limited to, all soap compounds, paper products, tapes, and all polyethylene coverings, plywood, masonite, cardboard, and any new type of products that may be used to protect tile installations, Blastrac equipment, and all floor scarifying equipment used in preparing floors to receive tile. The clean up and removal of all waste and materials. All demolition of existing tile floors and walls to be re-tiled.

COMMUNICATIONS TECHNICIAN

Construction, installation, maintenance and removal of telecommunication facilities (voice, sound, data and video), telephone, security systems, fire alarm systems that are a component of a multiplex system and share a common cable, and data inside wire, interconnect, terminal equipment, central offices, PABX and equipment, micro waves, V-SAT, bypass, CATV, WAN (wide area

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network), LAN (local area networks), and ISDN (integrated system digital network), pulling of wire in raceways, but not the installation of raceways.

MARBLE FINISHER

Loading and unloading trucks, distribution of all materials (all stone, sand, etc.), stocking of floors with material, performing all rigging for heavy work, the handling of all material that may be needed for the installation of such materials, building of scaffolding, polishing if needed, patching, waxing of material if damaged, pointing up, caulking, grouting and cleaning of marble, holding water on diamond or Carborundum blade or saw for setters cutting, use of tub saw or any other saw needed for preparation of material, drilling of holes for wires that anchor material set by setters, mixing up of molding plaster for installation of material, mixing up thin set for the installation of material, mixing up of sand to cement for the installation of material and such other work as may be required in helping a Marble Setter in the handling of all material in the erection or installation of interior marble, slate, travertine, art marble, serpentine, alberene stone, blue stone, granite and other stones (meaning as to stone any foreign or domestic materials as are specified and used in building interiors and exteriors and customarily known as stone in the trade), carrara, sanionyx, vitrolite and similar opaque glass and the laying of all marble tile, terrazzo tile, slate tile and precast tile, steps, risers treads, base, or any other materials that may be used as substitutes for any of the aforementioned materials and which are used on interior and exterior which are installed in a similar manner.

MATERIAL TESTER I: Hand coring and drilling for testing of materials; field inspection of uncured concrete and asphalt.

MATERIAL TESTER II: Field inspection of welds, structural steel, fireproofing, masonry, soil, facade, reinforcing steel, formwork, cured concrete, and concrete and asphalt batch plants; adjusting proportions of bituminous mixtures.

OPERATING ENGINEER - BUILDING

Class 1. Asphalt Plant; Asphalt Spreader; Autograde; Backhoes with Caisson Attachment; Batch Plant; Benoto (requires Two Engineers); Boiler and Throttle Valve; Caisson Rigs; Central Redi-Mix Plant; Combination Back Hoe Front End-loader Machine; Compressor and Throttle Valve; Concrete Breaker (Truck Mounted); Concrete Conveyor; Concrete Conveyor (Truck Mounted); Concrete Paver Over 27E cu. ft; Concrete Paver 27E cu. ft. and Under; Concrete Placer; Concrete Placing Boom; Concrete Pump (Truck Mounted); Concrete Tower; Cranes, All; Cranes, Hammerhead; Cranes, (GCI and similar Type); Creter Crane; Spider Crane; Crusher, Stone, etc.; Derricks, All; Derricks, Traveling; Formless Curb and Gutter Machine; Grader, Elevating; Grouting Machines; Heavy Duty Self-Propelled Transporter or Prime Mover; Highlift Shovels or Front Endloader 2-1/4 yd. and over; Hoists, Elevators, outside type rack and pinion and similar machines; Hoists, One, Two and Three Drum; Hoists, Two Tugger One Floor; Hydraulic Backhoes; Hydraulic Boom Trucks; Hydro Vac (and similar equipment); Locomotives, All; Motor Patrol; Lubrication Technician; Manipulators; Pile Drivers and Skid Rig; Post Hole Digger; Pre-Stress Machine; Pump Cretes Dual Ram; Pump Cretes: Squeeze Cretes-Screw Type Pumps; Gypsum Bulker and Pump; Raised and Blind Hole Drill; Roto Mill Grinder; Scoops - Tractor Drawn; Slip-Form Paver; Straddle Buggies; Operation of Tie Back Machine; Tournapull; Tractor with Boom and Side Boom; Trenching Machines.

Class 2. Boilers; Broom, All Power Propelled; Bulldozers; Concrete Mixer (Two Bag and Over); Conveyor, Portable; Forklift Trucks; Highlift Shovels or Front Endloaders under 2-1/4 yd.; Hoists, Automatic; Hoists, Inside Elevators; Hoists, Sewer Dragging Machine; Hoists, Tugger Single Drum; Laser Screed; Rock Drill (Self-Propelled); Rock Drill (Truck Mounted); Rollers, All; Steam Generators;

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Tractors, All; Tractor Drawn Vibratory Roller; Winch Trucks with "A" Frame.

Class 3. Air Compressor; Combination Small Equipment Operator; Generators; Heaters, Mechanical; Hoists, Inside Elevators (remodeling or renovation work); Hydraulic Power Units (Pile Driving, Extracting, and Drilling); Pumps, over 3" (1 to 3 not to exceed a total of 300 ft.); Low Boys; Pumps, Well Points; Welding Machines (2 through 5); Winches, 4 Small Electric Drill Winches.

Class 4. Bobcats and/or other Skid Steer Loaders; Oilers; and Brick Forklift.

Class 5. Assistant Craft Foreman.

Class 6. Gradall.

Class 7. Mechanics; Welders.

OPERATING ENGINEERS - HIGHWAY CONSTRUCTION

Class 1. Asphalt Plant; Asphalt Heater and Planer Combination; Asphalt Heater Scarfire; Asphalt Spreader; Autograder/GOMACO or other similar type machines; ABG Paver; Backhoes with Caisson Attachment; Ballast Regulator; Belt Loader; Caisson Rigs; Car Dumper; Central Redi-Mix Plant; Combination Backhoe Front Endloader Machine, (1 cu. yd. Backhoe Bucket or over or with attachments); Concrete Breaker (Truck Mounted); Concrete Conveyor; Concrete Paver over 27E cu. ft.; Concrete Placer; Concrete Tube Float; Cranes, all attachments; Cranes, Tower Cranes of all types: Creter Crane; Spider Crane; Crusher, Stone, etc.; Derricks, All; Derrick Boats; Derricks, Traveling; Dredges; Elevators, Outside type Rack & Pinion and Similar Machines; Formless Curb and Gutter Machine; Grader, Elevating; Grader, Motor Grader, Motor Patrol, Auto Patrol, Form Grader, Pull Grader, Subgrader; Guard Rail Post Driver Truck Mounted; Hoists, One, Two and Three Drum; Heavy Duty Self-Propelled Transporter or Prime Mover; Hydraulic Backhoes; Backhoes with shear attachments up to 40' of boom reach; Lubrication Technician; Manipulators; Mucking Machine; Pile Drivers and Skid Rig; Pre-Stress Machine; Pump Cretes Dual Ram; Rock Drill - Crawler or Skid Rig; Rock Drill - Truck Mounted; Rock/Track Tamper; Roto Mill Grinder; Slip-Form Paver; Snow Melters; Soil Test Drill Rig (Truck Mounted); Straddle Buggies; Hydraulic Telescoping Form (Tunnel); Operation of Tieback Machine; Tractor Drawn Belt Loader; Tractor Drawn Belt Loader (with attached pusher - two engineers); Tractor with Boom; Tractaire with Attachments; Traffic Barrier Transfer Machine; Trenching; Truck Mounted Concrete Pump with Boom; Raised or Blind Hole Drills (Tunnel Shaft); Underground Boring and/or Mining Machines 5 ft. in diameter and over tunnel, etc; Underground Boring and/or Mining Machines under 5 ft. in diameter; Wheel Excavator; Widener (APSCO).

Class 2. Batch Plant; Bituminous Mixer; Boiler and Throttle Valve; Bulldozers; Car Loader Trailing Conveyors; Combination Backhoe Front Endloader Machine (Less than 1 cu. yd. Backhoe Bucket or over or with attachments); Compressor and Throttle Valve; Compressor, Common Receiver (3); Concrete Breaker or Hydro Hammer; Concrete Grinding Machine; Concrete Mixer or Paver 7S Series to and including 27 cu. ft.; Concrete Spreader; Concrete Curing Machine, Burlap Machine, Belting Machine and Sealing Machine; Concrete Wheel Saw; Conveyor Muck Cars (Haglund or Similar Type); Drills, All; Finishing Machine - Concrete; Highlift Shovels or Front Endloader; Hoist - Sewer Dragging Machine; Hydraulic Boom Trucks (All Attachments); Hydro-Blaster; Hydro Excavating (excluding hose work); Laser Screed; All Locomotives, Dinky; Off-Road Hauling Units (including articulating) Non Self-Loading Ejection Dump; Pump Cretes: Squeeze Cretes - Screw Type Pumps, Gypsum Bulker and Pump; Roller, Asphalt; Rotary Snow Plows; Rototiller, Seaman, etc., self-propelled; Self-Propelled Compactor; Spreader - Chip - Stone, etc.; Scraper - Single/Twin

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Engine/Push and Pull; Scraper - Prime Mover in Tandem (Regardless of Size); Tractors pulling attachments, Sheeps Foot, Disc, Compactor, etc.; Tug Boats.

Class 3. Boilers; Brooms, All Power Propelled; Cement Supply Tender; Compressor, Common Receiver (2); Concrete Mixer (Two Bag and Over); Conveyor, Portable; Farm-Type Tractors Used for Mowing, Seeding, etc.; Forklift Trucks; Grouting Machine; Hoists, Automatic; Hoists, All Elevators; Hoists, Tugger Single Drum; Jeep Diggers; Low Boys; Pipe Jacking Machines; Post-Hole Digger; Power Saw, Concrete Power Driven; Pug Mills; Rollers, other than Asphalt; Seed and Straw Blower; Steam Generators; Stump Machine; Winch Trucks with "A" Frame; Work Boats; Tamper-Form-Motor Driven.

Class 4. Air Compressor; Combination - Small Equipment Operator; Directional Boring Machine; Generators; Heaters, Mechanical; Hydraulic Power Unit (Pile Driving, Extracting, or Drilling); Light Plants, All (1 through 5); Pumps, over 3" (1 to 3 not to exceed a total of 300 ft.); Pumps, Well Points; Vacuum Trucks (excluding hose work); Welding Machines (2 through 5); Winches, 4 Small Electric Drill Winches.

Class 5. SkidSteer Loader (all); Brick Forklifts; Oilers.

Class 6. Field Mechanics and Field Welders

Class 7. Dowell Machine with Air Compressor; Gradall and machines of like nature.

OPERATING ENGINEERS - FLOATING

Diver. Diver Wet Tender, Diver Tender, ROV Pilot, ROV Tender

TRAFFIC SAFETY Worker I

Traffic Safety Worker I - work associated with the delivery, installation, pick-up and servicing of safety devices during periods of roadway construction, including such work as set-up and maintenance of barricades, barrier wall reflectors, drums, cones, delineators, signs, crash attenuators, glare screen and other such items, and the layout and application or removal of conflicting and/or temporary roadway markings utilized to control traffic in construction zones, as well as flagging for these operations.

TRAFFIC SAFETY WORKER II

Work associated with the installation and removal of permanent pavement markings and/or pavement markers including both installations performed by hand and installations performed by truck.

TRUCK DRIVER - BUILDING, HEAVY AND HIGHWAY CONSTRUCTION

Class 1. Two or three Axle Trucks. A-frame Truck when used for transportation purposes; Air Compressors and Welding Machines, including those pulled by cars, pick-up trucks and tractors; Ambulances; Batch Gate Lockers; Batch Hopperman; Car and Truck Washers; Carry-alls; Fork Lifts and Hoisters; Helpers; Mechanics Helpers and Greasers; Oil Distributors 2-man operation; Pavement Breakers; Pole Trailer, up to 40 feet; Power Mower Tractors; Self-propelled Chip Spreader; Skipman; Slurry Trucks, 2-man operation; Slurry Truck Conveyor Operation, 2 or 3 man; Teamsters; Unskilled Dumpman; and Truck Drivers

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hauling warning lights, barricades, and portable toilets on the job site.

Class 2. Four axle trucks; Dump Crets and Adgetors under 7 yards; Dumpsters, Track Trucks, Euclids, Hug Bottom Dump Turnapulls or Turnatrailers when pulling other than self-loading equipment or similar equipment under 16 cubic yards; Mixer Trucks under 7 yards; Ready-mix Plant Hopper Operator, and Winch Trucks, 2 Axles.

Class 3. Five axle trucks; Dump Crets and Adgetors 7 yards and over; Dumpsters, Track Trucks, Euclids, Hug Bottom Dump Turnatrailers or turnapulls when pulling other than self-loading equipment or similar equipment over 16 cubic yards; Explosives and/or Fission Material Trucks; Mixer Trucks 7 yards or over; Mobile Cranes while in transit; Oil Distributors, 1-man operation; Pole Trailer, over 40 feet; Pole and Expandable Trailers hauling material over 50 feet long; Slurry trucks, 1-man operation; Winch trucks, 3 axles or more; Mechanic--Truck Welder and Truck Painter.

Class 4. Six axle trucks; Dual-purpose vehicles, such as mounted crane trucks with hoist and accessories; Foreman; Master Mechanic; Self-loading equipment like P.B. and trucks with scoops on the front.

TERRAZZO FINISHER

The handling of sand, cement, marble chips, and all other materials that may be used by the Mosaic Terrazzo Mechanic, and the mixing, grinding, grouting, cleaning and sealing of all Marble, Mosaic, and Terrazzo work, floors, base, stairs, and wainscoting by hand or machine, and in addition, assisting and aiding Marble, Masonic, and Terrazzo Mechanics.

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 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.

MATERIAL TESTER & MATERIAL TESTER/INSPECTOR I AND II

Notwithstanding the difference in the classification title, the classification entitled "Material Tester I" involves the same job duties as the classification entitled "Material Tester/Inspector I". Likewise, the classification entitled "Material Tester II" involves the same job duties as the classification entitled "Material Tester/Inspector II".

McHenry County Prevailing Wage Rates posted on 8/15/2023

SECTION 01 10 00 - SUMMARY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section Includes:

1. Project information.
2. Work covered by Contract Documents.
3. Access to site.
4. Work restrictions.
5. Specification and drawing conventions.
6. Miscellaneous provisions.

- B. Related Requirements:

1. Section 01 50 00 "Temporary Facilities and Controls" for limitations and procedures governing temporary use of Owner's facilities.

1.3 PROJECT INFORMATION

- A. Project Identification: University Center / Switchboard Equipment Pre-Purchase

1. Project Location: McHenry County College, University Center, 222 E. Church Street, Woodstock, IL 60098

- B. Owner: The Board of Trustees, McHenry County College.

1. Owner's Representative: Mr. Dave Dammon, Director of Facilities

- C. Architect: Demonica Kemper Architects, LLC.

1.4 WORK COVERED BY CONTRACT DOCUMENTS

- A. The Work of Project is defined by the Contract Documents.

- B. Type of Contract:

1. Project will be constructed under a single prime contract.

1.5 ACCESS TO SITE

- A. General: Coordinate delivery of the fabricated equipment to the job site on or before the Date of Substantial Completion, indicated below.

1.6 WORK RESTRICTIONS

- A. Date of Commencement: Fabrication may commence on or after September 29, 2023, or after Award of Contract, whichever is first.
- B. Date of Substantial Completion: Equipment must be fabricated completely and delivered to the job site ready for turnover to the Owner and installation by the General Contractor on or before June 14, 2024.
- C. Liquidated Damages: The parties agree that time is of the essence of this Agreement. If the Contractor fails to achieve Substantial Completion of the Work by the Substantial Completion date(s) established in the Contract Documents and/or as established in the approved construction schedules, as may be adjusted by extensions of time contained in fully-executed Change Orders, if any (the "Scheduled Date(s) of Substantial Completion"), the Contractor shall be liable to and shall pay the Owner an amount of liquidated delay damages per calendar day for each and every such day between the Scheduled Date(s) of Substantial Completion and the actual date(s) of Substantial Completion, and the Owner may set off and deduct such amounts from payments due, or which may later become due, to the Contractor. At the Owner's option, the amount of liquidated delay damages applicable to this Section may be established elsewhere in the Contract Documents.

The parties stipulate and agree that this provision is fair and reasonable, and the per day rate established in the Contract Documents is fair and reasonable, considering the nature of the harm that may be incurred by the Owner as a result of such delay, and the difficulty or impossibility of ascertaining, calculating, and/or proving the actual damages resulting from such delay. The parties stipulate and agree that this Section is a valid and enforceable liquidated delay damages clause, and is not a penalty. The liquidated damages clause contained in the contract documents shall be Owner's sole and exclusive remedy against Contractor for delay.

- 1. Liquidated Damages shall be in the amount of \$1,000.00 per calendar day.

1.7 SPECIFICATION AND DRAWING CONVENTIONS

- A. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:
 - 1. Imperative mood and streamlined language are generally used in the Specifications. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase.
 - 2. Specification requirements are to be performed by Contractor unless specifically stated otherwise.
- B. Division 01 General Requirements: Requirements of Sections in Division 01 apply to the Work of all Sections in the Specifications.

- C. Drawing Coordination: Requirements for materials and products identified on Drawings are described in detail in the Specifications. One or more of the following are used on Drawings to identify materials and products:
1. Terminology: Materials and products are identified by the typical generic terms used in the individual Specifications Sections.
 2. Abbreviations: Materials and products are identified by abbreviations published as part of the U.S. National CAD Standard and scheduled on Drawings.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 10 00

SECTION 01 26 00 - CONTRACT MODIFICATION PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for handling and processing Contract modifications.
- B. Related Requirements:
 - 1. Section 01 25 00 "Substitution Procedures" for administrative procedures for handling requests for substitutions made after the Contract award.

1.3 MINOR CHANGES IN THE WORK

- A. Architect will issue supplemental instructions authorizing minor changes in the Work, not involving adjustment to the Contract Sum or the Contract Time, on AIA Document G710, "Architect's Supplemental Instructions" or similar form

1.4 PROPOSAL REQUESTS

- A. Owner-Initiated Proposal Requests: Architect will issue a detailed description of proposed changes in the Work that may require adjustment to the Contract Sum or the Contract Time. If necessary, the description will include supplemental or revised Drawings and Specifications.
 - 1. Work Change Proposal Requests issued by Architect are not instructions either to stop work in progress or to execute the proposed change.
 - 2. Within time specified in Proposal Request after receipt of Proposal Request, submit a quotation estimating cost adjustments to the Contract Sum and the Contract Time necessary to execute the change.
 - a. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
 - b. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
 - c. Include costs of labor and supervision directly attributable to the change.
 - d. Include an updated Contractor's construction schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.

- e. Quotation Form: Use CSI Form 13.6D, "Proposal Worksheet Summary," and Form 13.6C, "Proposal Worksheet Detail." or similar forms acceptable to Architect.
- B. Contractor-Initiated Proposals: If latent or changed conditions require modifications to the Contract, Contractor may initiate a claim by submitting a request for a change to Architect.
 - 1. Include a statement outlining reasons for the change and the effect of the change on the Work. Provide a complete description of the proposed change. Indicate the effect of the proposed change on the Contract Sum and the Contract Time.
 - 2. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
 - 3. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
 - 4. Include costs of labor and supervision directly attributable to the change.
 - 5. Include an updated Contractor's construction schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
 - 6. Comply with requirements in Section 01 25 00 "Substitution Procedures" if the proposed change requires substitution of one product or system for product or system specified.
 - 7. Proposal Request Form: Use CSI Form 13.6A, "Change Order Request (Proposal)," with attachments CSI Form 13.6D, "Proposal Worksheet Summary," and Form 13.6C, "Proposal Worksheet Detail." or similar form acceptable to Architect.

1.5 ADMINISTRATIVE CHANGE ORDERS

- A. Allowance Adjustment: See Section 01 21 00 "Allowances" for administrative procedures for preparation of Change Order Proposal for adjusting the Contract Sum to reflect actual costs of allowances.
- B. Unit-Price Adjustment: See Section 01 22 00 "Unit Prices" for administrative procedures for preparation of Change Order Proposal for adjusting the Contract Sum to reflect measured scope of unit-price work.

1.6 CHANGE ORDER PROCEDURES

- A. On Owner's approval of a Work Changes Proposal Request, Architect will issue a Change Order for signatures of Owner and Contractor on AIA Document G701 .

1.7 CONSTRUCTION CHANGE DIRECTIVE

- A. Construction Change Directive: Architect may issue a Construction Change Directive on AIA Document G714 or similar form acceptable to Architect. Construction Change Directive instructs Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.

1. Construction Change Directive contains a complete description of change in the Work. It also designates method to be followed to determine change in the Contract Sum or the Contract Time.
- B. Documentation: Maintain detailed records on a time and material basis of work required by the Construction Change Directive.
1. After completion of change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 26 00

SECTION 01 29 00 - PAYMENT PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes administrative and procedural requirements necessary to prepare and process Applications for Payment.
- B. Related Requirements:
 - 1. Section 01 26 00 "Contract Modification Procedures" for administrative procedures for handling changes to the Contract.
 - 2. Section 01 32 00 "Construction Progress Documentation" for administrative requirements governing the preparation and submittal of the Contractor's construction schedule.

1.3 DEFINITIONS

- A. Schedule of Values: A statement furnished by Contractor allocating portions of the Contract Sum to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

1.4 SCHEDULE OF VALUES

- A. Coordination: Coordinate preparation of the schedule of values with preparation of Contractor's construction schedule. Cost-loaded Critical Path Method Schedule may serve to satisfy requirements for the schedule of values.
 - 1. Coordinate line items in the schedule of values with other required administrative forms and schedules, including the following:
 - a. Application for Payment forms with continuation sheets.
 - b. Submittal schedule.
 - c. Items required to be indicated as separate activities in Contractor's construction schedule.
 - 2. Submit the schedule of values to Architect at earliest possible date, but no later than seven days before the date scheduled for submittal of initial Applications for Payment.
 - 3. Subschedules for Separate Elements of Work: Where the Contractor's construction schedule defines separate elements of the Work, provide subschedules showing values coordinated with each element.

- B. Format and Content: Use Project Manual table of contents as a guide to establish line items for the schedule of values. Provide at least one line item for each Specification Section.
1. Identification: Include the following Project identification on the schedule of values:
 - a. Project name and location.
 - b. Name of Architect.
 - c. Architect's project number.
 - d. Contractor's name and address.
 - e. Date of submittal.
 2. Arrange the schedule of values in tabular form with separate columns to indicate the following for each item listed:
 - a. Related Specification Section or Division.
 - b. Description of the Work.
 - c. Name of subcontractor.
 - d. Name of manufacturer or fabricator.
 - e. Name of supplier.
 - f. Change Orders (numbers) that affect value.
 - g. Dollar value of the following, as a percentage of the Contract Sum to nearest one-hundredth percent, adjusted to total 100 percent.
 - 1) Labor.
 - 2) Materials.
 - 3) Equipment.
 3. Provide a breakdown of the Contract Sum in enough detail to facilitate continued evaluation of Applications for Payment and progress reports. Coordinate with Project Manual table of contents. Provide multiple line items for principal subcontract amounts in excess of five percent of the Contract Sum.
 4. Round amounts to nearest whole dollar; total shall equal the Contract Sum.
 5. Provide a separate line item in the schedule of values for each part of the Work where Applications for Payment may include materials or equipment purchased or fabricated and stored, but not yet installed.
 - a. Differentiate between items stored on-site and items stored off-site. If required, include evidence of insurance.
 6. Provide separate line items in the schedule of values for initial cost of materials, for each subsequent stage of completion, and for total installed value of that part of the Work.
 7. Allowances: Provide a separate line item in the schedule of values for each allowance. Show line-item value of unit-cost allowances, as a product of the unit cost, multiplied by measured quantity. Use information indicated in the Contract Documents to determine quantities.
 8. Each item in the schedule of values and Applications for Payment shall be complete. Include total cost and proportionate share of general overhead and profit for each item.

- a. Temporary facilities and other major cost items that are not direct cost of actual work-in-place may be shown either as separate line items in the schedule of values or distributed as general overhead expense, at Contractor's option.
9. Schedule Updating: Update and resubmit the schedule of values before the next Applications for Payment when Change Orders or Construction Change Directives result in a change in the Contract Sum.

1.5 APPLICATIONS FOR PAYMENT

- A. Each Application for Payment following the initial Application for Payment shall be consistent with previous applications and payments as certified by Architect and Construction Manager and paid for by Owner.
 1. Initial Application for Payment, Application for Payment at time of Substantial Completion, and final Application for Payment involve additional requirements.
- B. Payment Application Times: The date for each progress payment is indicated in the Agreement between Owner and Contractor. The period of construction work covered by each Application for Payment is the period indicated in the Agreement.
- C. Application for Payment Forms: Use AIA Document G702 and AIA Document G703 as form for Applications for Payment.
- D. Application Preparation: Complete every entry on form. Notarize and execute by a person authorized to sign legal documents on behalf of Contractor. Architect will return incomplete applications without action.
 1. Entries shall match data on the schedule of values and Contractor's construction schedule. Use updated schedules if revisions were made.
 2. Include amounts for work completed following previous Application for Payment, whether or not payment has been received. Include only amounts for work completed at time of Application for Payment.
 3. Include amounts of Change Orders and Construction Change Directives issued before last day of construction period covered by application.
 4. Indicate separate amounts for work being carried out under Owner-requested project acceleration.
- E. Payroll Certification: Submit Payroll Certification in accordance with the Prevailing Wage Act as amended in Public Act 094-0515, including, but not limited to, the following:
 1. Certified payroll for all laborers, mechanics, and other workers employed on the project, including each worker's name, address, telephone number (when available,) social security number, classification, the hourly wages paid in each pay period, the number of hours worked each day, and the starting and ending times of work each day.
 2. Statement signed by the contractor or subcontractor which states that:
 - a. Such records are true and accurate;
 - b. The hourly rate paid to each worker is not less than the general prevailing rate of hourly wages required by the Prevailing Wage Act;

- c. The contractor or subcontractor is aware that filing a certified payroll that he/she knows to be false is a Class B misdemeanor. A General Contractor is not prohibited from relying on the certification of a lower tier subcontractor, provided the General Contractor does not knowingly rely on a subcontractor's false certification. Any contractor or subcontractor subject to the Prevailing Wage Act who fails to submit a certified payroll or knowingly files a false certified payroll is in violation of the Prevailing Wage Act and guilty of a Class B misdemeanor.

- F. **Stored Materials:** Include in Application for Payment amounts applied for materials or equipment purchased or fabricated and stored, but not yet installed. Differentiate between items stored on-site and items stored off-site.
 - 1. Provide certificate of insurance, evidence of transfer of title to Owner, and consent of surety to payment, for stored materials.
 - 2. Provide supporting documentation that verifies amount requested, such as paid invoices. Match amount requested with amounts indicated on documentation; do not include overhead and profit on stored materials.
 - 3. Provide summary documentation for stored materials indicating the following:
 - a. Value of materials previously stored and remaining stored as of date of previous Applications for Payment.
 - b. Value of previously stored materials put in place after date of previous Application for Payment and on or before date of current Application for Payment.
 - c. Value of materials stored since date of previous Application for Payment and remaining stored as of date of current Application for Payment.

- G. **Transmittal:** Submit three signed and notarized original copies of each Application for Payment to Architect by a method ensuring receipt within 24 hours. One copy shall include waivers of lien and similar attachments if required.
 - 1. Transmit each copy with a transmittal form listing attachments and recording appropriate information about application.

- H. **Waivers of Mechanic's Lien:** With each Application for Payment, submit waivers of mechanic's lien from entities lawfully entitled to file a mechanic's lien arising out of the Contract and related to the Work covered by the payment.
 - 1. Submit partial waivers on each item for amount requested in previous application, after deduction for retainage, on each item.
 - 2. When an application shows completion of an item, submit conditional final or full waivers.
 - 3. Owner reserves the right to designate which entities involved in the Work must submit waivers.
 - 4. Waiver Forms: Submit executed waivers of lien on forms acceptable to Owner.

- I. **Initial Application for Payment:** Administrative actions and submittals that must precede or coincide with submittal of first Application for Payment include the following:
 - 1. List of subcontractors.
 - 2. Schedule of values.
 - 3. Contractor's construction schedule (preliminary if not final).

4. Combined Contractor's construction schedule (preliminary if not final) incorporating Work of multiple contracts, with indication of acceptance of schedule by each Contractor.
 5. Products list (preliminary if not final).
 6. Schedule of unit prices.
 7. Submittal schedule (preliminary if not final).
 8. List of Contractor's staff assignments.
 9. List of Contractor's principal consultants.
 10. Copies of building permits.
 11. Copies of authorizations and licenses from authorities having jurisdiction for performance of the Work.
 12. Initial progress report.
 13. Report of preconstruction conference.
 14. Certificates of insurance and insurance policies.
 15. Performance and payment bonds.
 16. Data needed to acquire Owner's insurance.
- J. Application for Payment at Substantial Completion: After Architect issues the Certificate of Substantial Completion, submit an Application for Payment showing 100 percent completion for portion of the Work claimed as substantially complete.
1. Include documentation supporting claim that the Work is substantially complete and a statement showing an accounting of changes to the Contract Sum.
 2. This application shall reflect Certificate(s) of Substantial Completion issued previously for Owner occupancy of designated portions of the Work.
- K. Final Payment Application: After completing Project closeout requirements, submit final Application for Payment with releases and supporting documentation not previously submitted and accepted, including, but not limited, to the following:
1. Evidence of completion of Project closeout requirements.
 2. Insurance certificates for products and completed operations where required and proof that taxes, fees, and similar obligations were paid.
 3. Updated final statement, accounting for final changes to the Contract Sum.
 4. AIA Document G706, "Contractor's Affidavit of Payment of Debts and Claims."
 5. AIA Document G706A, "Contractor's Affidavit of Release of Liens."
 6. AIA Document G707, "Consent of Surety to Final Payment."
 7. Evidence that claims have been settled.
 8. Final meter readings for utilities, a measured record of stored fuel, and similar data as of date of Substantial Completion or when Owner took possession of and assumed responsibility for corresponding elements of the Work.
 9. Final liquidated damages settlement statement.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 29 00

SECTION 01 33 00 - SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes requirements for the submittal schedule and administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other submittals.
- B. Related Requirements:
 - 1. Section 01 29 00 "Payment Procedures" for submitting Applications for Payment and the schedule of values.
 - 2. Section 01 32 00 "Construction Progress Documentation" for submitting schedules and reports, including Contractor's construction schedule.
 - 3. Section 01 78 23 "Operation and Maintenance Data" for submitting operation and maintenance manuals.
 - 4. Section 01 78 39 "Project Record Documents" for submitting record Drawings, record Specifications, and record Product Data.
 - 5. Section 01 79 00 "Demonstration and Training" for submitting video recordings of demonstration of equipment and training of Owner's personnel.

1.3 DEFINITIONS

- A. Action Submittals: Written and graphic information and physical samples that require Architect's responsive action. Action submittals are those submittals indicated in individual Specification Sections as "action submittals."
- B. Informational Submittals: Written and graphic information and physical samples that do not require Architect's responsive action. Submittals may be rejected for not complying with requirements. Informational submittals are those submittals indicated in individual Specification Sections as "informational submittals."
- C. File Transfer Protocol (FTP): Communications protocol that enables transfer of files to and from another computer over a network and that serves as the basis for standard Internet protocols. An FTP site is a portion of a network located outside of network firewalls within which internal and external users are able to access files.
- D. Portable Document Format (PDF): An open standard file format licensed by Adobe Systems used for representing documents in a device-independent and display resolution-independent fixed-layout document format.

1.4 ACTION SUBMITTALS

- A. Submittal Schedule: Submit a schedule of submittals, arranged in chronological order by dates required by construction schedule. Include time required for review, ordering, manufacturing, fabrication, and delivery when establishing dates. Include additional time required for making corrections or revisions to submittals noted by Architect and additional time for handling and reviewing submittals required by those corrections.
1. Coordinate submittal schedule with list of subcontracts, the schedule of values, and Contractor's construction schedule.
 2. Initial Submittal: Submit concurrently with startup construction schedule. Include submittals required during the first 60 days of construction. List those submittals required to maintain orderly progress of the Work and those required early because of long lead time for manufacture or fabrication.
 3. Final Submittal: Submit concurrently with the first complete submittal of Contractor's construction schedule.
 - a. Submit revised submittal schedule to reflect changes in current status and timing for submittals.
 4. Format: Arrange the following information in a tabular format:
 - a. Scheduled date for first submittal.
 - b. Specification Section number and title.
 - c. Submittal category: Action; informational.
 - d. Name of subcontractor.
 - e. Description of the Work covered.
 - f. Scheduled date for Architect's final release or approval.
 - g. Scheduled date of fabrication.
 - h. Scheduled dates for purchasing.
 - i. Scheduled dates for installation.
 - j. Activity or event number.

1.5 SUBMITTAL ADMINISTRATIVE REQUIREMENTS

- A. Architect's Digital Data Files: Electronic digital data files of the Contract Drawings will be provided by Architect for Contractor's use in preparing submittals.
1. Architect will furnish Contractor one set of digital data drawing files of the Contract Drawings for use in preparing Shop Drawings and Project record drawings.
 - a. Architect makes no representations as to the accuracy or completeness of digital data drawing files as they relate to the Contract Drawings.
 - b. Digital Drawing Software Program: The Contract Drawings are available in Revit 2017.
 - c. Contractor shall execute a data licensing agreement in the form of Agreement form acceptable to Owner and Architect.
 - d. The following digital data files will be furnished for each appropriate discipline:
 - 1) Floor plans.
 - 2) Reflected ceiling plans.

- B. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.
1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
 2. Submit all submittal items required for each Specification Section concurrently unless partial submittals for portions of the Work are indicated on approved submittal schedule.
 3. Submit action submittals and informational submittals required by the same Specification Section as separate packages under separate transmittals.
 4. Coordinate transmittal of different types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination.
 - a. Architect reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.
- C. Processing Time: Allow time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Architect's receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.
1. Initial Review: Allow 15 days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Architect will advise Contractor when a submittal being processed must be delayed for coordination.
 2. Intermediate Review: If intermediate submittal is necessary, process it in same manner as initial submittal.
 3. Resubmittal Review: Allow 15 days for review of each resubmittal.
 4. Sequential Review: Where sequential review of submittals by Architect's consultants, Owner, or other parties is indicated, allow 21 days for initial review of each submittal.
 5. Concurrent Consultant Review: Where the Contract Documents indicate that submittals may be transmitted simultaneously to Architect and to Architect's consultants, allow 15 days for review of each submittal. Submittal will be returned to Architect before being returned to Contractor.
- D. Electronic Submittals: Identify and incorporate information in each electronic submittal file as follows:
1. Assemble complete submittal package into a single indexed file incorporating submittal requirements of a single Specification Section and transmittal form with links enabling navigation to each item.
 2. Name file with submittal number or other unique identifier, including revision identifier.
 - a. File name shall use project identifier and Specification Section number followed by a decimal point and then a sequential number (e.g., LNHS-061000.01). Resubmittals shall include an alphabetic suffix after another decimal point (e.g., LNHS-061000.01.A).
 3. Provide means for insertion to permanently record Contractor's review and approval markings and action taken by Architect.
 4. Transmittal Form for Electronic Submittals: Use electronic form acceptable to Owner, containing the following information:

- a. Project name.
 - b. Date.
 - c. Name and address of Architect.
 - d. Name of Construction Manager.
 - e. Name of Contractor.
 - f. Name of firm or entity that prepared submittal.
 - g. Names of subcontractor, manufacturer, and supplier.
 - h. Category and type of submittal.
 - i. Submittal purpose and description.
 - j. Specification Section number and title.
 - k. Specification paragraph number or drawing designation and generic name for each of multiple items.
 - l. Drawing number and detail references, as appropriate.
 - m. Location(s) where product is to be installed, as appropriate.
 - n. Related physical samples submitted directly.
 - o. Indication of full or partial submittal.
 - p. Transmittal number, numbered consecutively.
 - q. Submittal and transmittal distribution record.
 - r. Other necessary identification.
 - s. Remarks.
- E. Options: Identify options requiring selection by Architect.
- F. Deviations and Additional Information: On an attached separate sheet, prepared on Contractor's letterhead, record relevant information, requests for data, revisions other than those requested by Architect on previous submittals, and deviations from requirements in the Contract Documents, including minor variations and limitations. Include same identification information as related submittal.
- G. Resubmittals: Make resubmittals in same form and number of copies as initial submittal.
- 1. Note date and content of previous submittal.
 - 2. Note date and content of revision in label or title block and clearly indicate extent of revision.
 - 3. Resubmit submittals until they are marked with approval notation from Architect's action stamp.
- H. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, installers, authorities having jurisdiction, and others as necessary for performance of construction activities. Show distribution on transmittal forms.
- I. Use for Construction: Retain complete copies of submittals on Project site. Use only final action submittals that are marked with approval notation from Architect's action stamp.

PART 2 - PRODUCTS

2.1 SUBMITTAL PROCEDURES

- A. General Submittal Procedure Requirements: Prepare and submit submittals required by individual Specification Sections. Types of submittals are indicated in individual Specification Sections.

1. Post electronic submittals as PDF electronic files directly to Project Web site specifically established for Project.
 2. Certificates and Certifications Submittals: Provide a statement that includes signature of entity responsible for preparing certification. Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of that entity.
 - a. Provide a digital signature with digital certificate on electronically submitted certificates and certifications where indicated.
 - b. Provide a notarized statement on original paper copy certificates and certifications where indicated.
- B. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.
1. If information must be specially prepared for submittal because standard published data are not suitable for use, submit as Shop Drawings, not as Product Data.
 2. Mark each copy of each submittal to show which products and options are applicable.
 3. Include the following information, as applicable:
 - a. Manufacturer's catalog cuts.
 - b. Manufacturer's product specifications.
 - c. Standard color charts.
 - d. Statement of compliance with specified referenced standards.
 - e. Testing by recognized testing agency.
 - f. Application of testing agency labels and seals.
 - g. Notation of coordination requirements.
 - h. Availability and delivery time information.
 4. For equipment, include the following in addition to the above, as applicable:
 - a. Wiring diagrams showing factory-installed wiring.
 - b. Printed performance curves.
 - c. Operational range diagrams.
 - d. Clearances required to other construction, if not indicated on accompanying Shop Drawings.
 5. Submit Product Data before or concurrent with Samples.
 6. Submit Product Data in the following format:
 - a. PDF electronic file.
- C. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data.
1. Preparation: Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:
 - a. Identification of products.
 - b. Schedules.
 - c. Compliance with specified standards.
 - d. Notation of coordination requirements.

- e. Notation of dimensions established by field measurement.
 - f. Relationship and attachment to adjoining construction clearly indicated.
 - g. Seal and signature of professional engineer if specified.
2. Sheet Size: Except for templates, patterns, and similar full-size drawings, submit Shop Drawings on sheets at least 8-1/2 by 11 inches, but no larger than 30 by 42 inches.
 3. Submit Shop Drawings in the following format:
 - a. PDF electronic file.
 4. BIM File Incorporation: Develop and incorporate Shop Drawing files into Building Information Model established for Project.
 - a. Prepare Shop Drawings in the following format: Same digital data software program, version, and operating system as the original Drawings.
 - b. Refer to Section 01 31 00 "Project Management and Coordination" for requirements for coordination drawings.
- D. Samples: Submit Samples for review of kind, color, pattern, and texture for a check of these characteristics with other elements and for a comparison of these characteristics between submittal and actual component as delivered and installed.
1. Transmit Samples that contain multiple, related components such as accessories together in one submittal package.
 2. Identification: Attach label on unexposed side of Samples that includes the following:
 - a. Generic description of Sample.
 - b. Product name and name of manufacturer.
 - c. Sample source.
 - d. Number and title of applicable Specification Section.
 - e. Specification paragraph number and generic name of each item.
 3. For projects where electronic submittals are required, provide corresponding electronic submittal of Sample transmittal, digital image file illustrating Sample characteristics, and identification information for record.
 4. Disposition: Maintain sets of approved Samples at Project site, available for quality-control comparisons throughout the course of construction activity. Sample sets may be used to determine final acceptance of construction associated with each set.
 - a. Samples that may be incorporated into the Work are indicated in individual Specification Sections. Such Samples must be in an undamaged condition at time of use.
 - b. Samples not incorporated into the Work, or otherwise designated as Owner's property, are the property of Contractor.
 5. Samples for Initial Selection: Submit manufacturer's color charts consisting of units or sections of units showing the full range of colors, textures, and patterns available.

- a. Number of Samples: Submit one full set(s) of available choices where color, pattern, texture, or similar characteristics are required to be selected from manufacturer's product line. Architect will return submittal with options selected.

- 6. Samples for Verification: Submit full-size units or Samples of size indicated, prepared from same material to be used for the Work, cured and finished in manner specified, and physically identical with material or product proposed for use, and that show full range of color and texture variations expected. Samples include, but are not limited to, the following: partial sections of manufactured or fabricated components; small cuts or containers of materials; complete units of repetitively used materials; swatches showing color, texture, and pattern; color range sets; and components used for independent testing and inspection.
 - a. Number of Samples: Submit three sets of Samples. Architect will retain one Sample sets; remainder will be returned. Mark up and retain one returned Sample set as a project record sample.
 - 1) Submit a single Sample where assembly details, workmanship, fabrication techniques, connections, operation, and other similar characteristics are to be demonstrated.
 - 2) If variation in color, pattern, texture, or other characteristic is inherent in material or product represented by a Sample, submit at least three sets of paired units that show approximate limits of variations.

- E. Product Schedule: As required in individual Specification Sections, prepare a written summary indicating types of products required for the Work and their intended location. Include the following information in tabular form:
 - 1. Type of product. Include unique identifier for each product indicated in the Contract Documents or assigned by Contractor if none is indicated.
 - 2. Manufacturer and product name, and model number if applicable.
 - 3. Number and name of room or space.
 - 4. Location within room or space.
 - 5. Submit product schedule in the following format:
 - a. PDF electronic file.

- F. Coordination Drawing Submittals: Comply with requirements specified in Section 01 31 00 "Project Management and Coordination."

- G. Contractor's Construction Schedule: Comply with requirements specified in Section 01 32 00 "Construction Progress Documentation."

- H. Application for Payment and Schedule of Values: Comply with requirements specified in Section 01 29 00 "Payment Procedures."

- I. Test and Inspection Reports and Schedule of Tests and Inspections Submittals: Comply with requirements specified in Section 01 40 00 "Quality Requirements."

- J. Closeout Submittals and Maintenance Material Submittals: Comply with requirements specified in Section 01 77 00 "Closeout Procedures."

- K. Maintenance Data: Comply with requirements specified in Section 01 78 23 "Operation and Maintenance Data."
- L. Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, contact information of architects and owners, and other information specified.
- M. Welding Certificates: Prepare written certification that welding procedures and personnel comply with requirements in the Contract Documents. Submit record of Welding Procedure Specification and Procedure Qualification Record on AWS forms. Include names of firms and personnel certified.
- N. Installer Certificates: Submit written statements on manufacturer's letterhead certifying that Installer complies with requirements in the Contract Documents and, where required, is authorized by manufacturer for this specific Project.
- O. Manufacturer Certificates: Submit written statements on manufacturer's letterhead certifying that manufacturer complies with requirements in the Contract Documents. Include evidence of manufacturing experience where required.
- P. Product Certificates: Submit written statements on manufacturer's letterhead certifying that product complies with requirements in the Contract Documents.
- Q. Material Certificates: Submit written statements on manufacturer's letterhead certifying that material complies with requirements in the Contract Documents.
- R. Material Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements in the Contract Documents.
- S. Product Test Reports: Submit written reports indicating that current product produced by manufacturer complies with requirements in the Contract Documents. Base reports on evaluation of tests performed by manufacturer and witnessed by a qualified testing agency, or on comprehensive tests performed by a qualified testing agency.
- T. Research Reports: Submit written evidence, from a model code organization acceptable to authorities having jurisdiction, that product complies with building code in effect for Project. Include the following information:
 - 1. Name of evaluation organization.
 - 2. Date of evaluation.
 - 3. Time period when report is in effect.
 - 4. Product and manufacturers' names.
 - 5. Description of product.
 - 6. Test procedures and results.
 - 7. Limitations of use.
- U. Preconstruction Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of tests performed before installation of product, for compliance with performance requirements in the Contract Documents.

- V. Compatibility Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of compatibility tests performed before installation of product. Include written recommendations for primers and substrate preparation needed for adhesion.
- W. Field Test Reports: Submit written reports indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with requirements in the Contract Documents.
- X. Design Data: Prepare and submit written and graphic information, including, but not limited to, performance and design criteria, list of applicable codes and regulations, and calculations. Include list of assumptions and other performance and design criteria and a summary of loads. Include load diagrams if applicable. Provide name and version of software, if any, used for calculations. Include page numbers.

2.2 DELEGATED-DESIGN SERVICES

- A. Performance and Design Criteria: Where professional design services or certifications by a design professional are specifically required of Contractor by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated.
 - 1. If criteria indicated are not sufficient to perform services or certification required, submit a written request for additional information to Architect.
- B. Delegated-Design Services Certification: In addition to Shop Drawings, Product Data, and other required submittals, submit digitally signed PDF electronic file and three paper copies of certificate, signed and sealed by the responsible design professional, for each product and system specifically assigned to Contractor to be designed or certified by a design professional.
 - 1. Indicate that products and systems comply with performance and design criteria in the Contract Documents. Include list of codes, loads, and other factors used in performing these services.
- C. BIM File Incorporation: Incorporate delegated-design drawing and data files into Building Information Model established for Project.
 - 1. Prepare delegated-design drawings in the following format: Same digital data software program, version, and operating system as the original Drawings.

PART 3 - EXECUTION

3.1 CONTRACTOR'S REVIEW

- A. Action and Informational Submittals: Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to Architect.
- B. Project Closeout and Maintenance Material Submittals: See requirements in Section 01 77 00 "Closeout Procedures."

- C. Approval Stamp: Stamp each submittal with a uniform, approval stamp. Include Project name and location, submittal number, Specification Section title and number, name of reviewer, date of Contractor's approval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents.

3.2 ARCHITECT'S ACTION

- A. Action Submittals: Architect will review each submittal, make marks to indicate corrections or revisions required, and return it. Architect will stamp each submittal with an action stamp and will mark stamp appropriately to indicate action.
- B. Informational Submittals: Architect will review each submittal and will not return it, or will return it if it does not comply with requirements. Architect will forward each submittal to appropriate party.
- C. Partial submittals prepared for a portion of the Work will be reviewed when use of partial submittals has received prior approval from Architect.
- D. Incomplete submittals are unacceptable, will be considered nonresponsive, and will be returned for resubmittal without review.
- E. Submittals not required by the Contract Documents may be returned by the Architect without action.

END OF SECTION 01 33 00

SECTION 01 40 00 - QUALITY REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for quality assurance and quality control.
- B. Testing and inspecting services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.
 - 1. Specific quality-assurance and -control requirements for individual construction activities are specified in the Sections that specify those activities. Requirements in those Sections may also cover production of standard products.
 - 2. Specified tests, inspections, and related actions do not limit Contractor's other quality-assurance and -control procedures that facilitate compliance with the Contract Document requirements.
 - 3. Specific test and inspection requirements are not specified in this Section.

1.3 DEFINITIONS

- A. **Quality-Assurance Services:** Activities, actions, and procedures performed before and during execution of the Work to guard against defects and deficiencies and substantiate that proposed construction will comply with requirements.
- B. **Quality-Control Services:** Tests, inspections, procedures, and related actions during and after execution of the Work to evaluate that actual products incorporated into the Work and completed construction comply with requirements. Services do not include contract enforcement activities performed by Architect.
- C. **Preconstruction Testing:** Tests and inspections performed specifically for Project before products and materials are incorporated into the Work, to verify performance or compliance with specified criteria.
- D. **Product Testing:** Tests and inspections that are performed by an NRTL, an NVLAP, or a testing agency qualified to conduct product testing and acceptable to authorities having jurisdiction, to establish product performance and compliance with specified requirements.
- E. **Source Quality-Control Testing:** Tests and inspections that are performed at the source, e.g., plant, mill, factory, or shop.

- F. Field Quality-Control Testing: Tests and inspections that are performed on-site for installation of the Work and for completed Work.
- G. Testing Agency: An entity engaged to perform specific tests, inspections, or both. Testing laboratory shall mean the same as testing agency.
- H. Installer/Applicator/Erector: Contractor or another entity engaged by Contractor as an employee, Subcontractor, or Sub-subcontractor, to perform a particular construction operation, including installation, erection, application, and similar operations.
 - 1. Use of trade-specific terminology in referring to a trade or entity does not require that certain construction activities be performed by accredited or unionized individuals, or that requirements specified apply exclusively to specific trade(s).
- I. Experienced: When used with an entity or individual, "experienced" means having successfully completed a minimum of five previous projects similar in nature, size, and extent to this Project; being familiar with special requirements indicated; and having complied with requirements of authorities having jurisdiction.

1.4 CONFLICTING REQUIREMENTS

- A. Referenced Standards: If compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer conflicting requirements that are different, but apparently equal, to Architect for a decision before proceeding.
- B. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to Architect for a decision before proceeding.

1.5 INFORMATIONAL SUBMITTALS

- A. Contractor's Quality-Control Plan: For quality-assurance and quality-control activities and responsibilities.
- B. Qualification Data : For Contractor's quality-control personnel.
- C. Contractor's Statement of Responsibility: When required by authorities having jurisdiction, submit copy of written statement of responsibility sent to authorities having jurisdiction before starting work on the following systems:
 - 1. Seismic-force-resisting system, designated seismic system, or component listed in the designated seismic system quality-assurance plan prepared by Architect.
 - 2. Main wind-force-resisting system or a wind-resisting component listed in the wind-force-resisting system quality-assurance plan prepared by Architect.
- D. Testing Agency Qualifications: For testing agencies specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include proof of qualifications in the form of a recent report on the inspection of the testing agency by a recognized authority.

1.6 CONTRACTOR'S QUALITY-CONTROL PLAN

- A. Quality-Control Plan, General: Submit quality-control plan within 10 days of Notice to Proceed, and not less than five days prior to preconstruction conference. Submit in format acceptable to Architect. Identify personnel, procedures, controls, instructions, tests, records, and forms to be used to carry out Contractor's quality-assurance and quality-control responsibilities. Coordinate with Contractor's construction schedule.
- B. Quality-Control Personnel Qualifications: Engage qualified full-time personnel trained and experienced in managing and executing quality-assurance and quality-control procedures similar in nature and extent to those required for Project.
 - 1. Project quality-control manager may also serve as Project superintendent.
- C. Submittal Procedure: Describe procedures for ensuring compliance with requirements through review and management of submittal process. Indicate qualifications of personnel responsible for submittal review.
- D. Testing and Inspection: In quality-control plan, include a comprehensive schedule of Work requiring testing or inspection, including the following:
 - 1. Contractor-performed tests and inspections including subcontractor-performed tests and inspections. Include required tests and inspections and Contractor-elected tests and inspections.
- E. Continuous Inspection of Workmanship: Describe process for continuous inspection during construction to identify and correct deficiencies in workmanship in addition to testing and inspection specified. Indicate types of corrective actions to be required to bring work into compliance with standards of workmanship established by Contract requirements and approved mockups.
- F. Monitoring and Documentation: Maintain testing and inspection reports including log of approved and rejected results. Include work Architect has indicated as nonconforming or defective. Indicate corrective actions taken to bring nonconforming work into compliance with requirements. Comply with requirements of authorities having jurisdiction.

1.7 REPORTS AND DOCUMENTS

- A. Manufacturer's Technical Representative's Field Reports: Prepare written information documenting manufacturer's technical representative's tests and inspections specified in other Sections. Include the following:
 - 1. Name, address, and telephone number of technical representative making report.
 - 2. Statement on condition of substrates and their acceptability for installation of product.
 - 3. Statement that products at Project site comply with requirements.
 - 4. Summary of installation procedures being followed, whether they comply with requirements and, if not, what corrective action was taken.
 - 5. Results of operational and other tests and a statement of whether observed performance complies with requirements.
 - 6. Statement whether conditions, products, and installation will affect warranty.
 - 7. Other required items indicated in individual Specification Sections.

- B. Factory-Authorized Service Representative's Reports: Prepare written information documenting manufacturer's factory-authorized service representative's tests and inspections specified in other Sections. Include the following:
1. Name, address, and telephone number of factory-authorized service representative making report.
 2. Statement that equipment complies with requirements.
 3. Results of operational and other tests and a statement of whether observed performance complies with requirements.
 4. Statement whether conditions, products, and installation will affect warranty.
 5. Other required items indicated in individual Specification Sections.
- C. Permits, Licenses, and Certificates: For Owner's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents, established for compliance with standards and regulations bearing on performance of the Work.

1.8 QUALITY ASSURANCE

- A. General: Qualifications paragraphs in this article establish the minimum qualification levels required; individual Specification Sections specify additional requirements.
- B. Manufacturer Qualifications: A firm experienced in manufacturing products or systems similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.
- C. Fabricator Qualifications: A firm experienced in producing products similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.
- D. Installer Qualifications: A firm or individual experienced in installing, erecting, or assembling work similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in-service performance.
- E. Professional Engineer Qualifications: A professional engineer who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing engineering services of the kind indicated. Engineering services are defined as those performed for installations of the system, assembly, or product that are similar in material, design, and extent to those indicated for this Project.
- F. Specialists: Certain Specification Sections require that specific construction activities shall be performed by entities who are recognized experts in those operations. Specialists shall satisfy qualification requirements indicated and shall be engaged for the activities indicated.
1. Requirements of authorities having jurisdiction shall supersede requirements for specialists.

- G. Testing Agency Qualifications: An NRTL, an NVLAP, or an independent agency with the experience and capability to conduct testing and inspecting indicated, as documented according to ASTM E 329; and with additional qualifications specified in individual Sections; and, where required by authorities having jurisdiction, that is acceptable to authorities.
 - 1. NRTL: A nationally recognized testing laboratory according to 29 CFR 1910.7.
 - 2. NVLAP: A testing agency accredited according to NIST's National Voluntary Laboratory Accreditation Program.
- H. Manufacturer's Technical Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to observe and inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.
- I. Factory-Authorized Service Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.
- J. Preconstruction Testing: Where testing agency is indicated to perform preconstruction testing for compliance with specified requirements for performance and test methods, comply with the following:
 - 1. Contractor responsibilities include the following:
 - a. Provide test specimens representative of proposed products and construction.
 - b. Submit specimens in a timely manner with sufficient time for testing and analyzing results to prevent delaying the Work.
 - c. Provide sizes and configurations of test assemblies, mockups, and laboratory mockups to adequately demonstrate capability of products to comply with performance requirements.
 - d. Build site-assembled test assemblies and mockups using installers who will perform same tasks for Project.
 - e. Build laboratory mockups at testing facility using personnel, products, and methods of construction indicated for the completed Work.
 - f. When testing is complete, remove test specimens, assemblies, and mockups; do not reuse products on Project.

1.9 QUALITY CONTROL

- A. Owner Responsibilities: Where quality-control services are indicated as Owner's responsibility, Owner will engage a qualified testing agency to perform these services.
 - 1. Owner will furnish Contractor with names, addresses, and telephone numbers of testing agencies engaged and a description of types of testing and inspecting they are engaged to perform.
 - 2. Payment for these services will be made from testing and inspecting allowances, as authorized by Change Orders.
 - 3. Costs for retesting and reinspecting construction that replaces or is necessitated by work that failed to comply with the Contract Documents will be charged to Contractor, and the Contract Sum will be adjusted by Change Order.

- B. Contractor Responsibilities: Tests and inspections not explicitly assigned to Owner are Contractor's responsibility. Perform additional quality-control activities required to verify that the Work complies with requirements, whether specified or not.
1. Unless otherwise indicated, provide quality-control services specified and those required by authorities having jurisdiction. Perform quality-control services required of Contractor by authorities having jurisdiction, whether specified or not.
 2. Where services are indicated as Contractor's responsibility, engage a qualified testing agency to perform these quality-control services.
 - a. Contractor shall not employ same entity engaged by Owner, unless agreed to in writing by Owner.
 3. Notify testing agencies at least 24 hours in advance of time when Work that requires testing or inspecting will be performed.
 4. Where quality-control services are indicated as Contractor's responsibility, submit a certified written report, in duplicate, of each quality-control service.
 5. Testing and inspecting requested by Contractor and not required by the Contract Documents are Contractor's responsibility.
 6. Submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.
- C. Manufacturer's Field Services: Where indicated, engage a factory-authorized service representative to inspect field-assembled components and equipment installation, including service connections. Report results in writing as specified in Section 01 33 00 "Submittal Procedures."
- D. Manufacturer's Technical Services: Where indicated, engage a manufacturer's technical representative to observe and inspect the Work. Manufacturer's technical representative's services include participation in preinstallation conferences, examination of substrates and conditions, verification of materials, observation of Installer activities, inspection of completed portions of the Work, and submittal of written reports.
- E. Retesting/Reinspecting: Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and reinspecting, for construction that replaced Work that failed to comply with the Contract Documents.
- F. Testing Agency Responsibilities: Cooperate with Architect and Contractor in performance of duties. Provide qualified personnel to perform required tests and inspections.
1. Notify Architect and Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.
 2. Determine the location from which test samples will be taken and in which in-situ tests are conducted.
 3. Conduct and interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from requirements.
 4. Submit a certified written report, in duplicate, of each test, inspection, and similar quality-control service through Contractor.
 5. Do not release, revoke, alter, or increase the Contract Document requirements or approve or accept any portion of the Work.
 6. Do not perform any duties of Contractor.

- G. Associated Services: Cooperate with agencies performing required tests, inspections, and similar quality-control services, and provide reasonable auxiliary services as requested. Notify agency sufficiently in advance of operations to permit assignment of personnel. Provide the following:
1. Access to the Work.
 2. Incidental labor and facilities necessary to facilitate tests and inspections.
 3. Adequate quantities of representative samples of materials that require testing and inspecting. Assist agency in obtaining samples.
 4. Facilities for storage and field curing of test samples.
 5. Delivery of samples to testing agencies.
 6. Preliminary design mix proposed for use for material mixes that require control by testing agency.
 7. Security and protection for samples and for testing and inspecting equipment at Project site.
- H. Coordination: Coordinate sequence of activities to accommodate required quality-assurance and -control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspecting.
1. Schedule times for tests, inspections, obtaining samples, and similar activities.

1.10 SPECIAL TESTS AND INSPECTIONS

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

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 TEST AND INSPECTION LOG

- A. Test and Inspection Log: Prepare a record of tests and inspections. Include the following:

1. Date test or inspection was conducted.
 2. Description of the Work tested or inspected.
 3. Date test or inspection results were transmitted to Architect.
 4. Identification of testing agency or special inspector conducting test or inspection.
- B. Maintain log at Project site. Post changes and revisions as they occur. Provide access to test and inspection log for Architect's reference during normal working hours.

3.2 REPAIR AND PROTECTION

- A. General: On completion of testing, inspecting, sample taking, and similar services, repair damaged construction and restore substrates and finishes.
1. Provide materials and comply with installation requirements specified in other Specification Sections or matching existing substrates and finishes. Restore patched areas and extend restoration into adjoining areas with durable seams that are as invisible as possible. Comply with the Contract Document requirements for cutting and patching in Section 01 73 00 "Execution."
- B. Protect construction exposed by or for quality-control service activities.
- C. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

END OF SECTION 01 40 00

SECTION 01 60 00 - PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for selection of products for use in Project; product delivery, storage, and handling; manufacturers' standard warranties on products; special warranties; and comparable products.
- B. Related Requirements:
 - 1. Section 01 23 00 "Alternates" for products selected under an alternate.
 - 2. Section 01 25 00 "Substitution Procedures" for requests for substitutions.
 - 3. Section 01 42 00 "References" for applicable industry standards for products specified.

1.3 DEFINITIONS

- A. Products: Items obtained for incorporating into the Work, whether purchased for Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.
 - 1. Named Products: Items identified by manufacturer's product name, including make or model number or other designation shown or listed in manufacturer's published product literature, that is current as of date of the Contract Documents.
 - 2. New Products: Items that have not previously been incorporated into another project or facility. Products salvaged or recycled from other projects are not considered new products.
 - 3. Comparable Product: Product that is demonstrated and approved through submittal process to have the indicated qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics that equal or exceed those of specified product.
- B. Basis-of-Design Product Specification: A specification in which a specific manufacturer's product is named and accompanied by the words "basis-of-design product," including make or model number or other designation, to establish the significant qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics for purposes of evaluating comparable products of additional manufacturers named in the specification.

1.4 ACTION SUBMITTALS

- A. Comparable Product Requests: Submit request for consideration of each comparable product. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.
 - 1. Include data to indicate compliance with the requirements specified in "Comparable Products" Article.
- B. Basis-of-Design Product Specification Submittal: Comply with requirements in Section 01 33 00 "Submittal Procedures." Show compliance with requirements.

1.5 QUALITY ASSURANCE

- A. Compatibility of Options: If Contractor is given option of selecting between two or more products for use on Project, select product compatible with products previously selected, even if previously selected products were also options.

1.6 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, and handle products using means and methods that will prevent damage, deterioration, and loss, including theft and vandalism. Comply with manufacturer's written instructions.
- B. Delivery and Handling:
 - 1. Schedule delivery to minimize long-term storage at Project site and to prevent overcrowding of construction spaces.
 - 2. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.
 - 3. Deliver products to Project site in an undamaged condition in manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
 - 4. Inspect products on delivery to determine compliance with the Contract Documents and to determine that products are undamaged and properly protected.
- C. Storage:
 - 1. Store products to allow for inspection and measurement of quantity or counting of units.
 - 2. Store materials in a manner that will not endanger Project structure.
 - 3. Store products that are subject to damage by the elements, under cover in a weathertight enclosure above ground, with ventilation adequate to prevent condensation.
 - 4. Protect foam plastic from exposure to sunlight, except to extent necessary for period of installation and concealment.
 - 5. Comply with product manufacturer's written instructions for temperature, humidity, ventilation, and weather-protection requirements for storage.
 - 6. Protect stored products from damage and liquids from freezing.
 - 7. Provide a secure location and enclosure at Project site for storage of materials and equipment by Owner's construction forces. Coordinate location with Owner.

1.7 PRODUCT WARRANTIES

- A. Warranties specified in other Sections shall be in addition to, and run concurrent with, other warranties required by the Contract Documents. Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of obligations under requirements of the Contract Documents.
 - 1. Manufacturer's Warranty: Written warranty furnished by individual manufacturer for a particular product and specifically endorsed by manufacturer to Owner.
 - 2. Special Warranty: Written warranty required by the Contract Documents to provide specific rights for Owner.
- B. Special Warranties: Prepare a written document that contains appropriate terms and identification, ready for execution.
 - 1. Manufacturer's Standard Form: Modified to include Project-specific information and properly executed.
 - 2. See other Sections for specific content requirements and particular requirements for submitting special warranties.
- C. Submittal Time: Comply with requirements in Section 01 77 00 "Closeout Procedures."

PART 2 - PRODUCTS

2.1 PRODUCT SELECTION PROCEDURES

- A. General Product Requirements: Provide products that comply with the Contract Documents, are undamaged and, unless otherwise indicated, are new at time of installation.
 - 1. Provide products complete with accessories, trim, finish, fasteners, and other items needed for a complete installation and indicated use and effect.
 - 2. Standard Products: If available, and unless custom products or nonstandard options are specified, provide standard products of types that have been produced and used successfully in similar situations on other projects.
 - 3. Owner reserves the right to limit selection to products with warranties not in conflict with requirements of the Contract Documents.
 - 4. Where products are accompanied by the term "as selected," Architect will make selection.
 - 5. Descriptive, performance, and reference standard requirements in the Specifications establish salient characteristics of products.
 - 6. Or Equal: For products specified by name and accompanied by the term "or equal," or "or approved equal," or "or approved," comply with requirements in "Comparable Products" Article to obtain approval for use of an unnamed product.
- B. Product Selection Procedures:
 - 1. Product: Where Specifications name a single manufacturer and product, provide the named product that complies with requirements. Comparable products or substitutions for Contractor's convenience will not be considered.

2. Manufacturer/Source: Where Specifications name a single manufacturer or source, provide a product by the named manufacturer or source that complies with requirements. Comparable products or substitutions for Contractor's convenience will not be considered.
 3. Products:
 - a. Restricted List: Where Specifications include a list of names of both manufacturers and products, provide one of the products listed that complies with requirements. Comparable products or substitutions for Contractor's convenience will not be considered.
 - b. Nonrestricted List: Where Specifications include a list of names of both available manufacturers and products, provide one of the products listed, or an unnamed product, that complies with requirements. Comply with requirements in "Comparable Products" Article for consideration of an unnamed product.
 4. Manufacturers:
 - a. Restricted List: Where Specifications include a list of manufacturers' names, provide a product by one of the manufacturers listed that complies with requirements. Comparable products or substitutions for Contractor's convenience will not be considered.
 - b. Nonrestricted List: Where Specifications include a list of available manufacturers, provide a product by one of the manufacturers listed, or a product by an unnamed manufacturer, that complies with requirements. Comply with requirements in "Comparable Products" Article for consideration of an unnamed manufacturer's product.
 5. Basis-of-Design Product: Where Specifications name a product, or refer to a product indicated on Drawings, and include a list of manufacturers, provide the specified or indicated product or a comparable product by one of the other named manufacturers. Drawings and Specifications indicate sizes, profiles, dimensions, and other characteristics that are based on the product named. Comply with requirements in "Comparable Products" Article for consideration of an unnamed product by one of the other named manufacturers.
- C. Visual Matching Specification: Where Specifications require "match Architect's sample", provide a product that complies with requirements and matches Architect's sample. Architect's decision will be final on whether a proposed product matches.
1. If no product available within specified category matches and complies with other specified requirements, comply with requirements in Section 01 25 00 "Substitution Procedures" for proposal of product.
- D. Visual Selection Specification: Where Specifications include the phrase "as selected by Architect from manufacturer's full range" or similar phrase, select a product that complies with requirements. Architect will select color, gloss, pattern, density, or texture from manufacturer's product line that includes both standard and premium items.

2.2 COMPARABLE PRODUCTS

- A. Conditions for Consideration: Architect will consider Contractor's request for comparable product when the following conditions are satisfied. If the following conditions are not satisfied, Architect may return requests without action, except to record noncompliance with these requirements:
1. Evidence that the proposed product does not require revisions to the Contract Documents, that it is consistent with the Contract Documents and will produce the indicated results, and that it is compatible with other portions of the Work.
 2. Detailed comparison of significant qualities of proposed product with those named in the Specifications. Significant qualities include attributes such as performance, weight, size, durability, visual effect, and specific features and requirements indicated.
 3. Evidence that proposed product provides specified warranty.
 4. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners, if requested.
 5. Samples, if requested.

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 60 00

SECTION 01 78 23 - OPERATION AND MAINTENANCE DATA

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for preparing operation and maintenance manuals, including the following:
 - 1. Operation and maintenance documentation directory.
 - 2. Emergency manuals.
 - 3. Operation manuals for systems, subsystems, and equipment.
 - 4. Product maintenance manuals.
 - 5. Systems and equipment maintenance manuals.
- B. Related Requirements:
 - 1. Section "General Commissioning Requirements" for verification and compilation of data into operation and maintenance manuals.

1.3 DEFINITIONS

- A. System: An organized collection of parts, equipment, or subsystems united by regular interaction.
- B. Subsystem: A portion of a system with characteristics similar to a system.

1.4 CLOSEOUT SUBMITTALS

- A. Manual Content: Operations and maintenance manual content is specified in individual Specification Sections to be reviewed at the time of Section submittals. Submit reviewed manual content formatted and organized as required by this Section.
 - 1. Architect and Commissioning Authority will comment on whether content of operations and maintenance submittals are acceptable.
 - 2. Where applicable, clarify and update reviewed manual content to correspond to revisions and field conditions.
- B. Format: Submit operations and maintenance manuals in the following format:
 - 1. PDF electronic file. Assemble each manual into a composite electronically indexed file. Submit on digital media acceptable to Architect.

- a. Name each indexed document file in composite electronic index with applicable item name. Include a complete electronically linked operation and maintenance directory.
 - b. Enable inserted reviewer comments on draft submittals.
- C. Initial Manual Submittal: Submit draft copy of each manual at least 30 days before commencing demonstration and training. Architect and Commissioning Authority will comment on whether general scope and content of manual are acceptable.
- D. Final Manual Submittal: Submit each manual in final form prior to requesting inspection for Substantial Completion and at least 15 days before commencing demonstration and training. Architect and Commissioning Authority will return copy with comments.
 - 1. Correct or revise each manual to comply with Architect's and Commissioning Authority's comments. Submit copies of each corrected manual within 15 days of receipt of Architect's and Commissioning Authority's comments and prior to commencing demonstration and training.

PART 2 - PRODUCTS

2.1 OPERATION AND MAINTENANCE DOCUMENTATION DIRECTORY

- A. Directory: Prepare a single, comprehensive directory of emergency, operation, and maintenance data and materials, listing items and their location to facilitate ready access to desired information. Include a section in the directory for each of the following:
 - 1. List of documents.
 - 2. List of systems.
 - 3. List of equipment.
 - 4. Table of contents.
- B. List of Systems and Subsystems: List systems alphabetically. Include references to operation and maintenance manuals that contain information about each system.
- C. List of Equipment: List equipment for each system, organized alphabetically by system. For pieces of equipment not part of system, list alphabetically in separate list.
- D. Tables of Contents: Include a table of contents for each emergency, operation, and maintenance manual.
- E. Identification: In the documentation directory and in each operation and maintenance manual, identify each system, subsystem, and piece of equipment with same designation used in the Contract Documents. If no designation exists, assign a designation according to ASHRAE Guideline 4, "Preparation of Operating and Maintenance Documentation for Building Systems."

2.2 REQUIREMENTS FOR EMERGENCY, OPERATION, AND MAINTENANCE MANUALS

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

1. Title page.
2. Table of contents.
3. Manual contents.

B. Title Page: Include the following information:

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

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

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

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

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

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

2.3 EMERGENCY MANUALS

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

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

- B. Type of Emergency: Where applicable for each type of emergency indicated below, include instructions and procedures for each system, subsystem, piece of equipment, and component:
1. Fire.
 2. Flood.
 3. Gas leak.
 4. Water leak.
 5. Power failure.
 6. Water outage.
 7. System, subsystem, or equipment failure.
 8. Chemical release or spill.
- C. Emergency Instructions: Describe and explain warnings, trouble indications, error messages, and similar codes and signals. Include responsibilities of Owner's operating personnel for notification of Installer, supplier, and manufacturer to maintain warranties.
- D. Emergency Procedures: Include the following, as applicable:
1. Instructions on stopping.
 2. Shutdown instructions for each type of emergency.
 3. Operating instructions for conditions outside normal operating limits.
 4. Required sequences for electric or electronic systems.
 5. Special operating instructions and procedures.

2.4 OPERATION MANUALS

- A. Content: In addition to requirements in this Section, include operation data required in individual Specification Sections and the following information:
1. System, subsystem, and equipment descriptions. Use designations for systems and equipment indicated on Contract Documents.
 2. Performance and design criteria if Contractor has delegated design responsibility.
 3. Operating standards.
 4. Operating procedures.
 5. Operating logs.
 6. Wiring diagrams.
 7. Control diagrams.
 8. Piped system diagrams.
 9. Precautions against improper use.
 10. License requirements including inspection and renewal dates.
- B. Descriptions: Include the following:
1. Product name and model number. Use designations for products indicated on Contract Documents.
 2. Manufacturer's name.
 3. Equipment identification with serial number of each component.
 4. Equipment function.
 5. Operating characteristics.
 6. Limiting conditions.
 7. Performance curves.
 8. Engineering data and tests.

9. Complete nomenclature and number of replacement parts.
- C. Operating Procedures: Include the following, as applicable:
1. Startup procedures.
 2. Equipment or system break-in procedures.
 3. Routine and normal operating instructions.
 4. Regulation and control procedures.
 5. Instructions on stopping.
 6. Normal shutdown instructions.
 7. Seasonal and weekend operating instructions.
 8. Required sequences for electric or electronic systems.
 9. Special operating instructions and procedures.
- D. Systems and Equipment Controls: Describe the sequence of operation, and diagram controls as installed.
- E. Piped Systems: Diagram piping as installed, and identify color-coding where required for identification.

2.5 PRODUCT MAINTENANCE MANUALS

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

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

2.6 SYSTEMS AND EQUIPMENT MAINTENANCE MANUALS

- A. Content: For each system, subsystem, and piece of equipment not part of a system, include source information, manufacturers' maintenance documentation, maintenance procedures, maintenance and service schedules, spare parts list and source information, maintenance service contracts, and warranty and bond information, as described below.
- B. Source Information: List each system, subsystem, and piece of equipment included in manual, identified by product name and arranged to match manual's table of contents. For each product, list name, address, and telephone number of Installer or supplier and maintenance service agent, and cross-reference Specification Section number and title in Project Manual and drawing or schedule designation or identifier where applicable.
- C. Manufacturers' Maintenance Documentation: Manufacturers' maintenance documentation including the following information for each component part or piece of equipment:
 1. Standard maintenance instructions and bulletins.
 2. Drawings, diagrams, and instructions required for maintenance, including disassembly and component removal, replacement, and assembly.
 3. Identification and nomenclature of parts and components.
 4. List of items recommended to be stocked as spare parts.
- D. Maintenance Procedures: Include the following information and items that detail essential maintenance procedures:
 1. Test and inspection instructions.
 2. Troubleshooting guide.
 3. Precautions against improper maintenance.
 4. Disassembly; component removal, repair, and replacement; and reassembly instructions.
 5. Aligning, adjusting, and checking instructions.
 6. Demonstration and training video recording, if available.
- E. Maintenance and Service Schedules: Include service and lubrication requirements, list of required lubricants for equipment, and separate schedules for preventive and routine maintenance and service with standard time allotment.
 1. Scheduled Maintenance and Service: Tabulate actions for daily, weekly, monthly, quarterly, semiannual, and annual frequencies.
 2. Maintenance and Service Record: Include manufacturers' forms for recording maintenance.
- F. Spare Parts List and Source Information: Include lists of replacement and repair parts, with parts identified and cross-referenced to manufacturers' maintenance documentation and local sources of maintenance materials and related services.
- G. Maintenance Service Contracts: Include copies of maintenance agreements with name and telephone number of service agent.
- H. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.

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

PART 3 - EXECUTION

3.1 MANUAL PREPARATION

- A. Operation and Maintenance Documentation Directory: Prepare a separate manual that provides an organized reference to emergency, operation, and maintenance manuals.
- B. Emergency Manual: Assemble a complete set of emergency information indicating procedures for use by emergency personnel and by Owner's operating personnel for types of emergencies indicated.
- C. Product Maintenance Manual: Assemble a complete set of maintenance data indicating care and maintenance of each product, material, and finish incorporated into the Work.
- D. Operation and Maintenance Manuals: Assemble a complete set of operation and maintenance data indicating operation and maintenance of each system, subsystem, and piece of equipment not part of a system.
 1. Engage a factory-authorized service representative to assemble and prepare information for each system, subsystem, and piece of equipment not part of a system.
 2. Prepare a separate manual for each system and subsystem, in the form of an instructional manual for use by Owner's operating personnel.
- E. Manufacturers' Data: Where manuals contain manufacturers' standard printed data, include only sheets pertinent to product or component installed. Mark each sheet to identify each product or component incorporated into the Work. If data include more than one item in a tabular format, identify each item using appropriate references from the Contract Documents. Identify data applicable to the Work and delete references to information not applicable.
 1. Prepare supplementary text if manufacturers' standard printed data are not available and where the information is necessary for proper operation and maintenance of equipment or systems.
- F. Drawings: Prepare drawings supplementing manufacturers' printed data to illustrate the relationship of component parts of equipment and systems and to illustrate control sequence and flow diagrams. Coordinate these drawings with information contained in record Drawings to ensure correct illustration of completed installation.
 1. Do not use original project record documents as part of operation and maintenance manuals.
 2. Comply with requirements of newly prepared record Drawings in Section 01 78 39 "Project Record Documents."
- G. Comply with Section 01 77 00 "Closeout Procedures" for schedule for submitting operation and maintenance documentation.

END OF SECTION 01 78 23

SECTION 26 24 13 - SWITCHBOARDS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 PRE-PURCHASE EQUIPMENT

- A. In order to meet the overall construction schedule for this project, the Owner has elected to Pre-Bid and Pre-Purchase the equipment called for in this section of the specifications.
- B. Equipment manufacturer representative shall accept, unload, and store equipment off site until start of construction. At start of construction, equipment manufacturer representative shall load equipment for shipment to site and pay for same.
- C. Equipment shall be shipped to the project site and shall be unloaded by the installing contractor.
- D. The equipment manufacturer representative shall be on site and present at time of unloading. The equipment manufacturer representative, Owner and Architect/Engineer shall inspect the equipment for damage and/or missing components and identify such in writing.
- E. If Owner and Architect/Engineer agrees that the equipment is in proper condition, the manufacturer's representative shall obtain written acceptance of the equipment from the Owner.
- F. The equipment manufacturer shall include all start-up services, training of Owner's personnel, and operating manuals.
- G. All Bidders shall submit electronic copies of complete product data and shop drawings along with the equipment fabrication time with their bid.

1.3 REFERENCES

- A. NECA 1 - Standard for Good Workmanship in Electrical Construction; 2015.
- B. NECA 400 - Standard for Installing and Maintaining Switchboards; 2007.
- C. NEMA 250 - Enclosures for Electrical Equipment (1000 Volts Maximum); 2014.
- D. NEMA KS 1 - Heavy Duty Enclosed and Dead-Front Switches (600 Volts Maximum); 2013.
- E. NEMA PB 2 - Deadfront Distribution Switchboards; 2011.
- F. NEMA PB 2.1 - General Instructions for Proper Handling, Installation, Operation, and Maintenance of Deadfront Distribution Switchboards Rated 600 Volts or Less; 2013.

- G. NETA ATS - Acceptance Testing Specifications for Electrical Power Equipment and Systems; 2017.
- H. UL 98 - Enclosed and Dead-Front Switches; Current Edition, Including All Revisions.
- I. UL 489 - Molded-Case Circuit Breakers, Molded-Case Switches and Circuit Breaker Enclosures; Current Edition, Including All Revisions.
- J. UL 869A - Reference Standard for Service Equipment; Current Edition, Including All Revisions.
- K. UL 891 - Switchboards; Current Edition, Including All Revisions.
- L. UL 977 - Fused Power-Circuit Devices; Current Edition, Including All Revisions.
- M. UL 1053 - Ground-Fault Sensing and Relaying Equipment; Current Edition, Including All Revisions.
- N. NFPA 70 - National Electrical Code.

1.4 SUBMITTALS

- A. See Division 01 for project requirements.
- B. Product Data: Provide manufacturer's standard catalog pages and data sheets for switchboards, enclosures, overcurrent protective devices, and other installed components and accessories.
- C. Shop Drawings: Indicate dimensions, voltage, bus ampacities, overcurrent protective device arrangement and sizes, short circuit current ratings, conduit entry locations, conductor terminal information, and installed features and accessories.
 - 1. Include dimensioned plan and elevation views of switchboards and adjacent equipment with all required clearances indicated.
 - 2. Include wiring diagrams showing all factory and field connections.

1.5 CLOSEOUT SUBMITTALS

- A. See Division 01 for project requirements.
- B. Project Record Documents: Record actual locations, configurations, and ratings of switchboards and their components on single line diagrams and plan layouts.
- C. Maintenance Data: Include spare parts listing; source and current prices of replacement parts and supplies; and recommended maintenance procedures and intervals.

1.6 QUALITY ASSURANCE

- A. Manufacturer: Company specializing in manufacturing the products specified in this section with minimum five years documented experience.
 - 1. Obtain switchboards through one source from a single manufacturer.

- B. Drawings indicate maximum dimensions for switchboards including clearances between switchboards and adjacent equipment and surfaces. Comply with indicated maximum dimensions.

1.7 REGULATORY REQUIREMENTS

- A. Conform to the 2016 Health/Life Safety Code for Public Schools, 23 Illinois Administrative Code 180.
- B. Conform to the 2015 International Building Code (IBC).
- C. Conform to the 2015 International Existing Building Code (IEBC).
- D. Conform to the 2015 International Fuel Gas Code (IFGC).
- E. Conform to the 2015 International Property Maintenance Code (IPMC).
- F. Conform to the 2015 International Fire Code (IFC), excluding Chapter 4.
- G. Conform to the 2018 International Energy Conservation Code (IECC).
- H. Conform to the 2018 Illinois Accessibility Code, 71 Illinois Administrative Code 400.
- I. Conform to 2014 State of Illinois Plumbing Code, 77 Illinois Administrative Code 890.
- J. Conform to the 2013 Illinois State Fire Marshall Boiler and Pressure Vessel Safety Act, 41 Illinois Administrative Code 120.
- K. Conform to the 2015 International Mechanical Code (IMC).
- L. Conform to the 2015 ICC Electrical Code.
- M. Conform to 2014 NFPA 70, National Electrical Code.
- N. Conform to 2013 NFPA 72, National Fire Alarm Code.
- O. Products: Listed and classified by Underwriter's Laboratories, Inc. as suitable for the purpose specified and indicated.

1.8 DELIVERY, STORAGE, AND HANDLING

- A. See Division 01 for project requirements.
- B. Receive, inspect, handle, and store switchboards in accordance with manufacturer's instructions, NECA 400, and NEMA PB 2.1.
- C. Store in a clean, dry space having a uniform temperature to prevent condensation (including outdoor switchboards, which are not weatherproof until completely and properly installed). Where necessary, provide temporary enclosure space heaters or temporary power for permanent factory-installed space heaters.
- D. Maintain factory wrapping or provide an additional heavy canvas or heavy plastic cover to protect units from dirt, water, construction debris, and traffic.

- E. Handle carefully to avoid damage to switchboard internal components, enclosure, and finish.

1.9 FIELD MEASUREMENTS

- A. Verify that field measurements are as required to suit installation.

1.10 MAINTENANCE MATERIALS

- A. See Division 01 for project requirements.
- B. Furnish two of each different enclosure key.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. UL Certified Switchboard Makers containing 'Eaton', 'Square D' or 'Siemens' components:
 - 1. Illinois Switchboard Corp. in Addison, IL.
 - 2. Chicago Switchboard in Elmhurst, IL.
 - 3. Power Distribution Equipment Co. in Franklin Park, IL.

2.2 SWITCHBOARD

- A. Description: Dead-front switchboard assemblies complying with NEMA PB 2, and listed and labeled as complying with UL 891; ratings, configurations and features as indicated on the drawings.
- B. Hinged Front Panels: Allow access to circuit breakers, metering, accessory, and blank compartments.
- C. Front-Connected Switchboards:
 - 1. Main Device(s): Fixed, individually-mounted.
 - 2. Feeder Devices: Group-mounted.
 - 3. Arrangement: Front accessible only (not rear accessible), front and rear aligned.
 - 4. Gutter Access: Bolted covers.
- D. Service Entrance Switchboards:
 - 1. Listed and labeled as suitable for use as service equipment according to UL 869A.
 - 2. For solidly-grounded wye systems, provide factory-installed main bonding jumper between neutral and ground busses, and removable neutral disconnecting link for testing purposes.
 - 3. Comply with Utility Company requirements for electrical service.
 - 4. Utility Metering Compartment: Fabricated compartment and section complying with utility company's requirements. If separate vertical section is required for utility metering, match and align with basic switchboard.

5. Utility Metering Provisions: Provide separate barriered compartment complying with Utility Company requirements where indicated or where required by Utility Company. Include hinged sealable door and provisions for Utility Company current transformers (CTs), potential transformers (PTs), or potential taps as required.
- E. Nominal System Voltage: Indicated on Drawings.
 - F. Main-Bus Continuous Amperage: Indicated on Drawings.
 - G. Short Circuit Current Rating, Fully Rated:
 1. Indicated on Drawings or not less than the available fault current at the installed location as determined by short circuit study performed in accordance with Section 26 05 73 - Power System Studies.
 - H. Selectivity: Where the requirement for selectivity is indicated, furnish products as required to achieve selective coordination.
 - I. Main Devices: Configure for top or bottom incoming feed as indicated or as required for the installation. Provide separate pull section and/or top-mounted pullbox as indicated or as required to facilitate installation of incoming feed.
 - J. Bussing: Sized in accordance with UL 891 temperature rise requirements.
 1. Through bus (horizontal cross bus) to be fully rated through full length of switchboard (non-tapered). Tapered bus is not permitted.
 2. Provide fully rated neutral bus unless otherwise indicated, with a suitable lug for each feeder or branch circuit requiring a neutral connection.
 3. Provide solidly bonded equipment ground bus through full length of switchboard, with a suitable lug for each feeder and branch circuit equipment grounding conductor.
 4. Phase and Neutral Bus Material: Hand-drawn copper of 98 percent conductivity with feeder circuit-breaker line connections.
 5. Ground Bus Material: 1/4-by-2-inch minimum-size, hard-drawn copper. of 98 percent conductivity, equipped with pressure connectors for feeder and branch-circuit ground conductors.
 6. Contact Surface of Buses: Silver-plated.
 7. Load Terminals: Insulated, rigidly braced, silver-plated, copper runback bus extensions equipped with pressure connectors for outgoing circuit conductors. Provide load terminals for future circuit-breaker positions at full ampere rating of circuit-breaker position.
 8. Main Phase Buses, Neutral Buses, and Equipment Ground Buses: Uniform capacity for entire length of switchboard's main and distribution sections. Provide for future extensions from both ends.
 9. Neutral Buses: 100 percent of the ampacity of phase buses, unless otherwise indicated, equipped with pressure connectors for outgoing circuit neutral cables. Bus extensions for busway feeder neutral bus shall be braced.
 - K. Conductor Terminations: Suitable for use with the conductors materials and sizes as indicated on Drawings.
 1. Line Conductor Terminations:

- a. Main and Neutral Lug Material: Hard-drawn copper of 98 percent conductivity, suitable for terminating copper conductors only.
 - 1) Plating: Silver-Plated.
 - b. Main and Neutral Lug Type: Mechanical.
 - 2. Load Conductor Terminations:
 - a. Lug Material: Copper, suitable for terminating copper conductors only.
 - 1) Plating: Silver-plated.
 - b. Lug Type:
 - 1) Provide mechanical lugs unless otherwise indicated.
- L. Enclosures:
 - 1. Type 1 - General Purpose.
 - 2. Finish: Manufacturer's standard light gray enamel over external surfaces. Coat internal surfaces with minimum one coat corrosion-resisting paint, or plate with cadmium or zinc.
- M. Nameplates:
 - 1. Engraved three-layer laminated plastic, black letters on white background.
- N. Comply with NFPA 70E for arc flash labels.
- O. Ground Fault Protection: Where ground-fault protection is indicated, provide system listed and labeled as complying with UL 1053.
 - 1. Where overcurrent protective devices equipped with integral ground fault protection are used, provide separate neutral current sensor where applicable.
 - 2. Where accessory ground fault sensing and relaying equipment is used, equip companion overcurrent protective devices with ground-fault shunt trips.
 - a. Use zero sequence or residual ground fault detection method unless otherwise indicated.
 - b. Provide test panel and field-adjustable ground fault pick-up and delay settings.
 - c. Provide zone selective interlocking capability where indicated, capable of communicating with other electronic trip circuit breakers and external ground fault sensing systems to control ground fault delay functions for system coordination purposes.
- P. Arc Flash Energy-Reducing Maintenance Switching: For circuit breakers rated 1200 A or higher, provide a local accessory switch with status indicator light that permits selection of a maintenance mode with alternate electronic trip unit settings for reduced fault clearing time.

2.3 OVERCURRENT PROTECTIVE DEVICES

A. General:

1. Provide with provisions for locking in the open/off position with a maximum of three (3) padlocks.
2. Ground fault protection shall be provided for solidly grounded wye connected services over 150 volts to ground for all main devices rated 1000 amperes and as indicated on the drawings.
3. Provide circuit breakers with interrupting capacity with interrupting capacity not less than the short circuit current rating indicated.
4. Provide engraved three-layer laminated plastic, black letters on white background to identify each circuit breaker to describe load served.

B. Main Circuit Breaker:

1. Description: Molded case circuit breakers; listed and labeled as complying with UL 489; ratings, configurations, and features as indicated on the drawings.
2. Lugs: Mechanical style, suitable for number, size, trip ratings, and conductor material.
3. NEMA AB 3 with Minimum Interrupting Capacity: Fully rated.
4. Furnish solid state, microprocessor-based, true rms sensing trip units.
 - a. Provide the following field-adjustable trip response settings:
 - 1) Long time pickup, adjustable by replacing interchangeable trip unit or by setting dial.
 - 2) Long time delay.
 - 3) Short time pickup and delay.
 - 4) Instantaneous pickup.
 - 5) Ground fault pickup and delay where ground fault protection is indicated.
5. Ground fault protection shall be provided for solidly grounded wye connected services over 150 volts to ground for all main devices rated 1000 amperes and as indicated on the drawings.
6. Provide the following circuit breaker types where indicated:
 - a. 100 Percent Rated Circuit Breakers: Listed for application within the switchboard where installed at 100 percent of the continuous current rating.
 - b. Current Limiting Circuit Breakers: Without using fusible elements, designed to limit the let-through energy to a value less than the energy of a one-half cycle wave of the symmetrical prospective current when operating within its current limiting range.

C. Feeder/Branch Circuit Breakers:

1. Description: Molded case circuit breakers; listed and labeled as complying with UL 489; ratings, configurations, and features as indicated on the drawings.
2. Lugs: Mechanical style, suitable for number, size, trip ratings, and conductor material.
3. NEMA AB 3 with Minimum Interrupting Capacity: Fully rated.

4. For each pole, furnish thermal inverse time tripping element for overload protection and magnetic instantaneous tripping element for short circuit protection.
 - a. Provide field-adjustable magnetic instantaneous trip setting for circuit breaker frame sizes 250 amperes and larger.
5. Provide the following features and accessories where indicated or where required to complete installation:
 - a. Shunt Trip: 120V trip coil energized from separate circuit, set to trip at 55 percent of rated voltage.
 - b. Pad-Lock Provision: For locking circuit breaker handle in OFF position.
6. Application Listing: Appropriate for application; Type SWD for switching fluorescent lighting loads; Type HACR for heating, air-conditioning, and refrigerating equipment.

2.4 SWITCHBOARD ACCESSORIES

A. ELECTRONIC METER INSTRUMENT

1. Provide microprocessor-based digital electrical metering system including all instrument transformers, wiring, and connections necessary for measurements specified.
2. Mounting: Display and control unit flush or semi-flush mounted in instrument compartment door.
3. Measured Parameters:
 - a. Voltage (Volts AC): Line-to-line, line-to-neutral for each phase.
 - b. Current (Amps): For each phase and neutral.
 - c. Frequency (Hz).
 - d. Real power (kW): For each phase, 3-phase total.
 - e. Reactive power (kVAR): For each phase, 3-phase total.
 - f. Apparent power (kVA): For each phase, 3-phase total.
 - g. Power factor.
 - h. Real energy (kWh).
 - i. Reactive energy (kVARh).
 - j. Apparent energy (kVAh).
 - k. Current demand.
 - l. Power demand: Real, reactive, and apparent.
4. Meter Accuracy: Plus/minus 1.0 percent.
5. Features:
 - a. Communications Capability: Compatible with system indicated. Provide all accessories necessary for proper interface.
 - b. KYZ pulse output.
 - c. Adjustable demand interval.
 - d. Remote monitoring capability via PC or Building Automation System.
6. Manufacturer: Eaton Power Xpert Meter 2000 series or equal from switchboard manufacturer.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Provide concrete housekeeping pad.

3.2 EXAMINATION

- A. Verify that field measurements are as indicated.
- B. Verify that the ratings and configurations of the switchboards and associated components are consistent with the indicated requirements.
- C. Verify that mounting surfaces are ready to receive switchboards.
- D. Verify that conditions are satisfactory for installation prior to starting work.

3.3 INSTALLATION

- A. Install products in accordance with manufacturer's instructions.
- B. Install switchboards in accordance with NECA 1 (general workmanship), NECA 400, and NEMA PB 2.1.
- C. Arrange equipment to provide required clearances and maintenance access.
- D. Where switchboard is indicated to be mounted with inaccessible side against wall, provide minimum clearance of 1/2 inch between switchboard and wall.
- E. Provide required support and attachment components in accordance with Section 260529 - Hangers and Supports for Electrical Systems.
- F. Install switchboards plumb and level.
- G. Unless otherwise indicated, mount switchboards on properly sized 4 inch high concrete pad constructed in accordance with Section 033000.
- H. Provide grounding and bonding in accordance with Section 260526 - Grounding and Bonding for Electrical Systems.
- I. Install all field-installed devices, components, and accessories.
- J. Where accessories are not self-powered, provide control power source as indicated or as required to complete installation.
- K. Provide filler plates to cover unused spaces in switchboards.
- L. Identify switchboards in accordance with Section 260553 - Identification for Electrical Systems.
- M. Temporary Lifting Provisions: Remove temporary lifting eyes, channels, and brackets and temporary blocking of moving parts from switchboard units and components.

- N. Operating Instructions: Frame and mount the printed basic operating instructions for switchboards, including control and key interlocking sequences and emergency procedures. Fabricate frame of finished wood or metal and cover instructions with clear acrylic plastic. Mount on front of switchboards.

3.4 FIELD QUALITY CONTROL

- A. See Division 01 for project requirements.
- B. Provide services of a manufacturer's authorized representative to observe installation and assist in inspection and testing. Include manufacturer's reports with submittals.
- C. Disconnect surge protective devices (SPDs) prior to performing any high potential testing. Replace SPDs damaged by performing high potential testing with SPDs connected.
- D. Before energizing switchboard, perform insulation resistance testing in accordance with NECA 400 and NEMA PB 2.1.
- E. Inspect and test in accordance with NETA ATS, except Section 4.
- F. Perform inspections and tests listed in NETA ATS, Section 7.1.
- G. Fusible Switches: Perform inspections and tests listed in NETA ATS, Section 7.5.1.1.
- H. Molded Case and Insulated Case Circuit Breakers: Perform inspections and tests listed in NETA ATS, Section 7.6.1.1 for all main circuit breakers. Tests listed as optional are not required.
- I. Ground Fault Protection Systems: Test in accordance with manufacturer's instructions.
- J. Perform inspections and tests listed in NETA ATS, Section 7.14. The insulation-resistance test on control wiring listed as optional is not required.
- K. Meters: Perform inspections and tests listed in NETA ATS, Section 7.11.2.
- L. Instrument Transformers: Perform inspections and tests listed in NETA ATS, Section 7.10. The dielectric withstand tests on primary windings with secondary windings connected to ground listed as optional are not required.
- M. Test shunt trips to verify proper operation.
- N. Correct deficiencies and replace damaged or defective switchboards or associated components.
- O. Submit detailed reports indicating inspection and testing results and corrective actions taken.

3.5 ADJUSTING

- A. See Division 01 for project requirements.
- B. Adjust tightness of mechanical and electrical connections to manufacturer's recommended torque settings.
- C. Adjust alignment of switchboard covers and doors.

3.6 CLEANING

- A. See Division 01 for project requirements.
- B. Clean dirt and debris from switchboard enclosures and components according to manufacturer's instructions.
- C. Repair scratched or marred surfaces to match original factory finish.

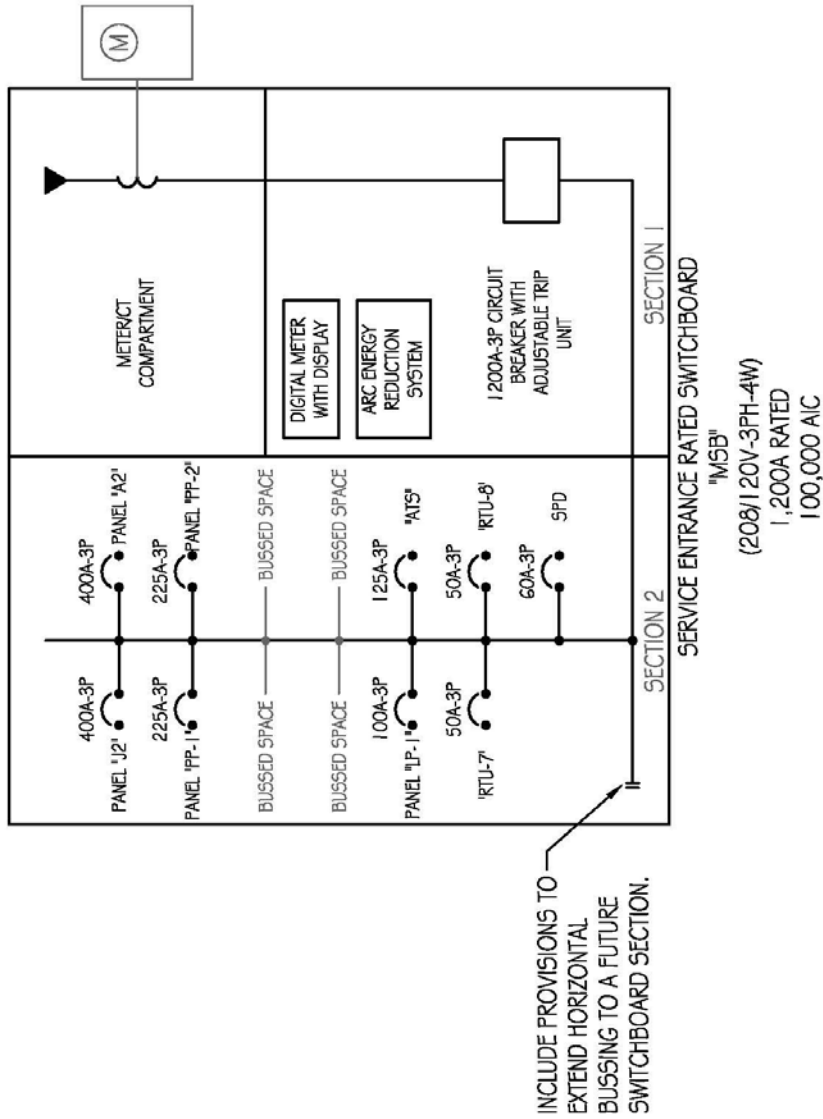
3.7 PROTECTION

- A. Protect installed switchboards from subsequent construction operations.

3.8 SWITCHBOARD DRAWINGS

- A. See switchgear elevations and details attached at the end of this section.

END OF SECTION 26 24 13



NEW SWITCHBOARD ELEVATION DETAIL

NO SCALE

NOTES:

- 1. METER/CT SECTION SHALL CONFORM TO COMED REQUIREMENTS.