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ARCHITECT**



**LANSING SCHOOL DISTRICT
2008 RENOVATION PROJECTS
JOHNSON FIELDHOUSE NATATORIUM RENOVATIONS - Bid #S.O. 1461
LANSING, MICHIGAN**

PROJECT ARCHITECT

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HOLT, MI 48842-1935

PROJECT #08-26 JOHNSON FIELDHOUSE NATATORIUM RENOVATIONS

SEPTEMBER 24, 2008

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LANSING SCHOOL DISTRICT
2008 RENOVATION PROJECTS

ROGER L DONALDSON, AIA P.L.C.

PROJECT #08-26 - JOHNSON FIELDHOUSE/NATATORIUM RENOVATIONS – SO 1461

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END OF SECTION 00015

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**SECTION 00100
INVITATION TO BID**

PROJECT

**LANSING SCHOOL DISTRICT
2008 RENOVATIONS PROJECTS**

Johnson Fieldhouse Natatorium Renovations - Bid #S.O. 1461

OWNER

Lansing School District
Purchasing Department
519 W. Kalamazoo Street
Lansing, Michigan 48933

ARCHITECT

Roger L. Donaldson, AIA P.L.C..
4787 Tartan Lane
Holt, Michigan 48842
Telephone/fax: (517) 694-0011
Email: RogerAIA@comcast.net
Architects Project #08-26 Johnson Fieldhouse Natatorium Renovations

I. GENERAL

A DESCRIPTION OF PROJECTS:

- 1.) **Johnson Fieldhouse Natatorium Renovations** - Bid #S.O. 1461: Painting of walls, Door & Frame, Providing new Suspended Ceiling System with lighting, grilles and clean up.
- 2.) Alternate #1, - Guaranteeing that all work will be completed within Thirty (30) calendar days after award of contract and receipt of approvals from City of Lansing Office of Building Safety and State of Michigan Bureau of Fire Services.

B PRE-BID MEETING:

- 1.) A Highly Recommended Pre-bid Conference on Monday, October 6, 2008 at 11:00 AM local time prevailing, at the Johnson Fieldhouse Natatorium Renovations , 400 N. Pennsylvania, Lansing, MI 48912, for the purpose of reviewing the scope of work. This location is North and East of Eastern High School.

C TYPE OF BIDS REQUESTED

- 1.) Sealed proposals for construction work of all trades for work at Johnson Fieldhouse Natatorium Renovations - Bid #S.O. 1461.

D TIME AND PLACE

- 1.) Sealed proposals will be received until 2:00 p.m. local Time, on Tuesday, October 14, 2008, Lansing School District, Board of Education Room , 519 W. Kalamazoo, Lansing, Michigan 48933. Bids will be opened and read aloud. Bids received after the time and date for receipt of Bids will be returned unopened.
- 2.) Bid form is included in the Project Manual. Bids must be submitted prior to the date and time specified in an Opaque Envelope marked in large letters –

BID PROPOSAL”

“2008 RENOVATIONS PROJECTS

JOHNSON FIELDHOUSE NATATORIUM RENOVATIONS - BID #S.O. 1461

BID PROPOSAL”

- 3.) Include with the Bid Proposal, also completed copies of:
 - (a) “Bid Security”,

- (b) Section 00452 - "Non Collusion Affidavit"
- (c) "Vendor Application"
- 4.) The envelope shall be addressed to the party receiving the Bids and shall be identified with the Project name, the Bidder's name and address and, if applicable, the designated portion of the Work for which the Bid is submitted. If the Bid is sent by mail the sealed envelope shall be enclosed in a separate mailing envelope with the notation "SEALED BID ENCLOSED" on the face thereof.
- 5.) No oral interpretations will be made. Interpretations must be made in writing and delivered to the Architect at least seven (7) working days prior to bid opening. Interpretations will be made in writing and furnished to prospective bidders present at the pre-bid inspection meeting.
- 6.) Each bidder is responsible for making their own measurements, for acquainting themselves with the specification documents, and for inspecting the work site and conditions.
- 7.) Each bidder in submitting a Bid Proposal agrees to and guarantees that the Materials, equipment and labor included in this proposal meets or exceeds all specifications..

E PROPOSAL GUARANTEE

- 1.) Each proposal must be accompanied by a proposal guarantee in an amount equal to five percent (5%) of the basic proposal. Guarantee shall be in the form of a certified check or bid bond executed by and approved surety company, made payable to the Lansing School District. Proposal guarantee shall run for a period of sixty (60) days.

F ACCESS TO BIDDING DOCUMENTS

- 1.) Bidding documents are on file at the following locations and are available for the use of bidders:
 - Office of the Architect, Builders Exchange of Lansing and Grand Rapids, MI
 - Lansing School District Physical Plant F. W. Dodge of Grand Rapids and Flint, MI.
- 2.) Contractors who obtain bid documents from other sources besides the Architect should notify the Architect of contact information, including email address so that additional information, including addendums that may be issued, can be forwarded to the addresses provided. Submitt contact information to RogerAIA@comcast.net

G PROCUREMENT OF BIDDING DOCUMENTS

- 1.) Copies of the bidding documents may be obtained from the Architect, with each general contractor being entitled to obtain up to three (3) sets, and each Sub Contractor entitled to obtain one (1) set of bidding documents for a refundable deposit of \$50.00 per set. Make Checks out to "Lansing School District". Provide a self address stamped envelope for return of deposit when drawings are returned after submission of bid proposal.
- 2.) If any bidder requires more than the sets of bidding documents stipulated, such additional full sets may be purchased from Capital City Blueprint at cost and this purchase amount will not be refunded. Subcontractors and suppliers may purchase complete sets of bidding documents at cost and this purchase amount will not be refunded.
- 3.) Bid documents may be mailed to contractors upon written request and prepayment (by check made out to Roger L. Donaldson AIA PLC) of \$20.00 to cover cost of wrapping, handling and mailing. This is for the contractor's convenience only, and the cost of this service is without refund.
- 4.) The deposit for the bidding documents will be returned to each bidder who:
 - (a) Submits a bona-fide proposal on time;
 - (b) Has returned the documents, in good condition, within ten (10) business days after opening of proposals.
 - (c) Has provided a self address stamped envelope;
 - (d) Or, is a successful low bidder and receives a contract award.
- 5.) No refund will be made to those bidders who fail to submit a bona-fide proposal, or to those who return

**SECTION 00100
INVITATION TO BID**

the documents after 10 business days of the bid opening., or return damaged and/or partial documents.

- 6.) A bidder may return the documents with a copy of Section 00211 – Statement of No Bid at least seven days prior to the bid proposal due date and receive a refund of the deposit for each set of documents returned in good condition.

H CONTRACT SECURITY

- 1.) Successful bidder will be required to furnish a "Performance Bond" and a "Labor and Material Payment Bond", each bond in the amount of 100% of his contract, as required in the "Instructions to Bidders".

I RIGHTS RESERVED BY OWNER

- 1.) The owner reserves the right to reject any or all proposals and to waive any irregularities in bidding, or to accept the lowest responsible proposal(s), that in the opinion of the owner will serve the best interest of the owner. The owner will not be obligated to accept the lowest proposal. The owner further reserves the right to approve all subcontractors.

J WITHDRAWAL OF PROPOSALS

- 1.) No proposals may be withdrawn for a period of sixty (60) days after the receipt of proposals.

END OF SECTION 00100

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SECTION 00200
INSTRUCTIONS TO BIDDERS

A. DEFINITIONS

1. Bidding Documents include the Invitation to Bid, Instructions to Bidders, the bid form, other sample bidding and contract forms and the proposed Contract Documents including any Addenda issued prior to receipt of bids. The Contract Documents proposed for the Work consists of the Owner-Contractor Agreement, the Conditions of the Contract (General, Supplementary and other Conditions), the Drawings, the Specifications and all Addenda issued prior to and all Modifications issued after execution of the Contract.
2. All definitions set forth in the General Conditions of the Contract for Construction, AIA Document A201, or in other Contract Documents are applicable to the Bidding Documents.
3. Addenda are written or graphic instruments issued by the Architect prior to the execution of the Contracts which modify or interpret the Bidding Documents by addition, deletion, clarifications or corrections.
4. A Bid is a complete and properly signed proposal to do the Work or designated portion thereof for the sums stipulated therein, submitted in accordance with the Bidding Documents.
5. The Base Bid is the sum stated in the Bid for which the Bidder offers to perform the Work described in the Bidding Documents as the base, to which work may be added or from which work may be deleted for sums stated in Alternate Bids.
6. An Alternate Bid (or Alternate) is an amount stated in the Bid to be added to or deducted from the amount of the Base Bid if the corresponding change in the Work, as described in the Bidding Documents, is accepted.
7. A Unit Price is an amount stated in the Bid as a price per unit of measurement for materials or services as described in the Bidding Documents or in the proposed Contract Documents.
8. A Bidder is a person or entity who submits a Bid.
9. A Sub-bidder is a person or entity who submits a bid to a Bidder for materials or labor for a portion of the Work.

B. BIDDER'S REPRESENTATION

1. Each Bidder by making his Bid represents that:
 - a. He has read and understands the Bidding Documents and his Bid is made in accordance therewith.
 - b. He has visited the site, has familiarized himself with the local conditions under which the Work is to be performed and has correlated his observations with the requirements of the proposed Contract Documents.
 - c. His Bid is based upon the materials, systems and equipment required by the Bidding Documents without exception.
 - d. Bidder has completed their own field measurements to verify quantity and sizes of roofing areas, lengths of edges and penetrations.

C. BIDDING DOCUMENTS

1. Bidders may obtain complete sets of the Bidding Documents from the issuing office designated in the Invitation to Bid in the number and for the deposit sum, if any, stated therein.
2. Bidders shall use complete sets of Bidding Documents in preparing Bids; neither the Owner nor the Architect assume any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.
3. The Owner or the Architect in making copies of the Bidding Documents available on the above terms do so only for the purpose of obtaining Bids on the Work and do not confer a license or grant for any other use.
4. Bidders and Sub-bidders shall promptly notify the Architect of any ambiguity, inconsistency or error which they may discover upon examination of the Bidding Documents or of the site and local conditions.
5. Bidders and Sub-bidders requiring clarification or interpretation of the Bidding Documents shall make a written request to the Architect at least ten days prior to the date for receipt of Bids.
6. Any interpretation, correction or change of the Bidding Documents will be made by Addendum. Interpretations, corrections or changes of the Bidding Documents made in any other manner will not be binding, and Bidders shall not rely upon such interpretations, corrections and changes.
7. No substitution will be considered prior to receipt of Bids unless a written request for approval has been received by the Architect at least seven days prior to the date for receipt of Bids. Each such request shall include the name of the material or equipment for which it is to be substituted and a complete description of the proposed substitute including drawings,

INSTRUCTIONS TO BIDDERS
SECTION 00200

cuts, performance and test data and any other information necessary for an evaluation. A statement setting forth any changes in other materials, equipment or other Work that incorporation of the substitute would require shall be included. The burden of proof of the merit of the proposed substitute is upon the proposer. The Architect's decision of approval or disapproval of a proposed substitution shall be final.

8. If the Architect approves any proposed substitution prior to receipt of Bids, such approval will set forth in an Addendum. Bidders shall not rely upon approvals made in any other manner.
9. No verbal or written correspondence will be responded to within 4 days of the Bid date other than to verify bid date and time and any issuance of Addenda.
10. No substitutions will be considered after the Contract award unless specifically provided in the Contract Documents.
11. Addenda will be mailed or delivered to all that are known by the Architect to have received a complete set of Bidding Documents.
12. Copies of Addenda will be made available for inspection wherever Bidding Documents are on file for that purpose.
13. No Addenda will be issued later than four days prior to the date for receipt of Bids except an Addendum withdrawing the request for Bids or one which includes postponement of the date for receipt of Bids.
14. Each Bidder shall ascertain prior to submitting his bid that he has received all Addenda issued, and he shall acknowledge their receipt in his Bid.

D. BIDDING PROCEDURE

1. Bids shall be submitted on forms included with the Bidding Documents.
2. Bid shall be submitted in triplicate, three (3) copies.
3. All blanks on the bid form shall be filled in by typewriter or manually in ink.
4. Where so indicated by the makeup of the bid forms, sums shall be expressed in both words and figures, and in case of discrepancy between the two, the amount written in words shall govern.
5. The signer of the Bid must initial any interlineations, alteration or erasure.
6. All requested Alternates shall be bid. If no change in the Base Bid is required enter "No Change."
7. Each copy of the Bid shall include the legal name of the Bidder and a statement that the Bidder is a sole proprietor, a partnership, a corporation, or some other legal entity. Each copy shall be signed by the person or persons legally authorized to bind the Bidder to a contract. A Bid by a corporation shall be further given the state of incorporation and have the corporate seal affixed. A Bid submitted by an agent shall have a current power of attorney attached certifying the agent's authority to bind the Bidder.
8. If so stipulated in the Invitation to Bid, each Bid shall be accompanied by a bid security in the form and amount required pledging that the Bidder will enter into a contract with the Owner on the terms stated in his Bid and will, if required, furnish bonds covering the faithful performance of the Contract and the payment of all obligations arising thereunder. Should the Bidder refuse to enter into such Contract or fail to furnish such bonds if required, the amount of the bid security shall be forfeited to the Owner as liquidated damages, not as a penalty.
9. A surety bond is required and shall be written on AIA Document A310-1970, Bid Bond, and the attorney-in-fact who executes the bond on behalf of the surety shall affix to the bond a certified and current copy of his power of attorney.
10. The Owner will have the right to retain the bid security of Bidders to whom an award is being considered until either (a) the Contract has been executed and bonds, if required, have been furnished, or (b) the specified time has elapsed so that Bids may be withdrawn, or (c) all Bids have been rejected.
11. All three (3) copies of the Bid, the bid security, if any, and any other documents required to be submitted with the Bid shall be enclosed in a sealed Opaque Bid Envelope.

12. The envelope shall be addressed to the party receiving the Bids and shall be identified with the Project name, the Bidder's name and address and, if applicable, the designated portion of the Work for which the Bid is submitted. If the Bid is sent by mail the sealed envelope shall be enclosed in a separate mailing envelope with the notation

BID PROPOSAL”
“2008 RENOVATIONS PROJECTS
JOHNSON FIELDHOUSE NATATORIUM RENOVATIONS - BID #S.O. 1461
BID PROPOSAL”

on the face thereof.

- a. Include with the Bid Proposal, also completed copies of:
- (i) “Bid Security”,
 - (ii) Section 00452 - “Non Collusion Affidavit”
 - (iii) “Vendor Application”
13. Bids shall be deposited at the designated location prior to the time and date for receipt of Bids indicated in the Invitation to Bid, or any extension thereof made by Addendum. Bids received after the time and date for receipt of Bids will be returned unopened.
14. The Bidder shall assume full responsibility for timely delivery at the location designated for receipt of Bids.
15. Oral, telephonic or telegraphic Bids are invalid and will not receive consideration.
16. A Bid may not be modified, withdrawn or canceled by the Bidder during the stipulated time period following the time and date designated for the receipt of Bids, and each Bidder so agrees in submitting his Bid.
17. Prior to the time and date designated for receipt of Bids, any Bid submitted may be modified or withdrawn by notice to the party receiving Bids at the place designated for receipt of Bids. Such notice shall be in writing over the signature of the Bidder or by telegram; if by telegram, written confirmation over the signature of the Bidder shall be mailed and postmarked on or before the date and time set for receipt of Bids, and it shall be so worded so as not to reveal the amount of the original Bid.
18. Withdrawn Bids may be resubmitted up to the time designated for the receipt of Bids provided that they are then fully in conformance with these Instructions to Bidders.
19. Bid security, shall be in an amount sufficient for the Bid as modified or resubmitted.

E. CONSIDERATION OF BIDS

1. Unless stated otherwise in the Invitation to Bid, the properly identified Bids received on time will be opened publicly and will be read aloud. An abstract of the Base Bids and Alternate Bids, if any, will be made available to Bidders. When it has been stated that Bids will be opened privately, an abstract of the same information may, at the discretion of the Owner, be made available to the Bidders within a reasonable time.
2. The Owner shall have the right to reject any or all Bids and to reject a Bid not accompanied by any required bid security or by other data required by the Bidding Documents, or to reject a Bid, which is in any way incomplete or irregular.
3. It is the intent of the Owner to award a Contract to one Bidder, the decision of awards will be based on a combination of:
- a. Owner being able to complete projects in the time frame required; and
 - b. Being the lowest responsible bidder; and
 - c. Provided the Bid has been submitted in accordance with the requirements of the Bidding Documents and does not exceed the funds available. The Owner shall have the right to waive any informality or irregularity in any Bid or Bids received and to accept the Bid or Bids which, in his judgement, is in his own best interest.
4. The Owner shall have the right to accept Alternates in any order or combination, and to determine the low Bidder on the basis of the sum of the Base Bid and the Alternates accepted.

F. POST BID INFORMATION

1. Bidders to whom award of a Contract is under consideration shall submit to the Architect, upon request, a properly executed AIA Document A305-1986, Contractor's Qualification Statement, unless such a Statement has been previously required and resubmitted as a prerequisite to the issuance of Bidding Documents.
2. The Bidder shall, within seven days of notification of selection for the award of a Contract for the Work, submit the

following information to the Architect:

- a. a designation of the Work to be performed by the Bidder with his own forces;
 - b. the proprietary names and the suppliers of principal items or systems of materials and equipment proposed for the Work;
 - c. A list of names of the Subcontractors or other persons or entities (including those who are to furnish materials or equipment fabricated to a special design) proposed for the principal portions of the Work.
3. The Bidder will be required to establish to the satisfaction of the Architect and the Owner the reliability and responsibility of the persons or entities proposed to furnish and perform the Work described in the Bidding Documents.
 4. Prior to the award of the Contract, the Architect will notify the Bidder in writing if either the Owner or the Architect, after due investigation, has reasonable objection to any such proposed person or entity. If the Owner or Architect has reasonable objection to any such proposed person or entity, the Bidder may, at his option, (1) withdraw his Bid, or (2) submit an acceptable substitute person or entity with an adjustment in his bid price to cover the difference in cost occasioned by such substitution. The Owner may, at his discretion, accept the adjusted bid price or he may disqualify the Bidder. In the event of either withdrawal or disqualification under this Subparagraph, bid security will not be forfeited.
 5. Persons and entities proposed by the Bidder and to whom the Owner and the Architect have made no reasonable objection must be used on the Work for which they were proposed and shall not be changed except with the written consent of the Owner and the Architect.

G. PERFORMANCE BOND AND LABOR AND MATERIAL PAYMENT BOND

1. Prior to execution of the Contract, if required hereinafter, the Bidder shall furnish bonds covering the faithful performance of the Contract and the payment of all obligations arising thereunder in such form and amount as the Owner may prescribe. Bonds may be secured through the Bidder's usual sources. If the furnishing of such bonds is stipulated, the cost shall be included in the Bid.
2. The Bidder shall deliver the required bonds to the Owner not later than the date of execution of the Contract, or if the Work is to be commenced prior thereto in response to a letter of intent, the Bidder shall, prior to commencement of the Work, submit evidence satisfactory to the Owner that such bonds will be furnished.
3. Unless otherwise required, the bonds shall be written on AIA Documents A312-1984, Performance Bond and Labor and Material Payment Bond.
4. The Bidder shall require the attorney-in-fact who executes the required bonds on behalf of the surety to affix thereto a certified and current copy of his power of attorney.

H. FORM OF AGREEMENT BETWEEN OWNER AND CONTRACTOR

1. The Agreement for the Work will be a written on AIA Document A101-1997, Standard Form of Agreement Between Owner and Contractor.

END OF SECTION 00200

**SECTION 00211
STATEMENT OF NO BID**

Note: If you do not intend to bid, please return any bidding documents and this form to the Architect
We, the undersigned, are declining to bid on the above project for the following reason(s):

- _____ **Insufficient time to respond to the Invitation to Bid.**
- _____ **Request for Proposal is unclear.**
- _____ **Do not offer this product or service.**
- _____ **Our schedule will not permit us to perform.**
- _____ **Unable to meet specifications.**
- _____ **Specifications are unclear (please explain below)**
- _____ **Remove us from your Bidder Mailing List.**
- _____ **Other (please explain below)**

Remarks: _____

Signature: _____

Company Name: _____

Date: _____ Telephone: _____ Fax: _____

END OF SECTION 00211

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SECTION 00330 EXISTING CONDITIONS

1 GENERAL

1.1 Existing Materials:

- A.** The Owner previously authorized inspections and bulk sampling of materials at various sites throughout the district.
- B.** Report was completed by **FiberTec**, on April 28, 1998 based on tests taken on April 13, 1998. Copy of the report is available from the owner upon request.

1.2 Existing Drawings:

- A.** The owner has available drawings for the construction of most of the areas and may be reviewed at the owner's office upon appointment. Drawings indicate original design intent and may not reflect actual as built conditions. Reliance upon these documents alone without proper field verification will not be cause for an extra in the contract amount.

1.3 References:

- A.** 40 C.F.R. Part 61, Sub Part M, Appendix A – Interpretative Rule Governing Roof Removal Operations

2 PRODUCTS

2.1 Not Used

3 EXECUTION

3.1 Disposal of Existing Materials

- A.** Contractor shall be responsible for complying with OSHA, MIOSHA, EPA, Michigan DNR, Michigan DEQ and local laws, ordinances and regulations regarding the removal, handling, assessments, transfers and disposal of materials in authorized disposal locations. The Contractor shall pay for all disposal fees.
- B.** It shall be the Contractor's responsibility to pay any and all costs incurred from the cleanup related to this project.
- C.** Hazardous Materials shall be disposed of at a Legal Landfill Site for these Materials. Provide Notarized disposal Certificate to verify compliance.

END OF SECTION 00330

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**SECTION 00400
PROPOSAL FORM**

BIDDERS NAME: _____

LEGAL ADDRESS: _____

TELEPHONE NO.: _____

FACSMILE NO.: _____

PROPOSAL FOR: ALL TRADES CONSTRUCTION WORK
PROJECT NAME: **LANSING SCHOOL DISTRICT
2008 RENOVATION PROJECTS**
JOHNSON FIELDHOUSE NATATORIUM RENOVATIONS - BID #S.O. 1461
LANSING, MICHIGAN
PROJECT NO.: Project #08-26 JOHNSON FIELDHOUSE NATATORIUM RENOVATIONS

PROPOSAL

In response to your invitation to bid, the undersigned submits the following offer to enter into a contract with you and extends this offer for 60 calendar days subsequent to the opening of bids. This offer has been prepared after our examination of the complete plans and specifications, together with their related documents, and our examination of the site and conditions surrounding the construction of the proposed work including the availability of materials, equipment and labor. Included in this offer are all costs necessary to complete the All Trades Construction Work in accordance with the contract documents prepared by Roger L. Donaldson, AIA P.L.C. within the time set forth herein for the sum of:

LANSING SCHOOL DISTRICT PROJECT PROPOSALS

BID PROPOSALS:

JOHNSON FIELDHOUSE NATATORIUM RENOVATIONS - BID #S.O. 1461 \$ _____
_____ Dollars

The undersigned hereby agrees to complete the above buildings area work within ____ calendar days.

ADD ALTERNATE BIDS:

The following Alternates may be accepted at the owner's option, indicate the cost (additional or deleted) for work described , and also indicate the change in completion time it would require if the Alternate is accepted.

ALTERNATE #1

Dewitt Junior High Bleacher Replacement – **Auxillary Gym Mobile Bleachers**

REMOVE EXISTING AND PROVIDE NEW MOBILE BLEACHERS IN THE AUXILLARY GYM :- (Add) \$ _____
_____ Dollars

(Amount shall be shown in both words and figures. In case of discrepancy, the amount shown in words will govern.)

If awarded this Alternate the undersigned hereby agrees to complete the work within Thirty (30) calendar days, from the date approval from City of Lansing Office of Building Safety and State of Michigan Bureau of Fire Services.

ADDENDUM SCHEDULE:

The above proposed bids and schedule includes the following addenda:

No. 1 dated _____ No. 2 dated _____

FORFEITURE OF BID SECURITY

If within the 60 days this offer is valid, a letter is sent notifying the undersigned of the acceptance of this proposal, the undersigned agrees to deliver within the 10 succeeding days surety bonds in the form specified or will forfeit the enclosed certified or cashier's check or bid bond which accompanies this proposal.

FEE FOR CHANGES IN THE WORK

The undersigned hereby agrees to perform all additional changes in the work ordered by the Owner on the basis of reasonable expenditures, plus reasonable allowance of said cost for overhead and profit. Cost shall be limited to the following: Cost of materials, including sales tax and cost of delivery; cost of labor, including social security, old age and unemployment insurance and fringe benefits required by agreement or custom; workers' or workmen's compensation insurance; bond premiums; rental value of equipment and machinery; and the additional costs of supervision and field office personnel directly attributable to the change.

The undersigned hereby agrees to charge the following fees, based on a mark-up percentage of the actual cost for overhead and profit combined, as stated hereinafter:

- For all additional work performed by the contractor's own forces, a fee of _____ percent of the actual cost as defined above.
- For all additional work subcontracted by the contractor, a fee of _____ percent of the subcontract sum for management, overhead and profit.

JOB CONTROL AND COORDINATION

If awarded the All Trades Construction Work Contract, the undersigned will assume control of the site and will coordinate the work of all the trades. All costs of controlling the site and coordinating the work of the subcontractors are included in this proposal.

SUBCONTRACTOR LISTING

The following is a list of the subcontractors to perform on this project:

Painting _____
 Suspended Ceiling System _____
 Electrical _____

REGULATORY REQUIREMENTS

It is the Contractor's responsibility to confirm that all subcontractors are properly licensed and that all necessary permits are obtained before starting work.

The Lansing School District reserves the right to reject any subcontractor not considered competent to prosecute the work. The Lansing School District representative (s) may request the removal of any contracted person who is deemed unfit to perform the specified work in a competent and professional manner.

The building will be in full operation during normal weekdays from 7:00 AM to 8:00 PM. The contractor will take every precaution to minimize the migration of dust and debris and to minimize noise where possible. The corridors will remain free of stored materials and debris during business hours. The Contractor will remove all debris created by this contract from the premises at the end of each workday.

If awarded this Contract, the undersigned agrees to commence work immediately upon receipt of Notice to Proceed.

In submitting this Proposal, it is understood that the right is reserved by the Owner to reject any and all Proposals.

The Owner reserves the right to accept or reject all alternates or to accept any one or more alternates without accepting those remaining.

1. Time is of the essence on this project and completion is extremely critical. Completion in general is defined as all work required and included in the Bid Documents, Specifications, Drawings, Federal and State Regulations, including clean-up, restoration, acceptable visual inspections, completion of change orders approved by the Owner, Architect and Contractor and do not add days to the construction calendar.
2. The Contractor agrees that by submitting a Bid, realizes there may be need to work multiple shifts, weekends

and holidays. All premium wages are included in his Bid.

3. Days are noted as calendar days. The Contractor has full access to the site during normal business hours of 7:00 a.m. to 8:00 p.m.

The Materials, equipment and labor included in this proposal meets or exceeds all specifications.

SIGNATURE

The bidder declares the following legal status in submitting this proposal: (check one)

- A Corporation organized and existing under the laws of the state of Michigan,
 A Partnership,
 An Individual doing business as _____.

Respectfully submitted,

By _____

Title _____

Date _____

Fed. Employer Identification No.

State License No.

END OF SECTION 00400

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**SECTION 00452
NON COLLUSION AFFIDAVIT**

**Lansing School District
Affidavit of Bidder**

The undersigned, the owner or authorized officer of _____ (the "Bidder"), pursuant to the familial disclosure requirement provided in the _____ (the "School District") advertisement for construction bids, hereby represents and warrant, except as provided below, that no familial relationships exist between the owner(s) or any employee of _____ and any member of the Board of Education of the School District or the Superintendent of the School District.

List any Familial Relationships:

BIDDER:

Signed: _____

(Print or type name of Contact Person^o)

Title: _____

Company: _____

Date: _____

State of Michigan)
) ss.
County of _____)

This instrument was acknowledge before me on the _____ day of _____, 20__, by

_____, Notary Public
County, Michigan

My Commission Expires: _____
Acting in the County of: _____

END OF SECTION 00452

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SECTION 00810
AFFIRMATIVE ACTION PROCUREMENT PRACTICES

Lansing School District

Policy No. 3310.1

Affirmative Action Procurement Practices

All vendors wishing to do business with the Lansing School District must comply with state and federal laws on equal employment opportunity. In addition, companies responding to requests for written quotations or bids for goods or services in excess of \$5,000 must submit to the district a certificate of compliance which states they do not discriminate against any employee or applicant for employment because of race, color, religion, national origin, sex, age, or handicap. Failure to comply with the provisions of this policy shall result in the removal of the vendor from the school district's acceptable vendor list.

The Superintendent of Schools shall direct all administrators to indicate on their purchase requisitions whether the goods or services being requested will be supplied by a handicapper, minority, or female-owned company if such information is available.

The Superintendent also shall establish a committee composed of the district's affirmative action officer, other appropriate staff, and community representatives which shall be responsible for conducting quarterly reviews to monitor compliance with this policy by successful contractors and vendors and for making semiannual reports to the Board of Education on the results of those reviews.

The Superintendent shall develop procedures to institute pre-bid conferences on all planned expenditures of \$10,000 or more for the purpose of providing handicapper, minority, and women business owners with an opportunity to develop more effective bids, become acquainted with non-handicapper/non-minority/non-female-owned companies, and negotiate potential sub-contracts with the primary contractors. Such pre-bid conferences shall be aimed at encouraging joint venturing between majority and handicapper/minority/female-owned firms.

Adopted: 8-17-89
Policy No. 3310.1

END OF SECTION 00810

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SECTION 00830 GENERAL REQUIREMENTS

PART 1: GENERAL REQUIREMENTS

1.1 PROTECTION:

- A. The Contractor shall at all times during the performance of the job, keep the premises and adjoining properties free from accumulations of waste material and rubbish. At the completion of the work, he shall remove from the premises all rubbish and implements and leave the project in an acceptable condition, to be checked by the Lansing School District's representative.

All debris resulting from demolition and/or construction is to be hauled away and disposed of by the Contractor at his expense. No dumping of any material will be allowed on the properties of Lansing School District.
- B. The Contractor shall place necessary barriers and/or protection around or under all work areas where his operations involve risk of injury to any person.
- C. The Contractor will also protect the building structure from damage in the process of the job. In the event that damage does occur to any property or equipment, or the Owner's work in process, notification must be made within two (2) working days of the incidents to the Lansing School District's representative.
- D. During the progress of the job, if waste material and rubbish are found or damage resulting from the Contractor's operations is found, or the Contractor does not comply with the requirements by keeping the premises free of accumulations and correct the damage, it shall be the Lansing School District's prerogative to hire personnel to do so, and the cost of this work will be deducted from the total contract.
- E. Anyone guilty of willful destruction or unlawful removal of city property will be dismissed from the job, by the Contractor, and is subject to prosecution by law.
- F. Any lawns damaged by the Contractor's vehicles will be restored with a stand of grass at the Contractor's expense. Any damage to other city property will likewise be restored.

1.2 WORK HOURS AND DAYS

- A. After the bid is awarded, the Contractor will contact the Lansing School District's representative to arrange the work schedule and the hours of the day that the workmen may be in the building. The job is to be bid under the assumption that all work will be performed on a straight time basis. The Contractor shall have full access to the site during normal business hours of 7:00 a.m. to 6:00 p.m., Monday through Friday.

1.3 DELIVERY AND STORAGE OF MATERIAL

- A. Materials must be delivered with manufacturer's and Contractor's label intact and legible. Labels must be affixed to the outside of the package stating the type of product, name and address of manufacturer. All materials shall be stored and protected against weather, vandalism, and theft. Any materials found to be damaged or missing shall be replaced by the Contractor with no expense to the Lansing School District. The Contractor shall be responsible for all receiving, unloading, storing and protecting of all materials.

1.4 UTILITIES

- A. Where possible, the Lansing School District will make available all necessary utilities. If it is not possible to obtain utilities from the Lansing School District, the Contractor will be responsible for obtaining his own utilities.

1.5 EXTRA WORK

- A. All work which must be accomplished, but was not included in the lump sum bid, must be authorized by the Lansing School District's representative on a written work order prior to starting the work.

- B. The Contractor must document the "Extra" work order request with drawings and/or sketches with dimensions and photographs and a full description of the work with prices.
- C. The Contractor will not be paid for any "Extra" work that is not authorized by the Lansing School District's representative.
- D. All "Extra" work covered by unit prices submitted by the Contractor in his proposal, must be covered by a written work order. The Contractor will prepare the work order in triplicate covering the quantity of work and the total cost of the work. The work order will be signed by the Lansing School District's representative and the Contractor's Foreman and/or Superintendent.
- E. Any work requiring deviation from these Specifications must be authorized in writing by the Lansing School District's representative prior to the starting.

1.6 SAFETY

- A. The Contractor will be responsible for reviewing with his people and complying with all safety rules as established by the Lansing School District's representative. The same safety rules that govern the Lansing School District employees shall govern the Contractor's employees.
- B. The Contractor will also be responsible for complying with all OSHA (Occupational Safety and Health Act) regulations and will include in his bid any costs required for compliance.
- C. If welding, burning, and use of other flame or spark producing equipment must be accomplished, authorization must be secured from the Lansing School District's representative before any such work can be started.
- D. Rigging and hoisting equipment must be used in a safe manner, and the condition of such equipment shall meet the approval of the Lansing School District's representative.
- E. Acetylene, oxygen, and other compressed gas cylinders must be used in an upright position and must be secured in a way that they cannot fall over. All cylinders must be capped at the end of each day.
- F. The Contractor must maintain fire extinguishers in working order on the roof and at ground level at all times.
- G. The Contractor will provide adequate first aid supplies for their employees at all times.

1.7 ENTRANCE TO FACILITY

- A. The Contractor's employees are to use facility entrances and exits as designated by the Lansing School District's representative.

1.8 SUPERVISION

- A. The Contractor will have a competent foreman in charge and on the job site at all times working directly with the Lansing School District's representative. Changing foremen during the project is not permitted except under emergency conditions or as requested by the Lansing School District's representative.
- B. Definition of a Foreman:
 - 1. Working Foreman - Responsible for planning each day's work, ordering materials, direct supervision of the workforce and some labor duties.
 - 2. Non-Working Foreman - Responsible for all duties of a working foreman, except he does not perform any direct work involved in installation. His primary responsibility is to tell workers what to do and to make sure specifications are followed.
- C. The foreman is responsible for maintaining a copy of the specifications and all associated drawings on the job site at all times.

1.9 WORKING AREA FOR CONTRACTOR'S EMPLOYEES

- A. Contractor's vehicles must observe city speed limits and stay on hard surface roads. Permission to

drive on lawn area or enter restricted areas must be secured from the Lansing School District's representative.

1.10 PERSONAL CONDUCT

The same rules of personal conduct as govern Lansing School District employees, shall govern Contractor's employees. Included are:

- A. No employee under the influence of alcohol or other drugs will be allowed on the job site.
- B. A shirt, full-length trousers, and appropriate shoes are the minimum clothing requirements.
- C. Possession or consumption of alcoholic beverages or illegal drugs on the job is not allowed. Violators will be dismissed.
- D. Horseplay, wrestling, etc., are prohibited.
- E. Fighting is strictly against the rules. Persons fighting on Lansing School District property will be dismissed.

1.11 USE OF LANSING SCHOOL DISTRICT'S TOOLS AND EQUIPMENT

- A. The Contractor will not use the Lansing School District's tools or maintenance shop equipment unless specific prior arrangements have been made.

1.12 COMPLIANCE WITH MUNICIPAL, STATE AND FEDERAL LAWS

- A. The Contractor shall comply in full with all municipal, state and federal laws governing all phases of contract work.

1.13 FIELD INSPECTIONS

- A. Regular inspection will be conducted by the Lansing School District's representative. Deficiencies in the workmanship and/or non-compliance to the Specifications will promptly be identified to the Contractor's foreman, and must be corrected immediately by Contractor.

END OF SECTION 00830

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SECTION 00890
PREVAILING WAGE RATE SCHEDULE

The following pages are from the Michigan Department of Labor & Economic Growth;
Year 2008 Prevailing Wage Rates for Ingham County
as of 9/25/2008
for Contract awarded by 12/24/2008

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STATE OF MICHIGAN

JENNIFER M. GRANHOLM
GOVERNOR

DEPARTMENT OF LABOR & ECONOMIC GROWTH
LANSING

KEITH W. COOLEY
DIRECTOR

REQUIREMENTS OF THE PREVAILING WAGES ON STATE PROJECTS ACT, PUBLIC ACT 166 OF 1965

The Michigan Department of Labor & Economic Growth determines prevailing rates pursuant to the Prevailing Wages on State Projects Act, Public Act 166 of 1965, as amended. The purpose of establishing prevailing rates is to provide minimum rates of pay that must be paid to workers on construction projects for which the state or a school district is the contracting agent and which is financed or financially supported by the state. By law, prevailing rates are compiled from the rates contained in collectively bargained agreements which cover the locations of the state projects. The official prevailing rates provide an hourly rate which includes wage and fringe benefit totals for designated construction mechanic classifications. The overtime rates also include wage and fringe benefit totals. Please pay special attention to the overtime and premium pay requirements. Prevailing wage is satisfied when wages plus fringe benefits paid to a worker are equal to or greater than the required rate.

State of Michigan responsibilities under the law:

- The department establishes the prevailing rate for each classification of construction mechanic **requested by a contracting agent** prior to contracts being let out for bid on a state project.

Contracting agent responsibilities under the law:

- If a contract is not awarded or construction does not start within 90 days of the date of the issuance of rates, a re-determination of rates must be requested by the contracting agent.
- Rates for classifications needed but not provided on the Prevailing Rate Schedule, **must** be obtained **prior** to contracts being let out for bid on a state project.
- The contracting agent, by written notice to the contractor and the sureties of the contractor known to the contracting agent, may terminate the contractor's right to proceed with that part of the contract, for which less than the prevailing rates have been or will be paid, and may proceed to complete the contract by separate agreement with another contractor or otherwise, and the original contractor and his sureties shall be liable to the contracting agent for any excess costs occasioned thereby.

Contractor responsibilities under the law:

- Every contractor and subcontractor shall keep posted on the construction site, in a conspicuous place, a copy of all prevailing rates prescribed in a contract.
- Every contractor and subcontractor shall keep certified payrolls, as used in the industry, of each and every construction mechanic, and verification of such certified payroll in writing by either a representative or auditor/certified accountant at the end of such a certified payroll. These records should include the occupation and indicate the hours worked on each project for each classification and the actual wages and benefits paid. This record shall be available for reasonable inspection by the contracting agent or the department.
- Each contractor or subcontractor is separately liable for the payment of the prevailing rate to its employees.
- The prime contractor is responsible for advising all subcontractors of the requirement to pay the prevailing rate prior to commencement of work.
- The prime contractor is secondarily liable for payment of prevailing rates that are not paid by a subcontractor.
- A construction mechanic shall only be paid the apprentice rate if registered with the United States Department of Labor, Bureau of Apprenticeship and Training and the rate is included in the contract.

Enforcement:

A person who has information of an alleged prevailing wage violation on a state project may file a complaint with the Wage & Hour Division. The department will investigate and attempt to resolve the complaint informally. During the course of an investigation, if the requested records and posting certification are not made available in compliance with Section 5 of Act 166, the investigation will be concluded and a referral to the Office of Attorney General for civil action will be made. The Office of Attorney General will pursue costs and fees associated with a lawsuit if filing is necessary to obtain records.

A violation of Act 166 may result in the contractor's name being added to the Prevailing Wage Act Violators List published on the division's website, updated monthly. This list includes the names and addresses of contractors and subcontractors the division has found in violation of Act 166 based on complaints from individuals and third parties. The Prevailing Wage Act Violators List is intended to inform contracting agents of contractors that have violated Act 166 for use in determining who should receive state-funded projects.

WAGE & HOUR DIVISION
P.O. BOX 30476 • LANSING, MICHIGAN 48909-7976
www.michigan.gov/wagehour • (517) 335-0400 • FAX (517) 335-0077

Official Request #: 1359
Requestor: LANSING SCHOOL DISTRICT
Project Description: RENOVATIONS
Project Number: SO-1461 JOHNSON FIELDHOUSE NATATORIUM

Ingham County
Official 2008 Prevailing Wage Rates for State Funded Projects

Issue Date: 9/25/2008
Contract must be awarded by: 12/24/2008

Page 1 of 19

<u>Classification</u>			Last Updated	Straight Hourly	Time and a Half	Double Time	Overtime Provision
Name	Description						
Asbestos & Lead Abatement Laborer							
Asbestos & Lead Abatement Laborer		MLDC	7/31/2007	\$32.65	\$43.39	\$54.13	H H H X X X D Y
Asbestos & Lead Abatement, Hazardous Material Handler							
Asbestos and Lead Abatement, Hazardous Material		AS207	11/28/2007	\$32.65	\$44.75	\$56.85	H H H X X X D Y
Boilermaker							
Boilermaker		BO169	11/5/2007	\$51.27	\$76.00	\$100.74	H H H H H H D Y
Apprentice Rates:							
				1st 6 months	\$38.12	\$56.28	\$74.44
				2nd 6 months	\$39.17	\$57.86	\$76.54
				3rd 6 months	\$40.23	\$59.45	\$78.66
				4th 6 months	\$41.29	\$61.04	\$80.78
				5th 6 months	\$42.33	\$62.60	\$82.86
				6th 6 months	\$44.44	\$65.76	\$87.08
				7th 6 months	\$46.54	\$68.91	\$91.28
				8th 6 months	\$48.65	\$72.08	\$95.50
Bricklayer							
Brick, stone, artificial, cement masonry, pointing, caulking & cleaning		BR9-31	9/17/2008	\$42.13	\$55.92	\$69.71	H H H X X X D Y
Apprentice Rates:							
				0-749 hours	\$31.10	\$39.37	\$47.65
				750-1,499 hours	\$32.48	\$41.45	\$50.41
				1,500-2,249 hours	\$33.86	\$43.51	\$53.17
				2,250-2,999 hours	\$35.23	\$45.57	\$55.91
				3,000-3,749 hours	\$36.61	\$47.64	\$58.67
				3,750-4,499 hours	\$37.99	\$49.71	\$61.43
				4,500 - 5,249 hours	\$39.37	\$51.78	\$64.19
				5,250 - 6,000 hours	\$40.75	\$53.85	\$66.95

Official Request 1359
 Requestor: LANSING SCHOOL DISTRICT
 Project Description: RENOVATIONS
 Project Number: SO-1461 JOHNSON FIELDHOUSE NATATORIUM
 County: Ingham

Official Rate Schedule
Every contractor and subcontractor shall keep posted on the construction site, in a conspicuous place, a copy of all prevailing wage and fringe benefit rates prescribed in a contract.

Official 2008 Prevailing Wage Rates for State Funded Projects

Issue Date: 9/25/2008

Contract must be awarded by: 12/24/2008

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Classification Name Description	Last Updated	Straight Hourly	Time and a Half	Double Time	Overtime Provision
Carpenter					
Floor layer	CA1004FL 1/11/2008	\$32.52	\$43.45	\$54.38	H H H H H H D N
Apprentice Rates:					
1st Year					
2nd Year					
3rd Year					
4th Year					
Carpenter and pile driver	CA1004L 1/11/2008	\$37.01	\$49.79	\$62.57	H H H H H H D Y
Apprentice Rates:					
1st Year					
2nd Year					
3rd Year					
4th Year					
Cement Mason					
Cement Mason	PL16-7 5/30/2008	\$35.42	\$47.93	\$60.44	H H H H H H D Y
Apprentice Rates:					
1st year					
2nd year					
3rd year					
Drywall					
Drywall Taper and Finisher Double Time due after the 12th hour, Monday thru	PT-845-DF 3/27/2007	\$33.92	\$45.75	\$57.57	H H H H H H D N
Apprentice Rates:					
0 - 1,000 hours					
1,001 - 2,000 hours					
2,001 to 3,000 hours					
3,001 to 4,000 hours					
4,001 to 5,000 hours					
5,001 to 6,000 hours					

Official Request 1359
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Official 2008 Prevailing Wage Rates for State Funded Projects

Issue Date: 9/25/2008

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Classification Name Description	Last Updated	Straight Hourly	Time and a Half	Double Time	Overtime Provision
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Electrician

Road Way Electrical Work	EC-17		\$45.37	\$65.63	\$85.90	H H H H H H D Y
Double time due after 16 hours on any calendar day and all hours Sunday.						
	11/19/2007					

Apprentice Rates:

1st 6 months	\$29.17	\$41.34	\$53.50
2nd 6 months	\$31.19	\$44.36	\$57.54
3rd 6 months	\$33.21	\$47.40	\$61.58
4th 6 months	\$35.23	\$50.43	\$65.62
5th 6 months	\$37.25	\$53.46	\$69.66
6th 6 months	\$41.32	\$59.57	\$77.80

<u>Subdivision of county</u> Inside wireman	Williamston, Locke, Leroy, Wheatfield & White Oak EC-252-IW		\$54.41	\$74.95	\$95.49	H H D H D D D D N
	6/13/2008					

Apprentice Rates:

1st Period	\$29.23	\$37.18	\$45.13
2nd Period	\$33.89	\$44.18	\$54.45
3rd Period	\$38.00	\$50.34	\$62.67
4th Period	\$42.10	\$56.49	\$70.87
5th Period	\$46.22	\$62.67	\$79.11
6th Period	\$50.33	\$68.83	\$87.33

<u>Subdivision of county</u> Sound & Communications Installer Technician	Townships of Onondaga, Leslie, Stockbridge and Bunker Hill EC-252-SC		\$33.06	\$45.21	\$57.35	H H D H D D D D N
	10/3/2007					

Apprentice Rates:

Period 1	\$18.87	\$24.95	\$31.02
Period 2	\$20.08	\$26.76	\$33.44
Period 3	\$21.29	\$28.57	\$35.86
Period 4	\$22.51	\$30.41	\$38.30
Period 5	\$23.72	\$32.22	\$40.72
Period 6	\$26.15	\$35.87	\$45.58

<u>Subdivision of county</u> Inside Wireman	Onondaga, Leslie, Stockbridge & Bunker Hill townships EC-665-IW		\$48.26	\$64.72	\$81.18	H H D H H H D D Y
	3/6/2007					

Apprentice Rates:

0-1000 hours	\$27.79	\$35.18	\$42.60
1000-2000 hours	\$29.44	\$37.68	\$45.90
2000-3500 hours	\$31.08	\$40.13	\$49.17
3500-5000 hours	\$34.38	\$45.09	\$55.78
5000-6500 hours	\$37.67	\$50.01	\$62.35
6500-8000 hours	\$40.96	\$54.96	\$68.94

Subdivision of county Lansing, Meridian, Williamston, Locke, Delhi, Alaiedon, Wheatfield, Leroy, Aurelius, Vevay, Ingham, & White Oak townships

Official Request 1359
 Requestor: LANSING SCHOOL DISTRICT
 Project Description: RENOVATIONS
 Project Number: SO-1461 JOHNSON FIELDHOUSE NATATORIUM
 County: Ingham

Official Rate Schedule
Every contractor and subcontractor shall keep posted on the construction site, in a conspicuous place, a copy of all prevailing wage and fringe benefit rates prescribed in a contract.

Official 2008 Prevailing Wage Rates for State Funded Projects

Issue Date: 9/25/2008

Contract must be awarded by: 12/24/2008

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Classification Name Description	Last Updated	Straight Hourly	Time and a Half	Double Time	Overtime Provision
Sound and Communication Journeyman	EC-665-SD 10/22/2007	\$35.22	\$47.14	\$59.06	H H D H H H D D Y
Apprentice Rates:					
1st period		\$20.16	\$26.11	\$32.07	
2nd period		\$21.65	\$28.20	\$34.76	
3rd period		\$23.15	\$30.30	\$37.94	
4th period		\$24.67	\$32.41	\$40.15	
5th period		\$26.18	\$34.52	\$42.86	
6th period		\$27.69	\$36.62	\$45.56	
<i>Subdivision of county</i> Lansing, Meridian, Williamston, Locke, Delhi, Alaiedon, Wheatfield, Leroy, Aurelius, Vevay, Ingham and White townships					
Elevator Constructor					
Elevator Constructor Mechanic	EL-85 1/22/2008	\$56.82		\$97.32	D D D D D D D D Y
Apprentice Rates:					
1st year		\$38.60		\$60.88	
2nd year		\$42.64		\$68.96	
3rd year		\$44.67		\$73.02	
4th year		\$48.72		\$81.12	
Glazier					
Glazier	GL-826 7/3/2007	\$38.17	\$51.56	\$64.95	H H H H D D D D Y
Apprentice Rates:					
1st 6 months		\$27.46	\$35.49	\$43.53	
2nd 6 months		\$28.80	\$37.51	\$46.21	
3rd 6 months		\$30.14	\$39.51	\$48.89	
4th 6 months		\$31.47	\$41.51	\$51.55	
5th 6 months		\$32.81	\$43.52	\$54.23	
6th 6 months		\$34.15	\$45.53	\$56.91	
7th 6 months		\$35.49	\$47.54	\$59.59	
8th 6 months		\$36.83	\$49.55	\$62.27	
Heat and Frost Insulator					
Spray Insulation	AS25S 3/5/2007	\$20.14	\$29.14		H H H H H H H H N
Heat and Frost Insulator and Asbestos Worker					
Heat and Frost Insulator and Asbestos Worker	AS47 7/2/2008	\$42.75	\$56.74	\$70.72	H H H H H H D Y
Apprentice Rates:					
1st year		\$24.90	\$31.89	\$38.88	
2nd year		\$28.47	\$36.86	\$45.25	
3rd year		\$32.04	\$41.83	\$51.62	
4th year		\$35.61	\$46.80	\$57.99	
5th year		\$39.18	\$51.77	\$64.35	

Official Request 1359
 Requestor: LANSING SCHOOL DISTRICT
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 County: Ingham

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Official 2008 Prevailing Wage Rates for State Funded Projects

Issue Date: 9/25/2008

Contract must be awarded by: 12/24/2008

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Classification Name Description	Last Updated	Straight Hourly	Time and a Half	Double Time	Overtime Provision
Ironworker					
Fence Erecting	IR-25-F 7/1/2008	\$42.16	\$62.99	\$83.81	H H D H H H D D Y
Siding, Glazing, Curtain Wall	IR-25-GZ2 3/28/2008	\$39.86	\$59.54	\$79.22	H H D H H H D D Y
Apprentice Rates:					
Level 1		\$24.72	\$36.54	\$48.34	
Level 2		\$26.69	\$39.49	\$52.28	
Level 3		\$28.65	\$42.43	\$56.20	
Level 4		\$30.62	\$45.39	\$60.14	
Level 5		\$32.59	\$48.34	\$64.08	
Level 6		\$34.56	\$51.29	\$68.02	
Pre-engineered Metal Work	IR-25-PE-Z3 5/8/2008	\$39.47	\$49.54	\$59.60	X X H X X X X D Y
Apprentice Rates:					
1st Level		\$23.47	\$28.51	\$33.55	
2nd Level		\$25.12	\$30.85	\$36.58	
3rd Level		\$26.78	\$33.19	\$39.61	
4th Level		\$28.44	\$35.55	\$42.66	
5th Level		\$30.10	\$37.90	\$45.70	
6th Level		\$31.36	\$39.65	\$47.93	
Reinforced Iron Work	IR-25-RF 6/2/2008	\$50.06	\$74.82	\$99.58	H H D H D D D D N
Apprentice Rates:					
Level 1		\$30.85	\$45.71	\$60.56	
Level 2		\$33.33	\$49.43	\$65.52	
Level 3		\$35.79	\$53.11	\$70.44	
Level 4		\$38.29	\$56.87	\$75.44	
Level 5		\$40.75	\$60.55	\$80.36	
Level 6		\$43.23	\$64.28	\$85.32	
Rigging Work	IR-25-RIG 6/2/2008	\$55.48	\$82.99	\$110.49	H H H H H H D N
Apprentice Rates:					
Level 1&2		\$31.46	\$46.59	\$61.72	
Level 3		\$34.21	\$50.72	\$67.22	
Level 4		\$36.95	\$54.83	\$72.70	
Level 5		\$39.71	\$58.97	\$78.22	
Level 6		\$42.46	\$63.09	\$83.72	
Decking	IR-25-SD 10/4/2007	\$46.40	\$69.32	\$92.23	H H D H H H D D Y

Official Request 1359
 Requestor: LANSING SCHOOL DISTRICT
 Project Description: RENOVATIONS
 Project Number: SO-1461 JOHNSON FIELDHOUSE NATATORIUM
 County: Ingham

Official Rate Schedule
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Classification Name Description	Last Updated	Straight Hourly	Time and a Half	Double Time	Overtime Provision
Structural, ornamental, conveyor, welder and pre-cast	IR-25-STR 6/2/2008	\$55.61	\$83.12	\$110.62	H H D H H H D D Y
Apprentice Rates:					
		Levels 1 & 2	\$31.46	\$46.59	\$61.72
		Level 3	\$34.21	\$50.72	\$67.22
		Level 4	\$36.95	\$54.83	\$72.70
		Level 5	\$39.71	\$58.97	\$78.22
		Level 6	\$42.46	\$63.09	\$83.72
		Level 7	\$45.20	\$67.20	\$89.20
		Level 8	\$47.96	\$71.34	\$94.72
Industrial Door erection & construction	IR-25-STR-D 3/28/2008	\$35.72	\$47.34	\$58.96	H H D H H H D D Y
Laborer					
Journeyman - building and heavy construction craft laborer, portable concrete mixer operator, air, electric or gasoline tool operator, hot dope carrier, tar kettle tender, gasoline vibrators, concrete gas buggies, concrete saw, signal person and top person on sewer, caisson construction (open cut work), concrete shoveler, car pusher, and bottom person (on sewer work). Demolition laborer, 3" pumps & below, jobsite clean-up, deep cleaning, jackhammer operators, burner, crock layer, caisson worker, tunnel mucker and tunnel miner, welder, mortar mixer, scaffold builder, forklift operator (masonry only), helper and tender on work customarily performed by laborers and all laborers working for plasterer tenders.	L499L 6/9/2008	\$31.99	\$42.58	\$53.16	H H H H H H H D Y
All hours worked on Saturday except as an inclement					
Apprentice Rates:					
		0-1,000 hours	\$26.70	\$34.64	\$42.58
		1,001-2,000 hours	\$27.76	\$36.23	\$44.70
		2,001-3,000 hours	\$28.81	\$37.80	\$46.80
		3,001-4,000 hours	\$30.93	\$40.98	\$51.04
Mason Tender	L499M 6/9/2008	\$32.05	\$42.20	\$52.85	H H H H H H H D Y
Apprentice Rates:					
		0-1,000 hours	\$26.73	\$34.22	\$42.21
		1,001-2,000 hours	\$27.79	\$35.81	\$44.33
		2,001-3,000 hours	\$28.85	\$37.40	\$46.45
		3,001-4,000 hours	\$30.99	\$40.61	\$50.73

Official Request 1359
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Classification Name Description	Last Updated	Straight Hourly	Time and a Half	Double Time	Overtime Provision
Laborer - Hazardous					
Class A Laborer - performing work in conjunction with site preparation and other preliminary work prior to actual removal, handling, or containment of hazardous waste substances not requiring use of personal protective equipment required by state or federal regulations; or a laborer performing work in conjunction with the removal, handling, or containment of hazardous waste substances when use of personal protective equipment level "D" is required.	LHAZ-Z6-A 10/16/2007	\$29.82	\$42.45	\$55.08	H H H H H H D Y
Apprentice Rates:					
		0-1,000 work hours	\$25.08	\$35.34	\$45.60
		1,001-2,000 work hours	\$26.03	\$36.77	\$47.50
		2,001-3,000 work hours	\$26.98	\$38.19	\$49.40
		3,001-4,000 work hours	\$28.87	\$41.03	\$53.18
Class B Laborer - performing work in conjunction with the removal, handling, or containment of hazardous waste substances when the use of personal protective equipment levels "A", "B" or "C" is required.	LHAZ-Z6-B 10/16/2007	\$30.82	\$43.95	\$57.08	H H H H H H D Y
Apprentice Rates:					
		0-1,000 work hours	\$25.83	\$36.47	\$47.10
		1,001-2,000 work hours	\$26.83	\$37.97	\$49.10
		2,001-3,000 work hours	\$27.83	\$39.47	\$51.10
		3,001-4,000 work hours	\$29.82	\$42.45	\$55.08
Laborer Underground - Tunnel, Shaft & Caisson					
Class I - Tunnel, shaft and caisson laborer, dump man, shanty man, hog house tender, testing man (on gas), and watchman.	LAUCT-Z2-1 9/24/2008	\$32.34	\$43.50	\$54.66	H H H H H H D Y
Apprentice Rates:					
		0-1,000 work hours	\$27.30	\$35.95	\$44.58
		1,001-2,000 work hours	\$28.31	\$37.46	\$46.60
		2,001-3,000 work hours	\$29.31	\$38.96	\$48.60
		3,001-4,000 work hours	\$31.33	\$41.99	\$52.64
Class II - Manhole, headwall, catch basin builder, bricklayer tender, mortar man, material mixer, fence erector, and guard rail builder	LAUCT-Z2-2 9/24/2008	\$32.43	\$43.64	\$54.84	H H H H H H D Y
Apprentice Rates:					
		0-1,000 work hours	\$27.37	\$36.05	\$44.72
		1,001-2,000 work hours	\$28.38	\$37.57	\$46.74
		2,001-3,000 work hours	\$29.39	\$39.08	\$48.76
		3,001-4,000 work hours	\$31.42	\$42.13	\$52.82

Official Request 1359
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Classification Name Description	Last Updated	Straight Hourly	Time and a Half	Double Time	Overtime Provision
Class III - Air tool operator (jack hammer man, bush hammer man and grinding man), first bottom man, second bottom man, cage tender, car pusher, carrier man, concrete man, concrete form man, concrete repair man, cement invert laborer, cement finisher, concrete shoveler, conveyor man, floor man, gasoline and electric tool operator, gunnite man, grout operator, welder, heading dinky man, inside lock tender, pea gravel operator, pump man, outside lock tender, scaffold man, top signal man, switch man, track man, tugger man, utility man, vibrator man, winch operator, pipe jacking man, wagon drill and air track operator and concrete saw operator (under 40	LAUCT-Z2-3 9/24/2008	\$32.53	\$43.79	\$55.04	H H H H H H D Y
Apprentice Rates:					
		0-1,000 work hours	\$27.44	\$36.15	\$44.86
		1,001-2,000 work hours	\$28.46	\$37.69	\$46.90
		2,001-3,000 work hours	\$29.48	\$39.21	\$48.94
		3,001-4,000 work hours	\$31.51	\$42.26	\$53.00
Class IV - Tunnel, shaft and caisson mucker, bracer man, liner plate man, long haul dinky driver and well point	LAUCT-Z2-4 9/24/2008	\$32.69	\$44.03	\$55.36	H H H H H H D Y
Apprentice Rates:					
		0-1,000 work hours	\$27.56	\$36.33	\$45.10
		1,001-2,000 work hours	\$28.59	\$37.88	\$47.16
		2,001-3,000 work hours	\$29.61	\$39.41	\$49.20
		3,001-4,000 work hours	\$31.66	\$42.49	\$53.30
Class V - Tunnel, shaft and caisson miner, drill runner, keyboard operator, power knife operator, reinforced steel or mesh man (e.g. wire mesh, steel mats, dowel bars)	LAUCT-Z2-5 9/24/2008	\$32.95	\$44.42	\$55.88	H H H H H H D Y
Apprentice Rates:					
		0-1,000 work hours	\$27.75	\$36.62	\$45.48
		1,001-2,000 work hours	\$28.79	\$38.18	\$47.56
		2,001-3,000 work hours	\$29.83	\$39.74	\$49.64
		3,001-4,000 work hours	\$31.91	\$42.86	\$53.80
Class VI - Dynamite man and powder man.	LAUCT-Z2-6 9/24/2008	\$33.26	\$44.88	\$56.50	H H H H H H D Y
Apprentice Rates:					
		0-1,000 work hours	\$27.99	\$36.98	\$45.96
		1,001-2,000 work hours	\$29.04	\$38.55	\$48.06
		2,001-3,000 work hours	\$30.10	\$40.15	\$50.18
		3,001-4,000 work hours	\$32.21	\$43.31	\$54.40

Official Request 1359
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 Project Description: RENOVATIONS
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 County: Ingham

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Classification Name Description	Last Updated	Straight Hourly	Time and a Half	Double Time	Overtime Provision
Class VII - Restoration laborer, seeding, sodding, planting, cutting, mulching and topsoil grading and the restoration of property such as replacing mail boxes, wood chips, planter boxes and flagstones.	LAUCT-Z2-7 9/24/2008	\$25.53	\$33.29	\$41.04	H H H H H H D Y

Apprentice Rates:

0-1,000 work hours	\$22.19	\$28.28	\$34.36
1,001-2,000 work hours	\$22.86	\$29.29	\$35.70
2,001-3,000 work hours	\$23.53	\$30.29	\$37.04
3,001-4,000 work hours	\$24.86	\$32.29	\$39.70

Landscape Laborer

Landscape Specialist includes air, gas, and diesel equipment operator, lawn sprinkler installer on landscaping work where seeding, sodding, planting, cutting, trimming, backfilling, rough grading or maintenance of landscape

LLAN-Z2-A	7/1/2008	\$24.65	\$33.97	\$43.28	X X H X X X H D Y
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All work pertaining to landscaping where seeding, sodding, planting, cutting, trimming, backfilling, rough grading or maintaining of landscape projects occurs which may include small power tool operator, lawn sprinkler installer helper, material mover, truck driver.

LLAN-Z2-B	7/1/2008	\$20.45	\$27.67	\$34.88	X X H X X X H D Y
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Operating Engineer

Class C- Regular equipment operator, crane, stiff leg derrick, scraper dozer, grader, front end loader, hoist, job mechanic, head grease man, concrete pump truck and hydro excavators.

EN-324-BH2C	5/20/2008	\$43.85	\$57.37	\$70.89	H H H H H H D Y
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Apprentice Rates:

1st 6 months	\$35.39	\$44.86	\$54.32
2nd 6 months	\$36.74	\$46.88	\$57.02
3rd 6 months	\$38.09	\$48.90	\$59.72
4th 6 months	\$39.44	\$50.93	\$62.42
5th 6 months	\$40.80	\$52.97	\$65.14
6th 6 months	\$42.15	\$55.00	\$67.84

Class D- Air tugger (single drum), material hoist, boiler operator, sweeping machine, winch truck, Bob Cat and similar equipment, elevators (when operated by an operating engineer), and fork truck over 20' lift.

EN-324-BH2D	5/20/2008	\$39.05	\$50.17	\$61.29	H H H H H H D Y
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Class E- Pump 6" or over, well points, freeze systems, boom truck (non-swinging), end dumps and laser/power screed, concrete wire saw 20 h.p. and over and brokk concrete breaker.

EN-324-BH2E	5/20/2008	\$38.45	\$49.27	\$60.09	H H H H H H D Y
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Official Request 1359
 Requestor: LANSING SCHOOL DISTRICT
 Project Description: RENOVATIONS
 Project Number: SO-1461 JOHNSON FIELDHOUSE NATATORIUM
 County: Ingham

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Classification Name Description	Last Updated	Straight Hourly	Time and a Half	Double Time	Overtime Provision
Class F- Air compressor, welder, generators, conveyors, pumps under 6", Grease man, and fork truck 20' or less lift.	EN-324-BH2F 5/20/2008	\$36.00	\$45.60	\$55.19	H H H H H H D Y
Class G- Oiler, fireman and heater operator.	EN-324-BH2G 5/20/2008	\$34.30	\$43.05	\$51.79	H H H H H H D Y
Class A- Crane w/ main Boom & Jib 220' or longer	EN-OSA 5/20/2008	\$45.20	\$59.40	\$73.59	H H H H H H D Y
Class A- Crane w/ main Boom & Jib 300' or longer	EN-OSA3 5/20/2008	\$46.70	\$61.65	\$76.59	H H H H H H D Y
Class A- Crane w/ main Boom & Jib 400' or longer	EN-OSA4 5/20/2008	\$48.20	\$63.90	\$79.59	H H H H H H D Y
Class B- Crane Operator with main boom and jib 140' or longer, tower cranes, gantry crane, whirley derrick.	EN-OSB 5/20/2008	\$44.95	\$59.02	\$73.09	H H H H H H D Y
Operating Engineer - Marine Construction					
Diver/Wet Tender, Engineer (hydraulic dredge)	GLF-1 1/8/2008	\$51.76	\$67.91	\$84.06	X X H H H H D Y

Holidays paid at \$100.21 per hour

Subdivision of county all Great Lakes, islands therein, & connecting & tributary waters
 Crane/Backhoe Operator, Mechanic/Welder, Assistant Engineer (hydraulic dredge), Leverman (hydraulic dredge), Diver Tender
 GLF-2
 1/8/2008
 \$50.26 \$65.66 \$81.06 X X H H H H D Y

Holidays paid \$96.46 per hour

Subdivision of county All Great Lakes, islands therein, & connecting & tributary waters
 Deck Equipment Operator, Machineryman, Maintenance of Crane (over 50 ton capacity) or Backhoe (115,000 lbs. or more), Tug/Launch Operator, Loader, Dozer and like equipment on Barge, Breakwater Wall, Slip/Doc or Scow, Deck Machinery
 GLF-3
 1/8/2008
 \$46.91 \$60.64 \$74.36 X X H H H H D Y

Holidays paid at \$88.08 per hour

Subdivision of county All Great Lakes, islands therein, & connecting & tributary waters
 Deck Equipment Operator, (Machineryman/Fireman), (4 equipment units or more), Deck Hand, Deck Engineer, & Crane Maintenance 50 ton capacity and under or Backhoe weighing 115,000 lbs or less, Assistant Tug Operator
 GLF-4
 1/8/2008
 \$42.26 \$53.66 \$65.06 X X H H H H D Y

Holidays paid at \$76.46 per hour

Subdivision of county All Great Lakes, islands therein, & connecting & tributary waters

Official Request 1359
 Requestor: LANSING SCHOOL DISTRICT
 Project Description: RENOVATIONS
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 County: Statewide

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Classification Name Description	Last Updated	Straight Hourly	Time and a Half	Double Time	Overtime Provision
Operating Engineer Hazardous Waste Class I					
Level A - Fully encapsulating chemical resistant suit w/ pressure demand, full face piece SCBA or pressure demand supplied air respirator w/ escape SCBA. The highest available level of respiratory, skin and eye	EN-324-HWCI-Z2A 3/25/2008	\$45.63	\$60.54	\$75.45	H H H H H H D Y
Apprentice Rates:					
1st 6 months		\$36.58	\$47.01	\$57.45	
2nd 6 months		\$38.08	\$49.27	\$60.45	
3rd 6 months		\$39.56	\$51.49	\$63.41	
4th 6 months		\$41.06	\$53.74	\$66.41	
5th 6 months		\$42.55	\$55.97	\$69.39	
6th 6 months		\$44.03	\$58.19	\$72.35	
Level B & C protection. B - Pressure demand, full face SCBA or pressure demand supplied air respirator w/ escape SCBA w/chemical resistant clothing. C - Full face piece, air purifying canister-equipped respirator w/chemical resistant clothing.	EN-324-HWCI-Z2B 3/25/2008	\$44.68	\$59.12	\$73.55	H H H H H H D Y
Apprentice Rates:					
1st 6 months		\$35.92	\$46.03	\$56.13	
2nd 6 months		\$37.36	\$48.18	\$59.01	
3rd 6 months		\$38.80	\$50.35	\$61.89	
4th 6 months		\$40.25	\$52.52	\$64.79	
5th 6 months		\$41.69	\$54.68	\$67.67	
6th 6 months		\$43.13	\$56.84	\$70.55	
Level D - Coveralls, safety boots, glasses or chemical splash goggles and hard hats.	EN-324-HWCI-Z2D 3/25/2008	\$43.38	\$57.17	\$70.95	H H H H H H D Y
Apprentice Rates:					
1st 6 months		\$35.01	\$44.66	\$54.31	
2nd 6 months		\$36.39	\$46.73	\$57.07	
3rd 6 months		\$37.77	\$48.80	\$59.83	
4th 6 months		\$39.14	\$50.86	\$62.57	
5th 6 months		\$40.52	\$52.93	\$65.33	
6th 6 months		\$41.90	\$55.00	\$68.09	

Official Request 1359
 Requestor: LANSING SCHOOL DISTRICT
 Project Description: RENOVATIONS
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 County: Ingham

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Classification Name Description	Last Updated	Straight Hourly	Time and a Half	Double Time	Overtime Provision
Level D When Capping Landfill Coveralls, safety boots, glasses or chemical splash goggles and hard hats.	EN-324-HWCI-Z2DCL 3/25/2008	\$43.13	\$56.79	\$70.45	H H H H H H D Y

Apprentice Rates:

1st 6 months	\$34.83	\$44.39	\$53.95
2nd 6 months	\$36.20	\$46.45	\$56.69
3rd 6 months	\$37.57	\$48.51	\$59.43
4th 6 months	\$38.94	\$50.56	\$62.17
5th 6 months	\$40.30	\$52.60	\$64.89
6th 6 months	\$41.67	\$54.66	\$67.63

Operating Engineer Hazardous Waste Class II

Level A - Fully encapsulating chemical resistant suit w/
pressure demand, full face piece SCBA or pressure
demand supplied air respirator w/ escape SCBA. The
highest available level of respiratory, skin and eye

EN-324-HWCII-Z2A 5/9/2008	\$41.23	\$53.94	\$66.65	H H H H H H D Y
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Level B & C protection. B - Pressure demand, full face
SCBA or pressure demand supplied air respirator w/
escape SCBA w/chemical resistant clothing. C - Full face
piece, air purifying canister-equipped respirator w/chemical
resistant clothing.

EN-324-HWCII-Z2B 3/25/2008	\$40.29	\$52.53	\$64.77	H H H H H H D Y
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Level D - Coveralls, safety boots, glasses or chemical
splash goggles and hard hats.

EN-324-HWCII-Z2D 3/25/2008	\$38.99	\$50.58	\$62.17	H H H H H H D Y
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Level D When Capping Landfill Coveralls, safety boots,
glasses or chemical splash goggles and hard hats.

EN-324-HWCII-Z2DCL 3/25/2008	\$38.74	\$50.21	\$61.67	H H H H H H D Y
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**Operating Engineer Hazardous Waste Crane w/ Boom & Jib
leads 140' or longer**

Level A - Fully encapsulating chemical resistant suit w/
pressure demand, full face piece SCBA or pressure
demand supplied air respirator w/ escape SCBA. The
highest available level of respiratory, skin and eye

EN-324-HW140-Z2A 3/25/2008	\$48.28	\$64.52	\$80.75	H H H H H H D Y
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Level B & C protection. B - Pressure demand, full face
SCBA or pressure demand supplied air respirator w/
escape SCBA w/chemical resistant clothing. C - Full face
piece, air purifying canister-equipped respirator w/chemical
resistant clothing.

EN-324-HW140-Z2B 3/25/2008	\$47.22	\$62.93	\$78.63	H H H H H H D Y
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Level D - Coveralls, safety boots, glasses or chemical
splash goggles and hard hats.

EN-324-HW140-Z2D 3/25/2008	\$46.03	\$61.14	\$76.25	H H H H H H D Y
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Level D When Capping Landfill Coveralls, safety boots,
glasses or chemical splash goggles and hard hats.

EN-324-HW140-Z2DCL 3/25/2008	\$45.78	\$60.77	\$75.75	H H H H H H D Y
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Official Request 1359
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County: Ingham

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Classification Name Description	Last Updated	Straight Hourly	Time and a Half	Double Time	Overtime Provision
Operating Engineer Hazardous Waste Crane w/ Boom & Jib leads 220' or longer					
Level A - Fully encapsulating chemical resistant suit w/ pressure demand, full face piece SCBA or pressure demand supplied air respirator w/ escape SCBA. The highest available level of respiratory, skin and eye	EN-324-HW220-Z2A 3/25/2008	\$48.58	\$64.97	\$81.35	H H H H H H H D Y
Level B & C protection. B - Pressure demand, full face SCBA or pressure demand supplied air respirator w/ escape SCBA w/chemical resistant clothing. C - Full face piece, air purifying canister-equipped respirator w/chemical resistant clothing.	EN-324-HW220-Z2B 3/25/2008	\$47.54	\$63.41	\$79.27	H H H H H H H D Y
Level D - Coveralls, safety boots, glasses or chemical splash goggles and hard hats.	EN-324-HW220-Z2D 3/25/2008	\$46.33	\$61.59	\$76.85	H H H H H H H D Y
Level D When Capping Landfill Coveralls, safety boots, glasses or chemical splash goggles and hard hats.	EN-324-HW220-Z2DCL 3/25/2008	\$46.08	\$61.22	\$76.35	H H H H H H H D Y
Operating Engineer Hazardous Waste Regular Crane, Job Mechanic, Dragline Operator, Boom Truck Operator, Power Shovel Operator and Concrete Pump with boom					
Level A - Fully encapsulating chemical resistant suit w/ pressure demand, full face piece SCBA or pressure demand supplied air respirator w/ escape SCBA. The highest available level of respiratory, skin and eye	EN-324-HWRC-Z2A 3/25/2008	\$46.60	\$62.00	\$77.39	H H H H H H H D Y
Operating Engineer Hazardous Waste Regular Crane, Job Mechanic, Dragline Operator, Boom Truck Operator, Power Shovel Operator and Concrete Pump with Boom Operator					
Level B & C protection. B - Pressure demand, full face SCBA or pressure demand supplied air respirator w/ escape SCBA w/chemical resistant clothing. C - Full face piece, air purifying canister-equipped respirator w/chemical resistant clothing.	EN-324-HWRC-Z2B 3/25/2008	\$45.65	\$60.57	\$75.49	H H H H H H H D Y
Level D - Coveralls, safety boots, glasses or chemical splash goggles and hard hats.	EN-324-HWRC-Z2D 3/25/2008	\$44.35	\$58.62	\$72.89	H H H H H H H D Y
Level D When Capping Landfill Coveralls, safety boots, glasses or chemical splash goggles and hard hats.	EN-324-HWRC-Z2DCL 3/25/2008	\$44.10	\$58.25	\$72.39	H H H H H H H D Y
Operating Engineer Steel Work					
Forklift, 1 Drum Hoist	EN-324-ef 6/6/2008	\$52.96	\$70.75	\$88.53	H H D H H H D D Y
Crane w/ 120' boom or longer	EN-324-SW120 6/6/2008	\$55.01	\$73.82	\$92.63	H H D H H H D D Y

Official Request 1359
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Official Rate Schedule
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Classification Name Description	Last Updated	Straight Hourly	Time and a Half	Double Time	Overtime Provision
Crane w/ 120' boom or longer w/ Oiler	EN-324-SW120-O 6/6/2008	\$56.01	\$75.32	\$94.63	H H D H H H D D Y
Crane w/ 140' boom or longer	EN-324-SW140 6/6/2008	\$56.19	\$75.59	\$94.99	H H D H H H D D Y
Crane w/ 140' boom or longer W/ Oiler	EN-324-SW140-O 6/6/2008	\$57.19	\$77.09	\$96.99	H H D H H H D D Y
Boom & Jib 220' or longer	EN-324-SW220 6/6/2008	\$56.46	\$76.00	\$95.53	H H D H H H D D Y
Crane w/ 220' boom or longer w/ Oiler	EN-324-SW220-O 6/6/2008	\$57.46	\$77.50	\$97.53	H H D H H H D D Y
Boom & Jib 300' or longer	EN-324-SW300 6/6/2008	\$57.96	\$78.25	\$98.53	H H D H H H D D Y
Crane w/ 300' boom or longer w/ Oiler	EN-324-SW300-O 6/6/2008	\$58.96	\$79.75	\$100.53	H H D H H H D D Y
Boom & Jib 400' or longer	EN-324-SW400 6/6/2008	\$59.46	\$80.50	\$101.53	H H D H H H D D Y
Crane w/ 400' boom or longer w/ Oiler	EN-324-SW400-O 6/6/2008	\$60.46	\$82.00	\$103.53	H H D H H H D D Y
Crane Operator, Job Mechanic, 3 Drum Hoist &	EN-324-SWCO 6/6/2008	\$54.65	\$73.28	\$91.91	H H D H H H D D Y
Apprentice Rates:					
	0-999 hours	\$42.03	\$54.90	\$67.77	
	1,000-1,999 hours	\$43.87	\$57.66	\$71.45	
	2,000-2,999 hours	\$45.71	\$60.42	\$75.13	
	3,000-3,999 hours	\$47.54	\$63.17	\$78.79	
	4,000-4,999 hours	\$49.38	\$65.93	\$82.47	
	5,000 hours	\$51.22	\$68.69	\$86.15	
Crane w/ Oiler	EN-324-SWCO-O 6/6/2008	\$55.65	\$74.78	\$93.91	H H D H H H D D Y
Compressor or Welder Operator	EN-324-SWCW 6/6/2008	\$47.20	\$62.11	\$77.01	H H D H H H D D Y
Hoisting Operator, 2 Drum Hoist, & Rubber Tire Backhoe	EN-324-SWHO 6/6/2008	\$54.01	\$72.32	\$90.63	H H D H H H D D Y
Oiler	EN-324-SWO 6/6/2008	\$45.79	\$59.99	\$74.19	H H D H H H D D Y
Tower Crane & Derrick where work is 50' or more above first level	EN-324-SWTD50 6/6/2008	\$55.74	\$74.92	\$94.09	H H D H H H D D Y

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Classification Name Description	Last Updated	Straight Hourly	Time and a Half	Double Time	Overtime Provision
Tower Crane & Derrick 50' or more w/ Oiler where work station is 50' or more above first level	EN-324-SWTD50-O 6/6/2008	\$56.74	\$76.42	\$96.09	H H D H H H D D Y
Operating Engineer Underground					
Class I Equipment	EN-324A2-UC1 10/8/2007	\$43.13	\$56.77	\$70.40	H H H H H H H D Y
Apprentice Rates:					
0-999 hours		\$34.85	\$44.40	\$53.94	
1,000-1,999 hours		\$36.21	\$46.44	\$56.66	
2,000-2,999 hours		\$37.58	\$48.50	\$59.40	
3,000-3,999 hours		\$38.93	\$50.51	\$62.10	
4,000-4,999 hours		\$40.30	\$52.57	\$64.84	
5,000-5,999 hours		\$41.66	\$54.61	\$67.56	
Class II Equipment	EN-324A2-UC2 10/8/2007	\$38.24	\$49.43	\$60.62	H H H H H H H D Y
Class III Equipment	EN-324A2-UC3 10/8/2007	\$37.74	\$48.68	\$59.62	H H H H H H H D Y
Class IV Equipment	EN-324A2-UC4 10/8/2007	\$37.46	\$48.26	\$59.06	H H H H H H H D Y
Painter					
Painter	PT-845-BR 3/27/2007	\$30.09	\$40.46	\$50.83	H H H H H H H D Y
Apprentice Rates:					
1st period		\$20.76	\$26.47	\$32.17	
2nd period		\$21.79	\$28.01	\$34.23	
3rd period		\$23.45	\$30.50	\$37.55	
4th period		\$24.91	\$32.69	\$40.47	
5th period		\$26.98	\$35.79	\$44.61	
6th period		\$29.05	\$38.90	\$48.75	
Plasterer					
Plasterer	PL16-2 5/30/2008	\$36.42	\$49.61	\$62.79	H H H H H H H D N
Apprentice Rates:					
1st year		\$27.19	\$35.76	\$44.33	
2nd year		\$29.83	\$39.72	\$49.61	
3rd year		\$32.46	\$43.67	\$54.87	

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Classification Name Description	Last Updated	Straight Hourly	Time and a Half	Double Time	Overtime Provision
Plumber & Pipefitter					
Plumber & Pipefitter	PL-333-RI 9/6/2007	\$47.52	\$71.08	\$94.64	H H H H H H D Y
Apprentice Rates:					
1st 6 months		\$30.01	\$44.82	\$59.62	
2nd 6 months		\$31.61	\$47.22	\$62.82	
3rd 6 months		\$33.20	\$49.60	\$66.00	
4th 6 months		\$34.79	\$51.99	\$69.18	
5th 6 months		\$36.38	\$54.38	\$72.36	
6th 6 months		\$37.97	\$56.76	\$75.54	
7th 6 months		\$39.56	\$59.14	\$78.72	
8th 6 months		\$41.15	\$61.53	\$81.90	
9th 6 months		\$42.75	\$63.93	\$85.10	
10th 6 months		\$44.34	\$66.32	\$88.28	
Roofer					
Commercial Roofer	RO-70-Z2 3/28/2008	\$34.95	\$46.38	\$57.80	X X H H H H H D Y
Apprentice Rates:					
1st Class		\$20.63	\$25.35	\$30.07	
2nd Class		\$22.56	\$28.19	\$33.82	
3rd Class		\$24.53	\$31.12	\$37.70	
4th Class		\$26.36	\$33.83	\$41.31	
5th Class		\$28.21	\$36.56	\$44.90	
6th Class		\$30.03	\$39.23	\$48.43	
Sheet Metal Worker					
Sheet Metal Worker	SHM-7-1 5/24/2007	\$43.12	\$56.18	\$69.23	H H H H D D D D Y
Apprentice Rates:					
First Year		\$23.41	\$29.94	\$36.47	
Second Year		\$28.14	\$35.97	\$43.81	
Third Year		\$35.29	\$44.43	\$53.57	
Fourth Year		\$37.90	\$48.35	\$58.79	

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Classification Name Description	Last Updated	Straight Hourly	Time and a Half	Double Time	Overtime Provision
Sprinkler Fitter					
Sprinkler Fitter	SP 669 9/25/2007	\$45.11	\$60.84	\$76.57	H H H H H H D Y
Apprentice Rates:					
Class 1 & 2		\$22.24	\$30.11	\$37.97	
Class 3		\$27.85	\$36.50	\$45.15	
Class 4		\$29.43	\$38.87	\$48.31	
Class 5		\$34.10	\$44.33	\$54.55	
Class 6		\$35.67	\$46.68	\$57.69	
Class 7		\$37.25	\$49.05	\$60.85	
Class 8		\$38.82	\$51.41	\$63.99	
Class 9		\$40.39	\$53.76	\$67.13	
Class 10		\$41.96	\$56.11	\$70.27	
Tile, Terrazzo and Mosaic Finisher					
Finisher	BR9-31-TF 9/17/2008	\$28.37	\$37.70	\$47.02	H H H X X X D Y
Apprentice Rates:					
0-749 hours		\$21.84	\$27.90	\$33.96	
750-1,499 hours		\$22.77	\$29.30	\$35.82	
1,500-2,249 hours		\$23.71	\$30.70	\$37.70	
2,250-2,999 hours		\$24.64	\$32.10	\$39.56	
3,000-3,749 hours		\$25.57	\$33.50	\$41.42	
3,750-4,499 hours		\$26.50	\$34.89	\$43.28	
Setter					
Setter	BR9-31-TS 9/17/2008	\$33.74	\$44.74	\$55.74	H H H X X X D Y
Apprentice Rates:					
0-749 hours		\$26.04	\$33.19	\$40.34	
750-1499 hours		\$27.14	\$34.84	\$42.54	
1500-2249 hours		\$28.24	\$36.49	\$44.74	
2250-2999 hours		\$29.34	\$38.14	\$46.94	
3000-3749 hours		\$30.44	\$39.79	\$49.14	
3750-4499 hours		\$31.54	\$41.44	\$51.34	
Truck Driver					
of all trucks of 8 cubic yd capacity or over	TM-RB2 9/17/2008	\$35.84	\$36.44		H H H H H H H Y
of all trucks of 8 cubic yard capacity or less	TM-RB2A 9/17/2008	\$35.74	\$36.29		H H H H H H H Y
on euclid type equipment	TM-RB2B 9/17/2008	\$35.99	\$36.66		H H H H H H H Y

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Classification Name Description	Last Updated	Straight Hourly	Time and a Half	Double Time	Overtime Provision
Underground Laborer Open Cut, Class I					
Construction Laborer	LAUC-Z3-1	\$30.28	\$40.41	\$50.54	H H H H H H D Y
	9/18/2008				
Apprentice Rates:					
	0-1,000 work hours	\$25.75	\$33.62	\$41.48	
	1,001-2,000 work hours	\$26.66	\$34.99	\$43.30	
	2,001-3,000 work hours	\$27.56	\$36.33	\$45.10	
	3,001-4,000 work hours	\$29.37	\$39.05	\$48.72	
Underground Laborer Open Cut, Class II					
Mortar and material mixer, concrete form man, signal man, well point man, manhole, headwall and catch basin builder, guard rail builders, headwall, seawall, breakwall, dock builder and fence erector.	LAUC-Z3-2	\$30.42	\$40.62	\$50.82	H H H H H H D Y
	9/18/2008				
Apprentice Rates:					
	0-1,000 work hours	\$25.86	\$33.79	\$41.70	
	1,001-2,000 work hours	\$26.77	\$35.15	\$43.52	
	2,001-3,000 work hours	\$27.68	\$36.51	\$45.34	
	3,001-4,000 work hours	\$29.51	\$39.26	\$49.00	
Underground Laborer Open Cut, Class III					
Air, gasoline and electric tool operator, vibrator operator, drillers, pump man, tar kettle operator, bracers, rodder, reinforced steel or mesh man (e.g. wire mesh, steel mats, dowel bars, etc.), cement finisher, welder, pipe jacking and boring man, wagon drill and air track operator and concrete saw operator (under 40 h.p.), windlass and tugger man, and directional boring man.	LAUC-Z3-3	\$30.54	\$40.80	\$51.06	H H H H H H D Y
	9/18/2008				
Apprentice Rates:					
	0-1,000 work hours	\$25.95	\$33.92	\$41.88	
	1,001-2,000 work hours	\$26.87	\$35.30	\$43.72	
	2,001-3,000 work hours	\$27.78	\$36.67	\$45.54	
	3,001-4,000 work hours	\$29.62	\$39.43	\$49.22	
Underground Laborer Open Cut, Class IV					
Trench or excavating grade man.	LAUC-Z3-4	\$30.59	\$40.88	\$51.16	H H H H H H D Y
	9/18/2008				
Apprentice Rates:					
	0-1,000 work hours	\$25.99	\$33.98	\$41.96	
	1,001-2,000 work hours	\$26.91	\$35.36	\$43.80	
	2,001-3,000 work hours	\$27.83	\$36.74	\$45.64	
	3,001-4,000 work hours	\$29.67	\$39.50	\$49.32	

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Underground Laborer Open Cut, Class V					
Pipe Layer	LAUC-Z3-5	\$30.73	\$41.09	\$51.44	H H H H H H D Y
	9/18/2008				
Apprentice Rates:					
	0-1,000 work hours	\$26.09	\$34.13	\$42.16	
	1,001-2,000 work hours	\$27.02	\$35.53	\$44.02	
	2,001-3,000 work hours	\$27.95	\$36.92	\$45.88	
	3,001-4,000 work hours	\$29.80	\$39.69	\$49.58	
 Underground Laborer Open Cut, Class VI					
Grouting man, top man assistant, audio visual television operations and all other operations in connection with closed circuit television inspection, pipe cleaning and pipe relining work and the installation & repair of water service pipe & appurtenances	LAUC-Z3-6	\$28.03	\$37.04	\$46.04	H H H H H H D Y
	9/18/2008				
Apprentice Rates:					
	0-1,000 work hours	\$24.07	\$31.10	\$38.12	
	1,001-2,000 work hours	\$24.86	\$32.29	\$39.70	
	2,001-3,000 work hours	\$25.65	\$33.47	\$41.28	
	3,001-4,000 work hours	\$27.24	\$35.85	\$44.46	
 Underground Laborer Open Cut, Class VII					
Restoration laborer, seeding, sodding, planting, cutting, mulching and topsoil grading and the restoration of property such as replacing mail boxes, wood chips, planter boxes, flagstones etc.	LAUC-Z3-7	\$25.18	\$32.76	\$40.34	H H H H H H D Y
	9/18/2008				
Apprentice Rates:					
	0-1,000 work hours	\$21.93	\$27.89	\$33.84	
	1,001-2,000 work hours	\$22.58	\$28.87	\$35.14	
	2,001-3,000 work hours	\$23.23	\$29.84	\$36.44	
	3,001-4,000 work hours	\$24.53	\$31.79	\$39.04	

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ENGINEERS - CLASSES OF EQUIPMENT LIST

UNDERGROUND ENGINEERS
<p>CLASS I Backfiller Tamper, Backhoe, Batch Plant Operator, Clam-Shell, Concrete Paver (2 drums or larger), Conveyor Loader (Euclid type), Crane (crawler, truck type or pile driving), Dozer, Dragline, Elevating Grader, End Loader, Gradall (and similar type machine), Grader, Power Shovel, Roller (asphalt), Scraper (self propelled or tractor drawn), Side Broom Tractor (type D-4 or larger), Slope Paver, Trencher (over 8' digging capacity), Well Drilling Rig, Mechanic, Slip Form Paver, Hydro Excavator.</p>
<p>CLASS II Boom Truck (power swing type boom), Crusher, Hoist, Pump (1 or more 6" discharge or larger gas or diesel powered by generator of 300 amps or more, inclusive of generator), Side Boom Tractor (smaller than type D-4 or equivalent), Tractor (pneu-tired, other than backhoe or front end loader), Trencher (8' digging capacity and smaller), Vac Truck.</p>
<p>CLASS III Air Compressors (600 cfm or larger), Air Compressors (2 or more less than 600 cfm), Boom Truck (non-swinging, non-powered type boom), Concrete Breaker (self-propelled or truck mounted, includes compressor), Concrete Paver (1 drum, ½ yard or larger), Elevator (other than passenger), Maintenance Man, Mechanic Helper, Pump (2 or more 4" up to 6" discharge, gas or diesel powered, excluding submersible pump), Pumpcrete Machine (and similar equipment), Wagon Drill Machine, Welding Machine or Generator (2 or more 300 amp or larger, gas or diesel powered).</p>
<p>CLASS IV Boiler, Concrete Saw (40HP or over), Curing Machine (self-propelled), Farm Tractor (w/attachment), Finishing Machine (concrete), Firemen, Hydraulic Pipe Pushing Machine, Mulching Equipment, Oiler (2 or more up to 4", exclude submersible), Pumps (2 or more up to 4" discharge if used 3 hrs or more a day-gas or diesel powered, excluding submersible pumps), Roller (other than asphalt), Stump Remover, Vibrating Compaction Equipment (6' wide or over), Trencher (service) Sweeper (Wayne type and similar equipment), Water Wagon, Extend-a-Boom Forklift.</p>

HAZARDOUS WASTE ABATEMENT ENGINEERS
<p>CLASS I Backhoe, Batch Plant Operator, Clamshell, Concrete Breaker when attached to hoe, Concrete Cleaning Decontamination Machine Operator, Concrete Pump, Concrete Paver, Crusher, Dozer, Elevating Grader, Endloader, Farm Tractor (90 h.p. and higher), Gradall, Grader, Heavy Equipment Robotics Operator, Hydro Excavator, Loader, Pug Mill, Pumpcrete Machines, Pump Trucks, Roller, Scraper (self-propelled or tractor drawn), Side Boom Tractor, Slip Form Paver, Slope Paver, Trencher, Ultra High Pressure Waterjet Cutting Tool System Operator, Vactors, Vacuum Blasting Machine Operator, Vertical Lifting Hoist, Vibrating Compaction Equipment (self-propelled), and Well Drilling Rig.</p>
<p>CLASS II Air Compressor, Concrete Breaker when not attached to hoe, Elevator, End Dumps, Equipment Decontamination Operator, Farm Tractor (less than 90 h.p.), Forklift, Generator, Heater, Mulcher, Pigs (Portable Reagent Storage Tanks), Power Screens, Pumps (water), Stationary Compressed Air Plant, Sweeper, Water Wagon and Welding Machine.</p> <p style="text-align: right;">Revised: 05/23/08</p>

ENGINEERS - CLASSES OF EQUIPMENT LIST

UNDERGROUND ENGINEERS
<p>CLASS I Backfiller Tamper, Backhoe, Batch Plant Operator, Clam-Shell, Concrete Paver (2 drums or larger), Conveyor Loader (Euclid type), Crane (crawler, truck type or pile driving), Dozer, Dragline, Elevating Grader, End Loader, Gradall (and similar type machine), Grader, Power Shovel, Roller (asphalt), Scraper (self propelled or tractor drawn), Side Broom Tractor (type D-4 or larger), Slope Paver, Trencher (over 8' digging capacity), Well Drilling Rig, Mechanic, Slip Form Paver, Hydro Excavator.</p>
<p>CLASS II Boom Truck (power swing type boom), Crusher, Hoist, Pump (1 or more 6" discharge or larger gas or diesel powered by generator of 300 amps or more, inclusive of generator), Side Boom Tractor (smaller than type D-4 or equivalent), Tractor (pneu-tired, other than backhoe or front end loader), Trencher (8' digging capacity and smaller), Vac Truck.</p>
<p>CLASS III Air Compressors (600 cfm or larger), Air Compressors (2 or more less than 600 cfm), Boom Truck (non-swinging, non-powered type boom), Concrete Breaker (self-propelled or truck mounted, includes compressor), Concrete Paver (1 drum, ½ yard or larger), Elevator (other than passenger), Maintenance Man, Mechanic Helper, Pump (2 or more 4" up to 6" discharge, gas or diesel powered, excluding submersible pump), Pumpcrete Machine (and similar equipment), Wagon Drill Machine, Welding Machine or Generator (2 or more 300 amp or larger, gas or diesel powered).</p>
<p>CLASS IV Boiler, Concrete Saw (40HP or over), Curing Machine (self-propelled), Farm Tractor (w/attachment), Finishing Machine (concrete), Firemen, Hydraulic Pipe Pushing Machine, Mulching Equipment, Oiler (2 or more up to 4", exclude submersible), Pumps (2 or more up to 4" discharge if used 3 hrs or more a day-gas or diesel powered, excluding submersible pumps), Roller (other than asphalt), Stump Remover, Vibrating Compaction Equipment (6' wide or over), Trencher (service) Sweeper (Wayne type and similar equipment), Water Wagon, Extend-a-Boom Forklift.</p>

HAZARDOUS WASTE ABATEMENT ENGINEERS
<p>CLASS I Backhoe, Batch Plant Operator, Clamshell, Concrete Breaker when attached to hoe, Concrete Cleaning Decontamination Machine Operator, Concrete Pump, Concrete Paver, Crusher, Dozer, Elevating Grader, Endloader, Farm Tractor (90 h.p. and higher), Gradall, Grader, Heavy Equipment Robotics Operator, Hydro Excavator, Loader, Pug Mill, Pumpcrete Machines, Pump Trucks, Roller, Scraper (self-propelled or tractor drawn), Side Boom Tractor, Slip Form Paver, Slope Paver, Trencher, Ultra High Pressure Waterjet Cutting Tool System Operator, Vactors, Vacuum Blasting Machine Operator, Vertical Lifting Hoist, Vibrating Compaction Equipment (self-propelled), and Well Drilling Rig.</p>
<p>CLASS II Air Compressor, Concrete Breaker when not attached to hoe, Elevator, End Dumps, Equipment Decontamination Operator, Farm Tractor (less than 90 h.p.), Forklift, Generator, Heater, Mulcher, Pigs (Portable Reagent Storage Tanks), Power Screens, Pumps (water), Stationary Compressed Air Plant, Sweeper, Water Wagon and Welding Machine.</p>

Revised: 05/23/08



STATE OF MICHIGAN

JENNIFER M. GRANHOLM
GOVERNOR

DEPARTMENT OF LABOR & ECONOMIC GROWTH
LANSING

KEITH W. COOLEY
DIRECTOR

Michigan Department of Labor & Economic Growth *Wage & Hour Division*
OVERTIME PROVISIONS for MICHIGAN PREVAILING WAGE RATE SCHEDULE

1. Overtime is represented as a nine character code. Each character represents a certain period of time after the first 8 hours Monday thru Friday.

	Monday thru Friday	Saturday	Sunday & Holidays
First 8 Hours		4	8
9th Hour	1	5	
10th Hour	2	6	
Over 10 hours	3	7	

Overtime for Monday thru Friday after 8 hours:

the 1st character is for time worked in the 9th hour (8.1 - 9 hours)
the 2nd character is for time worked in the 10th hour (9.1 - 10 hours)
the 3rd character is for time worked beyond the 10th hour (10.1 and beyond)

Overtime on Saturday:

the 4th character is for time worked in the first 8 hours on Saturday (0 - 8 hours)
the 5th character is for time worked in the 9th hour on Saturday (8.1 - 9 hours)
the 6th character is for time worked in the 10th hour (9.1 - 10 hours)
the 7th character is for time worked beyond the 10th hour (10.01 and beyond)

Overtime on Sundays & Holidays

The 8th character is for time worked on Sunday or on a holiday
The last character indicates if an optional 4-day 10-hour per day workweek can be worked without paying overtime after 8 hours worked.

2. Overtime Indicators Used in the Overtime Provision:
- H - means TIME AND ONE-HALF due
 - X - means TIME AND ONE-HALF due after 40 HOURS worked
 - D - means DOUBLE PAY due
 - Y - means YES an optional 4-day 10-hour per day workweek can be worked without paying overtime after 8 hours worked
 - N - means NO an optional 4-day 10-hour per day workweek *can not* be worked without paying overtime after 8 hours worked

3. EXAMPLES:

HHHHHHHDN - This example shows that the 1½ rate must be used for time worked after 8 hours Monday thru Friday (*characters 1 - 3*); for all hours worked on Saturday, 1½ rate is due (*characters 4 - 7*). Work done on Sundays or holidays must be paid double time (*character 8*). The N (*character 9*) indicates that 4 ten-hour days is not an acceptable workweek at regular pay.

XXXHHHHDY - This example shows that the 1½ rate must be used for time worked after 40 hours are worked Monday thru Friday (*characters 1-3*); for hours worked on Saturday, 1½ rate is due (*characters 4 - 7*). Work done on Sundays or holidays must be paid double time (*character 8*). The Y (*character 9*) indicates that 4 ten-hour days is an acceptable alternative workweek. (REV 01/15/08)



JENNIFER M. GRANHOLM
GOVERNOR

KEITH W. COOLEY
DIRECTOR

Informational Sheet: Prevailing Wages on State Projects
General Information Regarding Fringe Benefits

Certain fringe benefits **may** be credited toward the payment of the Prevailing Wage Rate:

- If a fringe benefit is paid directly to a construction mechanic
- If a fringe benefit contribution or payment is made on behalf of a construction mechanic
- If a fringe benefit, which may be provided to a construction mechanic, is pursuant to a written contract or policy
- If a fringe benefit is paid into a fund, for a construction mechanic

When a fringe benefit is not paid by an hourly rate, the hourly credit will be calculated based on the annual value of the fringe benefit divided by 2080 hours per year (52 weeks @ 40 hours per week).

The following is an example of the types of fringe benefits allowed and how an hourly credit is calculated:

Vacation	40 hours X \$14.00 per hour = \$560/2080 =	\$.27
Dental insurance	\$31.07 monthly premium X 12 mos. = \$372.84 /2080 =	\$.18
Vision insurance	\$5.38 monthly premium X 12 mos. = \$64.56/2080 =	\$.03
Health insurance	\$230.00 monthly premium X 12 mos. = \$2,760.00/2080 =	\$1.33
Life insurance	\$27.04 monthly premium X 12 mos. = \$324.48/2080 =	\$.16
Tuition	\$500.00 annual cost/2080 =	\$.24
Bonus	4 quarterly bonus/year x \$250 = \$1000.00/2080 =	\$.48
401k Employer Contribution	\$2000.00 total annual contribution/2080 =	\$.96
Total Hourly Credit		\$3.65

Other examples of the types of fringe benefits allowed:

- Sick pay
- Holiday pay
- Accidental Death & Dismemberment insurance premiums

The following are examples of items that **will not** be credited toward the payment of the Prevailing Wage Rate

- Legally required payments, such as:
 - Unemployment Insurance payments
 - Workers' Compensation Insurance payments
 - FICA (Social Security contributions, Medicare contributions)
- Reimbursable expenses, such as:
 - Clothing allowance or reimbursement
 - Uniform allowance or reimbursement
 - Gas allowance or reimbursement
 - Travel time or payment
 - Meals or lodging allowance or reimbursement
 - Per diem allowance or payment
- Other payments to or on behalf of a construction mechanic that are not wages or fringe benefits, such as:
 - Industry advancement funds
 - Financial or material loans

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SUPPLEMENTARY CONDITIONS
OF THE CONTRACT FOR CONSTRUCTION A201-1997

The following supplements modify the "General Conditions of the Contract for Construction," AIA Document A201, Fifteenth Edition, 1997. Where a portion of the General Conditions is modified or deleted by these Supplementary Conditions, the unaltered portions of the General Conditions shall remain in effect.

ARTICLE 1; GENERAL PROVISIONS

1.2 CORRELATIONS AND INTENT OF THE CONTRACT DOCUMENTS

Add the following Subparagraphs 1.2.1.2 to 1.2.1:

- 1.2 In the event of conflicts or discrepancies among the Contract Documents, interpretations will be based on the following priorities.
1. The Agreement.
 2. Addenda, with those of later date having precedence over those of earlier date.
 3. The Supplementary Conditions.
 4. The General Conditions of the Contract for Construction.
 5. Drawings and Specifications.

In the case of an inconsistency between Drawings and Specifications or within either Document not clarified by addendum, the better quality or greater quantity of Work shall be provided in accordance with the Architect's/Engineer's interpretation.

1.1.8 Miscellaneous Definitions

General: The following definitions supplement other general contract documents, and apply generally to the work.

- a) **Abbreviations, Plural Words:** Abbreviations, where not defined in contract documents, will be interpreted to mean the normal construction industry terminology, determined by recognized grammatical rules, by the Architect. Plural words will be interpreted as singular and singular words will be interpreted as plural where applicable for context of contract documents.
- b) **Addenda** are written or graphic instruments issued by the Architect prior to the execution of the Contract which modify or interpret the bidding documents by additions, deletions, clarifications or corrections.
- c) An **Alternate Bid** (or Alternate) is an amount stated in the Bid to be added to or deducted from the amount of the Base Bid if the corresponding change in project scope or materials or methods of construction described in the Bidding Documents is accepted.
- d) **Approved by Architect or Owner:** In no case releases the Contractor from responsibility to fulfill requirements of contract documents.
- e) **Base Bid** is the sum stated in the Bid for which the Bidder offers to perform the Work described as the base, to which Work may be added or deducted for sums stated in Alternate Bids.
- f) A **Bid** is a complete and properly signed proposal to do work for the sum stipulated therein in accordance with the Bidding Documents.
- g) A **Bidder** is one who submits a bid for a contract with the Owner for the Work described in the proposed Contract Document.
- h) **Bidding Documents** include the Advertisement or Invitation to Bid, Instructions to Bidders, the Proposal, other sample bidding and contract forms, and the proposed Contract Documents including any addendum.
- i) **Directed, Requested, Approved, Accepted, etc.:** These terms imply "by the Architect," unless otherwise indicated.
- j) **Furnish:** Supply and deliver to project site, ready for unloading, unpacking, assembly, installation, and similar subsequent requirements.
- k) **General Requirements:** Provisions of Division-1 sections of these specifications.
- l) **Indicated:** Shown on drawings by notes, graphics or scheduled, or written into other portions of contract documents. Terms such as "shown," "noted," "scheduled," and "specified" have the same meaning as "indicated," and are used to assist the reader in locating particular information.
- m) **Install:** Operations at project site, including loading, unpacking, assembly, erection, placing, anchoring, applying, working to dimension, finishing, curing, and protecting, cleaning, and similar requirements.

- n) **Installer:** Entity (firm or person) engaged to install work, by Contractor, subcontractor, or sub-subcontractor. Installers are required to be skilled experts in work they are engaged to install.
- o) **Minimum Requirements:** Indicated requirements are for specific minimum acceptable level of quality/quantity, as recognized in the industry. Actual work must comply (within specified tolerances), or may exceed minimum within reasonable limits. Refer uncertainties to Architect before proceeding.
- p) **Overlapping/Conflicting Requirements:** Most stringent (generally most costly) applies and will be enforced, unless more detailed language written directly into contract documents clearly indicates that a less stringent requirement is acceptable. Refer uncertainties to Architect for decision before proceeding.
- q) **Prepare:** Provide the necessary supports, rough opening, utility rough-in, base of sub-base, etc., for items to be installed by others.
- r) **Product:** Includes materials, systems and equipment.
- s) **Project Manual:** The volume which includes the bidding requirements, sample forms and certain of the contract document such as conditions of the contract and the specifications.
- t) **Project Site:** Space available to Contractor at location of project, either exclusively or to be shared with separate contractors, for performance of the work.
- u) **Provide:** Furnish and install, complete and ready for intended use.
- v) **Specification Text format:** Underscoring facilitates scan reading, no other meaning. Imperative language is directed at Contractor, unless otherwise noted.
- w) A **Sub-bidder** is one who submits a bid to Bidder for materials or labor for a portion of the Work.
- x) **Testing Laboratory:** An independent entity engages for the project to provide inspections, tests, interpretations, reports and similar services.
- y) A **Unit Price** is an amount stated in the Bid as a price per unit of measurement for materials or services as described in the Contract Documents.

1.2.4 Add the following sentence to the end of the paragraph:

It shall be the Contractor's responsibility to divide the work among subcontractors and to promptly settle any disputes arising from such division of the work for the prompt execution of the project. Divisions 2 through 16 indicated various segments of the work and are not intended to indicate division of the work among subcontractors.

ARTICLE 2; OWNER:

- 2.2.5 Delete subparagraph 2.2.5 in its entirety and substitute the following:
The Contractor will be furnished free of charge 3 copies of the Drawings and 3 copies of the Project Manuals. Additional sets may be ordered directly from local printing shop at cost of reproduction and handling to be paid by the contractor.

ARTICLE 3; CONTRACTOR

3.4 LABOR AND MATERIALS

Add the following Sentence to Section 3.4.2:

- 3.4.2 The Architect will consider a formal written request for the substitution of products in place of those specified only under the conditions set forth in the General Requirements (Division 1 of the Specifications).

Add the following Subparagraph to 3.4.2:

- 3.4.2.1 By making requests for substitutions based on Subparagraph 3.4.2 above, the Contractor:
 1. Represents that the Contractor has personally investigated the proposed substitute product and determined that it is equal or superior in all respects to that specified;
 2. Represents that the Contractor will provide the same warranty for the substitution that the Contractor would for that specified;
 3. certifies that the cost data presented is complete and includes all related costs under this Contract except the Architect's/Engineer's redesign costs, and waives all claims for additional costs related to the substitution which subsequently become apparent; and
 4. Will coordinate the installation of the accepted substitute, making such changes as may be required for the Work to be complete in all respects.

Add the following subparagraph:

- 3.18.1.1 The foregoing Subparagraph shall, but not by way of limitation, specifically include all claims and judgements

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which may be made against the Owner, Architect, Architect's/Engineer's consultants, and agents and employees of any of them under the governing laws of the state in which this construction is conducted, and similar laws of other state or governmental body having jurisdiction; and further, against claims and judgements arising from violations of public ordinances and requirements of governing authorities due to the Contractor's or Subcontractor's method of execution of the work.

Delete subparagraph 3.18.2 and substitute the following:

3.18.2 The indemnification which the Contractor and Subcontractors are to provide under Paragraph 3.18 shall include, extend and insure to and be for the benefit of the Owner, Architect, Architect's/Engineer's consultants, their respective agents, and employees of any of them, and shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for the Contractor or any Subcontractor under Worker's Compensation or Employer's Liability Acts, disability acts, employee benefit acts or other legislation or rule of law, whether legislative, judicial, administrative or common law.

ARTICLE 5; SUBCONTRACTORS

5.3 SUBCONTRACTURAL RELATIONS

Add the following subparagraph 5.3.2:

5.3.2 The Subcontractor agrees, to the fullest extent permitted by law, to indemnify, save harmless and defend the Contractor, Owner, Architect, Architect's/Engineer's consultants, their respective agents, and employees of any of them harmless from any liability for damages to any person or property upon, or at, or about the project, that may arise as a result of or in connection with the work hereunder, provided, however, that the Subcontractor shall not be required to indemnify the Contractor against the Contractor's sole negligence; and the Subcontractor agrees to procure at his own expense, before the commencement of the work comprehensive general liability including contractor's protective liability insurance, completed operations and contractual liability insurance and automobile liability insurance, including the ownership, maintenance, and operation of any automotive equipment owned, hired and non-owned for the benefit of the Contractor and Owner, in the sum of Two hundred Fifty Thousand (\$250,000) Dollars for damages resulting to one person and Fire Hundred Thousand (\$500,000) Dollars for damages to persons resulting from one casualty, and Two Hundred Fifty Thousand (\$250,000) for damages to property arising out of each casualty, and an aggregate of not less than Five Hundred Thousand (\$500,000) Dollars for damages to property, and to keep such insurance in force until the construction of the project is fully completed, and to immediately and before commencing work deliver such policy or policies or certificates of such insurance to the Contractor.

ARTICLE 9; PAYMENTS AND COMPLETION

9.3 APPLICATIONS FOR PAYMENT

Add the Following Subparagraphs to 9.3.1 after 9.3.1.2:

9.3.1.3 Until final payment, the Owner will pay ninety percent of the amount due the contractor on account of progress payments. If the manner of completion of the Work and its progress are and remain satisfactory to the Architect and in the absence of other good and sufficient reasons, for each Work category shown to be 50% or more complete in the Application for Payment, the Architect will, without reduction of previous retainage on presentation by the Contractor of Consent of Surety, certify any remaining progress payments for each Work category to be paid in full.

9.3.1.4 The full Contract retainage may be reinstated if the manner of completion of the Work and its progress do not remain satisfactory to the Architect (or if the Surety withholds its consent), or for other good and sufficient reasons.

9.6 PROGRESS PAYMENTS

Add the Following Subparagraphs to 9.6 after 9.6.7:

9.6.8 Should the contractor fail to complete his contract work by the completion date as stated in his contract, the Owner will suspend all further payments on the contract, until all work on the contract is substantially completed and has been accepted by the Owner. If no completion date is stated in the contract, then this paragraph shall be omitted entirely.

9.10 FINAL COMPLETION AND FINAL PAYMENT

Add the Following Subparagraphs to 9.10.1.1 after 9.10.1:

**LANSING SCHOOL DISTRICT
2008 RENOVATION PROJECTS**

ROGER L DONALDSON, AIA P.L.C.

PROJECT #08-26 - JOHNSON FIELDHOUSE/NATORIUM RENOVATIONS - SO 1461

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9.10.1.1 Except with the consent of the Owner, the Architect will perform no more than two (2) inspections to determine whether the Work or a designated portion has attained Final Completion in accordance with the Contract Documents. The Owner shall be entitled to deduct from the Contract Sum amounts paid to the Architect for any additional inspections.

ARTICLE 11; INSURANCE AND BONDS

11.1 CONTRACTOR'S LIABILITY INSURANCE

Delete subparagraph 11.1.2 and substitute the following:

11.1.2 The insurance required by Subparagraph 11.1.1 shall be written for not less than limits of liability specified in the Contract Documents, or required by law, whichever coverage is greater. Coverages, whether written on an occurrence or claims-made basis, shall be maintained without interruption from date of commencement of the Work until date of final payment and termination of any coverage required to be maintained after final payment. Notwithstanding the above, the insurance required by paragraph 11.1 shall be on an occurrence basis.

Add the following subparagraph:

11.1.2.1 Such insurance shall be written to include the following coverages and for not less than the following minimum limits or greater if required by law:

- .1 Worker's Compensation, Occupational Disease and Employer's Liability Insurance:
 - A. State of Michigan - Statutory limits.
 - B. Applicable Federal (if any) - Statutory limits.
 - C. Employer's Liability -

Bodily Injury by Accident	-	\$1,000,000 each accident
Bodily Injury by Disease	-	\$1,000,000 each employee
Bodily Injury by Disease	-	\$1,000,000 each policy limit
- .2 Commercial General Liability Insurance including as minimum coverages:
 - Premises - Operations Liability
 - Independent Contractor's Protective Liability
 - Products and Completed Operations Liability
 - Broad Form Property Damage Endorsement
 - Blanket Contractual
 - Personal Injury, with Employment Exclusion deleted
 - A. Special Requirements:
 1. Property Damage Liability Insurance will provide "X, C, and U" (Explosion, collapse and underground hazard) coverage as applicable.
 2. Products and Completed Operations to be maintained for three (3) year after final payment.
 3. The owner, architect, engineer, their consultants, agents and employees shall be named as "additional insureds" on the commercial general liability policy of the general contractor and/or subcontractor of any tier.
 - B. Limits of Liability:

\$1,500,000	Each occurrence as respects Bodily Injury Liability or Property Damage Liability, or both combined.
\$5,000,000	General Aggregate
\$1,000,000	Products/Completed Operations Aggregate
\$1,000,000	Personal and Advertising Injury
- .3 Automobile Liability Insurance:
 - A. Special Requirements:
 1. All owned, hired, and non-owned vehicles including the loading or unloading thereof.
 2. The owner, Architect, their consultants, agents and employees, shall be named as "additional insureds" on the commercial automobile liability policy of the general contractor and/or

subcontractor of any tier.

- B. Limits of Liability:
\$1,500,000 Each occurrence as respects Bodily Injury Liability or Property Damage Liability, or both combined.

4 Owner's and Architect's/Engineer's Protective Liability Insurance:

The Contractor will furnish and maintain during the entire period of construction an Owner's Protective Liability Policy written in the name of the owner, architect, engineer, and architect's/engineer's consultants, with the following limits of liability:

- A. Limits of Liability:
\$1,500,000 Each occurrence as respects Bodily Injury Liability or Property Damage Liability, or both combined.
\$1,000,000 General Aggregate

.5 Umbrella/Excess Liability Insurance:

- A. Limits of Liability
\$2,500,000 Each Occurrence
\$2,500,000 Aggregate

Delete subparagraph 11.1.3 and substitute the following:

11.1.3 Certificates of Insurance for the above coverages and the Owner's Protective Policy shall be submitted to the Architect for transmittal to the Owner for his approval prior to the start of construction. The Contractor shall certify to the Owner that he has obtained or will obtain similar certificates of insurance from each of his Subcontractors before their work commences. Each Subcontractor must be covered by insurance of the same character and in the same amounts as the Contractor unless the Contractor and Owner agree that a reduced coverage is adequate. Each Subcontractor's insurance shall cover the Owner, Architect, their agents and employees. The Contractor shall submit a statement with each monthly affidavit stating that he has obtained certificates of insurance, or other satisfactory evidence, that all required insurance is in force for each of the Subcontractors listed on his affidavit. If the "additional insureds" have other insurance which is applicable to the loss, it shall be on an excess or contingent basis. The amount of the company's liability under this policy shall not be reduced by existence of such other insurance. Contractors certificates shall be in duplicate on standard Acord forms.

11.1.3.1 Certificate of Insurance shall contain a statement therein or a rider attached thereto incorporating the indemnity clause stated in Paragraph 3.18 (Indemnification) and Subparagraphs 3.18.1, 3.18.1.1, 3.18.2 and 3.18.3 of the General Conditions, and including the changes and additions made in those subparagraphs within these Supplemental General Conditions.

11.1.3.2 These Certificates and the insurance policies required by this Paragraph 11.1 shall contain a provision that coverages afforded under the policies will not be canceled or allowed to expire until at least **sixty (60)** days' prior written notice has been given to the Owner and Architect. If any of the foregoing insurance coverages are required to remain in force after final payment and are reasonably available, an additional certificate evidencing continuation of such coverage shall be submitted with the final Application for Payment as required by Subparagraph 9.10.2. Information concerning reduction of coverage shall be furnished by the Contractor with reasonable promptness in accordance with the Contractor's information and belief.

11.1.3.3 The obligations of the Contractor under the provisions of this article shall not extend to the liability of the Architect, his agents or employees arising out of (1) the preparation or approval of maps, drawings, opinions, reports, surveys, change orders, designs, or specifications, or (2) the giving of or the failure to give directions or instructions by the Architect, his agents or employees to the extent that such giving or failure to give is the cause of the injury or damage.

11.4 PROPERTY INSURANCE

Delete subparagraph 11.4.1 and substitute the following:

11.4.1 Unless otherwise provided, the Owner shall purchase and maintain, in a company or companies lawfully authorized to do business in the jurisdiction in which the Project is located, property insurance in the amount of

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the initial Contract Sum as well as subsequent modifications thereto for the entire Work at the site on a replacement cost basis without voluntary deductibles. Such property insurance shall be maintained, unless otherwise provided in the Contract Documents or otherwise agreed in writing by all persons and entities who are beneficiaries of such insurance, until final payment has been made as provided in Paragraph 9.10 or until no person or entity other than the Owner has an insurable interest in the property required by this Paragraph 11.3 to the covered, whichever is earlier. This insurance shall include interests of the Owner, Architect, the Contractor, Subcontractors and Sub-subcontractors in the Work.

Delete subparagraph 11.4.1.1 and substitute the following:

11.4.1.1 Property insurance shall be on all-risk policy form and shall insure against the perils of fire and extended coverage and physical loss or damage including, without duplication of coverage, theft, vandalism, malicious mischief, collapse, false-work, temporary buildings and debris removal including demolition occasioned by enforcement of any applicable legal requirements, and shall cover reasonable compensation for Architect's services and expenses required as a result of such insured loss. Coverage for other perils shall not be required unless otherwise provided in the Contract Documents.

Property Insurance provided by Owners shall not cover any tools, apparatus, machinery, scaffolding, hoists, forms, staging, shoring and other similar items commonly referred to as construction equipment, which may be on the site and the capital value of which is not included in the Work. The Contractor shall make his own arrangements for any insurance he may require on such construction equipment.

Delete subparagraph 11.4.1.3 and substitute the following:

11.4.1.3 If the property insurance required minimum deductibles and such deductibles are identified in the Contract Documents, the Contractor shall pay costs not covered because of such deductibles. If the Owner or insurer increases the required minimum deductibles above the amounts identified or if the Owner elects to purchase this insurance with voluntary deductible amounts, the Owner shall be responsible for payment of the additional costs not covered because of such increased or voluntary deductibles. If deductibles are not identified in the Contract Documents, the Owner shall pay costs not covered cause of deductibles.

Delete subparagraph 11.4.7 and substitute the following:

11.4.7 Waivers of Subrogation. If permitted by the Owner's and Contractor's insurance companies, without penalties, the Owner and Contractor waive all rights against (1) each other and any of their Subcontractors, Sub-subcontractors, agents and employees, each of the other, and (2) the Architect, Architect's/Engineer's consultants, separate contractors described in Article 6, if any, and any of their Subcontractors, Sub-subcontractors, agents and employees, for damages caused by fire or other perils to the extent covered by property insurance obtained pursuant to this Paragraph 11.4 or other property insurance applicable to the Work, except such rights as they have to proceeds of such insurance held by the Owner as fiduciary. The Owner or Contractor, as appropriate, shall require of the Architect, Architect's/Engineer's consultants, separate contractors described in Article 6, if any, and the Subcontractors Sub-subcontractors, agents and employees of any of them, by appropriate agreements, written where legally required for validity, similar waivers each in favor of other parties enumerated herein. The policies shall provide such waivers of subrogation by endorsement or otherwise. A waiver of subrogation shall be effective as to a person or entity even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise did not pay the insurance premium directly or indirectly, and whether or not the person or entity had an insurable interest in the property damaged.

11.5 PERFORMANCE BOND AND PAYMENT BOND

Add subparagraph 11.5.3

11.5.3 The Contractor, before commencing the Work, shall furnish a Performance Bond and a Labor and Material Payment Bond. The Performance Bond shall be in an amount equal to 100 percent of the full amount of the Contract Sum as security for the faithful performance of the obligations of the Contract Documents, and the Labor and Material Payment Bond shall be in an amount equal to 100 percent of the full amount of the Contract Sum as Security for the payment of all persons performing labor and furnishing materials in connection with the Contract Documents. Such bond shall be on A.I.A. Document A-312-1984, issued by the American Institute of Architects, shall be issued by a surety satisfactory to the Owner and shall name the Owner as primary co-obligee.

Add the following paragraph 11.6 to Article 11:

11.6 MISCELLANEOUS REQUIREMENTS

- 11.6.1 All insurance coverage shall be provided by insurance companies having policy holder ratings no lower than "A" and financial ratings not lower than "XII" in the Best's Insurance Guide, latest edition in effect as of the date of the Contract.
- 11.6.2 The Contractor is responsible for determining that Subcontractors are adequately insured against claims arising out of or relating to the Work. The premium cost and charges for such insurance shall be paid by each Subcontractor.
- 11.6.3 The limits of liability as stated, may be arrived at using a Split-Limit or a Combined Single Limit basis. However, the total limit of liability shall not be less than that stated in the requirements.

ARTICLE 15; PREVAILING WAGE AND FRINGE BENEFIT RATES

Add the following Article 15 including Paragraph 15.1 through 15.3:

- 15.1 **PREVAILING WAGE AND FRINGE BENEFIT RATES:** This LANSING SCHOOL DISTRICT project is required to fall under the prevailing wage provisions of Act 166 of 1965 of the State of Michigan standard labor practices.
- 15.2 15.2 The rates of wages and fringe benefits to be paid to each class of mechanics by the Contractor and all of his Subcontractors shall be not less than the wage and fringe benefit rates prevailing in the locality in which the work is to be performed, in accordance with Act No. 166, Public Acts of 1965. A copy of the applicable and fringe benefit rates is bound in this document.
- 15.3 Every Contractor and Subcontractor shall keep posted on the construction site, in a conspicuous place, a copy of all prevailing wage and fringe benefit rates prescribed in the Contract and shall keep an accurate record showing the name and occupation of and the actual wages and benefits paid to each construction mechanic employed by him in connection with said Contract. This record shall be available for reasonable inspection by a representative of the Owner.
- 15.4 The Contractor shall classify any class of service employee which is not listed therein and which is to be employed under the Contract so as to provide a reasonable relationship between such unlisted classification and the classifications listed in the wage determination. Such conformed class of employee shall be paid the monetary wages and furnished the fringe benefits as are determined pursuant to the procedures in Subparagraph 15.4.2 through Subparagraph 15.4.5.
 - 15.4.1 Payroll and basic records relating thereto shall be maintained by the Contractor during the course of the Work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the Work. Such records shall contain the name, address and social security number of each such worker, the correct classification, hourly rate of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents), daily and weekly numbers of hours worked, deductions made and actual wages paid. If the Contractor employs apprentices or trainees under an approved program, the Contractor shall maintain written evidence of the registration of apprenticeship program and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.
 - 15.4.2 The Contractor shall submit weekly for each week in which any Work is performed a copy of all payrolls to the Owner. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under Subparagraph 15.4.1. The Contractor is responsible for the submission of copies of payrolls by Subcontractors.
 - 15.4.3 Each payroll submitted shall be accompanied by a "Statement of Compliance" signed by the Contractor or Subcontractor or their agent who pays or supervises the payment of the persons employed under the Contract, which shall certify the following:
 - 15.4.3.1 That the payroll for the payroll period contains the information required to be maintained under Subparagraph 15.4.1 and such information is correct and complete;
 - 15.4.3.2 That each labor or mechanic (including helper, apprentice, and trainee) employed on the Contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in the Act.

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- 15.4.3.3 That each laborer or mechanic has been paid not less the applicable wage rates and fringe benefits or cash equivalents for the classification of Work performed, as specified in the applicable wage determination incorporated in the Contract.
- 15.4.4 The Contractor or Subcontractor shall make the records required under Subparagraph 15.4.1 available for inspection, copying or transcription by the Owner or authorized representatives of the Owner. The Contractor or Subcontractor shall permit the Owner or representatives of the Owner to interview employees during working hours on the job. If the Contractor or Subcontractor fails to submit the required records or the make them available, the Owner may, after written notice t the Contractor, take such action as may be necessary to cause the suspension of any further payment.
- 15.4.5 The Contractor or Subcontractor shall maintain payroll and basic payroll records during the course of the Work and shall preserve them for a period of three years from the completion of the Contract for all laborers and mechanics, working on the Contract. Such records shall contain the name, address of each such employee, and social security number, correct classifications, hourly rates of wages paid, daily and weekly numbers of hours worked, deductions made and actual wages paid. The records to be maintained under this Subparagraph 15.4.5 shall be made available by the Contractor or Subcontractor for inspection, copying or transcription by the authorized representatives of the Owner, and the Contractor or Subcontractor shall permit such representatives to interview employees during working hours on the job.

ARTICLE 16; LANSING SCHOOL DISTRICT POLICIES:

Add the following Article 16 including Paragraph 16.1 through 16.2:

- 16.1 Purchasing Guidelines and Procedures:** Lansing School District projects comply with a follow Policy No. 3310. Contractor will review Policy No. 3310 and shall comply with the requirements.
- 16.2 Affirmative Action Procument Practices:** Lansing School District projects comply with a follow Policy No. 3310.1. Contractor will review Policy No. 3310.1 shall comply with the requirements and execute required Certificate.

END OF SECTION 01004

**SECTION 01010
SUMMARY OF THE WORK**

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Summary of the Work:

1.02 SUMMARY OF THE WORK

A. PROPOSALS:

1. The Contractor shall submit a proposal all trades as required for each project they submit a proposal for.
2. The approximate areas and dimensions indicated are to assist the contractor in determining the relative magnitude of project size and shall not be used as actual areas in determining quantities for bidding or ordering of material. The contractor is responsible for taking their own measurements of the existing conditions.

B. **PROJECT #07-17 - JOHNSON FIELDHOUSE BLEACHER REPAIRS - BID #S.O. 1392**

1. A partial list of work to be completed includes:
 - a. Clean all previously painted walls, remove all loose paint to provide for a stable base for new painted finish.
 - b. Clean all approximately 72 high natural glazed face brick wainscot, height varies in some locations.
 - c. Paint all walls above approximately 72 natural glazed face brick wainscot. Height varies in some locations.
 - d. Paint all Metal Fin Tube enclosures.
 - e. Provide new Suspend Acoustical Ceiling, Mechanical Grilles (Supply, Return & Exhaust) and Lighting Systems.
 - f. Paint Hollow Metal Door & Frame where indicated. Adjust door & hardware for proper operation. Provide new hardware or parts if required for proper operations.
 - g. Upon finish of construction work, clean total project area, including pool area to be ready for filling with water.
2. Alternate #1, - Guaranteeing that all work will be completed within Thirty (30) calendar days after award of contract and receipt of approvals from City of Lansing Office of Building Safety and State of Michigan Bureau of Fire Services.
3. It is the Contractor's responsibility to verify quantities of materials for the project. The documents do not identify quantities or accessories that may also be required.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

- A. **Contractor Use of Premises:** During construction the Contractor shall have partial use of the premises for construction operations, including use of the site. The Contractor's use of the premises is limited only by the Owner's right to perform facility operations and services to the Public.
 - a. Keep driveways and entrances clear at all times. Do not use these areas for parking or storage of materials. Schedule deliveries to minimize requirements for storage of materials.
- B. **Use of the Existing Building:** Maintain the existing building in a weathertight condition throughout construction. Repair damage caused by construction operations. Take precautions necessary to protect the building and occupants during the construction period.
- C. **Full Owner Occupancy:** The Owner will occupy the site and the existing building the entire period of construction. Cooperate fully with the Owner or their representative during construction operations to minimize conflicts and to facilitate Owner usage. Perform the work so as not to interfere with the Owner's operation.

END OF SECTION 01010

SECTION 01019
CONTRACT CONSIDERATIONS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Inspection and testing allowances.
- B. Schedule of Values.

1.02 RELATED SECTIONS

- A. Section 01027 - Application For Payment.
- B. Section 01028 - Change Order Procedures.
- C. Section 01030 - Alternates.
- D. Section 01300 - Submittals: Schedule of Values.
- E. Section 01600 - Material and Equipment: Product substitutions.

1.04 SCHEDULE OF VALUES

- A. Submit typed schedule on AIA Form G703 - Application and Certificate for Payment Continuation Sheet. Contractor's standard form or electronic media printout will be considered.
- B. Submit a separate Schedule for each Purchase Order as a unique project.
- C. Submit Schedule of Values in duplicate within 15 days after date of Owner-Contractor Agreement established in Notice to Proceed.
- D. Coordinate preparation of the Schedule of Values with the Contractor's Construction Schedule. Correlate line items in the Schedule of Values with other schedules and forms, including:
 - 1. Contractor's Construction Schedule
 - 2. List of products
 - 3. Application for Payment form
 - 4. Schedule of submittals
 - 5. List of subcontractors
- E. **Format and Content:** Utilize the Table of Contents of this Project Manual. Identify each line item with number and title of the major specification Section.
 - 1. Identification: Include the following identification:
 - a) Project name and location
 - b) Name of the Architect
 - c) Project number
 - d) Contractor's name and address
 - e) Date of submittal
 - 2. Arrange the Schedule in tabular form with columns to indicate the following for each item.
 - a) Generic name
 - b) Related Specification Section
 - c) Name of Subcontractor
 - d) Name of manufacturer or fabricator
 - e) Name of supplier
 - f) Change Orders (numbers) that have affected value
 - g) Dollar value
 - h) Percentage of Contract Sum to the nearest one-hundredth percent, adjusted to total 100 percent
 - 3. Break Contract Sum down in enough detail to facilitate evaluation of Applications for Payment. Break subcontract amounts down into several line items. Round amounts off to the nearest dollar; the total shall equal the Contract Sum.
 - 4. For each item where an Application for Payment includes products purchased or fabricated and stored, but not installed, provide separate line items for initial cost, each subsequent stage of

completion, and installed value.

- F. Include in each line item, the amount of Allowances specified in this section.
- G. Include within each line item, a direct proportional amount of Contractor's overhead and profit.
- H. Revise schedule to list approved Change Orders, with each Application For Payment.
- I. Show line items for indirect costs, and margins on costs, to extent that such items will be listed individually in Applications for Payment. Each item in the Schedule of Values and Applications for Payment shall be complete including total cost and share of overhead and profit.
 - 1. Temporary facilities and items that are not direct cost of Work-in-place may be shown as separate line items or distributed as general overhead expense.
- J. Update and resubmit the schedule when Change Orders or Construction change Directives change the Contract Sum.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

END OF SECTION 01019

SECTION 01027
APPLICATIONS FOR PAYMENT

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Procedures for preparation and submittal of Applications for Payment.

1.02 RELATED SECTIONS

- A. Document AIA 101-1997 -Owner-Contractor Agreement: Contract Sum/Price amounts of Progress Payments and Retainages, time schedule for submittals.
- B. Document AIA 201-1997 - General Conditions of the contract: Progress Payments and Final Payment.
- C. Section 01019 - Contract Considerations: Cash Allowances, Inspection and Testing Allowances, Contingency Allowance, Schedule of Values.
- D. Section 01028 - Change Order Procedures: Procedures for changes to the Work.
- E. Section 01300 - Submittals: Submittal procedures.
- F. Section 01700 - Contract Closeout: Final Payment.

1.03 FORMAT

- A. Payment Application Forms: Use AIA Document G 702 and Continuation Sheets G 703 as the form for the application.
- B. AIA G702 - Application and Certificate for Payment. - Application for Payment including continuation sheets when required.
- C. AIA G703 - Continuation Sheet for G702.
- D. For each item, provide a column for listing: Item Number; Description of work; Scheduled Value, Previous Applications: Work in Place, and Stored Materials under this Application: Authorized Change Orders; Total Completed and Stored to Date of Application; Percentage of Completion; Balance to Finish; and Retainage.

1.04 PREPARATION OF APPLICATIONS

- A. Present required information in typewritten form or electronic media printout.
- B. Execute certification by signature of authorized officer.
- C. Use data from approved Schedule of Values. Provide dollar value in each column for each line item for portion of work performed and for stored products.
- D. **Applications for Payment:** Each Application for Payment shall be consistent with previous applications and payments as certified by the Architect and paid for by the Owner.
- E. List each authorized Change Order as an extension on continuation sheet, listing Change Order number and dollar amount as for an original item of Work.
- F. Prepare Application for Final Payment as specified in Section 01700.

1.05 SUBMITTAL PROCEDURES

- A. **Payment Application Times:** Payment dates are indicated in the Agreement. The period covered by each application is the period indicated.
- B. **Application Preparation:** Complete every entry, including notarization and execution by person authorized to sign on behalf of the Owner. Incomplete applications will be returned without action.
 - 1. Entries shall match data on the Schedule of Values and Contractor's Construction Schedule. Use updated schedules if revisions have been made.
 - 2. Include amounts of Change Orders and Construction Change Directives issued prior to the last day of the period covered by the application.
- C. **Transmittal:** Submit 3 executed copies of each application to the Architect within 24 hours; one copy shall be complete, including waivers of lien and similar attachments.
 - 1. Transmit each copy with a transmittal listing attachments, and recording information related to the application.

D. Waivers of Lien:

- 1. Waiver Forms:** Submit waivers of lien on forms, and executed in a manner, acceptable to Owner.
- 2.** With each copy of application, submit waivers of lien from every entity who has work on or provided materials, or who may file a lien arising out of the Contract, and related to the Work covered by the payment.
- 3.** Submit partial waivers on each item for amount requested, prior to deduction for retainage, on each item.
- 4.** When an application shows completion of an item, submit final or full waivers.
- 5. Waiver Delays:** Submit each application with Contractor's waiver of lien for the period covered by the application.
- 6. Final Waivers:** Submit final Application for Payment with final waivers from every entity involved with performance of Work covered by the application that could be entitled to a lien.

E. Submit an updated construction schedule with each Application for Payment.

1.06 SUBSTANTIATING DATA

- A. When Architect requires substantiating information, submit data justifying dollar amounts in question.
- B. Provide one copy of data with cover letter for each copy of submittal. Show Application number and date, and line item by number and description.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

END OF SECTION 01027

SECTION 01028 CHANGE ORDER PROCEDURES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Submittals.
- B. Documentation of change in Contract Sum/Price and Contract Time.
- C. Change procedures.
- D. Stipulated Sum change order.
- E. Execution of change orders.
- F. Correlation of Contractor submittals.

1.02 RELATED SECTIONS

- A. Document A101 - Agreement Forms: Monetary values of established Unit Prices, and percentage allowances for Contractor's overhead and profit.
- B. Document A201 - General Conditions: Governing requirements for changes in the Work, in Contract Sum/Price, and Contract Time.
- C. Section 01019 - Contract Considerations: Contingency allowance, Cash Allowances.
- D. Section 01019 - Contract Considerations: Schedule of Values.
- E. Section 01019 - Contract Considerations, 01027 - Applications for Payment: Payment applications.
- F. Section 01300 - Submittals.
- G. Section 01600 - Material and Equipment: Product options and substitutions.
- H. Section 01700 - Contract Closeout: Project Record Documents.

1.03 SUBMITTALS

- A. Submit name of the individual authorized to receive change documents, and be responsible for informing others in Contractor's employ or Subcontractors of changes to the Work.
- B. Change Order Forms: AIA G701 Change Order Change Order.

1.04 DOCUMENTATION OF CHANGE IN CONTRACT SUM/PRICE AND CONTRACT TIME

- A. Maintain detailed records of work done on a time and material basis. Provide full information required for evaluation of proposed changes, and to substantiate costs of changes in the Work.
- B. Document each quotation for a change in cost or time with sufficient data to allow evaluation of the quotation.
- C. On request, provide additional data to support computations:
 - 1. Quantities of products, labor, and equipment.
 - 2. Taxes, insurance and bonds.
 - 3. Overhead and profit.
 - 4. Justification for any change in Contract Time.
 - 5. Credit for deletions from Contract, similarly documented.
- D. Support each claim for additional costs, and for work done on a time and material basis, with additional information:
 - 1. Origin and date of claim.
 - 2. Dates and times work was performed, and by whom.
 - 3. Time records and wage rates paid.
 - 4. Invoices and receipts for products, equipment, and subcontracts, similarly documented.

1.05 CHANGE PROCEDURES

- A. Do not proceed with any additional work without a signed authorization from the OWNER, Maintenance Department's Representative that is authorized to execute a change.
- B. The Architect may issue a Bulletin, which includes a detailed description of a proposed change with supplementary or revised Drawings and specifications, a change in Contract Time for executing the change, Contractor will prepare and submit an estimate within 14 days.

- C. The Contractor may submit in writing a detailed request for change. Each such request shall include the name of the material or equipment for which it is to be substituted and a complete description of the proposed substitute including drawings, product cuts, performance and test data and any other information necessary for an evaluation. A statement setting forth any changes in other materials, equipment or other Work that incorporation of the substitute would require shall be included. Include a statement indicating the effect the proposed change in the Work will have on the Contract Time and Contract Cost, and additional design fees
- 1.06 CONSTRUCTION CHANGE AUTHORIZATION
- A. Architect may issue a document, signed by the Owner, instructing the Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.
 - B. The document will describe changes in the Work, and will designate method of determining any change in Contract Sum/Price or Contract Time.
 - C. Promptly execute the change in Work.
- 1.07 STIPULATED SUM CHANGE ORDER
- A. Based on Bulletin and Contractor's fixed price quotation.
- 1.08 UNIT PRICE CHANGE ORDER
- A. For pre-determined unit prices and quantities, the Change Order will be executed on a fixed unit price basis.
 - B. For unit costs or quantities of units of work, which are not pre-determined, execute Work under a Construction Change Authorization.
 - C. Changes in Contract Sum/Price or Contract Time will be computed as specified for Time and Material Change Order.
- 1.09 TIME AND MATERIAL CHANGE ORDER
- A. Submit itemized account and supporting data after completion of change, within time limits indicated in the Conditions of the Contract.
 - B. Architect will determine the change allowable in Contract Sum/Price and Contract Time as provided in the Contract Documents.
 - C. Maintain detailed records of work done on Time and Material basis.
 - D. Provide full information required for evaluation of proposed changes, and to substantiate costs for changes in the Work.
- 1.10 EXECUTION OF CHANGE ORDERS
- A. Execution of Change Orders: Architect will issue Change Orders for signatures of parties as provided in the Conditions of the Contract.
- 1.11 CORRELATION OF CONTRACTOR SUBMITTALS
- A. Promptly revise Schedule of Values and Application for Payment forms to record each authorized Change Order as a separate line item and adjust the Contract Sum/Price.
 - B. Promptly revise progress schedules to reflect any change in Contract Time, revise sub-schedules to adjust time for other items of work affected by the change, and resubmit.
 - C. Promptly enter changes in Project Record Documents.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

END OF SECTION 01028

SECTION 01039 COORDINATION AND MEETINGS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Coordination.
- B. Field engineering.
- C. Preconstruction conference.
- D. Progress meetings.
- E. Preinstallation conferences.
- F. Safety Procedures.

1.02 RELATED SECTIONS

- A. Section 01045 - Cutting and Patching.
- B. Section 01120 - Alteration Project Procedures.

1.03 COORDINATION

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

1.04 PRECONSTRUCTION CONFERENCE

- A. Pre-construction Conference:** Conduct a pre-construction conference after execution of the Agreement and prior to commencement of construction activities. Review responsibilities and personnel assignments.
- B. Attendees:** The Owner, Architect and their consultants, the Contractor and its superintendent, subcontractors, suppliers, manufacturers, and other concerned parties shall be represented by persons authorized to conclude matters relating to the Work.
- C. Agenda:** Discuss significant items that could affect progress, including the tentative construction schedule, critical sequencing, use of the premises, procedures for processing Change Orders and equipment deliveries.
 - 1. Execution of Owner-Contractor Agreement.
 - 2. Submission of executed bonds and insurance certificates.
 - 3. Distribution of Contract Documents.
 - 4. Submission of list of Subcontractors, list of products, Schedule of Values, and progress schedule.
 - 5. Designation of personnel representing the parties in Contract, and the Architect.
 - 6. Procedures and processing of field decisions, submittals, substitutions, applications for payments, proposal request, Change Orders and Contract closeout procedures.
 - 7. Scheduling.
 - 8. Use of premises by Owner and Contractor.
 - 9. Owner's requirements and partial occupancy.
 - 10. Construction facilities and controls.

11. Temporary utilities.
12. Security and housekeeping procedures.
13. Procedures for testing.
14. Procedures for maintaining record documents.
15. Requirements for start-up of equipment.

1.05 **PROGRESS MEETINGS**

- A. Conduct progress meetings at regular intervals; Notify the Owner and Architect of scheduled dates. Coordinate meeting dates with preparation of the payment request.
- B. Make arrangements for meetings, prepare agenda with copies for participants, preside at meetings, record and distribute minutes.
- C. **Attendance Required:** - Owner and Architect, Job superintendent, Subcontractors and suppliers, or other entity concerned with progress or involved in planning, coordination or performance of future activities shall be represented by persons familiar with the Project and authorized to conclude matters relating to progress, as appropriate to agenda topics for each meeting.
- D. **Agenda:**
 1. Review minutes of previous meetings.
 2. Review of Work progress.
 3. Field observations, problems, and decisions.
 4. Identification of problems which impede planned progress.
 5. Review of submittals schedule and status of submittals.
 6. Maintenance of progress schedule.
 7. Corrective measures to regain projected schedules.
 8. Planned progress during succeeding work period.
 9. Coordination of projected progress.
 10. Effect of proposed changes on progress schedule and coordination.
 11. Other business relating to Work.
 12. Review significant items that could affect progress.
 13. Include topics appropriate to the current status of the Project.
 14. **Contractor's Construction Schedule:** Review progress since the last meeting. Determine where each activity is in relation to the Contractor's Construction Schedule, whether on time or ahead or behind schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.
 - a. Review the present and future needs of each entity present, including such items as:
 - b. Time
 - c. Sequences
 - d. Deliveries
 - e. Off-site fabrication problems
 - f. Site utilization
 - g. Temporary facilities and services
 - h. Hazards and risks
 - i. Maintenance of quality and work standards.
 - j. Change Orders
 - k. Documentation of information for payment requests
- E. **Reporting:** No later than 3 days after each meeting, distribute copies of minutes of the meeting to each party present and to parties who should have been present. Include a summary, in narrative form, of progress since the previous meeting.

1.06 **PREINSTALLATION CONFERENCES**

- A. When required in individual specification Section, convene a preinstallation conference at work site prior to commencing work of the Section.
- B. Require attendance of parties directly affecting, or affected by, work of the specific Section.
- C. Notify Architect seven days in advance of meeting date.
- D. Prepare agenda, preside at conference, record minutes, and distribute copies within five days after conference to participants, with two copies to Architect, Engineer and Owner.

**SECTION 01039
COORDINATION AND MEETINGS**

- E. Review conditions of installation, preparation and installation procedures, and coordination with related work.

1.07 SAFETY PROCEDURES

- A. Contractor shall follow a written Safety Program and shall be able to show documentation of compliance with applicable OSHA and MIOSHA regulations.
- B. Safety Program shall have been reviewed by an independent organization (Association of General Contractors, or other similar organization) for content.
- C. Contractor shall be able to show documentation of worker training programs that comply with OSHA, MIOSHA, and EPA for Hazardous Materials, recognition, handling, and supervision. All workers involved in this project shall have completed the training program prior to working on this project.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

END OF SECTION 01039

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SECTION 01045 CUTTING AND PATCHING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Requirements and limitations for cutting and patching of Work.

1.02 RELATED SECTIONS

- A. Section 01120 - Alteration Project Procedures: Cutting and patching for alterations work.
- B. Section 01300 - Submittals.
- C. Section 01600 - Materials and Equipment: Product Options and Substitutions.
- D. Individual Product Specification Sections:
 - 1. Cutting and patching incidental to work of the Section.
 - 2. Advance notification to other Sections of openings required in work of those Sections.
 - 3. Limitations on cutting structural members.

1.03 SUBMITTALS

- A. Submit written request in advance of cutting or alteration which affects:
 - 1. Structural integrity of any element of Project.
 - 2. Integrity of weather-exposed or moisture-resistant element.
 - 3. Efficiency, maintenance, or safety of any operational element.
 - 4. Visual qualities of sight exposed elements.
 - 5. Work of Owner or separate contractor.
- B. Include in request:
 - 1. Identification of Project.
 - 2. Location and description of affected work.
 - 3. Necessity for cutting or alteration.
 - 4. Description of proposed work, and products to be used.
 - 5. Alternatives to cutting and patching.
 - 6. Effect on work of Owner or separate contractor.
 - 7. Written permission of affected separate contractor.
 - 8. Date and time work will be executed.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Primary Products: Those required for original installation.
- B. Product Substitution: For any proposed change in materials, submit request for substitution under provisions of Section 01600.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Inspect existing conditions prior to commencing Work, including elements subject to damage or movement during cutting and patching.
- B. After uncovering existing work, inspect conditions affecting performance of work.
- C. Beginning of cutting or patching means acceptance of existing conditions.

3.02 PREPARATION

- A. Provide temporary supports to ensure structural integrity of the Work. Provide devices and methods to protect other portions of Project from damage.
- B. Provide protection from elements for areas which may be exposed by uncovering work.
- C. Maintain excavations free of water.

3.03 CUTTING AND PATCHING

- A. Execute cutting, fitting, and patching including excavation and fill to complete work.
- B. Fit products together, to integrate with other work.

LANSING SCHOOL DISTRICT

2008 RENOVATION PROJECTS

ROGER L DONALDSON, AIA P.L.C.

PROJECT #08-26 - JOHNSON FIELDHOUSE NATATORIUM RENOVATIONS - SO 1461

01045 - 1

**SECTION 01045
CUTTING AND PATCHING**

- C. Uncover work to install ill-timed work.
- D. Remove and replace defective or non-conforming work.
- E. Remove samples of installed work for testing when requested.
- F. Provide openings in the work for penetration of mechanical and electrical work.

3.04 **PERFORMANCE**

- A. Execute work by methods to avoid damage to other Work, and which will provide appropriate surfaces to receive patching and finishing.
- B. Employ original installer to perform cutting and patching for weather exposed and moisture resistant elements, and sight-exposed surfaces.
- C. Cut rigid materials using masonry saw or core drill. Pneumatic tools not allowed without prior approval.
- D. Restore work with new products in accordance with requirements of Contract Documents.
- E. Fit work tight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.
- F. At penetrations of fire rated walls, partitions, ceiling, or floor construction, completely seal voids with material, to full thickness of the penetrated element.
- G. Refinish surfaces to match adjacent finish. For continuous surfaces, refinish to nearest intersection or natural break. For an assembly, refinish entire unit.

END OF SECTION 01045

**SECTION 01120
ALTERATION PROJECT PROCEDURES**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Products and installation for patching and extending Work.
- B. Transition and adjustments.
- C. Repair of damaged surfaces, finishes, and cleaning.

1.02 RELATED SECTIONS

- A. Section 01039 - Coordination and Meetings.
- B. Section 01045 - Cutting and Patching.
- C. Section 01500 - Construction Facilities and Temporary Controls: Temporary enclosures, Protection of installed work, Cleaning during construction.

PART 2 PRODUCTS

2.01 PRODUCTS FOR PATCHING AND EXTENDING WORK

- A. New Materials: As specified in product Sections; match existing Products and work for patching and extending work.
- B. Type and Quality of Existing Products: Determine by inspection and testing Products where necessary, referring to existing Work as a standard.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that demolition is complete, and areas are ready for installation of new Work.
- B. Beginning of restoration Work means acceptance of existing conditions.

3.02 PREPARATION

- A. Cut, move, or remove items as necessary for access to alterations and renovation Work. Replace and restore at completion.
- B. Remove unsuitable material not marked for salvage, such as rotted wood, corroded metals, and deteriorated masonry and concrete. Replace materials as specified for finished Work.
- C. Remove debris and abandoned items from area and from concealed spaces.
- D. Prepare surface and remove surface finishes to provide for proper installation of new work and finishes.
- E. Close openings in exterior surfaces to protect existing work and salvage items from weather and extremes of temperature and humidity. Insulate ductwork and piping to prevent condensation in exposed areas.

3.03 INSTALLATION

- A. Coordinate work of alternations and renovations to expedite completion sequentially and to accommodate Owner occupancy.
- B. Remove, cut, and patch Work in a manner to minimize damage and to provide a means of restoring Products and finishes to original or specified condition.
- C. Refinish visible existing surfaces to remain in renovated rooms and spaces, to specified condition for each material, with a neat transition to adjacent finishes.
- D. Install Products as specified in individual Sections.

3.04 TRANSITIONS

- A. Where new Work abuts or aligns with existing, perform a smooth and even transition. Patched Work to match existing adjacent Work in texture and appearance.
- B. When finished surfaces are cut so that a smooth transition with new work is not possible, terminate existing surface along a straight line at a natural line of division and make recommendation to Architect.

**SECTION 01120
ALTERATION PROJECT PROCEDURES**

- 3.05 ADJUSTMENTS
 - A. Where a change of plane of 1/4 inch or more occurs, submit recommendation for providing a smooth transition for Architect review or request instructions from Architect.
 - B. Fit work at penetrations of surfaces as specified in Section 01045.
- 3.06 REPAIR OF DAMAGED SURFACES
 - A. Repair substrate prior to patching finish.
- 3.07 FINISHES
 - A. Finish surfaces as specified in individual Product Sections.
 - B. Finish patches to product uniform finish and texture over entire area. When finish cannot be matched, refinish entire surface to nearest intersections.
- 3.08 CLEANING
 - A. In addition to cleaning specified in Section 01500, clean Owner occupied areas of work.

END OF SECTION 01120

SECTION 01300 SUBMITTALS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Submittal procedures.
- B. Construction progress schedules.
- C. Proposed products list.
- E. Product data.
- F. Samples.
- G. Manufacturers' instructions.
- H. Manufacturers' certificates.

1.02 RELATED SECTIONS

- A. Section 01019 - Contract Considerations: Schedule of Values.
- B. Section 01700 - Contract Closeout: Contract warranty and manufacturer's certificates, closeout submittals.
- C. Section 01340 - Shop Drawings.

1.03 SUBMITTAL PROCEDURES

- A. Transmit each submittal with Architect accepted form.
- B. Sequentially number the transmittal forms. Resubmittals to have original number with an alphabetic suffix.
- C. Identify Project, Contractor, Subcontractor or supplier; pertinent Drawing sheet and detail numbers, and specification Section number, as appropriate.
- D. **Apply Contractor's stamp**, signed or initialed certifying that review, verification of Products required, field dimensions, adjacent construction Work, and coordination of information, is in accordance with the requirements of the Work and Contract Documents.
- E. Schedule submittals to expedite the Project, and deliver to Architect at business address. Coordinate submission of related items.
- F. Identify variations from Contract Documents and Product or system limitations which may be detrimental to successful performance of the completed Work.
- G. Provide space for Contractor and Architect review stamps.
- H. Revise and resubmit submittals as required, identify all changes made since previous submittal.
- I. Distribute copies of reviewed submittals to concerned parties. Instruct parties to promptly report any inability to comply with provisions.

1.04 CONSTRUCTION PROGRESS SCHEDULES

- A. Submit initial progress schedule in duplicate within 10 days after date of Owner-Contractor Agreement or established in Notice to Proceed for Architect review.
- B. Revise and resubmit as required and with each progress payment application.
- C. Submit revised schedules with each Application for Payment, identifying changes since previous version.
- D. Submit a computer generated or horizontal bar chart with separate line for each major section of Work or operation section of Work, identifying first work day of each week.
- E. Show complete sequence of construction by activity, identifying Work of separate stages and other logically grouped activities. Indicate the early and late start, early and late finish, float dates, and duration.
- F. Indicate estimated percentage of completion for each item of Work at each submission.
- G. Indicate submittal dates required for shop drawings, product data, samples, and product delivery dates, including those furnished by Owner and under Allowances.

1.05 PROPOSED PRODUCTS LIST

- A. Within 15 days after date of Owner-Contractor Agreement or Notice to Proceed, submit complete list

**SECTION 01300
SUBMITTALS**

of major products proposed for use, with name of manufacturer, trade name, and model number of each product.

- B. For products specified only by reference standards, give manufacturer, trade name, model or catalog designation, and reference standards.

1.06 MANUFACTURER'S INSTRUCTIONS

- A. When specified in individual specification Sections, submit manufacturers' printed instructions for delivery, storage, assembly, installation, start-up, adjusting, and finishing, in quantities specified for Product Data.
- B. Identify conflicts between manufacturers' instructions and Contract Documents.

1.07 MANUFACTURER'S CERTIFICATES

- A. When specified in individual specification Sections, submit manufacturers' certificate to Architect for review, in quantities specified for Product Data.
- B. Indicate material or product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.
- C. Certificates may be recent or previous test results on material or Product, but must be acceptable to Architect.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not used

END OF SECTION 01300

**SECTION 01310
PROGRESS SCHEDULES**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Format.
- B. Content.
- C. Revisions to schedules.
- D. Submittals.

1.02 FORMAT

- A. Prepare schedules as a horizontal bar chart with separate bar for each major portion of Work or operation, identifying first work day of each week.
- B. Sequence of Listings: The chronological order of the start of each item of Work.
- C. Scale and Spacing: To provide space for notations and revisions.
- D. Sheet Size: Multiples of 8-1/2 x 11 inches (216 x 279 mm).

1.03 CONTENT

- A. Show complete sequence of construction by activity, with dates for beginning and completion of each element of construction.
- B. Identify each item by specification section number.
- C. Identify work of separate stages and other logically grouped activities.
- D. Provide sub-schedules for each stage of Work.
- E. Provide sub-schedules to define critical portions of the entire schedule.
- F. Show accumulated percentage of completion of each item, and total percentage of Work completed, as of the first day of each month.
- G. Provide separate schedule of submittal dates for shop drawings, product data, and samples, including Owner furnished products and dates reviewed submittals will be required from Architect. Indicate decision dates for selection of finishes.
- H. Indicate delivery dates for Owner furnished products.
- I. Coordinate content with schedule of values specified in Section 01019.

1.04 REVISIONS TO SCHEDULES

- A. Indicate progress of each activity to date of submittal, and projected completion date of each activity.
- B. Identify activities modified since previous submittal, major changes in scope, and other identifiable changes.
- C. Provide narrative report to define problem areas, anticipated delays, and impact on Schedule. Report corrective action taken, or proposed, and its effect including the effect of changes on schedules of separate contractors.

1.05 SUBMITTALS

- A. Submit initial schedules within 10 days after date established in Notice to Proceed. After review, resubmit required revised data within five days.
- B. Submit revised Progress Schedules with each Application for Payment.
- C. Submit the number of opaque reproductions which Contractor requires, plus two copies which will be retained by Architect.

1.06 DISTRIBUTION

- A. Distribute copies of reviewed schedules to Project site file, Subcontractors, suppliers, and other concerned parties.
- B. Instruct recipients to promptly report, in writing, problems anticipated by projections indicated in schedules.

PART 2 PRODUCTS
Not Used

PART 3 EXECUTION
Not Used

END OF SECTION 01310

SECTION 01340
SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

I. GENERAL

A. SECTION INCLUDES

1. Format.
2. Content.
3. Revisions to schedules.
4. Submittals.

B. RELATED SECTIONS

1. Section 01019 - Contract Considerations: Schedule of Values.
2. Section 01300- Submittals.
3. Section 01310- Progress Schedules.
4. Section 01700 - Contract Closeout: Contract warranty and manufacturer's certificates, closeout submittals.

C. PROCEDURAL REQUIREMENTS:

1. Coordination: Coordinate the preparation and processing of work-related submittals with the performance of the work. Coordinate each separate submittal with other submittals and related activities that require sequential activity. Coordinate the submittal of different units of interrelated work so that one submittal will not be delayed by the necessity of reviewing a relates submittal.
2. Prepare and transmit each submittal sufficiently in advance of the scheduled performance of related work and similar activities.
3. Review Time: Allow 2 weeks for the Architect/Engineer's initial processing of each submittal. Allow one week for reprocessing each submittal. No extension of time will be authorized because of failure to transmit submittals to the Architect/Engineer sufficiently in advance of the Work.
4. Submittal Preparation: Mark each submittal with a permanent label for identification. Provide project name, date, name of Architect/Engineer, name of Contractor, number and title of appropriate specification section and similar definitive information. Provide a space on the label for Contractor's and Architect/Engineer's review markings.

D. Submittal Transmittal: Package each submittal appropriately for transmittal and handling. Send each submittal from the Contractor to the Architect/Engineer and other destinations using a transmittal form.

E. Additional Copies: Provide additional copies of submittals required by governing authorities that are in addition to copies specified for submittal to the Architect/Engineer.

F. Where it is necessary to provide intermediate submittals between the initial and final submittals, provide and process intermediate submittals in the same manner as for initial submittals.

G. Contractor Responsibilities: Review Shop Drawings, Product Data and Samples prior to submission to the Architect/Engineer.

1. Determine and verify:
 - (a) Field Measurements
 - (b) Field construction criteria
 - (c) Catalog numbers and similar data
 - (d) Conformance with specifications
2. Coordinate each submittal with requirements of the work and of the Contract Documents.
3. Notify the Architect/Engineer in writing, at time of submission, of any deviations in the submittals from requirements of the Contract Documents. If no such notification is attached it will be assumed by the Architect/Engineer that the product conforms to the Contract Documents. The Architect/Engineer will review the shop drawings for conformance with the design concept of the project and for compliance with the information given in the Contract Documents only to the extent that the information is contained in the submittal. The Architect/Engineer will not be responsible for verifying correctness of quantities or manufacturer's dimensions.
4. Begin no fabrication or work which requires submittals until return of submittals with

Architect/Engineer's approval.

5. Affix Contractor's stamp on submittals, initialed or signed, certifying to review of submittal, verification of products, and coordination of the information within the submittal with requirements of the work and of Contract Documents.
- H. Architect/Engineer's Responsibilities: Refer to General Conditions paragraph 4.2.4 and 4.2.7, for responsibilities of the Architect/Engineer upon receipt of submittals from the Contractor. Submittals from other sources will be returned without action.

II. SUBMITTALS

A. SHOP DRAWINGS

1. Submit two opaque blue/black line prints and one correctable, reproducible transparency. The transparency will be processed and returned. After approval, print processed transparency for job use and distribution.
2. The Contractor may submit the number of opaque reproductions which the contractor requires, plus two copies which will be retained by Architect.
3. After review, reproduce and distribute in accordance with Article on Procedures above and for Record Documents described in Section 01700 - Contract Closeout.
4. Catalog and Submittal Product Data: Submit 2 prints plus the number to be returned:
5. Mark each copy to indicate the actual product to be provided; show selections from among options in the manufacturer's printed product data.
6. Do not proceed with the installation of manufactured products until a copy of related product data is in the installer's possession at the project site.

B. PRODUCT DATA

1. Submit the number of copies which the Contractor requires, plus two copies which will be retained by the Architect.
2. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information unique to this Project.
3. Submit Material Safety Data Sheets (MSDS) for all materials that will be used for this project. Bind all MSDS in a three ring binder. Maintain 1 copy of all MSDS at each site location.
4. After review, distribute in accordance with Article on Procedures above and provide copies for Record Documents described in Section 01700 - Contract Closeout.

C. SAMPLES

1. Submit samples to illustrate functional and aesthetic characteristics of the Product, with integral parts and attachment devices. Coordinate sample submittals for interfacing work.
2. Submit samples of finishes from the full range of manufacturers' standard colors or in custom colors selected, textures, and patterns for Architect's selection.
3. Include identification on each sample, with full Project information.
4. Submit the number or samples specified in individual specification Sections; two of which will be retained by Architect.
5. Reviewed samples which may be used in the Work are indicated in individual specification Sections.
6. Samples: Submit 3 sets of samples; one set will be returned. Provide 3 or more samples in each set where variations in color, pattern or texture are observable; show average condition and extreme range of variations. Submit full documentation with each set. Sample submittals are for Architect/Engineer's observations of color, texture, pattern and "kind." Maintain returned set at project site for purposes of quality control comparisons.

III. ARCHITECT/ENGINEER'S ACTION

- A. **Action Stamp:** The Architect/Engineer will stamp each submittal to be returned to indicate the status of the submittal, as follows:
1. Where marked "**Approved for Design**," the work covered by the submittal may proceed provided it complies with requirements of contract documents; acceptance of the work will depend upon that compliance.

2. When marked "**Approved for Design as Noted**," the work covered by the submittal may proceed provided that it complies with Architect/Engineer's notations or corrections on submittal, and complies with requirements of contract documents; acceptance of the work will depend upon those compliances.
3. When marked "**Not Approved Returned for Corrections**," do not proceed with the work covered by the submittal (purchasing, fabrication, delivery or other activity); revise submittal or prepare a new submittal and resubmit without delay, in accordance with Architect/ Engineer's notations stating reason for returning submittals with the above marking (and those with no marking) to be in use at project site or elsewhere where the work is in progress.
4. When marked "**No Action**," with an explanation by Architect/Engineer, submittal is for special processing or other activity by Contractor, or primarily for information or record purposes.

END OF SECTION 01340

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SECTION 01500
CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS

1. GENERAL

B. SECTION INCLUDES

1. Temporary Utilities: Electricity, lighting, telephone service, water, and sanitary facilities.
2. Temporary Controls: Barriers, enclosures and fencing, protection of the Work, and water control.
3. Construction Facilities: Access roads, parking, progress cleaning, project signage, and temporary buildings.

C. RELATED SECTIONS

1. Section 01700 - Contract Closeout: Final cleaning.

D. ENVIRONMENTAL PROTECTION: Conduct construction activities by methods that comply with environmental regulations, and minimize the possibility that air, waterways and subsoil might be contaminated or polluted, or that other undesirable effects might result from the performance of work at the site. Avoid the use of tools and equipment which produce harmful noise. Restrict the use of noise making tools and equipment to hours of use that will minimize complaints.

E. SMOKING

1. Owner's Property is a Nonsmoking Area as defined by State Law, no smoking will be allowed within or around the building or on the Owner's Site. Smoking outside on the site will not be allowed in any areas..

F. REGULATIONS: Comply with requirements of local laws and regulations governing construction and local industry standards, in the installation and maintenance of temporary services and facilities.

G. FIRST AID SUPPLIES: Comply with governing regulations and recognized recommendations within the construction industry.

H. SECURITY

1. Provide security and facilities to protect Work, and existing facilities, and Owner's operations from unauthorized entry, vandalism, or theft.

I. PARKING

1. A portion of the existing parking area maybe available for use by the Contractor. Storage of heavy equipment or materials that will damage parking surface will not be allowed on paved area. At the completion of the work the parking area shall be cleaned and any damaged areas repaired.
2. Storage of heavy equipment or materials that will damage parking surface may be allowed across the road in area identified by the Owner.
3. Contractor shall photograph (and file copies of such photographs with the Architect) of all existing damaged areas prior to commencing site operations or assume responsibility of repairing all existing damaged areas.
4. Coordinate site parking with Property owner.
5. When site space is not adequate, arrange for additional off- site parking.

J. USE CHARGES: Usage charges for temporary services, equipment or facilities are not chargeable to the Owner or Architect/Engineer.

K. MAINTENANCE: Operate and maintain temporary services and facilities in good operating condition and in a safe and efficient manner until removal is authorized. Do not overload services or facilities. Protect from damage by freezing temperatures and similar elements. Do not allow unsanitary conditions, public nuisances or hazardous conditions to develop or persist on the site.

L. MATERIALS AND EQUIPMENT: Provide materials and equipment that are suitable for the intended use.

M. FIELD OFFICES:

1. Provide insulated, weathertight offices of size to accommodate personnel. Provide heated and air-conditioned, prefabricated portable units or similar construction, properly secured in place, with lockable entrances, operable windows and serviceable finishes. Keep clean and orderly for use for small progress meetings.
2. When connected to Owner's Utilities, provide meter to record utility usage which will be paid for by the contractor to the Owner.

N. TEMPORARY ELECTRICITY

1. The general contractor may use the owner's electrical system for use to complete this project. Energy

conservation shall be observed. Use of electricity for items not directly related to the completion of the work will not be allowed, including use of air conditioning.

2. The electrical contractor shall furnish and install temporary lighting which is required for:
 - (a) Construction needs.
 - (b) Safe and adequate working conditions throughout the project.
 - (c) Public safety.
 - (d) Security lighting.

O. TELEPHONE SERVICE

1. Use of Owners/facility phone system will not be allowed.

P. TEMPORARY HEAT AND VENTILATION

1. A minimum temperature of 50°F in the corridor areas and 70°F in the offices and classrooms shall be maintained during all times; the temperature in all parts of the building must be kept above freezing.
2. Provide adequate forced ventilation of enclosed areas for curing of installed materials, to disperse humidity, and to prevent hazardous accumulations of dust, fumes, vapors or gases.
3. Prior to operation of the permanent equipment for temporary heating or ventilating purposes, verify that installation is approved for operation, equipment is lubricated and filters are in place. Provide and pay for operation, maintenance and regular replacement of filters and worn or consumed parts.

Q. TEMPORARY WATER SERVICE

1. The mechanical contractor shall install and maintain a suitable temporary water service at the site. The service may consist of hoses from the permanent service. Contractors shall provide their own methods of conveying water from the temporary service.
2. Owner will pay cost of water used during the construction period.
3. Extend branch piping with outlets located so water is available by hoses with threaded connections.
4. Do not allow water to flow unattended. Waste of water will result in a water and sewage charge to the contractor

R. TEMPORARY SANITARY FACILITIES

1. Existing designated facilities may be used during construction operations.
2. Use only designated sanitary facilities.
3. Maintain daily in clean and sanitary condition.
4. At end of construction, return facilities to same or better condition than originally found.

S. BARRICADES, WARNING SIGNS AND LIGHTS:

1. Comply with recognized standards and code requirements for erection of substantial, barricades where needed to prevent accidents. Paint with appropriate colors and warning signs to inform personnel at the site and the public, of the hazard being protected against. Provide lighting where needed, including flashing red lights where appropriate.
2. Provide barriers to prevent unauthorized entry to construction areas and to protect existing facilities and adjacent properties from damage from construction operations.
3. Provide barricades and covered walkways required by governing authorities for public rights-of-way and for public access to existing building.
4. Provide protection for plant life designated to remain. Replace damaged plant life.
5. Protect non-owned vehicular traffic, stored materials, site and structures from damage.

T. HOISTS AND TEMPORARY ELEVATOR USE:

1. Provide facilities for hoisting materials and employees. Do not permit employees to ride hoists which comply only with requirements for hoisting materials.

U. FENCING

1. Construction: Contractor's option.

V. MISCELLANEOUS SERVICES AND FACILITIES:

1. Design, construct, and maintain miscellaneous services and facilities as needed to accommodate performance of the work, including temporary stairs, ramps, ladders, staging, shoring, scaffolding, temporary partitions, waste chutes and similar items.

W. PROTECTION OF INSTALLED WORK

1. Protect installed Work and provide special protection where specified in individual specification Sections.
2. Provide temporary and removable protection for installed Products. Control activity in immediate work area to minimize damage.
3. Prohibit traffic from landscaped areas.
4. Provide and maintain Fire Extinguishers readily available on roof and rooms below work. Leave Fire Extinguisher in rooms for 1 day after work is complete. Units shall be inspected and locations as recommended by NFPA standards for Fire Extinguishers.

X. PROGRESS CLEANING

1. Maintain areas free of waste materials, debris, and rubbish. Maintain site in a clean and orderly condition.
2. Remove debris and rubbish from pipe chases, plenums, attics, crawl spaces, and other closed or remote spaces, prior to enclosing the space.
3. Broom and vacuum clean interior areas prior to start of surface finishing, and continue cleaning to eliminate dust.

Y. COLLECTION AND DISPOSAL OF WASTES:

1. Establish a system for daily collection and disposal of waste materials. Enforce requirements strictly.
2. Do not hold collected materials longer than 7 days during normal weather or 3 days when the daily temperature is expected to rise above 80°F (27°C). Handle waste materials that are hazardous, dangerous, or unsanitary separately from other waste by containerizing.
3. Dispose of waste material in a lawful manner.
4. Burying or burning of waste materials on the site or washing waste materials down sewers will not be permitted.
5. Provide rodent proof containers located to encourage depositing of wastes by construction personnel.

Z. TERMINATION AND REMOVAL: Remove each temporary service and facility promptly when need has ended, or when replaced by use of a permanent facility, but no later than Substantial Completion. Complete, or, if necessary, restore permanent work delayed because of interference with the temporary service or facility. Repair damaged work, clean exposed surfaces and replace work which cannot be repaired.

1. At substantial completion, clean and renovate permanent services and facilities that have been used to provide temporary services and facilities during the construction period.
2. Remove temporary above grade or buried utilities, equipment, facilities, materials, prior to Substantial Completion inspection.
3. Remove underground installations, grade site as indicated.
4. Clean and repair damage caused by installation or use of temporary work.

II. PRODUCTS

- A. Not Used

III. EXECUTION

- A. Not Used

END OF SECTION 01500

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SECTION 01600 MATERIAL AND EQUIPMENT

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Products.
- B. Transportation and handling.
- C. Storage and protection.
- D. Product options.
- E. Substitutions.

1.02 RELATED SECTIONS

- A. Instructions to Bidders: Product options and substitution procedures.

1.03 PRODUCTS

- A. Products: Means new material, machinery, components, equipment, fixtures, and systems forming the Work. Does not include machinery and equipment used for preparation, fabrication, conveying and erection of the Work. Products may also include existing materials or components required for reuse.
- B. Do not use materials and equipment removed from existing premises, except as specifically permitted by the Contract Documents.
- C. Provide interchangeable components of the same manufacturer, for similar components.

1.04 TRANSPORTATION AND HANDLING

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

1.05 STORAGE AND PROTECTION

- A. Store and protect products in accordance with manufacturer's instructions, with seals and labels intact and legible. Store sensitive products in weather-tight, climate controlled enclosures.
- B. For exterior storage of fabricated products, place on sloped supports, above ground. Provide Secure enclosure. Exterior Storage of products and materials not incorporated into the project are the Contractors responsibility to protect against theft.
- C. Provide off-site storage and protection when site does not permit on-site storage or protection.
- D. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to avoid condensation.
- E. Store loose granular materials on solid flat surfaces in a well-drained area. Prevent mixing with foreign matter.
- F. Provide equipment and personnel to store products by methods to prevent soiling, disfigurement, or damage.
- G. Arrange storage of products to permit access for inspection. Periodically inspect to assure products are undamaged and are maintained under specified conditions.

1.06 PRODUCT OPTIONS

- A. Products Specified by Reference Standards or by Description Only: Any product meeting those standards or description.
- B. Products Specified by Naming One or More Manufacturers: Products of manufacturers named and meeting specifications, no options or substitutions allowed.
- C. Products Specified by Naming One or More Manufacturers with a Provision for Substitutions: Submit a request for substitution for any manufacturer not named.
- D. Products specified by naming only one manufacturer: No option, no substitution.

1.07 SUBSTITUTIONS

- A. Instructions to Bidders specify time restrictions for submitting requests for Substitutions during the bidding period to requirements specified in this Section.
- B. Substitutions may be considered when a product becomes unavailable through no fault of the Contractor.
- C. Document each request with complete data substantiating compliance of proposed Substitution with Contract Documents.
- D. A request constitutes a representation that the Contractor:
 - 1. Has investigated proposed product and determined that it meets or exceeds the quality level of the specified product.
 - 2. Will provide the same warranty for the Substitution as for the specified product.
 - 3. Will coordinate installation and make changes to other Work which may be required for the Work to be complete with no additional cost to Owner.
 - 4. Waives claims for additional costs or time extension which may subsequently become apparent.
 - 5. Will reimburse Owner for review or redesign services associated with re-approval by authorities.
- E. Substitutions will not be considered when they are indicated or implied on shop drawing or product data submittals, without separate written request, or when acceptance will require revision to the Contract Documents.
- F. Substitution Submittal Procedure:
 - 1. Submit three copies of request for Substitution for consideration. Limit each request to one proposed Substitution.
 - 2. Submit shop drawings, product data, and certified test results attesting to the proposed product equivalence.
 - 3. The Architect will notify Contractor, in writing, of decision to accept or reject request.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not used

END OF SECTION 01600

SECTION 01700 CONTRACT CLOSEOUT

I. GENERAL

A. SECTION INCLUDES

1. Closeout procedures.
2. Final cleaning.
3. Adjusting.
4. Project record documents.
5. Operation and maintenance data.
6. Warranties.
7. Spare parts and maintenance materials.

B. RELATED SECTIONS

1. Section 01500 - Construction Facilities and Temporary Controls: Progress cleaning.

C. CLOSEOUT PROCEDURES

1. Submit written certification that Contract Documents have been reviewed, Work has been inspected, and that Work is complete in accordance with Contract Documents and ready for Architect's inspection.
2. Provide submittals to Architect that are required by governing or other authorities.
3. Submit final Application for Payment identifying total adjusted Contract Sum, previous payments, and sum remaining due.
4. Owner may occupy portions of the building as specified in Section 01010.

D. FINAL CLEANING

1. Execute final cleaning prior to final inspection.
2. Clean site; sweep paved areas, rake clean landscaped surfaces.
3. Remove waste and surplus materials, rubbish, and construction facilities from the site.

E. ADJUSTING

1. Adjust operating Products and equipment to ensure smooth and unhindered operation.

F. Removal of Protection: Remove temporary protection and facilities.

G. Compliance: Comply with regulations of authorities having jurisdiction and safety standards for cleaning. Remove waste materials from the site and dispose of in a lawful manner.

II. END OF PROJECT DOCUMENTS

A. PROJECT RECORD DOCUMENTS

1. Maintain on site, one set of the following record documents; record actual revisions to the Work:
 - (a) Contract Drawings.
 - (b) Specifications.
 - (c) Addenda.
 - (d) Change Orders and other Modifications to the Contract.
 - (e) Reviewed shop drawings, product data, and samples.
2. Store Record Documents separate from documents used for construction.
3. Record information concurrent with construction progress.
4. Specifications: Legibly mark and record at each Product section description of actual Products installed, including the following:
 - (a) Manufacturer's name and product model and number.
 - (b) Product substitutions or alternates utilized.
 - (c) Changes made by Addenda and Modifications.
5. Record Documents and Shop Drawings: Legibly mark each item to record actual construction including:
6. Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.
7. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of the Work.
8. Field changes of dimension and detail.

9. Details not on original Contract Drawings.
10. Submit documents to Architect.

B. OPERATION AND MAINTENANCE DATA

1. Submit two (2) sets prior to final inspection, bound in 8-1/2 x 11 inch text pages, three D side ring capacity expansion binders with durable covers.
2. Prepare binder covers with printed title "OPERATION AND MAINTENANCE INSTRUCTIONS", title of project, and subject matter of binder when multiple binders are required.
3. Internally subdivide the binder contents with permanent page dividers, logically organized as described below; with tab titling clearly printed under reinforced laminated plastic tabs.
4. Contents: Prepare a Table of Contents for each volume, with each Product or system description identified, type on 20 pound white paper.
 - (a) Part 1: Directory, listing names, addresses, and telephone numbers of Architect, Contractor, Subcontractors, and major equipment suppliers.
 - (b) Part 2: Operation and maintenance instructions, arranged by system and subdivided by specification section. For each category, identify names, addresses, and telephone numbers of Subcontractors and suppliers. Identify the following:
 - (i) Significant design criteria.
 - (ii) List of equipment.
 - (iii) Parts list for each component.
 - (iv) Operating instructions.
 - (v) Maintenance instructions for equipment and systems.
 - (vi) Maintenance instructions for special finishes, including recommended cleaning methods and materials and special precautions identifying detrimental agents.
 - (c) Part 3: Project documents and certificates, including the following:
 - (i) Shop drawings and product data.
 - (ii) Air and water balance reports.
 - (iii) Certificates.
 - (iv) Photocopies of warranties.
5. Submit one copy of completed volumes in final form 15 days prior to final inspection. This copy will be returned after final inspection, with Architect comments. Revise content of documents as required prior to final submittal.
6. Submit final volumes revised, within ten days after final inspection.

C. WARRANTIES

1. Provide notarized copies.
2. Execute and assemble documents from Subcontractors, suppliers, and manufacturers.
3. Submit prior to final Application for Payment.
4. For items of Work delayed beyond date of Substantial Completion, provide updated submittal within ten days after acceptance, listing date of acceptance as start of warranty period.
5. **Special Project Warranty** issued by Contractor and, where required, countersigned by Installer or other recognized entity involved in performance of the work;
6. **Specified Product Warranty** issued by a manufacture or fabricator, for compliance with requirements in contract documents; and
7. **Date of Warranties:** All warranties are to be dated the same date as that shown on the Certificate of Substantial Completion or noted as to "commence on the date of substantial completion of the project."

D. SPARE PARTS AND MAINTENANCE MATERIALS

1. Provide products, spare parts, maintenance and extra materials in quantities specified in individual specification Sections.
2. Deliver to project site and place in location as directed prior to final payment.

III. PROCEDURES AT SUBSTANTIAL COMPLETION

- A. Prerequisites:** Comply with the General Conditions paragraph 9.8 before requesting Architect/ Engineer's inspection of the Work, for Certification of Substantial Completion.

**SECTION 01700
CONTRACT CLOSEOUT**

- B. Inspection Procedures:** Upon receipt of the Contractor's request, the Architect/Engineer will either proceed with inspection or advise Contractor of prerequisites not fulfilled. Following initial inspection, Architect/Engineer will either prepare Certificate of Substantial Completion, or advise Contractor of work which must be performed prior to issuance of Certificate; and repeat inspection when requested and assured that work has been substantially completed. Results of completed initial inspection will form initial "punch-list."
- C. Reinspection Procedure:** Upon receipt of Contractor's notice that work has been completed, including punch-list items resulting from earlier inspections, and excepting incomplete items delayed because of acceptable circumstances, Architect/Engineer will either issue Certificate of Substantial Completion, or advise Contractor of Work not completed or obligations not fulfilled as required for substantial completion. If necessary, procedure will be repeated.
- D. Reinspection Fees:** Should the Architect/Engineer perform reinspection due to failure of the work to comply with the claims of status of completion made by the Contractor, it is hereby agreed that the Owner will compensate the Architect/Engineer, for such additional services based on the hourly rate of the Architect/Engineer, plus reimbursable expenses, and the Owner will deduct the amount of such compensation from the final payment to the Contractor.
- E. Procedure at Final Acceptance:** Prior to requesting final payment and/or release of any retainage, complete the following:
1. Complete all items noted on Certificate of Substantial Completion and all subsequent items as notified by Architect/Engineer.
 2. Submit executed warranties, etc. Note that all warranties other than Coincidental Product Warranties are to be dated the same as the date on Certificate of Substantial Completion or noted to "Commence on the Date of the Certificate of Substantial Completion."
 3. Submit consent of surety (if any).
- F. Final Inspection Procedure:** Upon receipt of Contractor's notice that all work has been completed, and excepting incomplete items delayed because of acceptable circumstances, Architect/Engineer will reinspect work. Upon completion of reinspection, Architect/Engineer will either recommend final acceptance and final payment, or advise Contractor of work not completed or obligations not fulfilled as required for final acceptance. If necessary, procedure will be repeated.

END OF SECTION 01700

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**SECTION 02070
SELECTIVE DEMOLITION**

1 GENERAL

- A.** This Section requires the selective removal and subsequent off-site disposal of the following:
1. Portions of building roof & roof structure indicated on drawings and as required to accommodate new construction.
 2. Removing portions of Roof that previously have been abandoned in place, including old skylight areas, and roof curbs.
 3. Temporary removal of Roof Equipment and temporary disconnecting of related Utility connections for installation of new curbs and Utility penetration protection covers, and reinstalling Roof Equipment and reconnection of Utilities.
- B.** Related work specified elsewhere:
1. Existing Conditions, Refer to Section 00300 for Environmental concerns.
 2. Remodeling construction work and patching are included within the respective sections of specifications, including removal of materials for reuse and incorporation into remodeling or new construction.
 3. Relocation of pipes, conduits, ducts, and other mechanical and electrical work is specified in other Divisions.
- C.** Schedule: Submit schedule indicating proposed sequence of operations for selective demolition work to Owner's Representative for review prior to start of work. Include coordination for shutoff, capping, and continuation of utility services as required, together with details for dust and noise control.
1. Provide detailed sequence of demolition and removal work to ensure uninterrupted progress of Owner's on-site operations.
- D.** Occupancy: Owner will occupy portions of the building immediately adjacent to and below areas of selective demolition. Conduct selective demolition work in manner that will minimize need for disruption of Owner's normal operations. Provide minimum of 72 hours advance notice to Owner of demolition activities that will impact Owner's normal operations.
- E.** Condition of Structures: Owner assumes no responsibility for actual condition of items or structures to be demolished.
- F.** Conditions existing at time of commencement of contract will be maintained by Owner insofar as practicable. However, variations within structure may occur by Owner's removal and salvage operations prior to start of selective demolition work.
- G.** Partial Demolition and Removal: Items indicated to be removed but of salvageable value to Contractor may be removed from structure as work progresses. Transport salvaged items from site as they are removed.
- H.** Storage or sale of removed items on site will not be permitted.
- I.** Protections: Provide temporary barricades and other forms of protection as required to protect Owner's personnel and general public from injury due to selective demolition work.
- J.** Provide protective measures as required to provide free and safe passage of Owner's personnel and general public to and from occupied portions of building.
1. Erect temporary covered passageways as required by authorities having jurisdiction.
 2. Protect from damage existing finish work that is to remain in place and becomes exposed during demolition operations.
 3. Protect floors with suitable coverings when necessary.

4. Construct temporary insulated solid dustproof partitions where required to separate areas where noisy or extensive dirt or dust operations are performed. Equip partitions with dustproof doors and security locks if required.
 5. Provide temporary weather protection during interval between demolition and removal of existing construction on exterior surfaces and installation of new construction to ensure that no water leakage or damage occurs to structure or interior areas of existing building.
 6. Remove protections at completion of work.
- K. Damages:** Promptly repair damages caused to adjacent facilities by demolition work at no cost to Owner.
1. Damage to concrete, and asphalt paving areas shall be replaced by the Contractor.
 2. Damage to grass areas from this project shall be repaired and hydroseeded. Rut areas shall filled with clean top soil and hydroseeded.
- L. Traffic:** Conduct selective demolition operations and debris removal in a manner to ensure minimum interference with roads, streets, walks, and other adjacent occupied or used facilities.
- M. Utility Services:** Maintain existing utilities indicated to remain. Keep in service and protect against damage during demolition operations.
- N. Do not interrupt utilities serving occupied or used facilities, except when authorized in writing by authorities having jurisdiction. Provide temporary services during interruptions to existing utilities, as acceptable to governing authorities.**
1. Maintain fire protection services during selective demolition operations.
- O. Environmental Controls:** Use water sprinkling, temporary enclosures, and other suitable methods to limit dust and dirt rising and scattering in air to lowest practical level. Comply with governing regulations pertaining to environmental protection.
- P. Do not use water when it may create hazardous or objectionable conditions such as ice, flooding, and pollution.**

2 PRODUCTS

- A. Not used.**

3 EXECUTION

- A. Inspection:** Prior to commencement of selective demolition work, inspect areas in which work will be performed. Photograph existing conditions of structure surfaces, equipment, or surrounding properties that could be misconstrued as damage resulting from selective demolition work; file with Owner's representative prior to starting work.
- B. Preparation:** Provide interior and exterior shoring, bracing, or support to prevent movement, settlement, or collapse of structures to be demolished and adjacent facilities to remain.
1. Cease operations and notify Owner's representative immediately if safety of structure appears to be endangered. Take precautions to support structure until determination is made for continuing operations.
- C. Cover and protect equipment, and fixtures indicated "to remain" from soilage or damage.**
- D. Erect and maintain dust-proof partitions and closures as required to prevent spread of dust or fumes to occupied portions of the building.**
- E. Provide weatherproof closures for exterior openings resulting from demolition work.**
- F. Locate, identify, stub off, and disconnect utility services that are not indicated to remain.**
- G. Provide bypass connections as necessary to maintain continuity of service to occupied areas of building. Provide minimum of 72 hours advance notice to Owner if shutdown of service is necessary during changeover.**

- H.** Demolition: Perform selective demolition work in a systematic manner.
 - 1.** Demolish concrete and masonry in small sections. Cut concrete and masonry at junctures with construction to remain using power-driven masonry saw or hand tools; do not use power-driven impact tools.
 - 2.** Locate demolition equipment outside structure and promptly remove debris to avoid imposing excessive loads on supporting walls, floors, or framing.
 - 3.** Provide services for effective air and water pollution controls as required by local authorities having jurisdiction.
- I.** If unanticipated mechanical, electrical, or structural elements that conflict with intended function or design are encountered, investigate and measure both nature and extent of conflict. Submit report to Owner's representative in written, accurate detail. Pending receipt of directive from Owner's representative, rearrange selective demolition schedule as necessary to continue overall job progress without delay.
- J.** Salvage Items: When items may have a salvage value carefully remove indicated items, clean, store, and offer to Owner and obtain receipt, or when Owner refuses item, remove from site.
- K.** Disposal of Demolished Materials: Remove debris, rubbish, and other materials resulting from demolition operations from building site. Transport and legally dispose off site.
- L.** If hazardous materials are encountered during demolition operations, comply with applicable regulations, laws, and ordinances concerning removal, handling, and protection against exposure or environmental pollution.
 - 1.** Burning of removed materials is not permitted on project site.
- M.** Cleanup and Repair: Upon completion of demolition work, remove tools, equipment, and demolished materials from site. Remove protections and leave interior areas broom clean.
- N.** Repair demolition performed in excess of that required. Return structures and surfaces to remain to condition existing prior to commencement of selective demolition work. Repair adjacent construction or surfaces soiled or damaged by selective demolition work.

END OF SECTION 02070

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SECTION 07900 JOINT SEALANTS

1 GENERAL

1.1 GENERAL

- A.** Refer to other parts of Document Set for complete Contract requirements. Include all work reasonably inferable from Contract Documents. A capable foreman shall be on-site whenever work is in progress.

1.2 SUMMARY

- A.** This Section requires joint sealants at all occurrences of the following joints:
- 1.** Joints in exterior walls and vertical surfaces using sealant designation UR-1 or UR-3, including but not limited to:
 - a.** Control and expansion joints in unit masonry.
 - b.** Perimeter joints between masonry and metal frames.
 - c.** Control, expansion, and perimeter joints of ceiling and overhead surfaces.
 - d.** Control, expansion, and metal frame perimeter joints at exposed interior surfaces of exterior masonry and concrete.
 - e.** Related joints in non-traffic horizontal surfaces.
 - f.** Other joints as indicated.
 - 2.** Joints in interior traffic surfaces as indicated below, using sealant designation UR-1 or UR-3 (Use T):
 - a.** Joints in exposed cast-in-place concrete slabs.
 - b.** Other joints as indicated.
- B.** Include joint fillers and preparation necessary for proper installation.
- C.** Refer elsewhere for the following joint sealing and related work:
- 1.** General project requirements governing work performance and administrative procedures such as submittals and substitutions: Division 1.
 - 2.** Roofing and related flashing: Division 7.
- D.** Definitions:
- 1.** "Joint Sealer" is synonymous for either Sealant or Caulk.
 - 2.** "Caulk"; is used for interior joints allowing for differentially movement of adjoining materials.
 - 3.** "Sealant"; is used for sealing exterior joints exposed to the weather and shall seal against moisture penetration.
- E.** System Performances: Provide joints sealers that have been produced and installed to establish and maintain watertight and airtight continuous seals that are compatible with and nonstaining to abutting materials.

1.3 SUBMITTALS

- A.** Product data from manufacturers for each joint sealer product required, including instructions for joint preparation priming and sealer application. Mark to indicate compliance with requirements.
- B.** Color Samples of Elastomeric Sealants: Manufacturer's standard bead samples consisting of strips of actual products showing full range of colors available, for each product exposed to view.
- C.** Qualification data complying with requirements specified in "Quality Assurance" article. Include list of completed projects with project name, address, names of Architect/Engineers and Owners, plus other information specified.

1.4 QUALITY ASSURANCE

- A.** Installer Qualifications: Engage an Installer who has successfully completed within the last 3 years at least 3 joint sealer applications similar in type and size to that of this Project.

1.5 QUALITY ASSURANCE

- A.** Installer Qualifications: Engage an Installer who has successfully completed within the last 3 years at least 3 joint sealer applications similar in type and size to that of the Project.

- B.** Single Source Responsibility for Joint Sealer Materials: obtain joint sealer materials from a single manufacturer for each sealant type required.

1.6 DELIVERY, STORAGE AND HANDLING

- A.** Deliver materials to Project site in original unopened containers or bundles with labels informing about manufacturer, product name and designation color, expiration period for use, pot life, curing time, and mixing instructions of multi-component materials.
- B.** Store and handle materials in compliance with manufacturers’ recommendations to prevent their deterioration or damage due to moisture, high or low temperatures, contaminants, or other causes.

1.7 PROJECT CONDITIONS

- A.** Environmental Conditions: Do not proceed with installation of joint sealers under the following conditions:
 - 1.** When ambient and substrate temperature conditions are outside the limits permitted by joint sealer manufacturer or below 40 deg F (4.4 deg C).
 - 2.** When joint substrates are wet due to rain, frost, condensation, or other causes.
- B.** Joint Width Conditions: Do not proceed with installation of joint sealers where joint widths are less than allowed by joint sealer manufacturer for application indicated.
- C.** Joint Substrate Conditions: Do not proceed with installation of joint sealers until contaminants capable of interfering with their adhesion are removed from joint substrates.

2 PRODUCTS

2.1 MATERIALS, GENERAL

- A.** Compatibility: Provide joint sealers, joint fillers and other related materials that are compatible with one another and with joint substrates under conditions of service and application, as demonstrated by sealant manufacturer based on testing and field experiences.
- B.** Colors: Provide color of exposed joint sealers indicated or, of not otherwise indicated, as selected by Architect/Engineer from manufacturer’s standard colors.

2.2 ELASTOMERIC JOINT SEALANTS

- A.** Elastomeric Sealant Standard: Provide manufacturer’s standard chemically curing, elastomeric sealant of indicated base polymer which complies with ASTM C 920 requirements, including those referenced for Type, Grade, and Class. Select products with the classifications appropriate to joint substrates:
 - 1.** Use T: Traffic surfaces
 - 2.** Use NT: Non-traffic surfaces
 - 3.** Use M: Masonry
 - 4.** Use G: Glass
 - 5.** Use O: Other

2.3 SEALANT DESIGNATION UR-1

- A.** Multi-Part Nonsag Urethane Sealant: Type M (Milti-art); Grade NS (Non-Sag); Class 25; uses as applicable to joints substrates. Subject to compliance with requirements, provide one of the following:
- B.**

Manufacturer	Product	Use Classifications
1. Mameco	Vulkem 227	T NT M - A O
2. Pecora	Dynatred	T NT M G A O
3. Sonneborn/Rexord	Sonolastic NP2	T NT M G A O
4. Tremco	Dymeric	- NT M G A O

2.4 SEALANT DESIGNATION UR-3

- A.** One-Part Nonsag Urethane Sealant: Type S (Single Part); Grade NS (Non-Sag); Class 25; uses as applicable to joint substrates indicated. Subject to compliance with requirements, provide one of the following:
- B.**

Manufacturer	Product	Use Classifications
1. Mameco	Vulkem 921	- NT M - A O
2. Mameco	Vulkem 116	T NT M - A O

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3.	Pecora	Dynatrol I	-	NT	M	G	A	O
4.	Sonneborn/Rexnord	Sololastic NP 1	T	NT	M	G	A	O
5.	Tremco	Dymonic	-	NT	M	-	A	O
6.	PRC	Permapol RC-1	-	NT	M	-	A	O
7.	Sika Corp.	Silkaflex-1a or 15LM	T	NT	M	G	A	O
8.	Schnee-Morehead	S-M 7100 Permathane	-	NT	M	-	A	O

2.5 SEALANT DESIGNATION ACR

- A. Acrylic-Emulsion Sealant: Manufacturer's standard, one part, nonsag, mildew-resistant, acrylic-emulsion latex sealant complying with ASTM C 834, formulated to be paintable and recommended for exposed applications on interior and on protected exterior locations involving joint movement of not more than plus or minus 5 percent. Subject to compliance with requirements, provide one of the following:

1.	Manufacturer	Product
	a. Bostik	Chem-Calk 600
	b. Pecora	AC-20
	c. Sonneborn/Rexnord	Sonolac
	d. Tremco	Tremco Acrylic Latex 834

2.6 SEALANT DESIGNATION SE

- A. Silicone Emulsion Sealant: Manufacturer's standard one part, nonsag, mildew-resistant, silicone-emulsion latex sealant complying with ASTM C 834 and ASTM C 920, formulated to be paintable and recommended for exposed applications on interior and on protected exterior locations involving joint movement of not more than plus or minus 12-1/2 percent. Product: Dow Corning - Performance Plus Silicone Sealant.

2.7 BACKING AND MISCELLANEOUS MATERIALS

- A. General: Provide materials which are nonstaining; are comparable with joint substrates, sealants, and each other; and are approved for applications indicated by sealant manufacturer based on field experience and laboratory testing.
- B. Plastic Foam Joint Fillers: Preformed, compressible, resilient, nonwaxing, nonextruding strips of flexible, nongassing plastic foam of material indicated below; nonabsorbent to water and gas; and of size, shape and density to control sealant depth and otherwise contribute to producing optimum sealant performance.
- 1) Either open-cell polyurethane foam or closed-cell polyethylene foam, unless otherwise indicated, subject to approval of sealant manufacturer, for cold-applied sealants only.
- C. Bond-Breaker Tape: Polyethylene tape or other plastic tape as recommended by sealant manufacturer for preventing sealant from adhering to rigid, inflexible joint filler materials or joint surfaces at back of joint where such adhesion would result in sealant failure. Provide self-adhesive tape where applicable.
- D. Primer: Provide type recommended by joint sealer manufacturer where required for adhesion of sealant to joint substrates indicated, as determined from preconstruction joint sealer-substrate tests and field tests.
- E. Cleaners for Nonporous Surfaces: Provide nonstaining, chemical cleaners of type which are acceptable to manufacturers of sealants and sealant backing materials, which are not harmful to substrates and adjacent nonporous materials, and which do not leave oily residues or otherwise have a detrimental effect on sealant adhesion or in-service performance.
- F. Masking Tape: Provide nonstaining, nonabsorbent type compatible with joint sealants and to surfaces adjacent to joints.

3 EXECUTION

3.1 EXAMINATION AND PREPARATION

- A. Examine joints to receive joint sealers, with Installer present, for compliance with requirements for joint configuration, installation tolerances and other conditions affecting joint sealer performance. Do not proceed with installation of joint sealers until unsatisfactory conditions have been corrected.

- B.** Surface Cleaning of Joints: Clean out joints immediately before installing joint sealers to comply with recommendations of joint sealer manufacturers and the following requirements:
 - 1.** Remove all foreign material from joint substrates which could interfere with adhesion of joint sealer, including dust; paints, except for permanent, protective coatings tested and approved for sealant adhesion and compatibility by sealant manufacturer; old joint sealers, oil, grease; waterproofing; water repellants; water; surface dirt; and frost.
 - 2.** Clean concrete, masonry, unglazed surfaces of ceramic tile and similar porous joint substrate surfaces, by brushing, grinding, blast cleaning, mechanical abrading, or a combination of these methods to produce a clean, sound substrate capable of developing optimum bond with joint sealers. Remove loose particles remaining from above cleaning operations by vacuuming or blowing out joints with oil-free compressed air.
 - 3.** Remove laitance and form release agents from concrete.
 - 4.** Clean metal, glass, porcelain enamel, glazed surfaces of ceramic tile; and other nonporous surfaces by chemical cleaners or other means which are not harmful to substrates or leave residues capable of interfering with adhesion of joint sealers.
- C.** Joint Priming: Prime joint substrates where indicated or where recommended by joint sealer manufacturer based on preconstruction joint sealer-substrate tests or prior experience. Apply primer to comply with joint sealer manufacturer's recommendations. Confine primers to areas of joint sealer bond, do not allow spillage or migration onto adjoining surfaces.
- D.** Masking Tape: Use masking tape where required to prevent contact of sealant with adjoining surfaces which otherwise would be permanently stained or damaged by such contact or by cleaning methods required to remove sealant smears. Remove tape immediately after tooling without disturbing joint seal.

3.2 INSTALLATION OF JOINTS SEALERS

- A.** General: Comply with joint sealer manufacturers' printed installation instructions applicable to products and applications indicated, except where more stringent requirements apply.
- B.** Elastomeric Sealant Installation Standard: Comply with recommendations of ASTM C 962.
- C.** Latex Sealant Installation Standard: Comply with requirements of ASTM C 790.
- D.** Install joint fillers to provide support of sealants during application and to produce the cross-sectional shapes and depths of installed sealants for optimum sealant movement capability. Do not leave gaps between ends of joint fillers. Do not stretch, twist, puncture, or tear joint fillers. Remove absorbent joint fillers which have become wet prior to sealant application and replace with dry material.
 - 1.** Install bond breaker tape between sealants and joint fillers, compression seals, or back of joints where adhesion of sealant to surfaces at back of joints would result in sealant failure.
- E.** Install sealants by proven techniques that result in sealants directly contacting and fully wetting joint substrates, completely filling recesses, and providing uniform, cross-sectional shapes and depths for optimum sealant movement capability.
- F.** Tooling of Nonsag Sealants: Immediately after sealant application and prior to time skinning or curing begins, tool sealants to form smooth, uniform beads of configuration indicated, to eliminate air pockets, and to ensure contact and adhesion of sealant with sides of joint. Using masking tape to protect adjacent surfaces of recessed tooled joints. Do not use tooling agents which discolor sealants or adjacent surfaces or are not approved by sealant manufacturer.
 - 1.** Provide concave joint configuration per Figure 6A in ASTM C 962, unless otherwise indicated. Provide flush joint configuration per Figure 6B. Provide recessed joint configuration per Figure 6C of recess depth and at locations indicated.
- G.** Clean off excess sealants or sealant smears as work progresses by non-damaging methods and cleaning materials.
- H.** Protect joint sealers during and after curing period from contact with contaminating substances or from damage resulting from construction operations or other causes so that they are without deterioration or damage at end of construction. If, despite such protection, damage or deterioration

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occurs, cut out and remove damaged deteriorated joint sealers immediately and reseal joints with new materials to product joint sealers installations with repaired areas indistinguishable from original work.

END OF SECTION 07900

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SECTION 09511 ACOUSTICAL PANEL CEILINGS

1 GENERAL

A. RELATED SECTIONS

1. Section 09260 - Gypsum Board Assemblies.

B. REFERENCES

1. ASTM C423 - Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method.
2. ASTM C635 - Manufacturing of Metal Suspension Systems.
3. ASTM C636 - Installation of Metal Suspension Systems in non-seismic applications.
4. ASTM D3273-00 - Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber
5. ASTM D3274 - Standard Test Method for Evaluating Degree of Surface Disfigurement of Paint Films by Microbial (Fungal or Algal) Growth or Soil and Dirt Accumulation
6. ASTM D5116-06 - Standard Guide for Small-Scale Environmental Chamber Determinations of Organic Emissions From Indoor Materials/Products
7. ASTM E580 - Installation of Metal Suspension Systems in Areas Requiring Moderate Seismic Restraint.
8. ASTM E84 - Surface Burning Characteristics of Building Materials.
9. ASTM E119 - Fire Tests of Building Construction and Materials.
10. ASTM E1264 - Classification for Acoustical Ceiling Products.
11. CISCA Ceiling Systems Installation Handbook.
12. Fire-resistance-rated, acoustical tile ceilings are indicated by design designations listed in the UL "Fire Resistance Directory," in the Warnock Hersey "Certification Listings," or in the listing of another qualified testing and inspecting agency.

C. SUBMITTALS

1. Coordination drawings: Submit reflected ceiling plans that are coordinated with mechanical, electrical and security work at acoustical ceilings. Show ceiling suspension members, method of anchorage of hangers and ceiling mounted work including light fixtures and air grilles.
2. 6"x12" samples of each tile type, pattern, and color required.
3. Set of 12-inch- long samples of suspension system members.
4. Set of 12-inch- long samples of exposed moldings for each color and system type required.
5. Submit certificates from manufacturers of acoustical ceiling units and suspension systems attesting that their products comply with specification requirements and warranties.

D. DELIVERY AND STORAGE OF MATERIALS

1. All materials shall be delivered in their original unopened packages and stored in an enclosed shelter providing protection from damage and exposure to the elements.
2. Storage:
 - a. Panels: Storage time of materials at the job site should be as short as possible, and environmental conditions should be as near as possible to those specified for occupancy (see no. 1.05 below). Excess humidity during storage can cause expansion of material and possible warp, sag, or poor fit after installation. Chemical changes in the mat and/or coatings can be aggravated by excess humidity and cause discoloration during storage, even in unopened cartons. Cartons should be removed from pallets and stringers to prevent distortion of material. Long-term (6- 12 months) storage under uncontrolled environmental conditions should be avoided.
 - b. Suspension System: Store in manner that will prevent warping, scratches, or damage of any kind.
3. Handling: Handle in such manner to ensure against racking, distortion, or physical damage of any kind.
4. Damaged or deteriorated materials should be removed from the premises. Immediately before installation, to stabilize tile and panels, store them at a location where temperature and humidity conditions duplicate those ambient during installation and anticipated for occupancy.
5. Extra materials: Provide acoustical ceiling units of each type in quantity equal to five percent (5%) of quantity installed. Package, label, deliver to Owner and receive signed receipt.

E. ENVIRONMENTAL CONDITIONS

1. Installation of acoustical panels shall not begin until building is enclosed, permanent heating and cooling equipment is in operation, and residual moisture from plaster, concrete, or terrazzo work has dissipated. CLIMAPLUS™ acoustical ceilings can be installed prior to building enclosure and permanent heating and cooling equipment is in operation.
2. Do not use ceiling panels in extreme or continuous high humidity, or areas exposed directly to weather or water. Ceiling panels are sized and designed for use within the standard occupancy range of temperature and humidity, 65-85 °F (18-29 °C), no more than 70% RH (relative humidity). Humidity can greatly affect product dimensional stability and sag resistance. Sag can become noticeable during periods of high humidity lasting only a few hours. CLIMAPLUS ceilings, if used with DONN® Brand Suspension Systems, can withstand temperatures from 60-104 °F (32-40 °C) and relative humidity up to 90%-100% RH. See USG Interiors Inc. for specific Warranty information.
3. Allow time for dimensional changes in ceiling panels stored at temperature/humidity conditions well outside of those recommended for service. With increases in temperature/humidity, these products expand (up to 1/64 in./ft. (4.3 mm/m) at 85 °F (29 °C)/90% RH) and may not fit into a fixed grid. Conversely, with decreases, these products will be undersize, but expand to normal when standard ambient conditions return.
4. For some pattern edge details, if perimeter panels must be cut smaller, the cut edge must be field-rabbited, or the wall angle must be lowered by 1/4".
5. Formaldehyde VOC Classification, as tested by ASTM D5116 and according to standards established by the Collaborative for High-Performance Schools (CHPS), the State of Washington, the American Society of Heating, Refrigeration and Air-Conditioning Engineers (ASHRAE), and the American National Standards Institute (ANSI) & The California Office of Environmental Health Hazard Assessment(COEHHA).
 - a. For environments where LOW or Formaldehyde FREE VOC classification for emissions and performance are required, use USG Products. USG's Products are classified as LOW or Formaldehyde FREE meeting the most stringent VOC emission standards as defined:
 - (1.) "Formaldehyde-free"
 - i. The California Office of Environmental Health Hazard Assessment recognizes products with emissions of less than 3 parts per billion (ppb) as "formaldehyde-free".
 - (2.) "Low Formaldehyde"
 - i. The Collaborative for High Performance Schools standard for VOC emissions limits the amount to 13.5ppb = 0.0135 ppm = 16.5µg/m3 as a Low Formaldehyde VOC Class panels.

F. QUALITY ASSURANCE

1. Single Source Responsibility: To obtain combined warranty for the Donn Brand suspension system and the acoustical panel, color match or ceiling panel and suspension system compatibility, all acoustical panel and suspension system components shall be produced and supplied by one manufacturer. Materials supplied by more than one manufacturer are not acceptable.
2. Subcontractor qualifications: Installer shall have successful experience in the installation of suspended ceiling systems on projects with requirements similar to requirements specified.
3. Requirements of regulatory agencies: Codes and regulations of authorities having jurisdiction.
4. Source quality control:
 - a. Test reports: Manufacturer will provide test certification for minimum requirements as tested in accordance with applicable industry standards and/or to meet performance standards specified by various agencies.
 - b. Changes from system: System performance following any substitution of materials or change in assembly design must be certified by the manufacturer.
 - c. All ceiling panel cartons must contain UL label for acoustical compliance.
 - d. All suspension system cartons must contain UL label for load compliance per ASTM C635.

G. PROJECT CONDITIONS

1. Existing conditions: (include specific alteration work requirements for project).
2. Environmental requirements for interior installation: Building shall be enclosed with windows and exterior doors in place and glazed, and roof watertight before installation of ceiling system and related ceiling components. Climatic Condition Range for panels used on this project are as follows:
 - a. ClimaPlus Ceilings: 60-104°F (16-29°C) with a max 90% RH.
3. Coordination with other work:
 - a. General: Coordinate with other work supported by or penetrating through the ceiling, including mechanical and electrical work and partition systems.

- b. Mechanical work: Ductwork above ceiling shall be complete, and permanent heating and cooling systems operating to climate conditions prior to installation of ceiling components.
 - c. Electrical work: Installation of conduit above ceiling shall be complete before installation of ceiling components.
 - d. Fire protection work: Fire protection lines and/or equipment occurring above ceiling shall be completed and tested before ceiling components are installed.
4. Protection:
- a. Personnel: Follow good safety and industrial hygiene practices during handling and installing of all products and systems, with personnel to take necessary precautions and wear appropriate personal protective equipment as needed. Read material safety data sheets and related literature for important information on products before installation. Contractor to be solely responsible for all personal safety issues during and subsequent to installation; architect, specifier, owner, and manufacturer will rely on contractor's performance in such regard.
 - b. Protect completed work above ceiling system from damage during installation of ceiling components.

2 PRODUCTS

A. MATERIALS

1. Water Felted, Mineral-Base with painted finish Acoustical Panels for Acoustical Panel Ceiling.
 - a. Available Products
 - (1.) USG Corporation: "Radar ClimaPlus High CAC, High NRC" - Item Number: 22111.
 - b. Classification: Provide panels complying with ASTM E 1264 for type, form, and pattern as follows:
 - (1.) Type and Form: Type III Form 2.
 - (2.) Pattern: Pattern C,D,E.
 - (3.) Surface Burning Characteristics: Class A.
 - c. Fire Resistance: Acceptable for use in UL Fire Rated Designs.
 - d. Color: White Only.
 - e. Recycled Content: Not less than 58.
 - f. LR: Not less than 0.84.
 - g. NRC: Not less than 0.7 in accordance with ASTM C423. Product to have UL acoustical compliance.
 - h. CAC: Not less than 35 in accordance with ASTM E1414. Product to have UL acoustical compliance.
 - i. Edge Detail: Reveal sized to fit flange of exposed suspension system members. Square Edge.
 - j. Thickness: 3/4" inch.
 - k. Size: 2' x 2'
 - l. Formaldehyde VOC Classification: "Low" as defined by CHPS at 13.5 ppb = 0.0135 ppm = 16.5µg/m³
 - m. Panel Warranty: When used with a USG Donn Brand suspension system, this panel has a 30 year warranty that it shall be free from manufacturing defects. When used without a USG Donn Brand suspension system, the period of warranty is 10 years.
2. Metal Suspension System for Acoustical Panel Ceiling.
 - a. General: ASTM C635, commercial quality pretreated and painted hot-dipped galvanized cold-rolled steel, exposed surfaces prefinished in manufacturer's standard corrosion resistant enamel paint finish; color: Flat White #050 or as selected from manufacturer's standard colors.
 - b. Available Products
 - (1.) USG Corporation: "Donn DX/DXL"
 - c. Suspension System Components:
 - (2.) Fire Rated Main Tees: UL Classified Intermediate Duty Classification; double-web design; 1.64" high; rectangular top bulb; 15/16" exposed flange with roll-formed steel cap; cross tee holes and hanger wire holes at 6" o.c.; convenience holes at approximately 2" o.c.; integral reversible splices.
 - (3.) Cross Tees:
 - a. 1-1/2" high; roll-formed into double-web design with rectangular bulb; 15/16" exposed flange with prepainted steel cap; high tensile steel end clips clenched to web.
 - b. 1" high; roll-formed into double-web design with rectangular bulb; 15/16" exposed flange with prepainted steel cap; high tensile steel end clips clenched to web.
 - c. Main tees and cross tees shall be positively locked, yet shall be removable without the use of tools.
3. Accessories:

- a. Wall Molding: Angle shape; 7/8" mounting flange by 7/8" face flange; hemmed edges; exposed surface pre-finished to match suspension system components.
 - (1.) Inside Corner: Field-mitered joints at wall molding.
 - (2.) Inside Corner: Prefabricated corner cap; formed to 90° angle; hemmed edge; size and finish to match wall molding.
 - (3.) Outside Corner: Prefabricated corner cap; formed to 90° angle; hemmed edge; size and finish to match wall molding.
 - b. Shadow Molding: Formed steel section; exposed surfaces to match suspension system components.
 - (1.) 7/8" exposed flange; 3/4" x 3/4" reveal; 7/8" mounting flange.
 - c. Channel Molding: U-shape; hemmed edges; exposed surfaces pre-finished to match suspension system components; 1" or 1/2" exposed flange by depth as required for ceiling material.
4. Suspension System Attachment devices:
- a. Hanger Wire: Galvanized carbon steel; soft temper; pre-stretched; yield stress load at least three times the design load but not less than 12-gauge.
5. Suspension System Warranty: When used with a USG acoustical ceiling panel, this suspension system has a Lifetime 30 year warranty that it shall be free from the occurrence of 50% red rust. When used without a USG acoustical ceiling panel, the period of warranty is 10 years.

3 EXECUTION

A. GENERAL

1. Standard for Ceiling Suspension System Installations: Comply with ASTM C636.
2. Standard for Ceiling Suspension Systems Requiring Seismic Restraint: Comply with ASTM E 580.
3. CISCA Ceilings Systems Handbook.

B. INSPECTION

1. Examine areas to receive ceiling panels for conditions that will adversely affect installation. Provide written report of discrepancies.
2. Do not start work until unsatisfactory conditions are corrected.
3. Work to be concealed: Verify work above ceiling is complete and installed in manner that will not affect layout and installation of ceiling panels.
4. Beginning of installation shall signify acceptance of conditions in areas to receive ceiling panels.
5. Fire-rating requirements: Construction above fire-rated assembly shall meet requirements of UL Design specified in 2: Products.

C. PREPARATION

1. Field dimensions must be verified prior to installation.

D. INSTALLATION

1. Standard reference: Install ceiling panels and suspension system, including necessary hangers, grillage, splines, and other supporting hardware, in accordance with ASTM C636, CISCA Ceiling Systems Handbook, (UL Design) and any applicable code requirement.
2. Manufacturer's reference: Install ceiling panels in exposed grid systems, supported on all edges, in accordance with manufacturer's warranty.
3. Layout: Balance ceiling borders on opposite sides, using more-than-half-width acoustical units as indicated on the drawings.
4. Hanger Wires:
 - a. Spacing: Space hanger wires on main tees not more than 48 inches o.c. a maximum of 48" o.c., attaching hangers directly to the structure above, or as required to support loads.
 - b. Limitations: Do not support wires from mechanical and/or electrical equipment, piping or other equipment occurring above ceiling.
5. Accessories: Install accessories as applicable to meet project requirements.
6. Install edge moldings and trim of type indicated at perimeter of acoustical ceiling area and where necessary to conceal edges of acoustical tiles.
7. Install suspension system runners so they are square and securely interlocked with one another. Remove and replace dented, bent, or kinked members.

8. Install acoustical tiles in coordination with suspension system.
 - a. Fit adjoining tile to form flush, tight joints. Scribe and cut tile for accurate fit at borders and around penetrations through tile.
 - b. Remove and replace any damaged tiles.

E. CLEANING

1. Suspension System: Remove panel material and perform any necessary cleaning maintenance with non-solvent based commercial cleaner.
2. Immediately remove any corrosive substances or chemicals that would attack painted finishes (i.e. wallpaper adhesives).
3. Touch up all minor scratches and spots, as acceptable, or replace damaged sections when touch-up is not permitted.
4. Painting: Repainting of suspension member shall be with a high-quality solvent base enamel paint and applied as recommended by paint manufacturer. Ceiling panels may not be touched up. Damaged panels must be replaced with new panels.
5. Removal of debris: Remove all debris resulting from work of this section.

END OF SECTION 09511

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SECTION 09900 PAINTING

1 GENERAL

1.1 GENERAL

- A. Refer to other parts of Document Set for complete Contract requirements. Include all work reasonably inferable from Contract Documents. A capable foreman shall be on-site whenever work is in progress.

1.2 SUMMARY

- A. This section requires painting work for all interior and exterior exposed items and surfaces:
1. Those installed under the work of the Contract, except those specifically excluded. See following heading, "Scope Provisions".
 2. Those areas previously painted, and disturbed under the work of the Contract, including surfaces that become exposed as part of the work.
 3. Those that are noted or specified to be painted.
- B. Painting work includes surface preparation, priming of unprimed surfaces, touch-up of shop primers, and application of paint materials. (See "paint" under "Definitions".)
1. Refer to the schedule at the end of this Section.
- C. Related Work Specified Elsewhere:
1. General project requirements governing work performance and administrative procedures such as submittals and substitutions: Division 1.
 2. Concrete slab sealing: Division 3.
 3. Shop Finishing: Refer to specific section to determine the degree of shop finishing, priming, and painting for particular item, and the type of coating material, if any, to be applied as part of fabrication. Items to review include, but are not limited to:
 4. Steel structures, steel deck, metal fabrications, metal siding, doors and frames, miscellaneous specialties.
 5. Specified Field Touch-up: The following items are specified to receive touch-up of shop-applied primer as part of installation; do not paint over unrepaired prime coats of these or other items:
 6. Steel structures, steel deck, metal fabrications.

1.3 SCOPE PROVISIONS

- A. Items installed by mechanical and electrical trades are included in the scope of painting work.
1. Color: Match predominant adjacent surface colors unless color coding of pipe system is required.
- B. Surface preparation, priming, and finish coats specified in this section are in addition to shop priming and surface treatment specified under other sections.
- C. Paint exposed surfaces whether or not colors are designated in "schedules," except where a surface or material is specifically mentioned, paint the same as similar adjacent materials or surfaces. If color or finish is not designated, the Architect/Engineer will select from standard colors or finishes available.
- D. Excluded Items:
1. Do not paint the following items, materials and surfaces:
 - a. Paving and other exterior ground surfaces.
 - b. Plant materials.
 - c. Brick masonry.
 - d. Galvanized metal deck that is not shop primed.
 - e. Stainless steel.
 - f. Anodized aluminum.
 - g. Chrome.
 - h. Fluorocarbon coating.
 - i. Plastic laminate; cabinet hardware.
 - j. Roofing.
 - k. Sheet metal flashing not visible from ground level.
 - l. Unprimed door hardware.
 - m. Aluminum door thresholds.
 - n. Aluminum window framing; glass; glazing materials; mirrors.
 - o. Transparent plastic.

- p. Floor coverings; wall base.
 - q. Ceramic tile floorings.
 - r. Vinyl, fabric, or ceramic wall surfaces.
 - s. Acoustic treatments.
 - t. Spray-texture ceilings
 - u. Signage.
 - v. Wire mesh partitions.
 - w. Fire extinguishers, cabinets.
 - x. Toilet accessories.
 - y. Window treatment.
 - z. Furniture
 - aa. Finished mechanical and electrical operating equipment units.
 - bb. Light fixtures.
 - cc. Sprinkler heads.
 - dd. Plumbing fixtures.
2. Concealed surfaces such as those in the following generally inaccessible areas:
 - a. Spaces above suspended ceilings and soffits.
 - b. Pipe spaces.
 - c. Duct shafts.
 3. Operating parts and moving parts of operating equipment and other items for which painting would be obviously detrimental, such as the following:
 - a. Electrical contact surfaces.
 - b. Valve and damper operators.
 - c. Linkages.
 - d. Sensing devices.
 - e. Motor and fan shafts.
 - f. Filters.
 4. Labels: Do not paint over Underwriter's Laboratories, Factory Mutual or other code-required labels or equipment name, identification, performance rating, nomenclature plates, or piping identification.

1.4 DEFINITIONS

- A. "Paint" includes coating systems materials, primers, emulsions, enamels, stains, sealers and fillers, and other applied materials whether used as prime, intermediate, or finish coats.
- B. "DFT" indicates "Dry Film Thickness".

1.5 DESIGN REQUIREMENTS

- A. Number of Colors: For each finish paint product employed, allow for the Architect/Engineer's selection of up to five colors, distributed in any proportion of the total for that product, excluding colors specifically required for mechanical or electrical components.
- B. Color Layout Pattern: Except as otherwise indicated, no highly unusual graphic designs will be required. Color variations and accents as may be reasonably expected based on wall and ceiling surface breaks or construction will be determined and conveyed by the Architect/Engineer after Contract Award.
- C. Color Selection: Verify colors and sheens through submittals.

1.6 SUBMITTALS

- A. Product Data: Manufacturer's technical information, label analysis, and application instructions for each material proposed for use.
 1. List each material and cross-reference the specific coating and finish system and application. Identify each material by the manufacturer's catalog number and general classification.
- B. Color Samples: Request directions regarding colors and sheens. Provide samples of each color to be applied, with texture to simulate actual conditions. Provide a list of material and application for each coat of each sample. Label each sample as to location and application.

1.7 QUALITY ASSURANCE

- A. Single-Source Responsibility: Provide primers and undercoat paint produced by the same manufacturer as the finish coats.

- B. Coordination of Work: Review other sections in which primers are provided to ensure compatibility of the total systems for various substrates. On request, furnish information on characteristics of finish materials to ensure use of compatible primers. Notify the Architect/Engineer of problems anticipated using the materials specified.
- C. Field Samples: On wall surfaces and other exterior and interior components, duplicate finishes of prepared samples. Provide full-coat finish samples on at least 100 sq. ft. of surface until required sheen, color and texture are obtained; simulate finished lighting conditions for review of in-place work. Final acceptance of colors will be from job-applied samples.
 - 1. One room or surface may be selected to represent surfaces and conditions for each type of coating and substrate to be painted. Apply coatings in this room or surface in accordance with the schedule or as specified. After finishes are accepted, this room or surface will be used for evaluation of coating systems of a similar nature.
- D. Material Quality: Provide the manufacturer's highest quality professional or trade sale paint material of the various coating types specified. Paint material containers not displaying manufacturer's product identification will not be acceptable.
 - 1. Proprietary names used to designate paint colors or materials on schedules are not intended to imply that products named are required or to exclude equal products of other manufacturers.

1.8 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials to the job site in the manufacturer's original, unopened packages and containers bearing manufacturer's name and label and the following information:
 - 1. Product name or title or material.
 - 2. Product description (generic classification or binder type).
 - 3. Federal Specification number, if applicable.
 - 4. Manufacturer's stock number and date of manufacturer.
 - 5. Contents by volume, for pigment and vehicle constituents.
 - 6. Thinning instructions.
 - 7. Application instructions.
 - 8. Color name and number.
- B. Store materials not in use in tightly covered containers in a well-ventilated area at a minimum ambient temperature of 45 deg F (7 deg C). Maintain containers used in storage in a clean condition, free of foreign materials and residue.
 - 1. Protect from freezing. Keep storage area neat and orderly. Remove oily rags and waste daily. Take necessary measures to ensure that workers and work areas are protected from fire and health hazards resulting from handling, mixing and application.

1.9 JOB CONDITIONS

- A. Apply water-based paints only when the temperature of surfaces to be painted and surrounding air temperatures are between 50 deg F (10 deg C) and 90 deg F (32 deg C).
- B. Apply solvent-thinned paints only when the temperature of surfaces to be painted and surrounding air temperatures are between 45 deg F (7 deg C) and 95 deg F (35 deg C).
- C. Do not apply paint in snow, rain, fog, or mist, when the relative humidity exceeds 85 percent, at temperatures less than 5 deg F (3 deg C) above the dew point, or to damp or wet surfaces. Painting may continue during inclement weather if surfaces and areas to be painted are enclosed and heated within temperature limits specified by the manufacturer during application and drying period.

2 PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturer: Subject to compliance with requirements, provide products of one of the following:
 - 1. Paint Materials Manufacturers:
 - a. The Glidden Company (Glidden).
 - b. ITT
 - c. O'Leary Paint (O'Leary)
 - d. The Sherwin-Williams Company (S-W).
- B. BF-Latex: High-Performance Latex Block Filler: heavy-duty latex block fillers used for filling open textured interior and exterior concrete masonry block before application of top coats:

2.2 PRIMERS

- A. P-GYP: Latex-based primer coating used on interior gypsum drywall.
 - 1. Glidden: 5210 Glid-Guard Universal Fast-Dry Metal Primer.
 - 2. O'Leary: 4190 Latex Primer
 - 3. S-W: Pro-Mar 200 Latex Wall Primer B28W200.

- B. P-FM1: Synthetic, rust-inhibiting, quick-drying, rust-inhibiting primer for interior/exterior ferrous metal under alkyd or latex:
 - 1. Glidden: 5210 Glid-Guard Universal Fast-Dry Metal Primer.
 - 2. O'Leary: 35-111 Alkyd Metal Primer, Rust Scat
 - 3. S-W: Kem Kromik Metal Primer B50N2/B50W1.
- C. P-FM2: Alkyd-type zinc chromate exterior primer for priming ferrous metals under high-gloss alkyd:
- D. P-NF: Alkyd-type zinc chromate primer for priming aluminum under alkyd or latex:
- E. P-GM: Galvanized metal primer for interior and exterior zinc-coated (galvanized)metal surfaces under alkyd or latex:
 - 1. Glidden: 5229 Glid-Guard All-Purpose Metal Primer.
 - 2. O'Leary: 36-11 Rust Scat Acrylic Metal Primer
 - 3. S-W:DTM Primer B66W1
- F. P-EP: Epoxy primer for concrete masonry unit.

2.3 UNDERCOAT MATERIALS

- A. U-2: Interior enamel undercoat over a primer on filled concrete masonry, under semigloss enamel:
- B. U-5: Interior enamel undercoat over a primer on ferrous or zinc-coated metal under semigloss or gloss alkyd enamel:
 - 1. Glidden: 4500 Glid-Guard Alkyd Enamel (Gloss) 4200 Spread Ultra Semi-Gloss Enamel.
 - 2. S-W: Pro-Mar 200 Alkyd Enamel Undercoater B49W200.
- C. E-AG1: Exterior Acrylic Gloss: Weather-resistant high-gloss enamel for use over primed ferrous metal surfaces:
- D. E-AG2: Acrylic Gloss Deep Color Exterior Trim Paint: Use over prime-coated ferrous metal:

2.4 INTERIOR FINISH PAINT MATERIAL

- A. I-WF: Waterbase flat: Ready-mixed, latex based paint for use as a "size" on cotton or canvas covering over insulation:
 - 1. Glidden: 3400 Spred Satin Latex Wall Paint.
 - 2. O'Leary: 4100 Line, Pro Tech Latex Flat
 - 3. S-W: ProMar B30W201, 200 Latex Flat
- B. I-AS: Interior Latex Semigloss: Use over a primer and undercoat.
 - 1. Glidden: 4200 Spred Ultra Semigloss Enamel.
 - 2. O'Leary: 2600 White ProTech Latex Semi-Gloss
 - 3. S-W: Pro Classic Alykd B34W221.
- C. I-AG1: Interior Latex Gloss: For use over a primer and undercoat on interior plaster surfaces, wood, and hardboard and ferrous and zinc-coated metal surfaces:
- D. I-AE: Interior Latex Eggshell Wall Finish:
 - 1. Glidden: Ultra-Hide Alkyd Enamel No. 5450.
 - 2. O'Leary: 5300 Hi-Hide ProTech Latex Eggshell Finish
 - 3. S-W: ProMar 200 Alkyd Eg-shel Enamel
- E. I-WSDF: Interior Waterbase Semigloss Dry Fog Finish for Exposed Construction:
- F. I-EP: Epoxy gloss finish for concrete masonry unit.
- G. MW-INTST: Oil-Type Interior Wood Stain: Slow-penetrating oil-type wood stain for general use on interior wood surfaces under varnishes or wax finishes:
- H. MW-INTCS: Acrylic Water Based Sealer: Quick-drying, rosin-free, clear, general-purpose sealer for use on the interior over stained and natural-finished woodwork for a clear finish:
- I. MW-IFILL: Paste Wood Filler: Solvent-based, air-drying, paste-type wood filler for use on open-grain wood on interior wood surface:
- J. MW-IVARN: Acrylic Polyurethane: Clear for use on interior stained or natural-finished woodwork:

3 EXECUTION

3.1 EXAMINATION

- A. Examine substrates and conditions under which painting will be performed for compliance with requirements for application of paint. Do not begin paint application until unsatisfactory conditions have been corrected.
 - 1. Test surfaces for moisture, alkalinity, and similar conditions affecting paint performance.
 - 2. Start of painting will be construed as the Applicator's acceptance of surfaces and conditions within a particular area.

3.2 PREPARATION

- A. General Procedures: Remove hardware and hardware accessories, plates, machined surfaces, lighting fixtures, and similar items in place that are not to be painted, or provide surface-applied protection prior to surface preparation and painting. Remove these items if necessary for complete painting of the items and adjacent surfaces. Following completion of painting operations in each space have items reinstalled by workers skilled in the trades involved.
 - 1. Clean surfaces before applying paint or surface treatments. Remove oil and grease prior to cleaning. Schedule cleaning and painting so that dust and other contaminants from the cleaning process will not fall on wet, newly painted surfaces.
- B. Surface Preparation: Clean and prepare surfaces to be painted in accordance with the manufacturer's instructions for each particular substrate condition and as specified.
 - 1. Provide barrier coats over incompatible primers or remove and reprime. Notify Architect/Engineer in writing of problems anticipated with using the specified finish-coat material with substrates primed by others.
 - 2. Do not apply specified coats until all surface damage and all shop prime coats have been repaired.
 - 3. Cementitious Materials: Prepare concrete surfaces. Remove efflorescence, chalk, dust, dirt, grease, oils and release agents. Roughen as required to remove glaze. If hardeners or sealers have been used to improve curing, use mechanical methods or surface preparation.
 - 4. Use abrasive blast-cleaning methods if recommended by the paint manufacturer.
 - 5. Determine alkalinity and moisture content of surfaces by performing appropriate tests. If surfaces are sufficiently alkaline to cause blistering and burning of finish paint, correct this condition before application. Do not paint surfaces where moisture content exceeds that permitted in manufacturer's printed directions.
 - 6. Wood: Clean surfaces of dirt, oil, and other foreign substances with scrapers, mineral spirits, and sandpaper, as required. Sand surfaces exposed to view smooth and dust off.
 - 7. Scrape and clean small, dry, seasoned knots and apply a thin coat of white shellac or other recommended knot sealer before application of primer. After priming, fillholes and imperfections in finish surfaces with putty or plastic wood filler. Sand smooth when dried.
 - 8. Ferrous Metals: Clean nongalvanized ferrous-metal surfaces that have not been shop coated; remove rust, oil, grease, dirt, loose mill scale, and other foreign substances. Use solvent or mechanical cleaning methods that comply with recommendations of the Steel Structures Painting Council.
 - 9. Touch up bare areas and shop-applied prime coats that have been damaged. Wire-brush, clean with solvents recommended by the paint manufacturer, and touch up with primer similar to shop coat.
 - 10. Galvanized Surfaces: Clean galvanized surfaces with non-petroleum-based solvents so that the surface is free of oil and surface contaminants. Remove pretreatment from galvanized sheet metal fabricated from coil stock with mechanical methods.
- C. Materials Preparation: Carefully mix and prepare paint materials in accordance with manufacturer's directions and best practices of paint trade. Use only thinners approved by the paint manufacturer, and only within recommended limits.
- D. Tinting: Tint each undercoat a lighter shade to facilitate identification of each coat where multiple coats of the same material are applied. Tint undercoats to match the color of the finish coat, but provide sufficient differences in shade of undercoats to distinguish each separate coat. Omit this requirement for surfaces normally subject to wear, such as floors and handrails; tint undercoats to match top coat.

3.3 APPLICATION

- A. Apply paint in accordance with manufacturer's directions. Use applicator and techniques best suited for substrate, type of material being applied, and project conditions. Do not paint over dirt, rust, scale, grease, moisture, scuffed surfaces, or conditions detrimental to formation of a durable paint film. Verify compatibility of field-applied paint with primers used.
 - 1. The number of coats and film thickness required is the same regardless of the application method. Do not apply succeeding coats until the previous coat has cured as recommended by the manufacturer. Sand between applications where sanding is required to produce an even smooth surface in accordance with the manufacturer's directions.
 - 2. Apply additional coats when undercoats, stains, or other conditions show through final coat of paint until paint film is of uniform finish, color, and appearance. Give special attention to ensure that surfaces, including edges, corners, crevices, welds, and exposed fasteners, receive a dry film thickness equivalent to that of flat surfaces.
 - 3. The term "exposed surfaces" includes areas visible when permanent or built-in fixtures, convactor covers, covers for finned tube radiation, grilles, and similar components are in place. Extend coatings in these areas as required to maintain the system integrity and provide desired protection.
 - 4. In rooms and areas with suspended ceilings, paint interior surfaces of ducts, where visible through registers, or grilles, with a flat, nonspecular black paint.
 - 5. Paint back sides of access panels and removable or hinged covers to match exposed surfaces.
 - 6. Finish exterior doors on tops, bottoms, and side edges same as exterior faces.
 - 7. Sand lightly between each succeeding enamel or varnish coat.
- B. Scheduling Painting: Apply first coat to surfaces that have been cleaned, pretreated, or otherwise prepared for painting as soon as practicable after preparation and before subsequent surface deterioration.

1. Allow sufficient time between successive coats to permit proper drying. Do not recoat until paint has dried to where it feels firm, and does not deform or feel sticky under moderate thumb pressure and where application of another coat of paint does not cause lifting or loss of adhesion of the undercoat.
- C. Minimum Coating Thickness: Apply materials at not less than the manufacturer's recommended spreading rate. Provide a total dry film thickness of the entire system as recommended by the manufacturer.
- D. Block Fillers: Apply block fillers to concrete masonry block at a rate to ensure complete coverage with pores filled.
- E. Prime Coats: Before application of finish coats, apply a prime coat of material as recommended by the manufacturer to material that is required to be painted or finished and has not been prime coated by others. Recoat primed and sealed surfaces where evidence of suction spots or unsealed areas in first coat appears, to assure a finish coat with no burn through or other defects due to insufficient sealing.
- F. Brush Application: Brush-out and work brush coats into surfaces in an even film. Eliminate cloudiness, spotting, holidays, laps, brush marks, runs, sags, ropiness or other surface imperfections. Neatly draw glass lines and color breaks.
 1. Apply primers and first coats by brush unless the manufacturer's instructions permit use of mechanical applicators.
- G. Mechanical Applications: Use mechanical methods for coating application when permitted by the manufacturer's recommendations, governing ordinances, and project conditions.
 1. Wherever spray application is used, apply each coat to provide the equivalent hiding of brush-applied coats. Do not double-back with spray equipment building-up film thickness of 2 coats in one pass, unless recommended by the manufacturer.
- H. Stipple Enamel Finish: Roll and redistribute paint to an even and fine texture. Leave no evidence of rolling such as laps, irregularity in texture, skid marks, or other surface imperfections.
- I. Pigmented (Opaque) Finishes: Completely cover to provide an opaque, smooth surface of uniform finish, color, appearance, and coverage. Cloudiness, spotting, holidays, laps, brush marks, runs, sags, ropiness, or other surface imperfections will not be acceptable.
- J. Transparent (Clear) Finishes: Use multiple coats to produce a glass-smooth surface film of even luster. Provide a finish free of laps, cloudiness, color irregularity, runs, brush marks, orange peel, nail holes, or other surface imperfections.
 1. Provide satin finish for final coats.
- K. Completed Work: Match approved samples for color, texture, and coverage. Remove, refinish, or repaint work not in compliance with specified requirements.

3.4 FIELD QUALITY CONTROL

- A. The Owner reserves the right to invoke the following test procedure at any time and as often as the Owner deems necessary during the period when paint is being applied:
 1. The Owner will engage the services of an independent testing laboratory to sample the paint material being used. Samples of material delivered to the project will be taken, identified, sealed, and certified in the presence of the Contractor. The testing laboratory will perform appropriate tests for the following characteristics as required by the Owner:

Quantitative materials	Accelerated weathering
Analysis	Dry opacity
Abrasion resistance.	Accelerated yellowness.
Apparent reflectivity.	Recoating.
Flexibility.	Skinning.
Washability	Color retention.
Absorption.	Alkali and mildew resistance.
 2. If test results show material being used does not comply with specified requirements, the Contractor may be directed to stop painting, remove noncomplying paint, pay for testing, repaint surfaces coated with rejected paint, and remove rejected paint from previously painted surfaces if, upon repainting with specified paint, the two coatings are noncompatible.

3.5 CLEANING

- A. Cleanup: At the end of each work day, remove empty cans, rags, rubbish, and other discarded paint materials from the site.
 1. Upon completion of painting, clean glass and paint-spattered surfaces. Remove spattered paint by washing and scraping, using care not to scratch or damage adjacent finished surfaces.

3.6 PROTECTION

- A. Protect work of other trades, to be painted or not, against damage by painting. Correct damage by cleaning, repairing or replacing, and repainting, as acceptable to Architect/Engineer.

- B. Provide “wet paint” signs to protect newly painted finishes. Remove temporary protective wrappings provided by others for protection of their work after completion of painting operations.
1. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces.

PAINT SCHEDULES

- C. General: Provide the following paint systems for the various substrates indicated.
- D. Primer Note: For new items that are properly shop-primed, filed-applied primer coat may be omitted if shop primer and field paint are compatible. Properly touch-up and prepare shop-primed surfaces.

4 SCHEDULES

INTERIOR PAINT SCHEDULE

SYSTEM DESCRIPTION	COAT	COAT	COAT	NOTES
Gypsum Drywall:				
Waterbase Flat (ceilings only)	P-GYP	I-WF		No. I 2.5
Alkyd Eggshell (typical)	P-GYP	I-AE	I-AE	No. I 2.5
Alkyd Semigloss (toilets, jan. clos., mech. rooms, shipping/receiving, sim. spaces)	P-GYP	I-AS	I-AS	No. I 2.5
Ferrous Metal/zinc-Coated Metal				
Alkyd Semigloss (typical)	P-FM1/GM	U-5	I-AS	No. I 2.5
Alkyd Gloss (railings & sim.)	P-FM1/GM	U-5	I-AG	No. I 2.5
Cotton or Canvas Covering over Insulation:				
Waterbase Flat	I-WF	I-WF		No. I 1

Interior Systems Notes:

- I 1: Add fungicidal agent to render surface mildew-proof.
- I2.5: Minimum DFT of 2.5 mil.
- I3.5: Minimum DFT of 3.5 mil (excluding filler at block).
- I4: Minimum DFT of 4 mil (excluding filler at block).

END OF SECTION 09900

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SECTION 16010

BASIC ELECTRICAL REQUIREMENTS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Basic Electrical Requirements specifically applicable to Division 16 Sections, in addition to Division 1 - General Requirements.

1.2 ALTERNATES

- A. Refer to Section 01030 - Alternates for submission requirements, and procedures for selection/award of alternates.
- B. Electrical contractor shall review each alternate to determine if said alternate affects electrical trades. All electrical trade items shall be quoted for inclusion by the general contractor.
- C. Coordinate related work and modify surrounding work as required.

1.3 REFERENCES

- A. ANSI/NFPA 70 - National Electrical Code.

1.4 SUBMITTALS

- A. Submit under Requirements of General Conditions.
- B. Submit shop drawings for the following items:
 - 1. -Light fixtures
 - 2. Emergency Light Fixtures
 - 3. Lighting relay Panels
- C. Submit shop drawings and product data grouped to include complete submittals of related systems, products, and accessories in a single submittals.
- D. Mark dimensions and values in units to match those specified.

1.5 REGULATORY REQUIREMENTS

- A. Electrical: Conform to National Electrical Code.
- B. Obtain permits, and request inspections from authority having jurisdiction.
- C. Furnish products listed and classified by Underwriter's Laboratories, Inc.

1.6 PROJECT/SITE CONDITIONS

- A. Install Work in locations shown on Drawings, unless prevented by Project conditions.
- B. Prepare drawings showing proposed rearrangement of Work to meet Project conditions, including changes to Work specified in other Sections. Obtain permission of Architect/Engineer before proceeding.

1.7 SEQUENCING AND SCHEDULING

- A. Construct Work in sequence under requirements of General Provisions.

1.8 QUALITY ASSURANCE

- A. Perform work in accordance with NECA Standard of Installation.
- B. Maintain 3 copies of documents on site.

1.9 RECORD DOCUMENTS

- A. Submit under Requirements of General Provisions.
- B. Provide marked-up "As-Built" blueprints.
- C. Provide 4-copies of Operating and Maintenance Manuals. Manuals shall contain a copy of shop drawings, manufacturer equipment drawings (if different from shop drawings), equipment installation and maintenance guides, etc. Manuals shall be bound into a book form. (Three ring binders are acceptable).

- 1.10 FIELD VERIFICATION
- A. These drawings are symbolic and diagrammatic and are not intended to be shop drawings.
 - B. Prior to submitting bids contractor shall visit and familiarize himself with the site. No extras will be given for his/her failure to do so.
- 1.11 COORDINATION
- A. Coordinate the installation of all electrical equipment and connections with other contractors. No Extras will be given for failure to coordinate conduit/box requirements or any electrical equipment and or connections with other contractors.
- 1.12 DELIVERY, STORAGE AND HANDLING
- A. Deliver products to site under Requirements of General Provisions.
 - B. Store and protect products under Requirements of General Provisions.
 - C. Accept products on site in factory shipping splits and verify damage.
 - D. Protect products from moisture and debris by storing in a clean, dry heated space. Maintain Factory wrapping or provide an additional heavy canvas or heavy plastic cover to protect units. Provide auxiliary heating in switchgear and transformer sections in accordance with manufacturer instructions.
- 1.13 TEMPORARY POWER AND LIGHTING
- A. All temporary 125 volt, single phase, 15 and 20 amp receptacles shall have GFCI protection.
 - B. All lamps for temporary lighting shall be protected by a suitable fixture or lampholder with a guard.
 - C. The Electrical Contractor shall provide 120/240 volt, single phase temporary power as required for construction. Use of existing service in existing buildings shall be permitted as long as such usage does not inconvenience the owner at any time. If other trades require different voltages and/or phases, then that contractor shall pay any fees associated with furnishing that service.
- 1.14 UTILITY FEES
- A. The contractor shall be responsible for paying all utility connection and/or relocation fees including (but not limited to) electric and telephone.

END OF SECTION 16010

SECTION 16060
MINOR ELECTRICAL DEMOLITION FOR REMODELING

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Electrical demolition.

PART 2 PRODUCTS

2.1 MATERIALS AND EQUIPMENT

- A. Materials and equipment for patching and extending work: As specified in individual Sections.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify field measurements and circuiting arrangements are as shown on Drawings.
- B. Verify that abandoned wiring and equipment serve only abandoned facilities.
- C. Demolition Drawings are based on casual field observation. Report discrepancies to Architect/Engineer before disturbing existing installation.
- D. Beginning of demolition means installer accepts existing conditions.

3.2 PREPARATION

- A. Disconnect electrical systems in walls, floors, and ceilings scheduled for removal.
- B. Coordinate utility service outages with Owner.
- C. Provide temporary wiring and connections to maintain existing systems in service during construction. When work must be performed on energized equipment or circuits, use personnel experienced in such operations.

3.3 DEMOLITION & EXTENSION OF EXISTING ELECTRICAL WORK

- A. Demolish and extend existing electrical work under provisions of General Conditions and this Section.
- B. Remove, relocate, and extend existing installations to accommodate new construction.
- C. Remove abandoned wiring to source of supply.
- D. Remove exposed abandoned conduit, including abandoned conduit above accessible ceiling finishes. Cut conduit flush with walls and floors, and patch surfaces.
- E. Disconnect abandoned outlets and remove devices. Remove abandoned outlets if conduit servicing them is abandoned and removed. Coordinate with architectural trades for patching of surfaces. Provide blank cover for abandoned outlets which are not removed or patched.
- F. Disconnect and remove electrical devices and equipment serving utilization equipment that has been removed.
- G. Disconnect and remove abandoned luminaires. Remove brackets, stems, hangers, and other accessories.
- H. Repair adjacent construction and finishes damaged during demolition and extension work.
- I. Maintain access to existing electrical installations which remain active. Modify installation or provide access panel as appropriate.
- J. Extend existing installations using materials and methods compatible with existing electrical installations, or as specified.

3.4 CLEANING AND REPAIR

- A. Clean and repair existing materials and equipment which remain or are to be reused.

3.5 INSTALLATION

- A. Install relocated materials and equipment under the requirements of the General Provisions.

END OF SECTION 16060

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SECTION 16111 CONDUIT

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Metal conduit.
- B. Flexible metal conduit.
- C. Liquidtight flexible metal conduit.
- D. Electrical metallic tubing.
- E. Nonmetal conduit.
- F. Fittings and conduit bodies.

1.2 REFERENCES

- A. ANSI C80.1 - Rigid Steel Conduit, Zinc Coated.
- B. ANSI C80.3 - Electrical Metallic Tubing, Zinc Coated.
- C. ANSI C80.5 - Rigid Aluminum Conduit.
- D. ANSI/NEMA FB 1 - Fittings, Cast Metal Boxes, and Conduit Bodies for Conduit and Cable Assemblies.
- E. ANSI/NFPA 70 - National Electrical Code.
- F. NECA "Standard of Installation."
- G. NEMA RN 1 - Polyvinyl Chloride (PVC) Externally Coated Galvanized Rigid Steel Conduit and Intermediate Metal Conduit.
- H. NEMA TC 2 - Electrical Plastic Tubing (EPT) and Conduit (EPC-40 and EPC-80).
- I. NEMA TC 3 - PVC Fittings for Use with Rigid PVC Conduit and Tubing.

1.3 DESIGN REQUIREMENTS

- A. Conduit Size: ANSI/NFPA 70.

1.4 PROJECT CONDITIONS

- A. Verify that field measurements are as shown on Drawings.
- B. Verify routing and termination locations of conduit prior to rough-in.
- C. Conduit routing, when shown on Drawings, is in approximate locations unless dimensioned. Route as required to complete wiring system.

PART 2 PRODUCTS

2.1 CONDUIT REQUIREMENTS

- A. Minimum Size: 3/4" for homeruns, 1/2" for drops to devices unless otherwise specified.
- B. Dry Locations:
 - 1. Concealed: Use rigid steel conduit, intermediate metal conduit, electrical metallic tubing.
 - 2. Exposed: Use surface mounted wiremold.
- C. Connections to items subject to movement or vibration:
 - 1. Dry locations: Use flexible metal conduit.
 - 2. Wet, Damp or Corrosive Atmosphere Locations:
Use liquidtight flexible metal conduit.

2.2 METAL CONDUIT

- A. Rigid Steel Conduit: ANSI C80.1.
- B. Intermediate Metal Conduit (IMC): Rigid steel.
- C. Fittings and Conduit Bodies: ANSI/NEMA FB 1; all steel fittings.

2.3 FLEXIBLE METAL CONDUIT

- A. Description: Interlocked steel construction.
- B. Fittings: ANSI/NEMA FB 1.

2.4 LIQUIDTIGHT FLEXIBLE METAL CONDUIT

- A. Description: Interlocked steel construction with PVC jacket.
- B. Fittings: ANSI/NEMA FB 1.

2.5 ELECTRICAL METALLIC TUBING (EMT)

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

2.6 NONMETALLIC CONDUIT

- A. Description: NEMA TC 2; Schedule 40 PVC.
- B. Fittings and Conduit Bodies: NEMA TC 3.

PART 3 EXECUTION

3.1 INSTALLATION

- A. Install conduit in accordance with NECA "Standard of Installation."
- B. Arrange supports to prevent misalignment during wiring installation.
- C. Support conduit using coated steel or malleable iron straps, lay-in adjustable hangers, clevis hangers, and split hangers.
- D. Fasten conduit supports to building structure and surfaces.
- E. Do not support conduit with wire or perforated pipe straps. Remove wire used for temporary supports
- F. Do not attach conduit to ceiling support wires.
- G. Arrange conduit to maintain headroom and present neat appearance.
- H. Route conduit parallel and perpendicular to walls.
- I. Route conduit installed above accessible ceilings parallel and perpendicular to walls.
- J. Route conduit in and under slab from point-to-point.
- K. Do not cross conduits in slab.
- L. Maintain adequate clearance between conduit and piping.
- M. Maintain 12 inch clearance between conduit and surfaces with temperatures exceeding 104 degrees F (40 degrees C).
- N. Cut conduit square using saw or pipecutter; de-burr cut ends.
- O. Bring conduit to shoulder of fittings; fasten securely.
- P. Install nonmetallic conduit in accordance with manufacturer's instructions.
- Q. Join nonmetallic conduit using cement as recommended by manufacturer. Wipe nonmetallic conduit dry and clean before joining. Apply full even coat of cement to entire area inserted in fitting. Allow joint to cure for 20 minutes, minimum.
- R. Use conduit hubs or sealing locknuts to fasten conduit to sheet metal boxes in damp and wet locations and to cast boxes.
- S. Install no more than equivalent of three 90-degree bends between boxes. Use conduit bodies to make sharp changes in direction, as around beams. Use factory elbows for bends in metal conduit larger than 2 inch size.
- T. Avoid moisture traps; provide junction box with drain fitting at low points in conduit system. Conduits run outdoors shall be sealed watertight.
- U. Provide suitable fittings to accommodate expansion and deflection where conduit crosses control and expansion joints. Install grounding bonding jumper under provisions of Section 16170.
- V. Provide suitable pull wire in each empty conduit except sleeves and nipples.

**SECTION 16111
CONDUIT**

- W. Use suitable caps to protect installed conduit against entrance of dirt and moisture. capped conduits shall be sealed watertight.
- X. Ground and bond conduit under provisions of section 16170.
- Y. Install a separate equipment grounding conductor in all nonmetallic conduit under provisions of Section 16170.

3.2 INTERFACE WITH OTHER PRODUCTS

- A. Install conduit to preserve fire resistance rating of partitions and other elements, using materials and methods under the Requirements of General Provisions.
- B. Route conduit through roof openings for piping and ductwork or through suitable roof jack with pitch pocket. Coordinate location with roofing installation specified under Architectural Sections.

END OF SECTION 16111

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SECTION 16123 BUILDING WIRE AND CABLE

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Building wire and cable.
- B. Wiring connectors and connections.

1.02 REFERENCES

- A. ANSI/NFPA 70 - National Electrical Code.

1.03 PROJECT CONDITIONS

- A. Verify that field measurements are as shown on Drawings.
- B. All conductors shall be copper. Aluminum conductors will not be acceptable.
- C. Wire and cable routing shown on Drawings is approximate unless dimensioned. Route wire and cable as required to meet Project Conditions. Include wire and cable lengths within 10 feet of location shown. No "extra's" will be given for relocation of switches or receptacles within 10' of location shown prior to rough-in installation.
- D. Where wire and cable routing is not shown, and destination only is indicated, determine exact routing and lengths required.

PART 2 PRODUCTS

2.01 BUILDING WIRE AND CABLE

- A. Description: Single conductor insulated wire.
- B. Conductor: Copper.
- C. Insulation Voltage Rating: 300 volts.
- D. Insulation: ANSI/NFPA 70, Type THW THHN/THWN

2.02 WIRING CONNECTORS

- A. Provide split bolt connectors, solderless pressure connectors, spring wire connectors and compression connectors as required for a complete installation.

2.03 METAL CLAD CABLE

- A. Description: NFPA 70, Type MC.
- B. Conductor: Copper.
- C. Insulation Voltage Rating: 600 volts.
- D. Insulation Temperature Rating: 75 degrees C.
- E. Insulation Material: Thermoplastic.
- F. Armor Material: Steel.
- G. Armor Design: Interlocked metal tape.
- H. Jacket: None.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that interior of building has been protected from weather.
- B. Verify that mechanical work likely to damage wire and cable has been completed.

3.02 PREPARATION

- A. Completely and thoroughly swab raceway before installing wire.

3.03 WIRING METHODS

- A. Use only building wire, Type THW THHN/THWN insulation in raceway.

3.04 INSTALLATION

- A. Install products in accordance with manufacturer's instructions.

SECTION 16123
BUILDING WIRE AND CABLE

- B. Use stranded conductors for all power circuits where conduit and building wire is used.
- C. Use stranded conductors for control circuits.
- D. Use conductor not smaller than 12 AWG for power and lighting circuits.
- E. Use conductor not smaller than 16 AWG for control circuits.
- F. Use 10 AWG conductors for 20 ampere, 120 volt branch circuits longer than 75 feet.
- G. Pull all conductors into raceway at same time.
- H. Use suitable wire pulling lubricant for building wire 4 AWG and larger.
- I. Neatly train and lace wiring inside boxes, equipment, and panelboards.
- J. Clean conductor surfaces before installing lugs and connectors.
- K. Make splices,taps, and terminations to carry full ampacity of conductors with no perceptible temperature rise.

- L. Use split bolt connectors for copper conductor splices and taps, 6 AWG and larger. Tape uninsulated conductors and connector with electrical tape to 150 percent of insulation rating of conductor.
- M. Use solderless pressure connectors with insulating covers for copper conductor splices and taps, 8 AWG and smaller.
- N. Use insulated spring wire connectors with plastic caps for copper conductor splices and taps, 10 AWG and smaller.

3.05 FIELD QUALITY CONTROL

- A. Perform field inspection and testing under Requirements of General Provisions.
- B. Inspect wire for physical damage and proper connection.
- C. Measure tightness of bolted connections and compare torque measurements with manufacturer's recommended values.
- D. Verify continuity of each branch circuit conductor.

END OF SECTION 16123

SECTION 16130 BOXES

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Wall and ceiling outlet boxes.
- B. Pull and junction boxes.

1.2 REFERENCES

- A. ANSI/NEMA FB 1 - Fittings and Supports for Conduit and Cable Assemblies.
- B. ANSI/NEMA OS 1 - Sheet-steel Outlet Boxes, Device Boxes, Covers, and Box Supports.
- C. ANSI/NEMA OS 2 - Nonmetallic Outlet Boxes, Device Boxes, Covers and Box Supports.
- D. ANSI/NFPA 70 - National Electrical Code.
- E. NEMA 250 - Enclosures for Electrical Equipment (1000 Volts Maximum).

1.3 PROJECT CONDITIONS

- A. Verify field measurements are as shown on Drawings.
- B. Electrical boxes are shown on Drawings in approximate locations unless dimensioned. .Install at location required for box to serve intended purpose. Include installation within 10 feet of location shown. No "extra's" will be given for relocation of switches or receptacles within 10' of location shown prior to installation.

PART 2 PRODUCTS

2.1 OUTLET BOXES

- A. Sheet Metal Outlet Boxes: ANSI/NEMA OS 1, galvanized steel.
 - 1. Luminaire and Equipment Supporting Boxes: Rated for weight of equipment supported; include 1/2 inch male fixture studs where required.
 - 2. Concrete Ceiling Boxes: Concrete type.
- B. Cast Boxes: NEMA FB 1, Type FD, cast ferrous alloy. Provide gasketed cover by box manufacturer. Provide threaded hubs.

2.2 PULL AND JUNCTION BOXES

- A. Sheet Metal Boxes less than 100 cubic inches:
NEMA OS 1, galvanized steel.
- B. Sheet Metal Boxes greater than 100 cubic inches:
 - 1. Construction: NEMA 250, Type 1 steel enclosure.
 - 2. Covers: flat steel, held closed by sheet metal screws.
 - 3. Enclosure Finish: Manufacturer's standard enamel.
- C. Surface-Mounted Cast Metal Box: NEMA 250, Type 4; flat-flanged, surface-mounted junction box.
 - 1. Material: Galvanized cast iron.
 - 2. Cover: Furnish with ground flange, neoprene gasket, and stainless steel cover screws.

PART 3 EXECUTION

3.1 INSTALLATION

- A. Install electrical boxes as shown on Drawings, and as required for splices, taps, wire pulling, equipment connections and compliance with regulatory requirements.
- B. Install electrical boxes to maintain headroom and to present neat mechanical appearance.
- C. Install pull boxes and junction boxes above accessible ceilings and in unfinished areas only.
- D. Inaccessible Ceiling Areas: Install outlet and junction boxes no more than 6 inches from ceiling access panel or from removable recessed luminaire.

- E. Install boxes to preserve fire resistance rating of partitions and other elements, using materials and methods under the Provisions of Architectural Sections.
- F. Align adjacent wall-mounted outlet boxes for switches, thermostats, and similar devices with each other.
- G. Use flush mounting outlet boxes in all areas unless noted otherwise.
- H. Do not install flush mounting boxes back-to-back in walls; provide minimum 6 inch separation. Provide minimum 24 inches separation in acoustic rated walls.
- I. Secure flush mounting box to interior wall and partition studs. Accurately position to allow for surface finish thickness.
- J. Use stamped steel bridges to fasten flush mounting outlet box between studs.
- K. Install flush mounting box without damaging wall insulation or reducing its effectiveness.
- L. Use adjustable steel channel fasteners for hung ceiling outlet box.
- M. Do not fasten boxes to ceiling support wires.
- N. Support boxes independently of conduit, except cast box that is connected to two rigid metal conduits both supported within 12 inches of box.
- O. Use gang box where more than one device is mounted together. Do not use sectional box.
- P. Use gang box with plaster ring for single device outlets.
- Q. Use cast outlet box in exterior locations and wet locations.
- R. Large Pull Boxes: Boxes larger than 100 cubic inches in volume or 12 inches in any dimension.
 - 1. Interior Dry Locations: Use hinged enclosure.
 - 2. Other Locations: Use surface-mounted cast metal box.

3.2 INTERFACE WITH OTHER PRODUCTS

- A. Coordinate installation of outlet boxes for products furnished under other sections.
- B. Coordinate locations and sizes of required access doors with Architectural Sections.
- C. Locate flush mounting box in masonry wall to require cutting of masonry unit corner only. Coordinate masonry cutting to achieve neat opening.
- D. Coordinate mounting heights and locations of outlets mounted above counters, benches and backsplashes.
- E. Position outlet boxes to locate luminaires as shown on reflected ceiling plan.

3.3 ADJUSTING

- A. Adjust flush-mounting outlets to make front flush with finished wall material.
- B. Install knockout closure in unused box opening.

END OF SECTION 16130

SECTION 16170 GROUNDING AND BONDING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Grounding electrodes and conductors.
- B. Equipment grounding conductors.
- C. Bonding.

1.02 REFERENCES

- A. ANSI/NFPA 70 - National Electrical Code.

1.03 PERFORMANCE REQUIREMENTS

- A. Grounding System Resistance: 25 ohms.

PART 2 PRODUCTS

2.01 MECHANICAL CONNECTORS

- A. Material: Bronze.

2.02 WIRE

- A. Material: Stranded copper.
- B. Grounding Electrode Conductor: Size to meet NFPA 70 requirements.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install Products in accordance with manufacturer's instructions.
- B. Provide properly sized bonding jumpers for water meters, conduit and raceway expansion fittings to meet Regulatory Requirements.
- C. Equipment Grounding Conductor: Where indicated on drawings Provide separate, insulated conductor within each feeder and branch circuit raceway. Terminate each end on suitable lug, bus, or bushing.

3.02 FIELD QUALITY CONTROL

- A. Inspect grounding and bonding system conductors and connections for tightness and proper installation.
- B. Use suitable test instrument to measure resistance to ground of system. Perform testing in accordance with test instrument manufacturer's recommendations using the fall- of-potential method.

END OF SECTION 16170

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SECTION 16190 SUPPORTING DEVICES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Conduit and equipment supports.
- B. Anchors and fasteners.

1.02 REFERENCES

- A. NECA - National Contractors Association.
- B. ANSI/NFPA 70 - National Electrical Code.

PART 2 PRODUCTS

2.01 PRODUCT REQUIREMENTS

- A. Materials and Finishes: Provide adequate corrosion resistance.
- B. Provide materials, sizes, and types of anchors, fasteners and supports to carry the loads of equipment and conduit. Consider weight of wire in conduit when selecting products.
- C. Anchors and Fasteners:
 - 1. Concrete Structural Elements: Use precast insert system, expansion anchors and preset inserts.
 - 2. Steel Structural Elements: Use beam clamps, steel ramset fasteners, and welded fasteners.
 - 3. Concrete Surfaces: Use self-drilling anchors and expansion anchors.
 - 4. Hollow Masonry, Plaster, and Gypsum Board Partitions: Use toggle bolts and hollow wall fasteners.
 - 5. Solid Masonry Walls: Use expansion anchors and preset inserts.
 - 6. Sheet Metal: Use sheet metal screws.
 - 7. Wood Elements: Use wood screws.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install products in accordance with manufacturer's instructions.
- B. Provide anchors, fasteners, and supports in accordance with NECA "Standard of Installation".
- C. Do not fasten supports to pipes, ducts, mechanical equipment, and conduit.
- D. Do not use spring steel clips and clamps.
- E. Do not use powder-actuated anchors.
- F. Do not drill or cut structural members.
- G. Fabricate supports from structural steel or steel channel. Rigidly weld members or use hexagon head bolts to present neat appearance with adequate strength and rigidity. Use spring lock washers under all nuts.
- H. Install surface-mounted cabinets and panelboards with minimum of four anchors.
- I. In wet and damp locations use steel channel supports to stand cabinets and panelboards one inch off wall.
- J. Use sheet metal channel to bridge studs above and below cabinets and panelboards recessed in hollow partitions.

END OF SECTION 16190

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**SECTION 16195
ELECTRICAL IDENTIFICATION**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Nameplates and labels.

1.02 REFERENCES

- A. ANSI/NFPA 70 - National Electrical Code.

PART 2 PRODUCTS

2.01 NAMEPLATES AND LABELS

- A. Nameplates: Engraved three-layer laminated plastic, white letters on black background.
- B. Locations:
 - 1. Each electrical distribution and control equipment enclosure.
- C. Letter Size:
 - 1. Use 1/8 inch letters for identifying individual equipment and loads.
 - 2. Use 1/4 inch letters for identifying grouped equipment and loads.

PART 3 EXECUTION

3.01 PREPARATION

- A. Degrease and clean surfaces to receive nameplates.

3.02 APPLICATION

- A. Install nameplate parallel to equipment lines.
- B. Secure nameplate to equipment front using screws, rivets, or adhesive.
- C. Secure nameplate to inside surface of door on panelboard that is recessed in finished locations.

END OF SECTION 16195

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SECTION 16510 INTERIOR LUMINAIRES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Interior luminaires and accessories.
- B. Ballasts.
- C. Lamps.

1.02 REFERENCES

- A. ANSI C78.379 - Electric Lamps - Incandescent and High- Intensity Discharge Reflector Lamps - Classification of Beam Patterns.
- B. ANSI C82.1 - Ballasts for Fluorescent Lamps - Specifications.
- C. ANSI C82.4 - Ballasts for High-Intensity Discharge and Low Pressure Sodium Lamps (Multiple Supply Type).
- D. ANSI/NFPA 70 - National Electrical Code.
- E. ANSI/NFPA 101 - Life Safety Code.
- F. NEMA WD 6 - Wiring Devices-Dimensional Requirements.

PART 2 PRODUCTS

2.01 LUMINAIRES

- A. Furnish products as specified in schedule on Drawings.
- B. Substitutions: Under provisions of Section 16010.
- C. Install ballasts, lamps, and specified accessories at factory.

2.02 LAMPS

- A. Incandescent Lamp Manufacturers:
 - 1. Sylvania
 - 2. General Electric
 - 3. Substitutions: Under provisions of Section 16010.
- B. Fluorescent Lamp Manufacturers:
 - 1. Sylvania
 - 2. General Electric
 - 3. Substitutions: Under provisions of Section 16010.
- C. High Intensity Discharge (HID) Lamp Manufacturers:
 - 1. Sylvania
 - 2. General Electric
 - 3. Substitutions: Under provisions of Section 16010.
- D. Provide lamp type specified for luminaire.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Examine substrate and supporting grids for luminaires.
- B. Examine each luminaire to determine suitability for lamps specified.

3.02 INSTALLATION

- A. Install in accordance with manufacturers instructions.
- B. Support luminaires independent of ceiling framing at two opposite corners.
- C. Locate recessed ceiling luminaires as indicated on reflected ceiling plan.
- D. Install surface mounted luminaires and exit signs plumb and adjust to align with building lines and with each other. Secure to prohibit movement.

**SECTION 16510
INTERIOR LUMINAIRES**

- E. Install recessed luminaires to permit removal from below.
 - F. Install recessed luminaires using accessories and firestopping materials to meet regulatory requirements for fire rating.
 - G. Install clips to secure recessed grid-supported luminaires in place.
 - H. Install wall mounted luminaires and exit signs at height as indicated on Drawings.
 - I. Install accessories furnished with each luminaire.
 - J. Connect luminaires and exit signs to branch circuit outlets.
 - K. Make wiring connections to branch circuit using building wire with insulation suitable for temperature conditions within luminaire.
 - L. Bond products and metal accessories to branch circuit equipment grounding conductor.
 - M. Install specified lamps in each luminaire and exit sign.
- 3.03 FIELD QUALITY CONTROL
- A. Operate each luminaire after installation and connection. Inspect for proper connection and operation.
- 3.04 ADJUSTING
- A. Adjust Work under Requirements of General Provisions.
 - B. Aim and adjust luminaires as directed.
 - C. Adjust exit sign directional arrows as indicated.
 - D. Relamp luminaires that have failed lamps or are determined to be noticeably dim by Architect/Engineer at Substantial Completion.
- 3.05 CLEANING
- A. Clean Work under Requirements of General Provisions.
 - B. Clean electrical parts to remove conductive and deleterious materials.
 - C. Remove dirt and debris from enclosure.
 - D. Clean photometric control surfaces as recommended by manufacturer.
 - E. Clean finishes and touch up damage.
- 3.06 DEMONSTRATION
- A. Provide systems demonstration under Requirements of General Provisions.
 - B. Provide demonstration of luminaire operation.

END OF SECTION 16510

SECTION 16570 RELAY LIGHTING CONTROLS

PART 1 GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 specification Sections, apply to this section.
- B. All contract documents and addendum

1.02 SUMMARY

- A. The Electrical Contractors, as part of the work of this section, shall coordinate, receive, mount, connect, and place into operation all equipment. The electrical contractor shall furnish all conduit, wire, connectors, hardware, and other incidental items necessary for the complete and properly functioning relay lighting control system as described herein and shown on the plans.
- B. This section includes the following:
 - 1. General specification for the relay lighting control system.
- C. MANUFACTURERS REQUIREMENTS
 - 1. The equipment herein specified is manufactured by Leviton Lighting Control Division, Tualatin, Oregon (503)404-5500 and shall serve to indicate the quality of equipment required. Base bid shall be for equipment by Leviton Lighting Control Division. If alternate equipment is proposed, it shall be shown as add or deduct from the base bid price and shall be subject to approval.
 - 2. Other manufacturers who wish to bid must submit a complete bill of materials and company information listing qualifications and experience to the Specifier ten working days prior to bid date for permission to bid. All manufactures must comply with the specifications herein in every detail.
 - a. Approved other manufacturers are Watt Stopper and LCN.

1.03 MANUFACTURERS SERVICES

- A. Shop Drawings: Shop Drawings shall be submitted for approval within 30 days after receipt of contract. No fabrication of equipment is to proceed prior to approval of these drawings. Submittal package shall contain:
 - 1. A complete bill of materials
 - 2. Sets of catalog cuts for standard equipment
 - 3. Sets of shop drawings detailing all mechanical and electrical equipment including one line diagrams, wire counts, internal wiring, and physical dimensions of each item. Marked up catalog cuts are unacceptable.
- B. Jobsite Checkout: Upon completion of all contractors wiring, and after all fixtures are installed and lamped, the contractor shall request the services of a factory representative to completely check out the system prior to energizing the system. At the time of checkout and testing, the owner=s representative shall be thoroughly instructed in the proper operation of the system.
- C. Documentation: Two complete sets of as-built drawings shall ship with the equipment when it leaves the factory, along with operations and maintenance manuals for the relay system.
- D. Ballasts: It shall be the responsibility of the installing contractor to insure that any fluorescent ballasts supplied are compatible with the equipment being furnished on this project.
- E. Installation Instructions: Installing contractor shall follow manufacturer=s installation instructions.
- F. Within two weeks after system turn-on is completed, the manufacturer shall provide three sets operations and maintenance manuals along with a copy of written warranty.

1.04 QUALITY ASSURANCE

- A. Source Limitations: Obtain lighting controls from a single source with total responsibility for compatibility of

lighting control system components specified in this Section, in division 13 Section ALighting Controls@ and in Division 16 section ARelay Lighting Controls@.

- B. Performance Testing Requirements: All equipment shall be 100% tested. Sample testing is not acceptable.
- C. All standard system components shall be UL listed and so labeled when delivered to job site.
- D. Building Codes: All specified relays and control devices shall comply with the National Electrical Code. All units shall also comply with applicable local building codes.
- E. Installer Qualifications: Installer shall be experienced in performing the work of this section, and who has specialized in installation of work similar to that required for this project.
- F. Source Limitations: To assure compatibility, obtain relay systems and controls from a single source with complete responsibility over all lighting systems and controls, including accessory products.
- G. Manufacturer Requirements
 - 1. Experience: The manufacturer shall have been continuously engaged in the manufacture of architectural lighting controls and dimmers for no less than ten years.
 - 2. Testing: Manufacturer shall perform functional testing of all components to confirm proper operation prior to shipment.

1.05 DELIVERY, STORAGE & HANDLING

- A. General: Comply with Division 1 Product Requirements Sections.
- B. Ordering: Comply with manufacturer=s ordering instructions and lead-time requirements to avoid construction delays.
- C. Delivery: Materials must be delivered in a timely manner to other trades.
- D. Storage and Protection: Store materials away from exposure to harmful construction and weather conditions and at temperature and humidity conditions recommended by manufacturer.

1.06 WARRANTY

- A. Manufacturer=s Warranty: All equipment shall be warranted free of defects in materials and workmanship.
- B. Warranty Period: 26 months from date of shipment or two years from date of turn-on, whichever occurs first. Relay modules shall be warranted for a period of ten years.
- C. Owner Rights: Manufacturer=s warranty is in addition to, not a limitation of, other rights the Owner may have under contract documents.

PART 2 PRODUCTS

2.01 RELAY PANELS

- A. Physical
 - 1. Relay Panels shall be supplied in one of (3) sizes, Small, Medium, & Large:
 - (a) Small panel shall be populated with up to (8) relays
 - (b) Medium panel shall be populated with up to (24) relays
 - (c) Large panel shall be populated with up to (48) relays
 - (d) Provide panels as scheduled on drawings.
 - 2. Panel shall support installation of (1) Z-MAX Control Module with associated accessories, control protocols, and inputs and outputs as defined in the Z-MAX Control Module specification.
 - 3. Panel shall support installation of multiple Z-MAX relay modules, up to the maximum number of relays supported by the cabinet.
 - 4. Panels shall be constructed of Steel, a NEMA 1, IP-20 protection, rated enclosure with hinged door.
 - 5. Relay panels shall be able to be mounted surface or flush in a typical 4@deep wall. Flush mounted cabinets

require field installation of a flush mount trim kit which can be applied to any relay panel.

6. Relay Panel dimensions shall be less than or equal to 30-1/2" in width, allowing the panels to be installed in two standard 16" stud spaces.
7. Panels shall be provided with a locking hinged door which can be removed for ease of installation.
8. Panels shall be finished Leviton standard Blue. Custom colors shall be available for an additional charge, contact factory for additional information.
9. Knockouts shall be provided at various locations on the relay cabinet for both line and low voltage connections.

B. Electrical

1. Relay panels shall include an integral power supply to power Control Modules, Backplane, keypad, and other accessories which may be powered directly or indirectly from the Relay Panel.
 - (a) An optional external power supply may be used to power external accessories and control devices.)
2. Control Backplane shall provide data bus and data intercommunication between all Relay Modules, Control Module, and Low Voltage Inputs.
3. Standard Relay Panel shall accept to a tolerance of +/- 10% the following incoming voltages:
 - (a) 120VAC
4. Optional voltage barriers for field installation shall be available to separate differing voltages as may be required by prevailing jurisdiction. If a configured cabinet is ordered, voltage barriers can be provided pre-installed in the Relay Panels as required and shall be disclosed to the factory at time of quotation.
5. Circuit protection shall be provided to protect the Relay Panel electronics from overload or short circuit.

C. Certifications

1. Relay panels shall be certified to the following authorities:
 - (a) UL508

D. Installation

1. Relay Panels shall be installed per codes and other instructions by any and all authorities having jurisdiction.
2. Relay Panels shall be installed per the detailed installation instructions provided with the Panel by the Manufacturer.
3. Relay Panels shall be installed by the Division 16 contractor inclusive of all line and low voltage termination.
4. If factory System Commissioning was requested, Relay Panel shall not be energized without factory approval.

E. Warranty

1. The warranty on the relay panel shall be 2 years, as described in section I, serviced performed at Leviton Lighting Control Division, Tualatin, Oregon. Exception: If System Commissioning was elected, warranty service may be performed onsite.

F. Acceptable Products

1. Acceptable products shall be Z-MAX Relay Panels as manufactured by Leviton Manufacturing Company, Inc.

2.02 Z-MAX CONTROL MODULE

A. Physical

1. The control module for Medium & Large Relay Panels shall be a single self-contained unit, secured into the Panel with readily accessible mounting screws and must be field installable and/or replaceable. The control module for the Small Relay Panel shall be incorporated into the backplane and need not be field replaceable.

2. Three versions shall be available
 - (a) Network Control Module for Small, Medium, & Large Relay Panels
- B. Electrical
 1. The Control Module shall receive all power from the power supply, integral to the Relay Panel.
 2. The Control Module shall distribute power to all connected device and accessories as required.
 3. The total available power for all connected devices shall be at least 500mA at 24VDC.
 4. Voltage supplied to connected devices shall be +24VDC. Other supply voltage can be achieved with an external supply.
- C. Installation
 1. The Control Module shall be pre-installed into the cabinet by the factory.
- D. Operation & Features
 1. The Control Module keypad interface shall offer the following user interface components:
 - (a) LCD Display to indicate:
 - (1) Current Status
 - (2) Error Conditions
 - (3) Current Time
 - (4) Programming confirmation & feedback
 - (b) Alphanumeric data entry keys
 - (c) Arrow Keys
 - (d) Lock/Unlock Relay
 - (e) Relay/Group On/Off
 - (f) Programming Keys
 2. The Control Module keypad interface shall offer the following features:
 - (a) Programming of Z-MAX relay cabinet features and operation
 - (b) Relay On/Off
 - (c) Timed Relay/Group OFF
 - (d) Network Relay Groups On/Off
 - (e) Lock/Unlock Relay state
 3. The Backplane shall offer the following visual feedback mechanisms
 - (a) Individual Relay Status
 - (1) On
 - (2) Off
 - (3) Locked On
 - (4) Locked Off
 - (5) Override On
 - (6) Override Off
 - (b) Control Module Microprocessor Online
 - (c) Ethernet Link
 - (d) Modem Connection
 - (e) Relay Communication Microprocessor
 - (f) +5VDC Power Supply Normal Operation
 4. Basic Control Module
 - (a) The following control protocols shall be supported:
 - (1) Low Voltage Inputs
 - (i) Small Relay Cabinets - (8) 0-10VDC Inputs
 - (ii) Medium Relay Cabinet B (12) 0-10VDC Inputs

- (iii) Large Relay Cabinet B (12) 0-10VDC Inputs
- (2) Optionally one of the following
 - (i) Ethernet
 - (ii) Modem with Touch-Tone Interface support
- (3) The following features shall be supported:
 - (i) Software/Firmware Version Display
 - (ii) Relay Group On/Off Delay/Sequencing
 - (iii) Adjustable On/Off channel trigger points
 - (iv) Bypass on, or Bypass Off switch
 - (v) Emergency Input
 - (vi) Time, Time Clock, Scheduler, and Astronomical features
 - (a) 12 or 24 Hour Clock
 - (b) Automatic Daylight Savings Time Adjustment
 - (c) Latitude and Longitude data entry
 - (d) Sunrise/Sunset offsets
 - (e) Holiday and Holiday Schedule Event Engine
 - (i) (4) Holiday schedules can be assigned to any of the predefined holidays
 - (f) 999 event dates (recurring by day of week, day of month, to occur only on a specified date or a specified date range)
 - (vii) Blink Warn
 - (a) Adjustable time between Blink Warn and Lights Off
 - (b) Adjustable time of blink flash
 - (c) Individual relays can be selected for the blink warn feature
 - (viii) After Hours Sweep with adjustable time
 - (ix) Relay Groups
 - (a) Each relay can be assigned to a maximum of 32 groups.
 - (b) The network shall support up to 65,000 groups
 - (x) Priorities
 - (a) The system shall support 16 priorities
 - (b) Each control input or many internal events can be assigned a priority level
 - (c) The highest priority is 1, the lowest priority is 16
 - (d) Higher priorities shall take and maintain control until a Relinquish@ command has been issued for that relay.
 - (e) Priority control is applied on a relay-by-relay basis.
 - (xi) Low Voltage Switch support
 - (a) Low Voltage Switch inputs shall be supported through the Low Voltage Inputs
 - (b) Switch inputs can be triggered by either an Active low@ (pull to common) or an Active high@ (pull to + voltage) signal
 - (c) Feedback shall be returned by the panel to the switch as either +V or common. Feedback can be used to illuminate LEDs in the Z-MAX Low Voltage Switch
 - (d) Inputs can be assigned the following functions:
 - (i) Momentary (assigned relays operate in toggle behavior, press

for on, press for off)

- (ii) Maintained (assigned relays are on while pressed, off when released)
- (iii) Preset On (assigned relays turn on, all other relays in the preset group turn off when depressed and released)
- (iv) Preset Off (all relays in the preset group turn off when depressed and released)
- (xii) Photocell Support
 - (a) Photocells shall be connected to the Low Voltage Inputs
 - (b) (16) ARising@ and (16) AFalling@ trigger points can be set for each photocell
 - (c) Any Relay can be assigned to any photocell trigger point
 - (d) Any Group can be assigned to any photocell trigger point
 - (e) Multiple photocell operational modes shall be support to allow for varying applications
- (xiii) Occupancy Sensor Support
 - (a) Occupancy sensors shall be connected to the Low Voltage Inputs
 - (b) Occupancy sensor shall support multiple behaviors allowing for varying application
 - (c) Occupancy sensors shall support the blink warn feature
 - (d) A delay off time shall be set establishing the time which must elapse between occupancy sensor signal and the assigned action
 - (e) Any Relay can be assigned to any occupancy sensor
 - (f) Any Group can be assigned to any occupancy sensor
- (xiv) Contact Closure
 - (a) Contact Closures shall be connected to the Low Voltage Inputs
 - (b) Any contact closure can be assigned any action
 - (c) Any contact closure can be assigned any scheduled event/action

E. Network Control Module

1. The Network Control Module shall support all features of the basic control module.
2. The following additional control protocols shall be available:
 - (a) Z-MAX Digital Switch
 - (b) Luma-Net 3 (for Leviton Dimensions D8000 & D4200 Controls)
 - (c) Sapphire-Net (for NSI Sapphire Controls)
 - (d) DMX 512
 - (e) Master/Slave Z-MAX Network communication
3. The following additional features **shall be** available in the network control module
 - (a) Assignment of DMX 512 address to relay
 - (b) Assignment of Luma-Net or Sapphire-Net address to relay
 - (c) Configuration of all digital switch inputs (maximum of 206 total buttons per network.
 - (d) Master/Slave Operation
 - (1) Up to (96) Local + Slave Relays
 - (2) All slave cabinet features, functions, events, and signals are controlled and programmed from the master control module

F. Warranty

1. The warranty on the relay panel shall be 2 years as described in section I, performed at Leviton Lighting

Control Division, Tualatin, Oregon. Exception: If System Commissioning was elected, warranty service may be performed onsite.

G. Acceptable Products

1. Acceptable products shall be Control Modules for Z-MAX Relay Panels as manufactured by Leviton Manufacturing Company, Inc.

2.03 Z-MAX RELAY CARDS

A. Physical

1. Each relay card shall occupy a maximum of (1) relay card space
2. No relay card shall require reduction of total Relay Panel capacity
3. Relay cards can be secured to the Relay Panel backplane with a single screw
4. Relay cards shall contain a low voltage data connector for connection to the backplane which shall employ no wires
5. All external termination to the relay card shall be via screw-terminals

B. Electrical

1. The following relay cards shall be available:
 - (a) Standard Relay Card
 - (b) 2-Pole Relay Card
 - (c) Canadian Relay Card
2. All Relay Cards shall support the following load types at the full rated load of the relay card:
 - (a) Incandescent
 - (b) Tungsten
 - (c) Halogen
 - (d) Magnetic Low Voltage
 - (e) Electronic Low Voltage
 - (f) Neon
 - (g) Cold Cathode
 - (h) Magnetic Fluorescent
 - (i) Electronic Fluorescent
 - (j) HID
 - (k) Motors
3. The Standard Relay Card shall have the following electrical characteristics:
 - (a) Single Pole Contacts
 - (b) 20A continuous load rated
 - (c) Voltage up to 277VAC
 - (d) Motor Rating of 1HP @ 120V, or 2HP at 277V
 - (e) ANo-Load@ Switching of Relay
 - (f) Zero-Cross Switching Circuitry
 - (g) Relay Rated for 10,000,000 cycles under full electrical load
 - (h) Relay will withstand 50 times the rated load as inrush current for resistive, inductive, and capacitive loads.
 - (i) Supported Wire size of 8-20AWG
4. The Two-Pole Relay Card shall have the following electrical characteristics:
 - (a) Two Pole Contacts
 - (b) 20A continuous load rated

- (c) Voltage up to 277VAC
 - (e) Motor Rating of 2HP @ 240V, or 3HP at 480V
 - (f) Relay Rated for 30,000 cycles
 - (g) Relay will withstand 3 times the rated load as inrush current for resistive, inductive, and capacitive loads.
 - (h) Supported Wire size of 6-20AWG
5. The Canadian Relay Card shall have the following electrical characteristics:
- (a) Single Pole Contacts
 - (b) 20A continuous load rated
 - (c) Voltage up to 347VAC
 - (d) Motor Rating of 1HP @ 120V, or 2HP at 277V
 - (e) Relay Rated for 30,000 cycles
 - (f) Relay will withstand 3 times the rated load as inrush current for resistive, inductive, and capacitive loads.
 - (g) Supported Wire size of 6-20AWG
6. Each group of (8) Relay Cards can be isolated from every other group of (8) Relay Cards in the cabinet with the use of optional voltage barriers.

C. Installation

- 1. Relay Cards shall be furnished Pre-Installed in the cabinets by the factory or may be User-Installed in the field.
- 2. Custom configuration of multiple types of Relay Cards in the same cabinet can be performed by the factory or in the field.

D. Warranty

- 1. The warranty on the Relay Cards shall be 10 years, as described in section I. Repair, and/or warranty replacement performed at and by Leviton Lighting Control Division, Tualatin, Oregon. Exception: If System Commissioning was elected, warranty service only will be performed onsite.

E. Acceptable Products

- 1. Acceptable products shall be Z-MAX Relay Card for Z-MAX Relay Panels as manufactured by Leviton Manufacturing Company, Inc.

2.04 LEVITON LOW VOLTAGE SWITCHES

A. Physical

- 1. All switches shall fit into a standard 1 gang Adeep® electrical back box
- 2. Switches shall employ standard ADecora® style screwless wall plates
- 3. Switches shall be available in any of the following button configurations:
 - (a) 1 Button
 - (b) 2 Buttons
 - (c) 3 Buttons
 - (d) 4 Buttons
 - (e) 5 Buttons
 - (f) 6 Buttons
 - (g) 8 Buttons
 - (h) 10 Buttons
- 4. Labels for each button shall be as standard: Zone 1, Zone 2, Zone 3, etc.
- 5. Factory custom labeling per specification shall be available
- 6. End-user labeling kits shall be available B consult factory

7. Standard Color for all stations, wall plates, and trim rings shall be white.

B. Electrical

1. Connection to Controlled equipment shall be via standard low voltage wiring
2. Switches when depressed (or feeling sorry for themselves) may either supply voltage or connect to common as decided by the particular application. (Z-MAX Relay cabinets prefer +V)
3. Each switch shall employ an back-lit LED which can optionally provide visual feedback to the user. The LED terminal for each switch can either be connected to +V or common depending on the particular requirements of your installation. (+V is recommended for Z-MAX installations)
4. Each switch shall employ an optional station ALocator@ LED which shall provide visual feedback to the user of station location, system activity, etc. The Locator LED terminal may be either connected to +V or common depending on the particular requirements of the installation.

C. Installation

1. Installation of the Low Voltage switch shall be per Manufactures instructions and performed by the contractor.
2. Programming of switch functionality shall be performed by the contractor at the control panel and at their discretion unless factory commissioning is required

D. Warranty

1. The warranty on the all Low Voltage Switches shall be 2 years as described in section I. Repair, and/or warranty replacement performed at and by Leviton Lighting Control Division, Tualatin, Oregon.
Exception: If System Commissioning was elected, warranty service only will be performed onsite.

E. Acceptable Products

1. Acceptable products shall be Leviton Low Voltage Switches as manufactured by Leviton Manufacturing Company, Inc.

2.05 Z-MAX^J DIGITAL SWITCH

A. Electrical

1. Connection to Controlled equipment shall be via standard digital low voltage network wiring.
2. Digital low voltage network wiring, or Anetwork wiring@ shall be of acceptable cable types specified by manufacture on data sheets, installation guides, and submittals (if provided). Follow the traditional Luma-Net wiring specification as a guide.
3. Each switch shall employ a back-lit LED which provides visual feedback to the user.
4. Each switch requires (4) wires, (1) pair of data wiring, and (1) pair of wires for power.
5. An optional Infrared Remote Control can activate each button on the station.
6. Programming of switch functionality is performed at the Z-MAX relay panel. In addition to simple Relay or Group On/Off, switches can be programmed for advanced actions. See Z-MAX relay cabinet specification for complete functionality.

B. Installation

1. Installation of the Low Voltage switch shall be per Manufacturers instructions and performed by the contractor.
2. Programming of switch functionality shall be performed by the contractor at the control panel and at their discretion unless factory commissioning is required

C. Warranty

1. The warranty on the all Z-MAX^J Digital Switches shall be 2 years as described in section I. Repair, and/or warranty replacement performed at and by Leviton Lighting Control Division, Tualatin, Oregon.
Exception: If System Commissioning was elected, warranty service only will be performed onsite.

D. Acceptable Products

1. Acceptable products shall be the Leviton Z-MAX Digital Switch as manufactured by Leviton Manufacturing Company, Inc.

PART 3 EXECUTION

3.01 EXECUTION

- A. **Site Verification:** Verify that wiring conditions, which have been previously installed under other sections or at a previous time, are acceptable for product installation in accordance with manufacturer=s instructions.
- B. **Field Measurements:** The electrical contractor shall be responsible for field measurements and coordinating the physical size of all equipment with the architectural requirements of the spaces into which they are to be installed.
- C. **Inspection:** Inspect all material included in this contract prior to installation. Manufacturer shall be notified of unacceptable material prior to installation.

3.02 INSTALLATION

- A.
 1. The Electrical Contractor, as part of the work of this section, shall coordinate, receive, mount, connect, and place into operation all equipment. The Electrical Contractor shall furnish all conduit, wire, connectors, hardware, and other incidental items necessary for a properly functioning lighting control and relay system as described herein and shown on the plans. The Electrical Contractor shall maintain performance criteria stated by manufacturer without defects, damage, or failure.
 2. **Compliance:** Contractor shall comply with manufacturer=s product data, including shop drawings, technical bulletins, product catalog installation instructions, and product carton instructions for installation.
 3. **Circuit Testing:** The contractor shall test that all branch load circuits are operational before connecting loads to system load terminals, and then de-energize all circuits before installation.
 4. **Application of Power:** Power shall not be applied to the relay system during construction and prior to turn-on unless specifically authorized by written instructions from the manufacturer.
- B. **TESTING**
 1. **Notification:** Upon completion of the installation, the contractor shall notify the manufacturer that the system is ready for formal checkout. Notification shall be given in writing a minimum of 21 days prior to the time factory-trained personnel are required on site. Manufacturer shall have the option to waive formal turn-on.
 2. **Turn-On:** Upon completion of all line, load and interconnection wiring, and after all fixtures are installed and lamped, Manufacturer=s Rep or, if waived, Contractor shall completely check the installation prior to energizing the system. Each installed relay system shall be tested for proper ON/OFF operations, and proper LED illumination. Each installed control panel shall be tested with each scene: verifying that each controlled fixture adjusts to the selected setting and that all switch LED=s illuminate properly.
 3. At the time of checkout and testing, the owner=s representative shall be thoroughly instructed in the proper operation of the system.
- C. **SITE PROTECTION**
 1. Contractor shall protect installed product and finished surfaces from damage during all phases of installation including storage, preparation, testing, and cleanup.

END OF SECTION 16570



LANSING SCHOOL DISTRICT
2008 RENOVATION PROJECTS

JOHNSON FIELDHOUSE NATATORIUM RENOVATIONS - BID #S.O. 1461

LANSING, MICHIGAN

REQUIRED LANSING SCHOOL DISTRICT ATTACHEMENT FOLLOWS:

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LANSING
SCHOOL
DISTRICT

Committed to Quality

STATEMENT OF NO BID

NOTE: IF YOU DO NOT INTEND TO BID, PLEASE RETURN THIS FORM ONLY TO:

Lansing School District
519 W KALAMAZOO ST
LANSING, MI 48933

BID NO: # _____

PHONE: 517-755-3030
FAX: 517-755-3039

We, the undersigned, have declined to bid on the above noted bid for the following reasons:

- _____ Insufficient time to respond to the invitation to Bid.
- _____ Request for Proposal unclear.
- _____ Do not offer this product or service.
- _____ Our schedule will not permit us to perform.
- _____ Unable to meet the specifications
- _____ Specifications are unclear (Please explain below)
- _____ Remove us from your Bidder Mailing List
- _____ Other (Please specify below)

REMARKS:

Company Name: _____

Signature: _____

Date: _____ Telephone: _____ Fax: _____

Section 3000 – Fiscal Management

3610 Purchasing Goods and Services

3610

The Superintendent, and or his/her designee, shall be the sole purchasing agent for the District.

The purchase of goods and services required for the operation of the Lansing School District shall be conducted in accordance with all applicable laws. The purchasing process shall be open and competitive. Purchasing award decisions may include price; product quality; service; delivery; maintenance of product; adherence to specifications; past performance to the District; supplier reliability; warranties; supplier environmental responsibility; supplier school-to-work programs (including apprentices and cooperative training programs), supplier community responsibility; responsible contracting compliance, increasing the diversity of the supplier pool (as permitted by law) and increasing the percentage of contracts with local companies.

The Lansing School District places a high value on the richness of our diverse schools and community. The District will play a leadership role in promoting inclusiveness and the elimination of discrimination. All suppliers doing business with the school district must comply with state and federal laws on equal employment opportunity. In addition, companies responding to requests for formal bids for goods or services shall be required upon request to submit to the school district verification of compliance with laws. Suppliers shall state they do not discriminate against any employee or applicant for employment because of race, color, religion, national origin, sex, age, height, weight, marital status, or disability. Failure to present such and/or to not comply with state and federal laws on equal employment opportunity shall result in the supplier being removed from the District's supplier list and the rejection of the supplier's bids.

Cooperative Purchasing

Governmental cooperatives, joint governmental purchasing, and private cooperative purchasing agencies may be used if it is deemed in the best interest of the District and the agency adheres to the requirements of this policy.

Purchases through the District

Board members and employees shall not make any purchase through or in the name of the District for personal use. The name of the District or school or the employee's position, shall not be used in such manner that discounts or cost preferences are given to such person. Purchasing equipment and supplies by the District for resale to employees is prohibited.

Unauthorized Purchases

Unauthorized purchases by staff members are not the responsibility of the Lansing School District. Staff members that commit to unauthorized purchases shall be held individually responsible for payment of such obligations.

Section 3000 – Fiscal Management

3610 Purchasing Goods and Services

3610-2

Emergency Purchases

Emergency purchases of materials or labor for building construction, addition, renovation or repair may be made without using the quotation or bidding process if authorized by the Superintendent. Emergency purchases over the state-imposed bid limit must be authorized by the Superintendent. A report of the emergency purchase shall be presented to the next formal school board meeting for formal approval.

Approved: January 20, 2005

Revised: February 2007

LEGAL REF: MCL 15.321-330

May 9, 2005

Lansing School District
Administrative Regulation

3610-R Purchasing Rules and Procedures

The purchasing of all goods (supplies, materials and equipment) and services required for the operation of the Lansing School District shall be conducted in accordance with all applicable state and federal laws and Lansing School District policies.

A centralized purchasing process shall be utilized. Except as noted below, purchase orders or contracts shall be issued for all purchases. Documentation shall be maintained for all requisitions, bids, and purchases in accordance with the State of Michigan requirements.

The Purchasing Office shall publish the requisition process. The requisition process shall properly identify the items needed, the purpose for which they are intended, the specific account to which the items are to be charged, and the authority of the requesting party to order such items. Specifications shall be developed that adequately describe the District's requirements and encourage competitive bidding.

In accordance with state law, the District shall not purchase an item or group of items in a single transaction exceeding the state-imposed limit per Revised School Code, unless competitive bids are obtained and the purchase is approved by the Board of Education. Purchases cannot be artificially divided to lower the threshold applicable under this regulation or any Lansing School District purchasing policies, regulations or procedures.

All purchases (including supplier selection) are subject to the approval of the Purchasing Director acting as the purchasing agent for the Lansing School District. Purchases of commodities where adequate supply and competition is available within the local district to meet the district need may be redirected to local sources.

Formal Bids:

Formal bid procedures shall include, but not be limited to, a sealed bid process for purchases exceeding the state imposed limit. Bid security and performance bonds may be required per state law or at the discretion of the Superintendent or an appropriate designee. Construction bids shall be advertised and processed in accordance with state law. Construction bidders shall be required to submit names, location, ownership information and pricing of all sub-contractor bids as required in the request for bid or during bid evaluation. Failure to do so will disqualify the bid.

Bid security, performance and payment bonds shall be required in accordance with the State law.

Additional Purchasing Methods:

Purchase transactions of less than \$250 may be made using purchasing cards, verbal purchase orders or other expedited procedures as approved and monitored by the Director of Purchasing. The limit may be increased above \$250 per transaction if otherwise required by job function and approved by the Superintendent or his/her designee. Each purchasing card will have an overall limit as determined by the Superintendent.

Informal quotations (required to be in writing), contract or cooperative purchasing, blanket purchase orders, emergency purchase orders (when authorized per policy) or formal bids may be used.

Change Orders:

Change orders for capital projects can be approved within the scope of the approved project contingency by the Superintendent. Any change orders beyond the scope of the project contingency must be approved by the Board of Education.

Change orders for bond issue projects can be approved as follows:

Changes up to \$100,000 - Approved by the Superintendent with subsequent notice to the Finance Committee of the Board of Education.

Changes over \$100,000 - Approved by the Board of Education prior to commencing work.

Bid Appeal Process:

Purchase award recommendations may be appealed to the Director of Purchasing for review. The Director of Purchasing shall review input from the requisitioning administrator and the party requesting review along with other information per his/her discretion. Additional appeals shall be made to the Chief Financial Officer and to the Superintendent, in that order. Oral or written information from both the party requesting the review and the District's Purchasing Office will be considered at any appeal. When reasonable for the efficient functioning of the District, the Lansing School Board may table final decision on the purchase award until the appeal process is complete.

Staff - Purchase Order Procedure

The purchase order (PO) shall be used for all purchases that will be paid for by District funds. To initiate a purchase order, please follow this procedure.

1. A staff person who has budget responsibility (or his/her designee) enters a requisition in the on-line purchasing system. Access to this system may be obtained by sending a request in writing to the Technology Department.

When entering the requisition in the purchasing system the following information will be required: the potential company name, item description, estimated unit costs, account number, and location of use.

2. All requisitions are reviewed and processed according to Board policy and Purchasing Office procedures. Processing may include consolidation of orders, local sourcing or bidding.

3. Once the requisition is converted to a purchase order and all approvals have been obtained, a written purchase order is generated and sent to the vendor. A copy is sent to the requesting party.

4. The order may designate direct delivery to your location. If so, write the purchase order number on all receipts and invoices. Receipts and invoices must be sent to the Accounting Office. The receipt should be signed by the staff person who received the item(s). Payment will be made to the vendor when an order, invoice and receipt are matched.

5. A blanket purchase order may be requested using the same procedures as listed above. A blanket purchase order covers repeated small purchases of supplies or materials from one vendor (example toner and supplies for a copier). The request should indicate a period of time for which the order is valid, a maximum dollar amount that may be spent. And the names of staff members who are authorized to make a purchase.

Supplier – Purchase Order Procedure

Suppliers of goods to the Lansing School District shall be notified of the following:

1. **No purchases on Lansing School District accounts shall be made without a Lansing School District purchase order number.**
2. No Lansing School District purchases shall be considered tax exempt without a Lansing School District purchase order number.
3. Lansing School District principals and other administrative staff will approve Lansing School District purchases under a Small Purchase Order amount authorized by the Purchasing Office. This approval will be verified by a Lansing School District purchase order number or written purchase order.
4. All purchases in excess of the Small Purchase Order amount must be authorized by the Lansing School District, Purchasing Office. This authorization will be verified by a Lansing School District written purchase order.
5. Purchases made by Lansing School District staff members without a purchase order number (or that exceed the dollar amount authorized by a purchase order) are the financial responsibility of the individual staff member and will not be paid by the Lansing School District.
6. All invoices shall be sent to:
Lansing School District
Accounts Payable
519 West Kalamazoo
Lansing MI 48933
7. **The Lansing School District purchase order number should appear on all packing slips and invoices.** Charges from only one purchase order should appear per invoice. Invoices for a partial purchase order will be paid, if all items invoiced have been received.

General Conditions and Instructions to Bidders

1. Proposals shall be submitted on forms furnished by the owner. The proposal shall be in accordance with the specifications listed, which are available at the Lansing School District Purchasing Office.

Any variance from the specifications shall be fully explained in writing by the bidder and all prices quoted shall be on a unit price basis.

2. **MAILING OF PROPOSALS:**

Proposals shall be mailed in an opaque, sealed envelope and shall be clearly marked describing the project upon which the bid is made.

3. No oral, telegraphic facsimile, or electronic mail proposals or modifications will be considered.

4. **WITHDRAWAL OF BIDS:**

Any bidder may withdraw their bid at any time prior to the scheduled time of opening the bids upon the presentation of proper identification. After the opening of the bids, no proposal shall be withdrawn for a period of ninety (90) days.

5. **PROPOSAL FORMS AND SIGNATURES:**

Proposals shall be made on the proper forms provided by the owner. All spaces shall be properly filled in with ink or typewriter. The signatures shall be in longhand in ink by an authorized representative.

6. **BRANDS:**

The naming of a manufacturer, brand or model number shall not be considered as excluding other brands or models. Specifically, similar products with comparable construction, material and workmanship shall be considered as equal. However, the Board of Education of the Lansing School District shall evaluate the merits of all bids submitted and reserves the right to accept or reject any or all bids.

It is the intent of the attached specifications to define the minimum quality of equipment acceptable. The product lines of nationally recognized manufacturers who regularly advertise, promote and distribute catalog products to the school market are required.

7. **SAMPLES:**

Samples shall be submitted upon request at the expense of each bidder. These samples will be retained as control items until the completion of the delivery and installation.

8. **AGENDA:**

Any modifications of contract documents will be issued in the form of an addendum.

All addenda issued during the bidding time shall become part of the specifications. A copy of the addendum shall be sent to all bidders. No verbal statements by the owner shall be considered as authoritative. No request for explanations can be processed within four (4) days immediately prior to the bid opening date.

9. **VARIATIONS FROM MATERIALS SPECIFIED:**

All variations from the specified material or equipment shall be fully explained and included with the bid. Manufacturer numbers shall be used in all cases.

10. **ROYALTIES AND PATENTS:**

The contract shall pay for all royalties and patents, and shall defend all suits for claims or infringements on patent rights and save the owner harmless from loss on account thereof.

11. **CLEAN-UP:**

The contractor shall at all times, keep the premises free from accumulations of waste materials or same caused by the work; and upon completing the work, shall remove all work related rubbish from and about the building and shall leave the work broom clean, or it equivalent. In the case of dispute, the owner may remove the rubbish and charge the cost to the contractor, as the owner shall determine.

12. **FEDERAL, STATE AND MUNICIPAL TAXES:**

Each proposal submitted shall include, and the contractor shall pay, all taxes which are levied by the Federal, State and Municipal Governments, on labor, and for materials entering into the work. The owner reserves the right to require evident of payment of such taxes prior to final payment. The school district is exempt from Federal Excise Tax.

General Conditions and Instructions to Bidders

13. QUALIFICATIONS OF BIDDERS:

The owner may request any or all bidders to submit any of the following information before the award of the contracts.

- A. A bidder's performance record
- B. The address and description of bidder's equipment, plant or permanent place of business.
- C. An itemized list of the bidder's equipment, plant and personnel.
- D. A bidder's financial statement.
- E. A description of any project which the bidder has completed.
- F. Such additional information as will satisfy the owner that the bidder is adequately prepared to fulfill the contract.
- G. Description of work which will be done simultaneously with the owner's project.

14. NOTICE OF AWARD:

The contracts shall be deemed as having been awarded when the formal notice of acceptance of their proposal has been duly served upon the intended awardees (normally by purchase order) by some officer of agent of the owner duly authorized to give such notice.

15. GUARANTEE:

Each contract shall furnish the owner a written guarantee running for one (1) year, or longer as required herein, after the final payment covering all work in the contract. Any defects in workmanship or materials for which a claim is submitted within this period shall be corrected.

16. DOCUMENTS:

The Proposals submitted shall be based upon the specifications contained herein.

17. RIGHTS OF ACCEPTANCE OR REJECTION:

The Board of Education of the Lansing School District reserves the right to reject any or all bids in whole or in part and to accept the bid or portion of bid that, in their opinion, best serves the interest of the School District.

18. Contractors and subcontractors are required not to be discriminated against any employee or applicant for employment, to be employed in the performance of this contract, with respect to hire, tenure, terms, conditions or privileges of employment because of race, color, religion, national origin, or ancestry or also because of age or sex, except based on a bonafide occupational qualification. Breach of this covenant of purchasing agreement as provided in the Michigan Fair Employment Practices Act and may be processed there under. See Policy 3610



In order to maintain the public trust, your local school district Board of Education should consider and adopt a resolution containing at least some, if not all, of the factors listed below.

Each factor should be discussed thoroughly by school board members, the architects and construction managers involved in any school construction because of the potential impact they will have on a project.

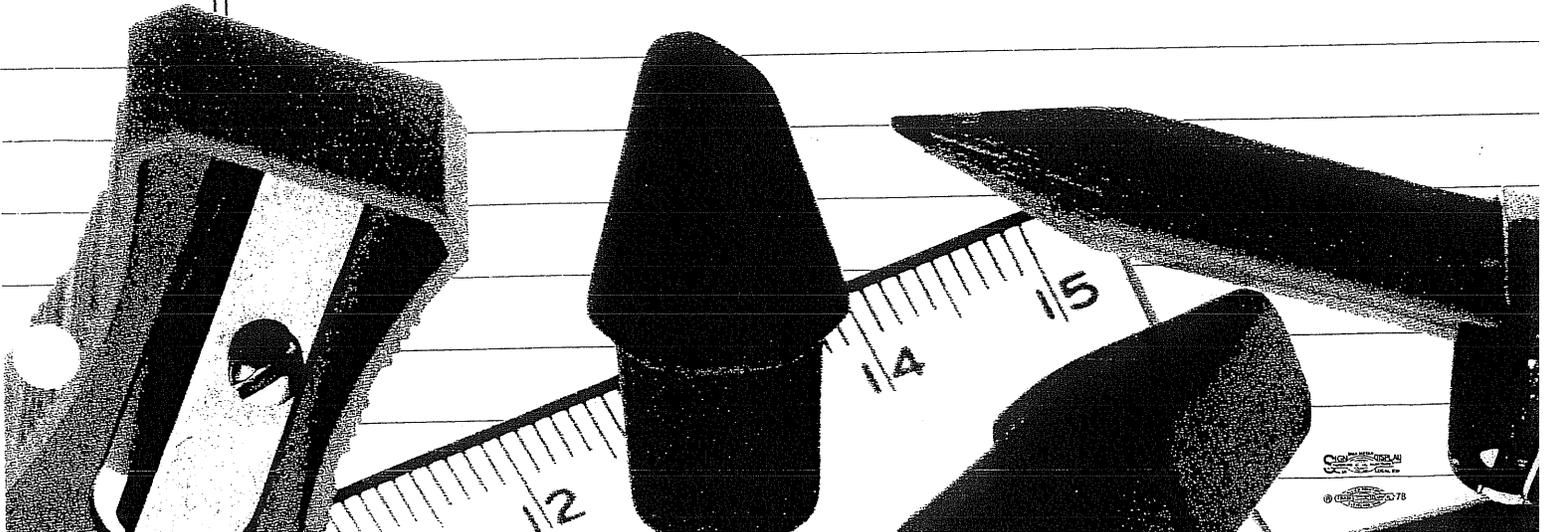
Your construction manager and design professional will then include these factors in the construction bid documents so all bidders know that in addition to price these items will be considered when construction bids are reviewed.



EXPERIENCE. Institutional building projects are expected to last 50-75 years. Therefore school board members should review the past experience of all construction professionals to ensure that they have pertinent experience on similar institutional projects. In so doing, the board members can evaluate whether local contractors should be considered for the project and only if they have the required experience should they be considered.

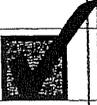


REFERENCES. School board members should investigate the references of their construction professionals from past clients doing similar institutional work. Construction professionals must supply pertinent references from their past clients, including information regarding performance and jobsite cooperation.





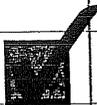
FINANCIAL CONDITION. A good financial rating means stability on the job and all through the project. Construction professionals must show they are financially prepared to perform the work they are bidding on. School boards must obtain information concerning a bidder's financial capability, any outstanding claims against them and bank references. A poor financial condition can affect the quality of materials, equipment and workers used on the project. It also can result in substantial project delays and unsafe schools.



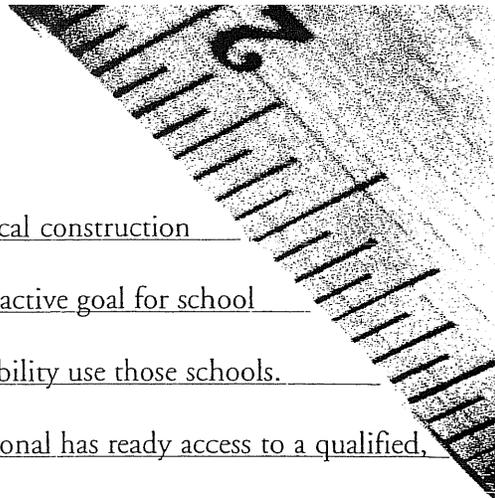
SAFETY & ACCIDENTS. Construction professionals with a good safety and EMR record will be more productive. An employer has an obligation according to the Michigan Occupational Safety and Health Act (MIOSHA) to provide a place of employment free from recognized hazards likely to cause death or serious physical harm. Every employee has the right to a safe and healthy workplace. An employer must provide training in the recognition and avoidance of hazards and specific training called for in the MIOSHA standards.



RESUME OF SUPERVISORY PERSONNEL. Beyond a construction professional's experience with similar institutional projects, it is important for board members to evaluate the resumes of the supervisory personnel of all construction professionals on their project. All supervisory personnel should have pertinent experience and adequate education and training to complete your project.



INSURANCE & SURETY BONDING. Construction professionals must show proof of adequate and relevant insurance coverage for a particular project and must prove their compliance with workers' compensation statutes. School boards must set minimum standards for insurance coverage. Construction professionals that cannot provide proper coverage may be unable to fulfill project obligations. A measure of a construction professional's stability is shown in the ability to secure the required bonding.



USE OF A TRAINED LOCAL WORKFORCE. Employing local construction professionals and skilled craft workers on a project can be an attractive goal for school boards. Local craft workers, their friends and family, in all probability use those schools.

However, it is necessary to determine if the construction professional has ready access to a qualified, experienced workforce to build your project.



PREVAILING WAGE. Use of prevailing wage requirements ensures that school boards secure the best qualified construction professionals to perform work on their projects. Construction professionals should compete for projects on the basis of their management practices, not by paying sub-standard wages. Utilization of prevailing wage will allow the construction professional to pay locally determined wages and benefits to attract qualified skilled craft workers.



EMPLOYEE HEALTH INSURANCE & PENSION BENEFITS. School districts can maintain and promote their community's health care and craft employees by requiring the construction professional to use prevailing wage, which includes health insurance and pension benefits. Construction professionals who provide such benefits to their craft personnel demonstrate a commitment to developing a stable workforce, which is a key component to a quality project and to the health of the community.



WORKFORCE SOURCE & PROPER EMPLOYEE CLASSIFICATION. School boards can ensure that their project will be built by qualified construction professionals by ensuring contractor access to a skilled workforce. School districts should examine carefully the source of building trades craft employees. School districts should ask prospective construction professionals to identify the source of the workforce they intend to use on the project. Construction professionals who staff the project with personnel hired from help-wanted ads or employment agencies might not have sufficient competence and ability to complete a quality project on schedule.

REGISTERED UNITED STATES DEPARTMENT OF LABOR, BUREAU OF

APPRENTICESHIP & TRAINING PROGRAMS. School boards know the value of high quality training and education. Responsible contractors know that better training equals better buildings. Bureau of Apprenticeship and Training (BAT) approved training programs create more productive craft workers. A construction professional's ability to staff a school construction project with qualified trades' workers is the key to success. Contractors, who bid on school construction projects should maintain, participate in and contribute to bona fide apprentice training programs recognized by the U.S. D.O.L./B.A.T. Trained craft workers promote cost effectiveness, timeliness, safety and quality on school construction work. Companies who employ skilled and trained workers, educated in their trade, deliver exceptional work. Moreover, every registered U.S. D.O.L./B.A.T., program must meet twenty-two standards of apprenticeship regulated and audited by the U.S. D.O.L./B.A.T., as outlined in 29 CFR 29.5.

LICENSING. School boards get a better building when highly competent construction professionals and tradespersons build it to code. State law establishes licensing requirements for

electrical, mechanical, plumbing, boiler and elevator contractors, and electrical,

elevator and plumbing craft workers. Proper licensing and certification,

when applicable, show school boards that construction

professionals bidding the job have been tested and are

competent to perform the work. All responsible construction

professionals must provide documented proof of licensing

and certification. This will allow school boards to contact

licensing and certification agencies to verify the bidder's

history and determine if any complaints or judgments

have been filed against them.



**SECTION 00100
INVITATION TO BID**

PROJECT

**LANSING SCHOOL DISTRICT
2008 RENOVATIONS PROJECTS**

Johnson Fieldhouse Natatorium Renovations - Bid #S.O. 1461

OWNER

Lansing School District
Purchasing Department
519 W. Kalamazoo Street
Lansing, Michigan 48933

ARCHITECT

Roger L. Donaldson, AIA P.L.C..
4787 Tartan Lane
Holt, Michigan 48842
Telephone/fax: (517) 694-0011
Email: RogerAIA@comcast.net
Architects Project #08-26 Johnson Fieldhouse Natatorium Renovations

I. GENERAL

A DESCRIPTION OF PROJECTS:

- 1.) **Johnson Fieldhouse Natatorium Renovations** - Bid #S.O. 1461: Painting of walls, Door & Frame, Providing new Suspended Ceiling System with lighting, grilles and clean up.
- 2.) Alternate #1, - Guaranteeing that all work will be completed within Thirty (30) calendar days after award of contract and receipt of approvals from City of Lansing Office of Building Safety and State of Michigan Bureau of Fire Services.

B PRE-BID MEETING:

- 1.) A Highly Recommended Pre-bid Conference on Monday, October 6, 2008 at 11:00 AM local time prevailing, at the Johnson Fieldhouse Natatorium Renovations , 400 N. Pennsylvania, Lansing, MI 48912, for the purpose of reviewing the scope of work. This location is North and East of Eastern High School.

C TYPE OF BIDS REQUESTED

- 1.) Sealed proposals for construction work of all trades for work at Johnson Fieldhouse Natatorium Renovations - Bid #S.O. 1461.

D TIME AND PLACE

- 1.) Sealed proposals will be received until 2:00 p.m. local Time, on Tuesday, October 14, 2008, Lansing School District, Board of Education Room , 519 W. Kalamazoo, Lansing, Michigan 48933. Bids will be opened and read aloud. Bids received after the time and date for receipt of Bids will be returned unopened.
- 2.) Bid form is included in the Project Manual. Bids must be submitted prior to the date and time specified in an Opaque Envelope marked in large letters –

“BID PROPOSAL”

“2008 RENOVATIONS PROJECTS

JOHNSON FIELDHOUSE NATATORIUM RENOVATIONS - BID #S.O. 1461

“BID PROPOSAL”

- 3.) Include with the Bid Proposal, also completed copies of:
 - (a) “Bid Security”,

- (b) Section 00452 - "Non Collusion Affidavit"
- (c) "Vendor Application"
- 4.) The envelope shall be addressed to the party receiving the Bids and shall be identified with the Project name, the Bidder's name and address and, if applicable, the designated portion of the Work for which the Bid is submitted. If the Bid is sent by mail the sealed envelope shall be enclosed in a separate mailing envelope with the notation "SEALED BID ENCLOSED" on the face thereof.
- 5.) No oral interpretations will be made. Interpretations must be made in writing and delivered to the Architect at least seven (7) working days prior to bid opening. Interpretations will be made in writing and furnished to prospective bidders present at the pre-bid inspection meeting.
- 6.) Each bidder is responsible for making their own measurements, for acquainting themselves with the specification documents, and for inspecting the work site and conditions.
- 7.) Each bidder in submitting a Bid Proposal agrees to and guarantees that the Materials, equipment and labor included in this proposal meets or exceeds all specifications..

E PROPOSAL GUARANTEE

- 1.) Each proposal must be accompanied by a proposal guarantee in an amount equal to five percent (5%) of the basic proposal. Guarantee shall be in the form of a certified check or bid bond executed by and approved surety company, made payable to the Lansing School District. Proposal guarantee shall run for a period of sixty (60) days.

F ACCESS TO BIDDING DOCUMENTS

- 1.) Bidding documents are on file at the following locations and are available for the use of bidders:
 - Office of the Architect, Builders Exchange of Lansing and Grand Rapids, MI
 - Lansing School District Physical Plant F. W. Dodge of Grand Rapids and Flint, MI.
- 2.) Contractors who obtain bid documents from other sources besides the Architect should notify the Architect of contact information, including email address so that additional information, including addendums that may be issued, can be forwarded to the addresses provided. Submitt contact information to RogerAIA@comcast.net

G PROCUREMENT OF BIDDING DOCUMENTS

- 1.) Copies of the bidding documents may be obtained from the Architect, with each general contractor being entitled to obtain up to three (3) sets, and each Sub Contractor entitled to obtain one (1) set of bidding documents for a refundable deposit of \$50.00 per set. Make Checks out to "Lansing School District". Provide a self address stamped envelope for return of deposit when drawings are returned after submission of bid proposal.
- 2.) If any bidder requires more than the sets of bidding documents stipulated, such additional full sets may be purchased from Capital City Blueprint at cost and this purchase amount will not be refunded. Subcontractors and suppliers may purchase complete sets of bidding documents at cost and this purchase amount will not be refunded.
- 3.) Bid documents may be mailed to contractors upon written request and prepayment (by check made out to Roger L. Donaldson AIA PLC) of \$20.00 to cover cost of wrapping, handling and mailing. This is for the contractor's convenience only, and the cost of this service is without refund.
- 4.) The deposit for the bidding documents will be returned to each bidder who:
 - (a) Submits a bona-fide proposal on time;
 - (b) Has returned the documents, in good condition, within ten (10) business days after opening of proposals.
 - (c) Has provided a self address stamped envelope;
 - (d) Or, is a successful low bidder and receives a contract award.
- 5.) No refund will be made to those bidders who fail to submit a bona-fide proposal, or to those who return

SECTION 00100
INVITATION TO BID

the documents after 10 business days of the bid opening., or return damaged and/or partial documents.

- 6.) A bidder may return the documents with a copy of Section 00211 – Statement of No Bid at least seven days prior to the bid proposal due date and receive a refund of the deposit for each set of documents returned in good condition.

H CONTRACT SECURITY

- 1.) Successful bidder will be required to furnish a "Performance Bond" and a "Labor and Material Payment Bond", each bond in the amount of 100% of his contract, as required in the "Instructions to Bidders".

I RIGHTS RESERVED BY OWNER

- 1.) The owner reserves the right to reject any or all proposals and to waive any irregularities in bidding, or to accept the lowest responsible proposal(s), that in the opinion of the owner will serve the best interest of the owner. The owner will not be obligated to accept the lowest proposal. The owner further reserves the right to approve all subcontractors.

J WITHDRAWAL OF PROPOSALS

- 1.) No proposals may be withdrawn for a period of sixty (60) days after the receipt of proposals.

END OF SECTION 00100

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