

RFB NO. 316002



# **CONSTRUCTION DOCUMENTS PROJECT MANUAL**

DANE COUNTY DEPARTMENT OF PUBLIC WORKS,  
HIGHWAY AND TRANSPORTATION

**PUBLIC WORKS ENGINEERING DIVISION**  
1919 ALLIANT ENERGY CENTER WAY  
MADISON, WISCONSIN 53713

## **REQUEST FOR BIDS NO. 316002 (REBID) EXPOSITION HALL LIGHTING UPGRADES ALLIANT ENERGY CENTER 1919 ALLIANT ENERGY CENTER WAY MADISON, WISCONSIN**

Due Date / Time: **2:00 P.M., TUESDAY, AUGUST 16, 2016**

Location: **PUBLIC WORKS OFFICE**

Performance / Payment Bond: **100% OF CONTRACT AMOUNT**

Bid Deposit: **5% OF BID AMOUNT**

---

FOR INFORMATION ON THIS REQUEST FOR BIDS, PLEASE CONTACT:

J. ERIC URTEZ, AIA - PROJECT MANAGER  
TELEPHONE NO.: 608/266-4798  
FAX NO.: 608/267-1533  
E-MAIL: [urtes.eric@countyofdane.com](mailto:urtes.eric@countyofdane.com)

## TABLE OF CONTENTS FOR RFB NO. 316002

### **DIVISION 00 - PROCUREMENT AND CONTRACTING REQUIREMENTS**

- Project Manual Cover Page
- Table of Contents
- Advertisement for Bids (Legal Notice)
- Instructions to Bidders
- Bid Form
- Best Value Contracting Application
- Fair Labor Practices Certification
- Sample Public Works Contract
- Sample Bid Bond
- Sample Performance Bond
- Sample Payment Bond
- Equal Benefits Compliance Payment Certification
- General Conditions of Contract
- Supplementary Conditions (including Prevailing Wage Determination)

### **DIVISION 01 - GENERAL REQUIREMENTS**

- 01 00 00 - Basic Requirements
- 01 74 19 - Recycling

### **DIVISION 26 – ELECTRICAL SECTIONS**

- 26 05 00 - COMMON WORK RESULTS FOR ELECTRICAL
- 26 05 02 - ELECTRICAL DEMOLITION FOR REMODELING
- 26 05 19 – LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLE
- 26 05 23 – CONTROL-VOLTAGE ELECTRICAL POWER CABLES
- 26 05 29 – HANGERS AND SUPPORTS FOR ELECTRICAL SYSTEMS
- 26 05 33 – RACEWAY AND BOXES FOR ELECTRICAL SYSTEMS
- 26 05 53 – IDENTIFICATION FOR ELECTRICAL SYSTEMS
- 26 09 28 – LIGHTING CONTROL
- 26 51 13 – INTERIOR LIGHTING FIXTURES, LAMPS, AND BALLASTS

### **EXHIBITS– ELECTRICAL FIXTURE CUT SHEETS**

- EXHIBIT A\* – Fixture A Holophane Phuzion PHS
- \* Fixtures can be found on new work schedule on E3.05

### **DRAWINGS**

Plot drawings on 11" x 17" (ANSI B) or 24" x 36" (ARCH D) paper for correct scale or size.

- E2.01 - Partail Plan- South Lobby & Exterior Soffit
- E2.02 - Partail Plan- Atrium Meeting Rooms
- E2.03 - Partail Plan- Mezz Meeting Rooms
- E3.01 - Partail Plan- Upper Level Exhibit Hall A
- E3.02 - Partail Plan- Upper Level Exhibit Hall B
- E3.03 - Partail Plan- Upper Level Exhibit Hall C
- E3.04 - Partail Plan- Upper Level Exhibit Hall D

**LEGAL NOTICE**

**INVITATION TO BID**

Dane County Public Works, Highway & Transportation Dept., 1919 Alliant Energy Center Way, Madison, WI 53713, will receive sealed Bids until:

**2:00 P.M., TUESDAY, AUGUST 16, 2016**

**REQUEST FOR BIDS NO. 316002**

**EXPOSITION HALL LIGHTING UPGRADES- REBID**

**ALLIANT ENERGY CENTER**

**1919 ALLIANT ENERGY CENTER WAY**

**MADISON, WISCONSIN**

Dane County is inviting Bids for construction services for lighting upgrades to the Exposition Hall on the grounds of the Alliant Energy Center. Only firms with capabilities, experience & expertise with similar projects should obtain this Request for Bids document & submit Bids.

Request for Bids document may be obtained after **2:00 p.m. on Thursday, July 21, 2016** by downloading it from [countyofdane.com/pwbids](http://countyofdane.com/pwbids). Please contact J. Eric Urtes, AIA - Project Manager, at 608/266-4798 or [urtes.eric@countyofdane.com](mailto:urtes.eric@countyofdane.com), or our office at 608/266-4018, for any questions or additional information.

All Bidders must be a registered vendor with Dane County & pay an annual registration fee & must be pre-qualified as a Best Value Contractor before award of Contract. Complete Vendor Registration Form at <https://www.danepurchasing.com/Account/Login?ReturnUrl=%2fvendor> or obtain one by calling 608/266-4131. Complete Pre-qualification Application for Contractors at [countyofdane.com/pwht/BVC\\_Application.aspx](http://countyofdane.com/pwht/BVC_Application.aspx) or obtain one by calling 608/266-4029.

A pre-bid facility tour will be held August 1, 2016 at 9:30 a.m. at the Alliant Energy Center – Administration Building, starting in the Main Conference Room. Bidders are strongly encouraged to attend this tour.

**PUBLISH: JULY 21 & 28, 2016 - WISCONSIN STATE JOURNAL**

**JULY 21 & 28, 2016 - THE DAILY REPORTER**

# INSTRUCTIONS TO BIDDERS

## TABLE OF CONTENTS

1. GENERAL .....	1
2. DRAWINGS AND SPECIFICATIONS .....	1
3. INTERPRETATION .....	2
4. QUALIFICATIONS OF BIDDER (CONTRACTOR AND SUBCONTRACTOR) ....	2
5. BID GUARANTEE .....	3
6. WITHDRAWAL OF BIDS .....	3
7. CONTRACT FORM .....	3
8. CONTRACT INTERESTS BY COUNTY PUBLIC OFFICIALS .....	3
9. EMERGING SMALL BUSINESS PROVISIONS .....	4
10. METHOD OF AWARD - RESERVATIONS .....	5
11. SECURITY FOR PERFORMANCE AND PAYMENTS .....	6
12. TAXES .....	6
13. SUBMISSION OF BIDS .....	6
14. SUBCONTRACTOR LISTING.....	7
15. ALTERNATE BIDS .....	7
16. INFORMATIONAL BIDS .....	7
17. UNIT PRICES .....	7
18. COMMENCEMENT AND COMPLETION .....	8
19. WORK BY OWNER .....	8
20. SPECIAL HAZARDS COVERAGE .....	8
FORM A .....	9
FORM B.....	10
FORM C.....	11
FORM D .....	12

### 1. GENERAL

- A. Before submitting Bid, bidder shall thoroughly examine all Construction Documents. Successful Bidder shall be required to provide all the Work that is shown on Drawings, set forth in Specifications, or reasonably implied as necessary to complete Contract for this project.
- B. Bidder shall visit site to become acquainted with adjacent areas, means of approach to site, conditions of actual site and facilities for delivering, storing, placing, and handling of materials and equipment.
- C. A **Pre-bid meeting is scheduled on Monday, August 1, 2016 at 1:00 p.m.** at the Alliant Energy Center – Administration Building (1919 Alliant Energy Center Way; Madison, WI) starting in the Main Conference Room.. Attendance by all bidders is optional, however bidders and subcontractors are strongly encouraged to attend.
- D. Failure to visit site or failure to examine any and all Construction Documents will in no way relieve successful Bidder from necessity of furnishing any necessary materials or equipment, or performing any work, that may be required to complete the Work in accordance with Drawings and Specifications. Neglect of above requirements will not be accepted as reason for delay in the Work or additional compensation.

### 2. DRAWINGS AND SPECIFICATIONS

- A. Drawings and Specifications that form part of this Contract, as stated in Article 1 of General Conditions of Contract,, are enumerated in Document Index of these Construction Documents.

- B. Complete sets of Drawings and Specifications for all trades will be available to all Bidders, irrespective of category of work to be bid on, in order that all Bidders may be familiar with work of other trades as they affect their bid.

### **3. INTERPRETATION**

- A. No verbal explanation or instructions will be given in regard to meaning of Drawings or Specifications before Bid Due Date. Bidders shall bring inadequacies, omissions or conflicts to Owner or Energy Engineer's attention at least ten (10) calendar days before Bid Due Date. Prompt clarification will be available to all bidders by Addendum.
- B. Failure to so request clarification or interpretation of Drawings and Specifications will not relieve successful Bidder of responsibility. Signing of Contract will be considered as implicitly denoting that Contractor has thorough understanding of scope of the Work and comprehension of Construction Documents.
- C. Owner or Energy Engineer will not be responsible for verbal instructions.

### **4. QUALIFICATIONS OF BIDDER (CONTRACTOR AND SUBCONTRACTOR)**

- A. Before award of Contract can be approved, Owner shall be satisfied that Bidder involved meets following requirements:
  - 1. Has completed at least one (1) project of at least fifty percent (50%) of size or value of Division of work being bid and type of work completed is similar to that being bid. If greater magnitude of experience is deemed necessary, other than size or value of work, such requirements will be described in appropriate section of Specifications.
  - 2. Maintains permanent place of business.
  - 3. Can be bonded for terms of proposed Contract.
  - 4. Has record of satisfactorily completing past projects and supplies list of no more than three (3) most recent, similar projects, with architect or engineer's and owner's names, addresses and telephone numbers for each project. Provide project list and references within two (2) days following the Bid Date. Criteria which will be considered in determining satisfactory completion of projects by bidder will include:
    - a. Completed contracts in accordance with drawings and specifications.
    - b. Diligently pursued execution of work and completed contracts according to established time schedule unless Owner grants extensions.
    - c. Fulfilled guarantee requirements of construction documents.
    - d. Is not presently on ineligible list maintained by County's Department of Administration for noncompliance with equal employment opportunities and affirmative action requirements.
    - e. Authorized to conduct business in Wisconsin. By submitting Bid, bidder warrants that it has: complied with all necessary requirements to do business in State of Wisconsin; that persons executing contract on its behalf are authorized to do so; and, if corporation, that name and address of bidder's registered agent are as set forth in Contract. Bidder shall notify Owner immediately, in writing, of any change in its registered agent, their address, and bidder's legal status. For partnership, term "registered agent" shall mean general partner.
- B. County's Public Works Project Engineer will make such investigations as are deemed necessary to determine ability of bidder to perform the Work, and bidder shall furnish to

County's Public Works Project Engineer or designee all such information and data for this purpose as County's Public Works Project Engineer may request. Owner reserves right to reject Bid if evidence submitted by, or investigation of, bidder fails to satisfy Owner that bidder is responsible and qualified to carry out obligations of Contract and to complete the Work contemplated therein.

## **5. BID GUARANTEE**

- A. Bank certified check, cashier's check or Bid Bond, payable to County in amount not less than five percent (5%) of maximum bid, shall accompany each Bid as guarantee that if Bid is accepted, Bidder will execute and return proposed Contract and Performance and Payment Bonds within ten (10) business days after being notified of acceptance of Bid. Company issuing bonds must be licensed to do business in Wisconsin.
- B. Any bid, which is not accompanied by bid guarantee, will be considered "No Bid" and will not be read at Bid Due Date.
- C. If successful Bidder so delivers Contract, Certificate of Insurance, and Performance and Payment Bonds, check will be returned to Bidder. In case Bidder fails to deliver such Contract, insurance, and bond, amount of bid guarantee will be forfeited to County as liquidated damages.
- D. All checks tendered as bid guarantee, except those of three (3) lowest qualified, responsible bidders, will be returned to their makers within three (3) business days after Bid Due Date. All such retained checks will be returned immediately upon signing of Contract and Performance and Payment Bonds by successful Bidder.

## **6. WITHDRAWAL OF BIDS**

- A. Bids may be withdrawn by written request received from bidder or authorized representative thereof prior to time fixed for Bid Due Date, without prejudice to right of bidder to file new Bid. Withdrawn Bids will be returned unopened. Negligence on part of bidder in preparing their Bid confers no right for withdrawal of Bid after it has been opened.
- B. No Bid may be withdrawn for period of sixty (60) calendar days after Bid Due Date.
- C. If Bid contains error, omission or mistake, bidder may limit liability to amount of bidder's guarantee by giving written Notice of Intent not to execute Contract to Owner within seventy-two (72) hours of Bid Due Date.

## **7. CONTRACT FORM**

- A. Sample copy of contract that successful Bidder will be required to enter into is included in these Construction Documents and bidders are required to familiarize themselves with all conditions contained therein.

## **8. CONTRACT INTERESTS BY COUNTY PUBLIC OFFICIALS**

- A. In accordance with Wisconsin Statute 946.13, county official may not bid for or enter into any contract involving receipts or disbursements of more than \$15,000.00 in a year, in which they have private pecuniary interest, direct or indirect if at same time they are authorized to take official action with respect to making of this Contract. Any contract entered into in violation of this Statute is void and County incurs no liability thereon. This subsection does not affect application and enforcement of Wisconsin Statute 946.13 by state prosecutors in criminal courts of this state.

## 9. EMERGING SMALL BUSINESS PROVISIONS

- A. **Emerging Small Business Definition.** For purposes of this provision, ESB is defined as:
1. Independent business concern that has been in business minimum of one year;
  2. Business located in State of Wisconsin;
  3. Business comprised of less than twenty-five (25) employees;
  4. Business must not have gross sales in excess of three million dollars (\$3,000,000.00) over past three years; and
  5. Business does not have history of failing to complete projects.
- B. **Emerging Small Business (ESB) Involvement.** Bidder shall make good faith effort to award minimum of ten percent (10%) of the Work to ESBs. Bidder shall submit report to Dane County Contract Compliance Officer within ten (10) days after Bid Due Date demonstrating such efforts. Good faith efforts means significant contact with ESBs for purposes of soliciting bids from them. Failure to make or demonstrate good faith efforts will be grounds for disqualification.
- C. **Emerging Small Business Report.** Emerging Small Business Enterprise Report is to be submitted by Bidder in separate envelope marked "Emerging Small Business Report". This report is due by 2:00 p.m. following specified ten (10) days after Bid Due Date. Bidder who fails to submit Emerging Small Business Report shall be deemed not responsive.
- D. **ESB Goal.** Goal of this project is ten percent (10%) ESB participation. ESB utilizations are shown as percentage of total Bid. If Bidder meets or exceeds specified goal, Bidder is only required to submit Form A - Certification, and Form B - Involvement. Goal shall be met if Bidder qualifies as ESB.
- E. **Report Contents.** Following award of Contract, Bidder shall submit copies of executed contracts for all Emerging Small Businesses. Emerging Small Business Report shall consist of these:
1. Form A - Certification;
  2. Form B - Involvement;
  3. Form C - Contacts;
  4. Form D - Certification Statement (if appropriate); and
  5. Supportive documentation (i.e., copies of correspondence, telephone logs, copies of advertisements).
- F. **ESB Certification.** All contractors, subcontractors and suppliers seeking ESB certification must complete and submit Emerging Small Business Certification Application to Dane County Contract Compliance Program.
- G. **Certification Statement.** If ESB firm has not been certified by County as ESB prior to submittal of this Bid, ESB Report cannot be used to fulfill ESB goal for this project unless firm provides "Form D - Certification Statement". Certification statement must be completed and signed by ESB firm.

H. **Questions.** Questions concerning Emerging Small Business provisions shall be directed to:

Dane County Contract Compliance Officer  
City-County Building, Room 421  
210 Martin Luther King, Jr. Blvd.  
Madison, WI 53703  
608/266-5623

I. **Substituting ESBs.** In event of any significant changes in subcontract arrangements or if need arises to substitute ESBs, Bidder shall report such proposed changes to Contract Compliance Officer to making any official changes and request authorization to substitute ESB firm. Bidder further agrees to make every possible effort to replace ESB firm with another qualified ESB firm.

J. **Good Faith Efforts.** Good faith efforts can be demonstrated by meeting all of these obligations:

1. Selecting portions of the Work to be performed by ESBs in order to increase likelihood of meeting ESB goal including, where appropriate, breaking down Contract into smaller units to facilitate ESB participation.
2. Advertising in general circulation, trade associations and women / minority focus media concerning subcontracting opportunities.
3. Providing written notices to reasonable number of specific ESBs that their interest in Contract was being solicited in sufficient time to allow ESBs to participate effectively.
4. Following up on initial solicitations of interest by contacting ESBs within five (5) business days prior to Bid Due Date to determine with certainty whether ESB were interested, to allow ESBs to prepare bids.
5. Providing interested ESB with adequate information about Drawings, Specifications and requirements of Contract.
6. Using services of available minority, women and small business organizations and other organizations that provide assistance in recruitment of MBEs / WBEs / ESBs.
7. Negotiating in good faith with interested ESBs, not rejecting ESBs as unqualified without sound reason based on thorough investigation of their capabilities.
8. Submitting required project reports and accompanying documents to County's Contract Compliance Officer within twenty-four (24) hours after Bid Due Date.

K. **Appeals Disqualification of Bid.** Bidder who is disqualified may appeal to Public Works & Transportation Committee and Equal Opportunity Commission.

## 10. METHOD OF AWARD - RESERVATIONS

A. Following will be basis of award of Contract, providing cost does not exceed amount of funds then estimated by County as available to finance Contract(s):

1. Lowest dollar amount submitted by qualified responsible bidder on Base Bid for all work comprising project, combined with such additive Owner accepted alternates.

2. Owner reserves right to reject all bids or any bid, to waive any informality in any bid, and to accept any bid that will best serve interests of County.
3. Unit Prices and Informational Bids will not be considered in establishing low bidder.

## **11. SECURITY FOR PERFORMANCE AND PAYMENTS**

- A. Simultaneous with delivery of signed Contract, Bidder shall be required to furnish Performance and Payment Bonds as specified in Article 29 of General Conditions of Contract. Surety Company shall be licensed to do business in Wisconsin. Performance and Payment Bonds must be dated same date or subsequent to date of Contract. Performance and Payment Bonds must emulate information in Sample Performance and Payment Bonds in Construction Documents.
- B. Provide certified copy of power of attorney from Surety Company showing that agent who signs Bond has power of attorney to sign for Surety Company. Secretary or Assistant Secretary of company must sign this certification, not attorney-in-fact. Certification must bear same or later date as Bond. Power of Attorney must emulate model power of attorney information detailed in Sample Performance and Payment Bonds.
- C. If Bidder is partnership or joint venture, State certified list, providing names of individuals constituting partnership or joint venture must be furnished. Contract itself may be signed by one partner of partnership, or one partner of each firm comprising joint venture, but Performance and Payment Bonds must be signed by all partners.
- D. If Bidder is a corporation, it is necessary that current certified copy of resolution or other official act of directors of corporation be submitted showing that person who signs Contract is authorized to sign contracts for corporation. It is also necessary that corporate seal be affixed to resolution, contract, and performance and payment bonds. If your corporation has no seal, it is required that above documents include statement or notation to effect that corporation has no seal.

## **12. TAXES**

- A. Wisconsin Statute 77.54 (9m) allows building materials that become part of local unit government facilities to be exempt from sales & use tax. Vendors & materials suppliers may not charge Bidders sales & use tax on these purchases. This does not include highways, streets or roads. Any other Sales, Consumer, Use & other similar taxes or fees required by law shall be included in Bid.
- B. In accordance with Wisconsin Statute 71.80(16)(a), successful nonresident bidder, whether incorporated or not, and not otherwise regularly engaged in business in this state, shall file surety bond with State of Wisconsin Department of Revenue payable to Department of Revenue, to guarantee payment of income taxes, required unemployment compensation contributions, sales and use taxes and income taxes withheld from wages of employees, together with any penalties and interest thereon. Amount of bond shall be three percent (3%) of Contract or subcontract price on all contracts of \$50,000 or more.

## **13. SUBMISSION OF BIDS**

- A. All Bids shall be submitted on standard Bid Form bound herein and only Bids that are made on this Bid Form will be considered. Entire Bid Form and other supporting documents, if any, shall be removed or copied from Construction Documents, filled out, and submitted in manner specified hereinafter. Submit completed Bid Bond with Bid as well.

- B. No bids for any subdivision or any sub-classification of this Work, except as indicated, will be accepted. Any conditional Bid, amendment to Bid Form or appended item thereto, or inclusion of any correspondence, written or printed matter, or details of any nature other than that specifically called for, which would alter any essential provision of Construction Documents, or require consideration of unsolicited material or data in determining award of Contract, will disqualify Bid. Telecommunication alterations to Bid will not be accepted.
- C. Bidders must submit single Bid for all the Work.
- D. Bid amounts shall be inserted in words and in figures in spaces provided on Bid Form; in case of conflict, written word amounts will govern.
- E. Addenda issued after Bid Letting shall become part of Construction Documents. Bidders shall acknowledge receipt of such addenda in appropriate space provided on Bid Form. Bid may be rejected if receipt of any particular addendum applicable to award of Contract has not been acknowledged on Bid Form.
- F. Bids shall be signed, placed in envelope, sealed and delivered before due time to place designated in Invitation to Bid, and identified with project name, bid number, location, category of work being bid upon, Bid Due Date, name and address of bidder.
- G. Bidder shall be responsible for sealed Bid being delivered to place designated for Bid Due Date on or before date and time specified. Bids received after time of closing will be rejected and returned to bidder unopened.
- H. Bid will be considered invalid and will be rejected if bidder has not signed it.
- I. Faxed or emailed Bids will not be accepted.
- J. Bidder's organization shall submit completed with Bid, Fair Labor Practices Certification form, included in these Construction Documents.

#### **14. SUBCONTRACTOR LISTING**

- A. Bidders shall be required to submit list of major subcontractors for General Construction, Plumbing, HVAC, and Electrical work proposed for this project to include committed prices for each subcontractor. List shall be placed in separate sealed envelope that must be clearly identified as "Major Subcontractor List", for named project and name of Bidder submitting it. County must receive envelope no later than date by which successful Bidder is required to submit his or her signed Contract, as established in Construction Documents.

#### **15. ALTERNATE BIDS**

- A. Not Applicable

#### **16. INFORMATIONAL BIDS**

- A. Not Applicable

#### **17. UNIT PRICES**

- A. Provide unit prices where requested on Bid Form. Unit prices will include all costs for materials, labor, insurance, taxes, overhead and profit necessary to perform specified work. Estimated quantities are approximate only. Payment will be based upon actual quantities

placed, provided or installed. Failure to provide requested unit prices may result in rejection of entire Bid.

- B. Owner reserves right to accept or reject any unit prices as given in Bid.
- C. Bidder shall refer to Bid Form and applicable specification section to determine basis of unit measure and detailed information related to each unit price item requested.

#### **18. COMMENCEMENT AND COMPLETION**

- A. Successful Bidder shall commence work when schedule and weather permit, but no later than stated in Bid Form. Contractor shall pursue the Work regularly and continuously at reasonable rate to insure completion of the Work within time stated in Bid.
- B. Should it be found impossible to complete the Work on or before time specified for completion, written request may be submitted for extension of time setting forth reasons believed to justify granting of such request. Refer to Article 20 of General Conditions of Contract, titled "Time for Completion".

#### **19. WORK BY OWNER**

- A. Work will be accomplished by Owner or will be let under separate contracts and will not be included under this Contract: Work by Owner (not included in the scope of Work by the Contractor) is outlined in Specification Section 14 21 00 (2.2 RELATED WORK PROVIDED BY OTHERS).

#### **20. SPECIAL HAZARDS COVERAGE**

- A. Not Applicable.

**FORM A**

**DANE COUNTY  
EMERGING SMALL BUSINESS REPORT - CERTIFICATION**

In accordance with General Conditions of Contract, submit this Emerging Small Business Report within ten (10) days after Bid Due Date.

PROJECT NAME: \_\_\_\_\_

\_\_\_\_\_

BID NO.: \_\_\_\_\_ BID DUE DATE: \_\_\_\_\_

**BIDDER INFORMATION**

COMPANY NAME: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

\_\_\_\_\_

TELEPHONE NO.: \_\_\_\_\_

CONTACT PERSON: \_\_\_\_\_

EMAIL ADDRESS: \_\_\_\_\_

**FORM B**

Page \_\_\_ of \_\_\_

**DANE COUNTY**

(Copy this Form as necessary to provide complete information)

**EMERGING SMALL BUSINESS REPORT - INVOLVEMENT**

COMPANY NAME: \_\_\_\_\_

PROJECT NAME: \_\_\_\_\_

BID NO.: \_\_\_\_\_ BID DUE DATE: \_\_\_\_\_

ESB NAME: \_\_\_\_\_

CONTACT PERSON: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

PHONE NO & EMAIL.: \_\_\_\_\_

Indicate percentage of financial commitment to this ESB: \_\_\_\_\_ % Amount: \$ \_\_\_\_\_

ESB NAME: \_\_\_\_\_

CONTACT PERSON: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

PHONE NO & EMAIL.: \_\_\_\_\_

Indicate percentage of financial commitment to this ESB: \_\_\_\_\_ % Amount: \$ \_\_\_\_\_

**FORM C**

Page \_\_\_ of \_\_\_

**DANE COUNTY  
EMERGING SMALL BUSINESS REPORT - CONTACTS**

(Copy this Form as necessary to provide complete information)

COMPANY NAME: \_\_\_\_\_

PROJECT NAME: \_\_\_\_\_

BID NO.: \_\_\_\_\_ BID DUE DATE: \_\_\_\_\_

	<u>ESB FIRM NAME CONTACTED</u>	<u>DATE</u>	<u>PERSON CONTACTED</u>	<u>DID ESB BID?</u>	<u>ACC- EPT BID?</u>	<u>REASON FOR REJECTION</u>
1)	_____	_____	_____	_____	_____	_____
2)	_____	_____	_____	_____	_____	_____
3)	_____	_____	_____	_____	_____	_____
4)	_____	_____	_____	_____	_____	_____
5)	_____	_____	_____	_____	_____	_____
6)	_____	_____	_____	_____	_____	_____
7)	_____	_____	_____	_____	_____	_____
8)	_____	_____	_____	_____	_____	_____

**FORM D**

**DANE COUNTY  
EMERGING SMALL BUSINESS REPORT - CERTIFICATION STATEMENT**

I, \_\_\_\_\_, \_\_\_\_\_ of  
Name Title

\_\_\_\_\_ certify to best of my knowledge and  
Company

belief that this business meets Emerging Small Business definition as indicated in Article 9 and  
that information contained in this Emerging Small Business Report is true and correct.

\_\_\_\_\_  
Bidder's Signature

\_\_\_\_\_  
Date

Name of Bidding Firm: \_\_\_\_\_

**BID FORM**

**BID NO. 316002**

**PROJECT: EXPOSITION HALL LIGHTING UPGRADES (REBID)  
ALLIANT ENERGY CENTER**

**TO: DANE COUNTY DEPARTMENT OF PUBLIC WORKS, HIGHWAY &  
TRANSPORTATION PROJECT MANAGER  
1919 ALLIANT ENERGY CENTER WAY  
MADISON, WISCONSIN 53713**

**NOTE: WISCONSIN STATUTE 77.54 (9M) ALLOWS FOR NO SALES & USE TAX ON  
THE PURCHASE OF MATERIALS FOR COUNTY PUBLIC WORKS PROJECTS.**

**BASE BID - LUMP SUM:**

Upgrade of lighting and control systems for the Exposition Hall of the Alliant Energy Center. The undersigned, having examined the site where the Work is to be executed and having become familiar with local conditions affecting the cost of the Work and having carefully examined the Drawings and Specifications, all other Construction Documents and Addenda thereto prepared by Dane County Department of Public Works, Highway & Transportation hereby agrees to provide all [design expertise, ]labor, materials, equipment and services necessary for the complete and satisfactory execution of the entire Work, as specified in the Construction Documents, for the Base Bid stipulated sum of:

\_\_\_\_\_ and \_\_\_\_\_ /100 Dollars  
Written Price

\$ \_\_\_\_\_  
Numeric Price

Receipt of the following addenda and inclusion of their provisions in this Bid is hereby acknowledged:

Addendum No(s). \_\_\_\_\_ through \_\_\_\_\_

Dated \_\_\_\_\_

Dane County Department of Public Works, Highway & Transportation must have this project completed by December 31, 2016. Assuming this Work can be started September 27, 2016, what dates can you commence and complete this job?

Commencement Date: \_\_\_\_\_ Completion Date: \_\_\_\_\_  
(final, not substantial)

I hereby certify that all statements herein are made on behalf of:

\_\_\_\_\_  
(Name of Corporation, Partnership or Person submitting Bid)

Select one of the following:

1. A corporation organized and existing under the laws of the State of \_\_\_\_\_, or
2. A partnership consisting of \_\_\_\_\_, or
3. A person conducting business as \_\_\_\_\_;

Of the City, Village, or Town of \_\_\_\_\_ of the State of \_\_\_\_\_.

I have examined and carefully prepared this Bid from the associated Construction Documents and have checked the same in detail before submitting this Bid; that I have full authority to make such statements and submit this Bid in (its) (their) (my) behalf; and that the said statements are true and correct. In signing this Bid, we also certify that we have not, either directly or indirectly, entered into any agreement or participated in any collusion or otherwise taken any action in restraint of free competition; that no attempt has been made to induce any other person or firm to submit or not to submit a Bid; that this Bid has been independently arrived at without collusion with any other bidder, competitor, or potential competitor; that this Bid has not been knowingly disclosed prior to the Bids Due Date to another bidder or competitor; that the above statement is accurate under penalty of perjury.

The undersigned further agrees to honor the Base Bid and the Alternate Bid(s) for sixty (60) calendar days from date of Award of Contract.

**SIGNATURE:** \_\_\_\_\_  
(Bid is invalid without signature)

Print Name: \_\_\_\_\_ Date: \_\_\_\_\_

Title: \_\_\_\_\_

Address: \_\_\_\_\_

Telephone No.: \_\_\_\_\_ Fax No.: \_\_\_\_\_

Email Address: \_\_\_\_\_

Contact Person: \_\_\_\_\_

**THIS PAGE IS FOR BIDDERS' REFERENCE AND NEED NOT BE SUBMITTED WITH BID FORM.**

**BID CHECK LIST:**

These items **must** be included with Bid:

Bid Form

Bid Bond

Fair Labor Practices Certification

**BIDDERS SHOULD BE AWARE OF THE FOLLOWING:**

**DANE COUNTY VENDOR REGISTRATION PROGRAM**

Any person bidding on any County contract must be registered with the Dane County Purchasing Division & pay an annual registration fee. A contract will not be awarded to an unregistered vendor. Obtain a *Vendor Registration Form* by calling 608/266-4131 or complete a new form or renewal online at:

[www.danepurchasing.com/registration](http://www.danepurchasing.com/registration)

**DANE COUNTY BEST VALUE CONTRACTING PRE-QUALIFICATION**

Contractors must be pre-qualified as a Best Value Contractor with the Dane County Public Works Engineering Division before the award of contract. Obtain a *Best Value Contracting Application* by calling 608/266-4018 or complete one online at:

[www.countyofdane.com/pwht/BVC\\_Application.aspx](http://www.countyofdane.com/pwht/BVC_Application.aspx)

**EQUAL BENEFITS REQUIREMENT**

By submitting a Bid, the contractor acknowledges that a condition of this contract is to provide equal benefits as required by Dane County Code of Ordinances Chapter 25.016. Contractor shall provide equal benefits as required by that Ordinance to all required employees during the term of the contract. Equal Benefits Compliance Payment Certification shall be submitted with final pay request. For more information:

[www.danepurchasing.com/partner\\_benefit.aspx](http://www.danepurchasing.com/partner_benefit.aspx)

This Page Left Blank Intentionally



# DANE COUNTY DEPARTMENT of PUBLIC WORKS, HIGHWAY and TRANSPORTATION

County Executive  
Joseph T. Parisi

1919 Alliant Energy Center Way • Madison, Wisconsin 53713  
Phone: (608) 266-4018 • FAX: (608) 267-1533

Commissioner / Director  
Gerald J. Mandli

## BEST VALUE CONTRACTING APPLICATION

### CONTRACTORS / LICENSURE APPLICANTS

The Dane County Department of Public Works requires all contractors to be pre-qualified as a best value contractor with the County prior to being awarded a contract. In addition, the County pre-qualifies potential contractors and sub-contractors who wish to work on County contracts. Subcontractors must become pre-qualified ten (10) days prior to commencing work under any Dane County Public Works Contract. Potential subcontractors are urged to become pre-qualified as early as possible. This document shall be completed, properly executed, along with the necessary attachments and additional information that the County requires for the protection and welfare of the public in the performance of a County contract.

Contractors or subcontractors of any tier who attain pre-qualification status will retain that status for a period of two (2) years from the date of qualification. Contractors shall notify the Dane County Department of Public Works, Highway & Transportation within fifteen (15) days of any changes to its business or operations that are relevant to the pre-qualification application. Failure to do so could result in suspension, revocation of the contractor's pre-qualification, debarment from County contracts for up to three (3) years and / or other sanctions available under the law.

No contracts will be awarded for construction work performed on Dane County projects unless the contractor is currently approved as a Wisconsin Trade Trainer or has applied for approval as an Apprenticeship Trade Trainer to the Wisconsin Department of Workforce Development and agrees to an acceptable apprenticeship program. If you are not currently approved as a Wisconsin Trade Trainer, or have not applied for approval as an Apprenticeship Trade Trainer, please contact the Department of Workforce Development - Bureau of Apprenticeship Standards at 608/266-3133 or visit their web site at: [dwd.wisconsin.gov/apprenticeship/](http://dwd.wisconsin.gov/apprenticeship/).

### EXEMPTIONS

- Contractors who employ less than five (5) apprenticeable trade workers are not required to pre-qualify.
- Contractors performing work that does not apply to an apprenticeable trade, as outlined in Appendix A.
- The contractor / subcontractor provides sufficient documentation to demonstrate one or more of the following:
  - apprentices are not available in a specific geographic area;
  - the applicable apprenticeship program is unsuitable or unavailable; or
  - there is a documented depression of the local construction market which prevents compliance.

<b>SEC.</b>	<b>PROOF OF RESPONSIBILITY</b>	<b>CHECK IF APPLICABLE</b>
1	Does your firm possess all technical qualifications and resources, including equipment, personnel and financial resources, necessary to perform the work required for any project or obtain the same through the use of responsible, pre-qualified subcontractors?	Yes: <input type="checkbox"/> No: <input type="checkbox"/>
2	Will your firm possess all valid, effective licenses, registrations or certificates required by federal, state, county, or local law, which are necessary for the type of work to be performed including, but not limited to, those for any type of trade work or specialty work?	Yes: <input type="checkbox"/> No: <input type="checkbox"/>
3	Will your firm meet all bonding requirements as required by applicable law or contract specifications?	Yes: <input type="checkbox"/> No: <input type="checkbox"/>
4	Will your firm meet all insurance requirements as required by applicable law or specifications, including general liability insurance, workers compensation insurance and unemployment insurance requirements?	Yes: <input type="checkbox"/> No: <input type="checkbox"/>
5	Will your firm maintain a substance abuse policy for employees hired for public works contracts that comply with Wis. Stats. Sec. 103.503?	Yes: <input type="checkbox"/> No: <input type="checkbox"/>
6	Does your firm acknowledge that it must pay all craft employees on public works projects the wage rates and benefits required under Section 66.0903 of the Wisconsin Statutes?	Yes: <input type="checkbox"/> No: <input type="checkbox"/>
7	Will your firm fully abide by the equal opportunity and affirmative action requirements of all applicable laws, including County ordinances?	Yes: <input type="checkbox"/> No: <input type="checkbox"/>
8	In the past three (3) years, has your firm had control or has another corporation, partnership or other business entity operating in the construction industry controlled it? If so, please attach a statement explaining the nature of the firm relationship?	Yes: <input type="checkbox"/> No: <input type="checkbox"/> If Yes, attach details.
9	In the past three (3) years, has your firm had any type of business, contracting or trade license, certification or registration revoked or suspended?	Yes: <input type="checkbox"/> No: <input type="checkbox"/> If Yes, attach details.
10	In the past three (3) years, has your firm been debarred by any federal, state or local government agency?	Yes: <input type="checkbox"/> No: <input type="checkbox"/> If Yes, attach details.
11	In the past three (3) years, has your firm defaulted or failed to complete any contract?	Yes: <input type="checkbox"/> No: <input type="checkbox"/> If Yes, attach details.
12	In the past three (3) years, has your firm committed a willful violation of federal, state or local government safety laws as determined by a final decision of a court or government agency authority.	Yes: <input type="checkbox"/> No: <input type="checkbox"/> If Yes, attach details.
13	In the past three (3) years, has your firm been in violation of any law relating to your contracting business where the penalty for such violation resulted in the imposition of a penalty greater than \$10,000?	Yes: <input type="checkbox"/> No: <input type="checkbox"/> If Yes, attach details.
14	Is your firm Executive Order 108 precertified with the State of Wisconsin?	Yes: <input type="checkbox"/> No: <input type="checkbox"/>
15	Is your firm an active Wisconsin Trade Trainer as determined by the Wisconsin Bureau of Apprenticeship Standards?	Yes: <input type="checkbox"/> No: <input type="checkbox"/>
16	Is your firm exempt from being pre-qualified with Dane County?	Yes: <input type="checkbox"/> No: <input type="checkbox"/> If Yes, attach reason for exemption.
17	Does your firm acknowledge that in doing work under any County Public Works Contract, it will be required to use as subcontractors only those contractors that are also pre-qualified with the County or become so ten days prior to commencing work?	Yes: <input type="checkbox"/> No: <input type="checkbox"/>
18	Contractor has been in business less than one year?	Yes: <input type="checkbox"/> No: <input type="checkbox"/>
19	Is your firm a first time Contractor requesting a one time exemption, but, intend to comply on all future contracts and are taking steps typical of a "good faith" effort?	Yes: <input type="checkbox"/> No: <input type="checkbox"/>
20	Not applicable. My firm does not intend to work on Best Value Contracts. Note: Best Value Contracting is required to bid on most Public Works Contracts (if unclear, please call Jan Neitzel Knox 608-266-4029).	Yes: <input type="checkbox"/> No: <input type="checkbox"/>

## SIGNATURE SECTION

Your firm's Officer, or the individual who would sign a bid and / or contract documents must sign this document.

I do hereby certify that all statements herein contained are true and correct to the best of my knowledge:

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Printed or Typed Name and Title

NAME AND ADDRESS OF CONTRACTOR	
Name of Firm:	
Address:	
City, State, Zip:	
Telephone Number:	
Fax Number:	
E-mail Address:	

## REMEMBER!

Return all to forms and attachments, or questions to:

**JAN NEITZEL KNOX**  
**EMAIL: NEITZEL-KNOX@COUNTYOFDANE.COM**  
**OFFICE: (608)266-4029, FAX: (608)267-1533**

**DANE COUNTY DEPARTMENT OF PUBLIC WORKS,  
HIGHWAY & TRANSPORTATION  
1919 ALLIANT ENERGY CENTER WAY  
MADISON, WI 53713**

# APPENDIX A

## APPRENTICEABLE TRADES

Bricklayer  
Carpenter  
Cement Mason (Concrete Finisher)  
Cement Mason (Heavy Highway)  
Construction Craft Laborer  
Data Communications Installer  
Electrician  
Elevator Mechanic / Technician  
Environmental Systems Technician / HVAC Service Technician / HVAC Install & Service  
Glazier  
Heavy Equipment Operator / Operating Engineer  
Insulation Worker (Heat & Frost)  
Iron Worker (Assembler, Metal Buildings)  
Painter / Decorator  
Plasterer  
Plumber  
Roofer / Waterproofer  
Sheet Metal Worker  
Sprinkler Fitter  
Steamfitter (Service & Refrigeration)  
Taper & Finisher  
Telecommunications (Voice, Data & Video) Installer / Technician  
Tile Setter

**FAIR LABOR PRACTICES CERTIFICATION**

The undersigned, for and on behalf of the BIDDER, APPLICANT or PROPOSER named herein, certifies as follows:

- A. That he or she is an officer or duly authorized agent of the above-referenced BIDDER, APPLICANT or PROPOSER, which has submitted a bid, application or proposal for a contract or agreement with the county of Dane.
  
- B. That BIDDER, APPLICANT or PROPOSER has (check one):

\_\_\_\_\_ not been found by the National Labor Relations Board (“NLRB”) or the Wisconsin Employment Relations Commission (“WERC”) to have violated any statute or regulation regarding labor standards or relations in the seven years prior to the signature date of this Certification.

\_\_\_\_\_ been found by the National Labor Relations Board (“NLRB”) or the Wisconsin Employment Relations Commission (“WERC”) to have violated any statute or regulation regarding labor standards or relations in the seven years prior to the signature date of this Certification.

\_\_\_\_\_  
Officer or Authorized Agent Signature \_\_\_\_\_ Date

\_\_\_\_\_  
Printed or Typed Name and Title

\_\_\_\_\_  
Printed or Typed Business Name

**NOTE:** You can find information regarding the violations described above at: [www.nlrb.gov](http://www.nlrb.gov) and [werc.wi.gov](http://werc.wi.gov).

For reference, Dane County Ordinance 25.11(28)(a) is as follows:  
(28) BIDDER RESPONSIBILITY. (a) Any bid, application or proposal for any contract with the county, including public works contracts regulated under chapter 40, shall include a certification indicating whether the bidder has been found by the National Labor Relations Board (NLRB) or the Wisconsin Employment Relations Committee (WERC) to have violated any statute or regulation regarding labor standards or relations within the last seven years. The purchasing manager shall investigate any such finding and make a recommendation to the committee, which shall determine whether the conduct resulting in the finding affects the bidder’s responsibility to perform the contract.

**If you indicated that the NLRB or WERC have found you to have such a violation, you must include copies of any relevant information regarding such violation with your proposal, bid or application.**

Include this completed Certification with your bid, application or proposal.

**COUNTY OF DANE**

**PUBLIC WORKS CONSTRUCTION CONTRACT**

Contract No. \_\_\_\_\_ Bid No. 316002 (Rebid)

Authority: 2016 RES - \_\_\_\_\_

**THIS CONTRACT**, made and entered into as of the date by which authorized representatives of both parties have affixed their signatures, by and between the County of Dane (hereafter referred to as "COUNTY") and \_\_\_\_\_ (hereafter, "CONTRACTOR"), and

**WITNESSETH:**

**WHEREAS**, COUNTY, whose address is c/o Assistant Public Works Director, 1919 Alliant Energy Center Way, Madison, WI 53713, desires to have CONTRACTOR provide lighting upgrades to Exposition Hall on the grounds of the Alliant Energy Center ("the Project"); and **WHEREAS**, CONTRACTOR, whose address is \_\_\_\_\_ is able and willing to construct the Project, in accordance with the Construction Documents

**NOW, THEREFORE**, in consideration of the above premises and the mutual covenants of the parties hereinafter set forth, the receipt and sufficiency of which is acknowledged by each party for itself, COUNTY and CONTRACTOR do agree as follows:

1. CONTRACTOR agrees to construct, for the price of \$\_\_\_\_\_ the Project and at the CONTRACTOR'S own proper cost and expense to furnish all materials, supplies, machinery, equipment, tools, superintendence labor, insurance, and other accessories and services necessary to complete the Project in accordance with the conditions and prices stated in the Bid Form and the General Conditions of Contract, the drawings which include all maps, plats, plans, and other drawings and printed or written explanatory matter thereof, and the specifications therefore as prepared by Sustainable Engineering Group, LLC (hereinafter referred to as "the Energy Engineer"), and as enumerated in the Project Manual Table of Contents, all of which are made a part hereof and collectively evidence and constitute the Contract.
2. COUNTY agrees to pay the CONTRACTOR in current funds for the performance of the Contract subject to additions and deductions, as provided in the General Conditions of Contract, and to make payments on account thereof as provided in Article entitled, "Payments to Contractor" of the General Conditions of Contract.
3. During the term of this Contract, CONTRACTOR agrees to take affirmative action to ensure equal employment opportunities. The CONTRACTOR agrees in accordance with Wisconsin Statute 111.321 and Chapter 19 of the Dane County Code of Ordinances not to discriminate on the basis of age, race, ethnicity, religion, color, gender, disability, marital status, sexual orientation, national origin, cultural differences, ancestry, physical appearance, arrest record or conviction record, military participation or membership in the national guard, state defense force or any other reserve component of the military forces of the United States, or political beliefs. Such equal opportunity shall include, but not be limited to, the following: employment, upgrading, demotion, transfer, recruitment, advertising, layoff, termination, training, rates of pay, and any other form of compensation. CONTRACTOR agrees to post in conspicuous places, available to all employees and applicants for employment, notices setting forth the provisions of this paragraph.

**4.** CONTRACTOR shall file an Affirmative Action Plan with the Dane County Contract Compliance Officer in accord with Chapter 19 of the Dane County Code of Ordinances. CONTRACTOR must file such plan within fifteen (15) business days of the effective date of this Contract. During the term of this Contract CONTRACTOR shall also provide copies of all announcements of employment opportunities to COUNTY'S Contract Compliance Office, and shall report annually the number of persons, by race, ethnicity, gender, and disability status, which apply for employment and, similarly classified, the number hired and number rejected.

**5.** During the term of this Contract, all solicitations for employment placed on CONTRACTOR'S behalf shall include a statement to the effect that CONTRACTOR is an "Equal Opportunity Employer".

**6.** CONTRACTOR agrees to comply with provisions of Chapter 25.016 of the Dane County Code of Ordinances, which pertains to domestic partnership benefits.

**7.** CONTRACTOR agrees to furnish all information and reports required by COUNTY'S Contract Compliance Officer as the same relate to affirmative action and nondiscrimination, which may include any books, records, or accounts deemed appropriate to determine compliance with Chapter 19, Dane County Code of Ordinances, and the provisions of this Contract.

**8.** CONTRACTOR agrees that all persons employed by CONTRACTOR or any subcontractor shall be paid no less than the minimum wage established under Chapter 40, Subchapter II, Dane County Code of Ordinances. CONTRACTOR agrees to abide by and comply with the provisions of Chapter 40, Subchapter II of the Dane County Code of Ordinances, and said Subchapter is fully incorporated herein by reference.

**9.** This Contract is intended to be a Contract solely between the parties hereto and for their benefit only. No part of this Contract shall be construed to add to, supplement, amend, abridge or repeal existing rights, benefits or privileges of any third party or parties including, but not limited to, employees of either of the parties.

**10.** The entire agreement of the parties is contained herein and this Contract supersedes any and all oral agreements and negotiations between the parties relating to the subject matter hereof. The parties expressly agree that the express terms of this Contract shall not be amended in any fashion except in writing, executed by both parties.

**11.** CONTRACTOR must be pre-qualified as a Best Value Contractor with Dane County Public Works Engineering Division before award of Contract. Subcontractors must be pre-qualified ten (10) business days prior to commencing Work under this Contract.

**12.** Attachment A is the Contractor's Bid Form and the RFB Construction Documents and is made a part of this Contract.

**IN WITNESS WHEREOF**, COUNTY and CONTRACTOR, by their respective authorized agents, have caused this Contract and its Schedules to be executed, effective as of the date by which all parties hereto have affixed their respective signatures, as indicated below.

\* \* \* \* \*

**FOR CONTRACTOR:**

\_\_\_\_\_  
Signature Date

\_\_\_\_\_  
Printed or Typed Name and Title

\_\_\_\_\_  
Signature Date

\_\_\_\_\_  
Printed or Typed Name and Title

**NOTE:** If CONTRACTOR is a corporation, Secretary should attest. In accordance with IRS Regulations, unincorporated entities are required to provide either their Social Security or Employer Number in order to receive payment for services rendered.

\* \* \* \* \*

This Contract is not valid or effectual for any purpose until approved by the appropriate authority designated below, and no work is authorized until the CONTRACTOR has been given notice to proceed by COUNTY'S Assistant Public Works Director.

**FOR COUNTY:**

\_\_\_\_\_  
Joseph T. Parisi, County Executive Date

\_\_\_\_\_  
Scott McDonell, County Clerk Date

**ATTACHMENT A**  
**PUBLIC WORKS CONSTRUCTION CONTRACT**  
**CONTRACTOR BID FORM AND RFB DOCUMENTS**

Follows on subsequent page(s)

Sample

**EQUAL BENEFITS COMPLIANCE PAYMENT CERTIFICATION FORM**

**PURPOSE**

25.016(8) of the Dane County Ordinance requires that each contractor receiving payment for contracted services must certify that he or she has complied fully with the requirements of Chapter 25.016 “Equal Benefits Requirement” of the Dane County Ordinances. Such certification must be submitted prior to the final payment on the contract.

This form should be included with a copy of the final contract invoice forwarded to your contract representative at Dane County.

**CERTIFICATION**

I, \_\_\_\_\_ certify that  
Printed or Typed Name and Title

\_\_\_\_\_  
Printed or Typed Name of Contractor

has complied fully with the requirements of Chapter 25.016 of the Dane County Ordinances “Equal Benefits Requirements”.

Signed \_\_\_\_\_

Date \_\_\_\_\_

For questions on this form, please contact Chuck Hicklin at 608-266-4109 or your contract representative at Dane County.

# GENERAL CONDITIONS OF CONTRACT

## TABLE OF CONTENTS

1. CONSTRUCTION DOCUMENTS .....	2
2. DEFINITIONS .....	2
3. ADDITIONAL INSTRUCTIONS AND DRAWINGS .....	2
4. SHOP DRAWINGS, PRODUCT DATA AND SAMPLES .....	3
5. CUTTING AND PATCHING .....	4
6. CLEANING UP .....	4
7. USE OF SITE .....	4
8. MATERIALS AND WORKMANSHIP .....	5
9. CONTRACTOR'S TITLE TO MATERIALS .....	5
10. "OR EQUAL" CLAUSE .....	5
11. PATENTS AND ROYALTIES .....	6
12. SURVEYS, PERMITS, REGULATIONS AND TAXES .....	6
13. CONTRACTOR'S OBLIGATIONS AND SUPERINTENDENCE .....	7
14. WEATHER CONDITIONS .....	8
15. PROTECTION OF WORK AND PROPERTY .....	8
16. INSPECTION AND TESTING OF MATERIALS .....	8
17. REPORTS, RECORDS AND DATA .....	9
18. CHANGES IN THE WORK .....	9
19. EXTRAS .....	10
20. TIME FOR COMPLETION .....	10
21. CORRECTION OF WORK .....	10
22. SUBSURFACE CONDITIONS FOUND DIFFERENT .....	11
23. RIGHT OF DEPARTMENT TO TERMINATE CONTRACT .....	11
24. CONSTRUCTION SCHEDULE AND PERIODIC ESTIMATES .....	11
25. PAYMENTS TO CONTRACTOR .....	12
26. WITHHOLDING OF PAYMENTS .....	14
27. ACCEPTANCE OF FINAL PAYMENT AS RELEASE .....	14
28. PAYMENTS BY CONTRACTOR .....	14
29. CONTRACT SECURITY .....	14
30. ASSIGNMENTS .....	15
31. MUTUAL RESPONSIBILITY OF CONTRACTORS .....	15
32. SEPARATE CONTRACTS .....	15
33. SUBCONTRACTS .....	15
34. PUBLIC WORKS PROJECT MANAGER'S AUTHORITY .....	16
35. ARCHITECT / ENGINEER'S AUTHORITY .....	16
36. STATED ALLOWANCES .....	17
37. ESTIMATES OF QUANTITIES .....	17
38. LANDS AND RIGHTS-OF-WAY .....	17
39. GENERAL GUARANTEE .....	18
40. CONFLICTING CONDITIONS .....	18
41. NOTICE AND SERVICE THEREOF .....	18
42. PROTECTION OF LIVES AND HEALTH .....	19
43. AFFIRMATIVE ACTION PROVISION AND MINORITY / WOMEN / DISADVANTAGED BUSINESS ENTERPRISES .....	19
44. COMPLIANCE WITH FAIR LABOR STANDARDS .....	20
45. DOMESTIC PARTNERSHIP BENEFITS .....	20
46. USE AND OCCUPANCY PRIOR TO ACCEPTANCE .....	20
47. MINIMUM WAGES .....	21
48. CLAIMS .....	21
49. ANTITRUST AGREEMENT .....	21
50. INSURANCE .....	22
51. WISCONSIN LAW CONTROLLING .....	24

## **1. CONSTRUCTION DOCUMENTS**

- A. Construction Documents, listed in Table of Contents of this Specification volume shall form part of this Contract and provisions of Construction Documents shall be as binding upon parties as if they were fully set forth in Contract itself.
- B. These shall also be considered as part of Construction Documents: Addenda, including additions and modifications incorporated in such addenda before execution of Contract; requests for information; construction bulletins; change orders; and written interpretations by Architect / Engineer or Public Works Project Manager that are made after execution of Contract.
- C. Construction Documents are complementary, and what is required by one shall be as binding as if required by all. Intent of Construction Documents is to include all labor, materials and equipment necessary for proper execution of the Work.

## **2. DEFINITIONS**

- A. These terms as used in this Contract are respectively defined as follows:
  - 1. All uses of term "County" in Construction Documents shall mean Dane County.
  - 2. All uses of term "Department" in Construction Documents shall mean Department of Public Works, Highway & Transportation, which is a unit of Dane County government. Department is County agency overseeing Contract with Contractor.
  - 3. Public Works Project Manager is appointed by and responsible to Department. Public Works Project Manager has authority to act on behalf of Department and will sign change orders, payment requests and other administrative matters related to projects.
  - 4. Public Works Project Manager is responsible for supervision, administration and management of field operations involved in construction phase of this Work.
  - 5. Term "Work" includes all labor, equipment and materials necessary to produce project required by Construction Documents.
  - 6. Term "Substantial Completion" is date when project or specified area of project is certified by Architect / Engineer that construction is sufficiently completed, in accordance with Construction Documents, and as modified by any subsequent changes agreed to by parties, so that County may occupy project or specified area of project for use for which it was intended subject to permit approval for occupancy.
  - 7. Contractor is person, firm, or corporation with whom County makes Contract. Though multiple contracts may be involved, Construction Documents treat them throughout as if each were of singular number.

## **3. ADDITIONAL INSTRUCTIONS AND DRAWINGS**

- A. Contractor may be furnished additional instructions and detail drawings as necessary to carry out the Work included in Contract. Additional drawings and instructions thus supplied to Contractor will coordinate with Construction Documents and will be so prepared that they can be reasonably interpreted as part thereof. Contractor shall carry out the Work in accordance with additional detail drawings and instructions.

#### **4. SHOP DRAWINGS, PRODUCT DATA AND SAMPLES**

- A. Unless otherwise specified, Contractor shall submit three (3) copies of all Shop Drawings for each submission, until receiving final approval. After final approval, provide five (5) additional copies for distribution and such other copies as may be required.
- B. Contractor shall submit, on an on-going basis and as directed, Product Data such as brochures that shall contain catalog cuts and specifications of all furnished mechanical and electrical equipment. After Architect / Engineer's approval, one (1) copy shall remain in Architect / Engineer's file, one (1) kept at Department's office and one (1) kept at job site by Contractor for reference purposes.
- C. Samples shall consist of physical examples furnished by Contractor in sufficient size and quantity to illustrate materials, equipment or workmanship, and to establish standards to compare the Work.
  - 1. Submit Samples in sufficient quantity (minimum of two (2)) to permit Architect / Engineer to make all necessary tests and of adequate size showing quality, type, color range, finish, and texture. Label each Sample stating material, type, color, thickness, size, project name, and Contractor's name.
  - 2. Submit transmittal letter requesting approval, and prepay transportation charges to Architect / Engineer's office on samples forwarded.
  - 3. Materials installed shall match approved Samples.
- D. Contractor shall review Shop Drawings and place their dated stamp thereon to evidence their review and approval and shall submit with reasonable promptness and in orderly sequence to cause no delay in the Work or in work of any other contractor. At time of submission, Contractor shall inform Architect / Engineer in writing of any deviation in Shop Drawings or Samples from requirements of Construction Documents. Architect / Engineer will not consider partial lists.
- E. Architect / Engineer will review and approve or reject Shop Drawings with reasonable promptness to cause no delay. Architect / Engineer's approval shall not relieve Contractor from responsibility for errors or omissions in Shop Drawings.
- F. Contractor shall not commence any work requiring Shop Drawing, Product Data or Sample submission until Architect / Engineer has approved submission. All such work shall be in accordance with approved Shop Drawings, Product Data and Samples.
- G. Contractor shall keep on site of the Work, approved or conformed copy of Shop Drawings and shall at all time give Department access thereto.
- H. By stamping and submitting Shop Drawings, Product Data and Samples, Contractor thereby represents that he or she has or will determine and verify all field measurements, field construction criteria, materials, catalog numbers, and similar data and that he or she has checked and coordinated each Shop Drawing, Product Data and Sample with requirements of the Work and of Construction Documents. Architect / Engineer shall return without examination, Shop Drawings, Product Data and Samples not so noted.
- I. All Shop Drawings from any one Contractor should be numbered consecutively and on cover sheet shall bear name and location of project, name of Contractor, date of submittal and date of each correction or revision and associated Specification section and page number.

## **5. CUTTING AND PATCHING**

- A. Contractor shall be responsible for all cutting, fitting or patching required to complete the Work or to make its parts fit together properly.
- B. Contractor shall not damage or endanger portion of the Work or fully or partially completed construction of County or separate contractors by cutting, patching or otherwise altering such construction, or by excavation. Contractor shall not cut or otherwise alter such construction by County or separate contractor except with written consent of County and of such separate contractor; such consent shall not be unreasonably withheld. Contractor shall not withhold unreasonably from County or separate contractor, Contractor's consent to cutting or otherwise altering the Work.

## **6. CLEANING UP**

- A. Contractor shall keep premises and surrounding area free from accumulation of waste materials or rubbish caused by operations under Contract. Contractor shall remove from and about the Work waste materials, rubbish, Contractor's tools, construction equipment, machinery, and surplus materials at completion of the Work. Contractor shall maintain streets and sidewalks around the Work site in clean condition. Contractor shall remove all spillage and prevent tracking of spillage arising from performance of the Work, into, out of, and within the Work site. Contractor shall establish regular maintenance program of sweeping, vacuuming and / or hosing to minimize accumulation of dirt and dust upon such areas.
- B. If Contractor fails to clean up as directed in Construction Documents, County may do so and shall charge Contractor cost thereof.
- C. In addition to general cleaning (sweeping, vacuuming and / or hosing, as is appropriate to work surface), Contractor shall perform following final cleaning for all trades at completion of the Work:
  - 1. Remove temporary protections;
  - 2. Remove marks, stains, fingerprints and other soil or dirt from painted, decorated and finished woodwork and wall surfaces;
  - 3. Remove spots, plaster, soil and paint from ceramic tile, marble and other finished materials, and wash or wipe clean;
  - 4. Clean fixtures, cabinet work and equipment, removing stains, paint, dirt and dust, and leave same in undamaged, new condition;
  - 5. Clean aluminum in accordance with recommendations of manufacturer; and
  - 6. Clean resilient floors thoroughly with well-rinsed mop containing only enough moisture to clean off any surface dirt or dust and buff dry by machine to bring surfaces to sheen.

## **7. USE OF SITE**

- A. Contractor shall provide County and Architect / Engineer access to the Work under all circumstances.
- B. Contractor shall confine operations at site to areas permitted by County, law, ordinance, permits and Construction Documents and shall not unreasonably encumber site with materials or equipment. Contractor shall assure free, convenient, unencumbered, direct and

safe access to all properties adjacent to the Work for County, its employees, invitees and guests.

## **8. MATERIALS AND WORKMANSHIP**

- A. Contractor shall perform all work and furnish all supplies and materials, machinery, equipment, facilities and means, necessary to complete the Work required by this Contract, within time specified, in accordance with provisions of Construction Documents.
- B. All equipment and materials incorporated in the Work covered by this Contract are to be new; use recycled and / or recovered materials to extent that such use is technically and economically feasible. Recovered materials are products recovered from solid waste in form identical to original form for use that is same as, or similar to original use. Recycled materials are products manufactured from solid waste.
- C. If requested, Contractor shall furnish satisfactory evidence as to kind and quality of construction materials proposed or used. Contractor shall furnish to Architect / Engineer, for approval, manufacturer name and model, performance capacities and other pertinent information of machinery, mechanical, electrical or other types of equipment, which Contractor plans to install.
- D. If not otherwise provided, materials and labor called for in this Contract shall be provided and performed in accordance with established practice and standards recognized by Architects, Engineers, Department, and construction industry.
- E. Reference to “Standard” specifications of any association or manufacturer, or codes of County authorities, intends most recent printed edition or catalog in effect on date that corresponds with date of Construction Documents.
- F. Whenever reference is made in Specifications that work shall be “performed”, “applied”, in accordance with “manufacturer’s directions or instructions”, Contractor to whom those instructions are directed shall furnish three (3) printed copies of such instructions to Architect / Engineer before execution of the Work.

## **9. CONTRACTOR’S TITLE TO MATERIALS**

- A. Contractor or any subcontractor shall not purchase materials or supplies for the Work subject to any chattel mortgage or under conditional sale contract or other agreement by which seller retains interest. Contractor warrants that all materials and supplies used in the Work are free from all liens, claims or encumbrances and Contractor has good title to them.

## **10. “OR EQUAL” CLAUSE**

- A. Whenever equipment or materials are identified on Drawings or in Specifications by reference to manufacturer’s or vendor’s name, trade name, catalog number, and other identifying information, it is intended to establish standards; and any equipment or material of other manufacturers and vendors which will perform adequately duties imposed by general design will be considered equally accepted provided equipment or material so proposed is, in opinion of Architect / Engineer, of equal substance and function. Architect / Engineer and Department shall provide written approval before Contractor may purchase or install it.

- B. Equipment or materials of manufacturers, other than those named, may be used only upon following conditions:
1. That, in opinion of Architect / Engineer and Department, proposed material or equipment item is fully equal or superior (in design, materials, construction, workmanship, performance, finish, etc.) to named item. No compromise in quality level, however small, is acceptable.
  2. That, in substituting materials or equipment, Contractor assumes responsibility for any changes in system or for modifications required in adjacent or related work to accommodate such substitution despite Architect / Engineer's and Department's approval, and all costs growing out of approval of "or equal" items shall be responsibility of Contractor. No extra costs resulting from such approval shall become responsibility of Department, Architect / Engineer or any other separate Contractor.
  3. It shall be understood that use of materials or equipment other than those specified, or approved equal by Architect / Engineer and Department, shall constitute violation of Contract, and that Architect / Engineer and Department shall have right to require removal of such materials or equipment and their replacement with specified materials or equipment at Contractor's expense.
  4. Product and manufacturer named first in Specifications or on information shown on Drawings is basis of selection of manufactured items and equipment, particularly mechanical equipment. In using other than first named products or manufacturers, including those specified as additionally approved or acceptable, Contractor assumes responsibility for any changes in system and for modifications in any work required to accommodate them. Architect / Engineer's approval of such additionally acceptable products or manufacturers, either in Specifications or in Addendum, does not relieve Contractor from obligation to coordinate such optional products with other Contractors, whose work may be affected by them, and to pay all additional costs resulting from their inclusion into the Work. Contractor's liability shall include payment of Architect / Engineer's fees for any additional services made necessary by or directly connected to such product changes. No extra costs resulting from such changes shall become responsibility of Department, Architect / Engineer or any other separate Contractor.
- C. No request for approval of "or equal" materials will be entertained except from Contractor. Identify any request for substitution as substitution on Contractor's letter of transmittal and give reasons for substitution. Department may in its sole discretion allow substitutions of materials.

## **11. PATENTS AND ROYALTIES**

- A. If Contractor uses any design, device or material covered by letters, patent or copyright, it is mutually agreed and understood, that, without exception, contract prices shall include all royalties or costs arising from use of such design, device or materials, in any way involved in the Work.
- B. Contractor shall indemnify and save harmless County from any and all claims for infringement by reason of use of such patent or copyright in connection with the Work agreed to be performed under this Contract, and shall indemnify County for any cost, expense or damage which it may be obliged to pay by reason of such infringement at any time during prosecution of the Work or after completion of the Work.

## **12. SURVEYS, PERMITS, REGULATIONS AND TAXES**

- A. Department will furnish to Contractor all site, topography and property surveys necessary for execution of the Work.
- B. Contractor shall procure all permits, licenses and approvals necessary for execution of this Contract.
- C. Contractor shall give all notices and comply with all State of Wisconsin, Federal and local laws, codes, rules and regulations relating to performance of the Work, protection of adjacent property, and maintenance of passageways, guard fences or other protective facilities.
- D. Contractor shall pay all Sales, Consumer, Use and other similar taxes required by law.
- E. Contractor shall promptly notify Architect / Engineer of any variances of Drawings or Specifications with that of any State of Wisconsin, federal or local law, code, rule or regulation. Upon such notification, Architect / Engineer will require correction of variance to comply with applicable law, code, rule or regulation at no additional cost to Contractor.
- F. Work under this Contract shall comply with all applicable State of Wisconsin, Federal and local laws, codes and regulations.
- G. Contractor shall pay charges for water, sewer and other utility connections made by municipalities where required by Specifications.

### **13. CONTRACTOR'S OBLIGATIONS AND SUPERINTENDENCE**

- A. Contractor shall provide and pay for all materials, labor, tools, equipment, transportation and superintendence necessary to execute, complete and deliver the Work within specified time. Contractor agrees to secure at their own expense all personnel necessary to carry out the Work. Such personnel shall not be deemed County employees nor shall they have or be deemed to have any direct contractual relationship with County.
- B. Performance of any work necessary after regular working hours, on Sundays or Legal Holidays shall be without additional expense to County. Performance of any work at site at other than normal working hours must be coordinated with Public Works Project Manager.
- C. Contractor shall furnish, erect, maintain and remove such temporary works as may be required.
- D. Contractor shall observe, comply with, and be subject to all terms, conditions, requirements and limitations of Construction Documents.
- E. At the Work site, Contractor shall give personal superintendence to the Work or shall employ construction superintendent or foreman, experienced in character of work covered by Contract, who shall have full authority to act for Contractor. Understand that such superintendent or foreman shall be acceptable to Architect / Engineer and Department.
- F. Remove from project or take other corrective action upon notice from Architect / Engineer or Department for Contractor's employees whose work is considered by Architect / Engineer or Department to be unsatisfactory, careless, incompetent, unskilled or otherwise objectionable.

- G. Contractor and subcontractors shall be required to conform to Labor Laws of State of Wisconsin and various acts amendatory and supplementary thereto and to other laws, ordinances and legal requirements applicable to the Work.
- H. Presence and observation of the Work by Architect / Engineer or Public Works Project Manager shall not relieve Contractor of any obligations.

#### **14. WEATHER CONDITIONS**

- A. In event of temporary suspension of work, or during inclement weather, or whenever Architect / Engineer shall direct, Contractor shall, and shall cause subcontractors to protect carefully all work and materials against damage or injury from weather. If, in opinion of Architect / Engineer or Department, any work or materials that have been damaged or injured due to failure on part of Contractor or any subcontractors so to protect the Work, such materials shall be removed and replaced at expense of Contractor.

#### **15. PROTECTION OF WORK AND PROPERTY**

- A. Contractor shall at all times safely guard County's property from injury or loss in connection with this Contract. Contractor shall at all times safely guard and protect the Work, and adjacent property, from damage. Contractor shall replace or make good any such damage, loss or injury unless such is caused directly by errors contained in Contract, or by County, or County's duly authorized representative.
- B. Contractor may act diligently, without previous instructions from Architect / Engineer and / or Department, in emergency that threatens loss or injury of property, or safety of life. Contractor shall notify Architect / Engineer and / or Department immediately thereafter. Promptly submit any claim for compensation by Contractor due to such extra work to Architect / Engineer and / or Department for approval as provided for in Article 18 herein.

#### **16. INSPECTION AND TESTING OF MATERIALS**

- A. Authorized representatives and agents of County government shall have access at all times to the Work wherever it is in preparation or progress and Contractor shall provide facilities for such access and for inspection.
- B. Should it be considered necessary or advisable at any time before final acceptance of the Work to make examination of work already completed, by removing or tearing out same, Contractor shall upon request, promptly furnish all necessary facilities, labor and materials. If such work is found to be defective in any aspect, due to fault of Contractor or subcontractors thereof, Contractor shall assume all expenses of such examination and of satisfactory reconstruction. Contractor will be reimbursed for such examination and replacement in accordance with Article 18 - A.3., of these General Conditions of Contract if such work is found to meet requirements of Contract.
- C. If Specifications, Architect / Engineer's, or Public Works Project Manager's instructions require any work to be specially tested or approved, Contractor shall give Architect / Engineer and Public Works Project Manager timely notice of its readiness for testing or inspection. Test all materials and equipment requiring testing in accordance with accepted or specified standards, as applicable. Architect / Engineer shall recommend laboratory or inspection agency and Department will select and pay for all initial laboratory inspection

services. Should retesting be required, due to failure of initial testing, cost of such retesting shall be borne by Contractor.

- D. Cost of any testing performed by manufacturers or Contractor for substantiating acceptability of proposed substitution of materials and equipment, or necessary conformance testing in conjunction with manufacturing processes or factory assemblage, shall be borne by Contractor or manufacturer responsible.

## **17. REPORTS, RECORDS AND DATA**

- A. Contractor shall submit to Energy Engineer and Public Works Project Manager such schedule of quantities and costs, progress schedules, payrolls, reports, estimates, invoices, records and other data as either may request concerning work performed or to be performed under this Contract.

## **18. CHANGES IN THE WORK**

- A. Make no changes, except in cases of emergency, in the Work covered by approved Construction Documents without having prior written approval of Department. Charges or credits for the Work covered by approved change shall be determined by one of these methods:
1. Unit bid prices previously approved.
  2. Agreed lump sum based on actual cost of:
    - a) Labor, including foremen, and all fringe benefits that are associated with their wages.
    - b) Materials entering permanently into the Work.
    - c) Ownership or rental cost of construction tools and equipment during time of use on extra work.
    - d) Power and consumable supplies for operation of power equipment.
    - e) Workmen's Compensation Insurance, Contractor's Public Liability and Property Damage Insurance, and Comprehensive Automobile Liability Insurance.
    - f) Social Security and old age and unemployment contributions.
    - g) Add to cost under (2), fixed fee to be agreed upon, but not to exceed fifteen percent (15%) of actual cost of work performed with their own labor force. Fee shall be compensation to cover cost of supervision, overhead, bond, profit and any other general expense.
    - h) On that portion of the Work under (2) done under subcontract, Contractor may include not over seven and one-half percent (7½%) for supervision, overhead, bond, profit and any other general expense.
    - i) Department may require correct amount of costs with supporting vouchers; Contractor shall keep and present in such form as directed.
  3. Cost-plus work, with not-to-exceed dollar limit, based on actual cost of:
    - a) Labor, including foremen, and all fringe benefits that are associated with their wages.
    - b) Materials entering permanently into the Work.
    - c) Ownership or rental cost of construction tools and equipment during time of use on extra work. Rental cost cannot exceed fifty percent (50%) replacement value of rented equipment.
    - d) Power and consumable supplies for operation of power equipment.
    - e) Workmen's Compensation Insurance, Contractor's Public Liability and Property Damage Insurance, and Comprehensive Automobile Liability Insurance.

- f) Social Security and old age and unemployment contributions.
  - g) To cost under (3), there shall be added fixed fee to be agreed upon but not to exceed fifteen percent (15%) of actual cost of work performed with their own labor force. Fee shall be compensation to cover cost of supervision, overhead, bond, profit, and any other general expense.
  - h) On that portion of the Work under (3) done under subcontract, Contractor may include not over seven and one-half percent (7½%) for supervision, overhead, bond, profit, and any other general expense.
  - i) Contractor shall keep and present, in such form as directed, correct amount of cost together with such supporting vouchers as may be required by Department.
- B. If Contractor claims that by any instructions given by Architect / Engineer, Department, by drawings or otherwise, regarding performance of the Work or furnishing of material under Contract, involves extra cost, Contractor shall give Department written notice of cost thereof within two (2) weeks after receipt of such instructions and in any event before proceeding to execute work, unless delay in executing work would endanger life or property.
- C. No claim for extra work or cost shall be allowed unless it was done in pursuance of written Change Order from Architect / Engineer and approved by Department, as previously mentioned, and claim presented with payment request submitted after changed or extra work is completed.
- D. Negotiation of cost for change in the Work shall not be cause for Contractor to delay prosecution of the Work if Contractor has been authorized in writing by Public Works Project Manager to proceed.

## **19. EXTRAS**

- A. Without invalidating Contract, Department may order extra work or make changes by altering, adding to or deducting from the Work, contract sum being adjusted in accordance with Article 18 herein.

## **20. TIME FOR COMPLETION**

- A. Contractor agrees that the Work shall be prosecuted regularly and diligently and complete the Work as stated in Construction Documents.

## **21. CORRECTION OF WORK**

- A. All work, all materials whether incorporated in the Work or not, and all processes of manufacture shall at all times and places be subject to inspection of Architect / Engineer and Public Works Project Manager who shall be judge of quality and suitability of the Work, materials, and processes of manufacture for purposes for which they are used. Should they fail to meet Energy Engineer's and Public Works Project Manager's approval they shall be reconstructed, made good, replaced or corrected, by Contractor at Contractor's expense. Immediately remove all rejected material from site.
- B. If Contractor defaults or neglects to carry out the Work in accordance with Construction Documents or fails to perform any provision of Contract, Department may, after ten (10) business days' written notice to Contractor and without prejudice to any other remedy County may have, make good such deficiencies. In such case, appropriate Change Order

shall be issued deducting from Contractor's payments then or thereafter, cost of correcting such deficiencies, including cost of Energy Engineer's additional services made necessary by such default, neglect or failure.

## **22. SUBSURFACE CONDITIONS FOUND DIFFERENT**

- A. If Contractor encounters subsurface or latent conditions at site materially differing from those shown on Drawings or indicated in Specifications, Contractor shall immediately give notice to Energy Engineer and Public Works Project Manager of such conditions before they are disturbed. Energy Engineer will thereupon promptly investigate conditions, and if Energy Engineer finds that they materially differ from those shown on Drawings or indicated in Specifications, Energy Engineer will at once make such changes as necessary, any increase or decrease of cost resulting from such changes to be adjusted in manner provided in above Article 18 entitled "Changes in the Work".

## **23. RIGHT OF DEPARTMENT TO TERMINATE CONTRACT**

- A. In event that any provisions of this Contract are violated by Contractor or by any subcontractors, County may serve written notice upon Contractor and Surety of its intention to terminate Contract, such notice to contain reasons for such intention to terminate Contract, and unless within ten (10) business days after serving of such notice upon Contractor, such violation or delay shall cease and satisfactory arrangement or correction be made, Contract shall, upon expiration of said ten (10) business days, cease and terminate.
- B. In event of any such termination, County shall immediately serve notice thereof upon Surety and Contractor, and Surety shall have right to take over and perform Contract subject to County's approval; provided, however, that if Surety does not commence performance thereof within ten (10) business days from date of mailing to such Surety of notice of termination, County may take over the Work and prosecute same to completion by contract, or by force account, at expense of Contractor; Contractor and Surety shall be liable to County for any excess cost occasioned County thereby, and in such event County may take possession of and utilize in completing the Work, such materials and equipment as may be on the Work site and therefore necessary.

## **24. CONSTRUCTION SCHEDULE AND PERIODIC ESTIMATES**

- A. Contractor shall be responsible for Construction Schedule and coordination. Immediately after execution and delivery of Contract and before making first payment, Contractor shall notify all subcontractors to furnish all required information to develop Construction Schedule. Contractor and all subcontractors associated with the Work shall furnish following information from each Division of Specifications:
  - 1. List of construction activities;
  - 2. Start, finish and time required for completion of each activity;
  - 3. Sequential relationships between activities;
  - 4. Identify all long lead-time items, key events, meetings or activities such as required submittals, fabrication and delivery, procurement of materials, installation and testing;
  - 5. Weekly definition of extent of work and areas of activity for each trade or Subcontract; and
  - 6. Other information as determined by Public Works Project Manager.

- B. In addition to above requested items, Contractor shall request delivery dates for all County-furnished equipment, materials or labor. This shall include any work handled by Department under separate contracts such as asbestos abatement, air and water balancing, etc. Indicate on Construction Schedule these associated delivery and installation dates.
- C. Progress Reporting:
  - 1. Contractor shall update and publish Construction Schedule on monthly basis. Revisions to Schedule shall be by Contractor and made in same detail as original Schedule and accompanied by explanation of reasons for revision; and shall be subject to approval by Department.
  - 2. Failure of Contractor to keep Schedule in updated format shall result in County hiring firm specializing in construction schedule development and deducting those costs associated with updating process from payments due Contractor.
  - 3. Contractor shall submit show actual percentage of each activity completed, estimated future progress, and anticipated completion time.
- D. Responsibility for timely completion requires:
  - 1. Contractor and subcontractors understand that performance of each is interdependent upon performance of others.
  - 2. Whenever it becomes apparent from current schedule, that phasing or progress completion dates will not be met, Contractor must take some or all following actions at no additional cost to County:
    - a) Increase construction labor in such quantities and crafts as will eliminate backlog of work.
    - b) Increase number of working hours per shift, shifts per working day, working days per week, amount of construction equipment, or any combination of foregoing to eliminate backlog of work.
    - c) Reschedule work (yet remain in conformance with Drawings and Specifications).
  - 3. Prior to proceeding with any of above actions, Contractor shall notify Public Works Project Manager.
- E. Maintain current Construction Schedule at all times. Revise Construction Schedule in same detail as original and accompany with explanation of reasons for revision. Schedule shall be subject to approval by Architect / Engineer and Public Works Project Manager.

## **25. PAYMENTS TO CONTRACTOR**

- A. Contractor shall provide:
  - 1. Detailed estimate giving complete breakdown of contract price by Specification Division; and
  - 2. Periodic itemized estimates of work done for purpose of making partial payments thereon.
- B. Submit these estimates for approval first to Architect / Engineer, then to Public Works Project Manager. Costs employed in making up any of these schedules are for determining basis of partial payments and not considered as fixing basis for additions to or deductions from Contract price.
- C. County will make partial payments to Contractor for value, proportionate to amount of Contract, of all labor and material incorporated in the Work during preceding calendar month upon receipt of Application and Certificate for Payment form from Architect / Engineer and approval of Department.

- D. Contractor shall submit for approval first to Architect / Engineer, and then to Public Works Project Manager all Application and Certificate for Payment forms. If requested, Application and Certificate for Payment shall be supported by such additional evidence as may be required, showing Contractor's right to payment claimed.
- E. Application and Certificate for Payment for preparatory work and materials delivered and suitably stored at site to be incorporated into the Work at some future period, will be given due consideration. Requesting payment for materials stored off site, may be rejected, however, if deemed essential for reasons of job progress, protection, or other sufficient cause, requests will be considered, conditional upon submission by Contractor of bills of sale, photographs and such other procedures as will adequately protect County's interest such as storage in bonded warehouse with adequate coverage. If there is any error in payment, Contractor is obligated to notify Department immediately, but no longer than ten (10) business days from receipt of payment.
- F. Payments by County will be due within forty-five (45) business days after receipt by Department of Application and Certificate for Payment.
- G. County will retain five percent (5%) of each Application and Certificate for Payment until final completion and acceptance of all the Work covered by Contract. However, anytime after fifty percent (50%) of the Work has been furnished and installed at site, County will make remaining payments in full if Energy Engineer and Public Works Project Manager find that progress of the Work corresponds with Construction Schedule. If Energy Engineer and Public Works Project Manager find that progress of the Work does not correspond with Construction Schedule, County may retain up to ten percent (10%) of each Application and Certificate for Payment for the Work completed.
- H. All material and work covered by partial payments made shall become sole property of County, but this provision shall not be construed as relieving Contractor from sole responsibility for care and protection of materials and work upon which payments have been made, or restoration of any damaged work, or as waiver of right of County to require fulfillment of all of terms of Contract.
- I. County will make final payment within sixty (60) calendar days after final completion of the Work, and will constitute acceptance thereof. Submit Equal Benefits Compliance Payment Certification with final pay request. Payment may be denied if Certification is not included.
- J. County may make payment in full, including retained percentages and less authorized deductions, upon completion and acceptance of each Division where price is stated separately in Contract.
- K. Every contractor engaged in performance of any contract for Department of Public Works, Highway & Transportation shall submit to this Department, as requested and with final application for payment for work under said contract, affidavit(s) as required to prove that all debts and claims against this Work are paid in full or otherwise satisfied, and give final evidence of release of all liens against the Work and County. If Wisconsin Prevailing Wage Rate Determination is required for this Work, use "Prime Contractor Affidavit of Compliance with Prevailing Wage Rate Determination" and "Agent or Subcontractor Affidavit of Compliance with Prevailing Wage Rate Determination" (if applicable). If Wisconsin Prevailing Wage Rate Determination is not required for this Work, use "Dane

County, Wisconsin\_Contractor Wage Affidavit". Forms of such affidavits are included in Supplementary Conditions.

## **26. WITHHOLDING OF PAYMENTS**

- A. County, after having served written notice on said Contractor, may either pay directly any unpaid bills of which Department has written notice, or withhold from Contractor's unpaid compensation sum of money deemed reasonably sufficient to pay any and all such lawful claims until satisfactory evidence is furnished that all liabilities have been fully discharged; whereupon, payment to Contractor shall be resumed in accordance with terms of this Contract, but in no event shall these provisions be construed to impose any obligations upon County to either Contractor or Contractor's Surety.
- B. In paying any unpaid bills of Contractor, County shall be deemed agent of Contractor, and any payment so made by County, shall be considered as payment made under Contract by County to Contractor and County shall not be liable to Contractor for any such payment made in good faith.
- C. Contractor shall indemnify, hold harmless and defend Dane County, its boards, commissions, agencies, officers, employees and representatives from all claims growing out of lawful demands of subcontractors, laborers, workers, mechanics, material men, and furnishers of machinery and parts thereof, equipment, power tools, and all supplies, including commissary, incurred in performance of this Contract.
- D. At Department's request, Contractor shall furnish satisfactory evidence that all obligations of nature designated above have been paid, discharged or waived.

## **27. ACCEPTANCE OF FINAL PAYMENT AS RELEASE**

- A. Making of final payment shall constitute waiver of all claims by County except those arising from:
  - 1. Unsettled lien;
  - 2. Faulty or defective work appearing after substantial completion;
  - 3. Failure of the Work to comply with requirements of Construction Documents; or
  - 4. Terms of any special guarantees required by Construction Documents.
- B. Acceptance of final payment shall constitute waiver of all claims by Contractor.

## **28. PAYMENTS BY CONTRACTOR**

- A. Contractor shall pay following not later than fifth (5<sup>th</sup>) business day following each payment received from County:
  - 1. All transportation and utility services rendered;
  - 2. All materials, tools, and other expendable equipment that have been delivered at site of the Work to extent of ninety percent (90%) of cost thereof, and balance of cost thereof when said balance is paid to Contractor; and
  - 3. Each subcontractor, respective amount allowed Contractor because of work performed by subcontractor to extent of subcontractor's interest therein.

## **29. CONTRACT SECURITY**

- A. Contractor shall furnish Performance and Payment Bonds in amount at least equal to one hundred percent (100%) of Contract price as security for faithful performance of this Contract and payment of all persons performing labor on project under this Contract and furnishing materials in connection with this Contract.
- B. Sample Performance and Payment Bonds that Contractor will be required to execute is bound into these Construction Documents. Before construction Contract is consummated, completed Performance and Payment Bonds must be approved by Department.

### **30. ASSIGNMENTS**

- A. Contractor shall not assign whole or any part of this Contract or any moneys due or to become due hereunder without written consent of Department. In case Contractor assigns all or any part of any moneys due or to become due under this Contract, instrument of assignment shall contain clause substantially to effect that it is agreed that right of assignee in and to any moneys due or to become due to Contractor shall be subject to prior claims of all persons, firms and corporations for services rendered or materials supplied for performance of the Work called for in this Contract.

### **31. MUTUAL RESPONSIBILITY OF CONTRACTORS**

- A. If, through acts of neglect on part of Contractor or any subcontractor shall suffer loss or damage on the Work, Contractor agrees to settle with such subcontractor by agreement or arbitration if such other subcontractor will so settle. If such subcontractor shall assert any claim against County on account of any damage alleged to have been sustained, Department shall notify Contractor, who shall indemnify, hold harmless and defend Dane County, its boards, commissions, agencies, officers, employees and representatives against any such claim.

### **32. SEPARATE CONTRACTS**

- A. Department may award other contracts for the Work and all Contractors shall fully cooperate with each other and carefully adjust their work to that provided under other contracts as may be directed by Department. No Contractor shall commit or permit any act that will interfere with performance of the Work by any other Contractor.
- B. Contractor shall coordinate the Work with those of other Contractors. Cooperation will be required in arrangement for storage of materials and in detailed execution of the Work. Contractor, including subcontractors, shall keep informed of progress and detail work of others and shall notify Architect / Engineer or Department immediately of lack of progress or defective workmanship on part of others. Failure of Contractor to keep informed of the Work progressing on site and failure to give notice of lack of progress or defective workmanship by others shall be construed as acceptance by Contractor of status of the Work as being satisfactory for proper coordination with Contractor's own work.

### **33. SUBCONTRACTS**

- A. Contractor may use services of specialty subcontractors on those parts of the Work that, under normal contracting practices, are performed by specialty subcontractors.

- B. Contractor shall not award any work to any subcontractor without prior approval of Department. Qualifications of subcontractors shall be same as qualifications of Contractor. Request for subcontractor approval shall be submitted to Department fifteen (15) business days before start of subcontractor's work. If subcontractors are changed or added, Contractor shall notify Department in writing.
- C. Contractor shall be as fully responsible to County for acts and omissions of subcontractors, and of persons either directly or indirectly employed by them, as Contractor is for acts and omissions of persons directly employed by Contractor.
- D. Contractor shall cause appropriate provisions to be inserted in all subcontracts relative to the Work to bind subcontractors to Contractor by terms of General Conditions of Contract and other Construction Documents insofar as applicable to work of subcontractors and to give Contractor same power as regards terminating any subcontract that Department may exercise over Contractor under any provision of Construction Documents.
- E. Nothing contained in this Contract shall create any contractual relation between any subcontractor and County.
- F. Contractor shall insert in all subcontracts, Articles 26, 33, 43 and 45, respectively entitled: "Withholding of Payments", "Subcontracts", "Affirmative Action Provision and Minority / Women / Disadvantaged Business Enterprises", and "Minimum Wages", and shall further require all subcontractors to incorporate physically these same Articles in all subcontracts.

#### **34. PUBLIC WORKS PROJECT MANAGER'S AUTHORITY**

- A. Public Works Project Manager shall:
  - 1. Administer and ensure compliance with Construction Documents;
  - 2. Provide responsible on-site observations of construction and have authority to request work and to stop work whenever necessary to insure proper enforcement of Construction Documents;
  - 3. Convene and chair project meetings and foreman's coordination meetings when necessary to coordinate resolution of conflicts between Contractors, Architects, Engineers, Consultants, and Department; and
  - 4. Check and inspect material, equipment and installation procedures of all trades for proper workmanship and for compliance with Drawings, Specifications and Shop Drawings, permit no material on project site that is not satisfactory and reject work not in compliance with Construction Documents.

#### **35. ENERGY ENGINEER'S AUTHORITY**

- A. Architect / Engineer is retained by, and is responsible to Department acting for County.
- B. Architect / Engineer shall determine amount, quality, acceptability, and fitness of several kinds of work and materials that are provided under this Contract and shall decide all questions that may arise in relation to said work and construction thereof.
- C. Architect / Engineer shall decide meaning and intent of any portion of Specifications and of any Drawings where they may be found obscure or be in dispute.

- D. Architect / Engineer shall provide responsible observation of construction. Architect / Engineer has authority to stop the Work whenever such stoppage may be necessary to insure proper execution of Construction Documents.
- E. Architect / Engineer shall be interpreter of conditions of Construction Documents and judge of its performance.
- F. Within reasonable time, Architect / Engineer shall make decisions on all matters relating to progress of the Work or interpretation of Construction Documents.
- G. Architect / Engineer's decisions are subject to review by Public Works Project Manager.

**36. STATED ALLOWANCES**

- A. Not Applicable

**37. ESTIMATES OF QUANTITIES**

- A. Whenever estimated quantities of work to be done and materials to be furnished under this Contract are shown in any of Construction Documents, they are given for use in comparing bids and right is especially reserved to increase or diminish them as they may be deemed reasonably necessary or desirable by Department to complete the Work included in this Contract, and cost for such increase or diminution shall be adjusted in manner provided for in General Conditions of Contract Article 18 entitled "Changes in the Work".

**38. LANDS AND RIGHTS-OF-WAY**

- A. Not Applicable

### **39. GENERAL GUARANTEE**

- A. Neither final certificate of payment nor any provision in Construction Documents nor partial or entire occupancy of premises by County shall constitute acceptance of work not done in accordance with Construction Documents or relieve Contractor of liability in respect to any expressed warranties or responsibility for faulty materials or workmanship.
  - 1. In no event shall making of any payment required by Contract constitute or be construed as waiver by County of any breach of covenants of Contract or waiver of any default of Contractor and making of any such payment by County while any such default or breach shall exist shall in no way impair or prejudice right of County with respect to recovery of damages or other remedy as result of such breach or default.
- B. Contractor shall remedy and make good all defective workmanship and materials and pay for any damage to other work resulting there from, which appear within period of one (1) year from date of substantial completion, providing such defects are not clearly due to abuse or misuse by County. Department will give notice of observed defects with reasonable promptness.
- C. Guarantee on work executed after certified date of substantial completion will begin on date when such work is inspected and approved by Architect / Engineer and Public Works Project Manager.
- D. Where guarantees or warranties are required in sections of Specifications for periods in excess of one (1) year, such longer terms shall apply; however, Contractor's Performance and Payment Bonds shall not apply to any guarantee or warranty period in excess of one (1) year.

### **40. CONFLICTING CONDITIONS**

- A. Any provision in any of Construction Documents which may be in conflict or inconsistent with any Articles in these General Conditions of Contract or Supplementary Conditions shall be void to extent of such conflict or inconsistency.
- B. In case of ambiguity or conflict between Drawings and Specifications, Specifications shall govern.
- C. Printed dimensions shall be followed in preference to measurements by scale. Large-scale drawings take precedence over small-scale drawings. Dimensions on Drawings and details are subject to field measurements of adjacent work.

### **41. NOTICE AND SERVICE THEREOF**

- A. Any notice to Contractor from Department relative to any part of this Contract shall be in writing and considered delivered and service thereof completed, when said notice is posted, by certified or registered mail, to Contractor at Contractor's last given address, or delivered in person to said Contractor, or Contractor's authorized representative on the Work.

## **42. PROTECTION OF LIVES AND HEALTH**

- A. In order to protect lives and health of Contractor's employees under Contract, Contractor shall comply with all pertinent provisions of Wisconsin Administrative Code, Rules of Department of Commerce, relating to Safety and Health.
- B. Contractor alone shall be responsible for safety, efficiency and adequacy of Contractor's tools, equipment and methods, and for any damage that may result from their failure or their improper construction, maintenance or operation.

## **43. AFFIRMATIVE ACTION PROVISION AND MINORITY / WOMEN / DISADVANTAGED BUSINESS ENTERPRISES**

- A. Affirmative Action Provisions.
  - 1. During term of their Contract, Contractor agrees not to discriminate on basis of race, religion, color, sex, handicap, age, sexual preference, marital status, physical appearance, or national origin against any person, whether recipient of services (actual or potential), employee, or applicant for employment. Such equal opportunity shall include but not be limited to following: employment, upgrading, demotion, transfer, recruitment, advertising, layoff, termination, training, rates of pay, and any other form of compensation or level of service(s). Contractor agrees to post in conspicuous places, these affirmative action standards so as to be visible to all employees, service recipients and applicants for this paragraph. Listing of prohibited bases for discrimination shall not be construed to amend in any fashion state or federal law setting forth additional bases and exceptions shall be permitted only to extent allowable in state or federal law.
  - 2. Contractor is subject to this Article only if Contractor has ten (10) or more employees and receives \$10,000.00 or more in annual aggregate contracts with County. Contractor shall file and Affirmative Action Plan with Dane County Contract Compliance Officer in accord with Chapter 19 of Dane County Code of Ordinances. Such plan must be filed within fifteen (15) business days of effective date of this Contract and failure to do so by said date shall constitute ground for immediate termination of Contract by County. Contractor shall also, during term of this Contract, provide copies of all announcements of employment opportunities to County's Contract Compliance Office, and shall report annually number of persons, by race, sex and handicap status, who apply for employment, and, similarly classified, number hired and number rejected.
  - 3. Contact Dane County Contract Compliance Officer at Dane County Contract Compliance Office, 210 Martin Luther King, Jr. Blvd., Room 421, Madison, WI 53703, 608/266-4114.
  - 4. In all solicitations for employment placed on Contractor's behalf during term of this Contract, Contractor shall include statement to affect Contractor is "Equal Opportunity Employer". Contractor agrees to furnish all information and reports required by County's Contract Compliance Officer as same relate to affirmative action and nondiscrimination, which may include any books, records, or accounts deemed appropriate to determine compliance with Chapter 19, Dane County Code of Ordinances, and provision of this Contract.
- B. Minority / Women / Disadvantaged / Emerging Small Business Enterprises.
  - 1. Chapter 19.508 of Dane County Code of Ordinances is official policy of Dane County regarding utilization of, to fullest extent of, Minority Business Enterprises (MBEs), Women Business Enterprises (WBEs) Disadvantage Business Enterprises (DBEs) and Emerging Small Business Enterprises (ESBEs).

2. Contractor may utilize MBEs / WBEs / DBEs / ESBEs as subcontractors or suppliers. List of subcontractors will be required of low bidder as stated in this Contract. List shall indicate which are MBEs / WBEs / DBEs / ESBEs and percentage of subcontract awarded, shown as percentage of total dollar amount of bid.

#### **44. COMPLIANCE WITH FAIR LABOR STANDARDS**

- A. During term of this Contract, Contractor shall report to County Contract Compliance Officer, within ten (10) business days, any allegations to, or findings by National Labor Relations Board (NLRB) or Wisconsin Employment Relations Commission (WERC) that Contractor has violated statute or regulation regarding labor standards or relations. If investigation by Contract Compliance Officer results in final determination that matter adversely affects Contractor's responsibilities under this Contract, and which recommends termination, suspension or cancellation of this Contract, County may take such action.
- B. Contractor may appeal any adverse finding by Contract Compliance Officer as set forth in Dane County Ordinance 25.015(11)(c) through (e).
- C. Contractor shall post this statement in prominent place visible to employees: "As condition of receiving and maintaining contract with Dane County, this employer shall comply with federal, state and all other applicable laws prohibiting retaliation or union organizing."

#### **45. DOMESTIC PARTNERSHIP BENEFITS**

- A. Contractor agrees to provide same economic benefits to all of its employees with domestic partners as it does to employees with spouses, or cash equivalent if such benefit cannot reasonably be provided. Contractor agrees to make available for County inspection Contractor's payroll records relating to employees providing services on or under this Contract or subcontract. If any payroll records of Contractor contain any false, misleading or fraudulent information, or if Contractor fails to comply with provisions of Chapter 25.016, Dane County Ordinances, contract compliance officer may withhold payments on Contract; terminate, cancel or suspend Contract in whole or in part; or, after due process hearing, deny Contractor right to participate in bidding on future County contracts for period of one year after first violation is found and for period of three years after second or subsequent violation is found.

#### **46. USE AND OCCUPANCY PRIOR TO ACCEPTANCE**

- A. Contractor agrees to use and occupancy of portion or unit of the Work before formal acceptance by Department, provided Department:
  1. Secures written consent of Contractor; except when in opinion of Public Works Project Manager, Contractor is chargeable with unwarranted delay in final cleanup of punch list items or other Contract requirements.
  2. Secures endorsement from insurance carrier and consent of Surety permitting occupancy of building or use of the Work during remaining period of construction, or, secures consent of Surety.
  3. Assumes all costs and maintenance of heat, electricity and water.
  4. Accepts all work completed within that portion or unit of the Work to be occupied, at time of occupancy.

#### **47. MINIMUM WAGES**

- A. Contractor shall post, at appropriate conspicuous point on site of project, schedule showing all determined minimum wage rates for various classes of laborers and mechanics to be engaged in the Work under this Contract and all deductions, if any, required by law to be made from unpaid wages actually earned by laborers and mechanics so engaged.
- B. Supplementary Conditions section in Construction Documents lists wage determinations required by State Law.
- C. If, after award of Contract, it becomes necessary to employ any person in trade or occupation not classified in wage determinations, such person shall be paid at not less than such rate as shall be determined by Wisconsin Department of Workforce Development. Such approved minimum rate shall be retroactive to time of initial employment of such person in such trade or occupation. Contractor shall notify Department of Contractor's intention to employ persons in trades or occupations not so classified in sufficient time for Department to obtain approved rates for such trades or occupations.
- D. Specified wage rates are minimum rates only, and Department will not consider any claims for additional compensation made by Contractor because of payment by Contractor of any wage rate in excess of applicable rate contained in this Contract. Contractor shall adjust any disputes in regard to payment of wages in excess of those specified in this Contract.
- E. Submit required affidavit(s) to Department of Public Works, Highway & Transportation, as requested and with final application for payment for work under said contract. Affidavit(s) shall clearly indicate name, trade or occupation, and paid wages of every laborer, worker or mechanic employed by Contractor and all subcontractors during billing period including accurate record of number of hours worked by each employee and actual wages paid as stipulated in Wisconsin Statute 66.0903. If Wisconsin Prevailing Wage Rate Determination is required for this Work, use "Prime Contractor Affidavit of Compliance with Prevailing Wage Rate Determination" and "Agent or Subcontractor Affidavit of Compliance with Prevailing Wage Rate Determination" (if applicable). If Wisconsin Prevailing Wage Rate Determination is not required for this Work, use "Dane County, Wisconsin Contractor Wage Affidavit". Forms of such affidavits are included in Supplementary Conditions.

#### **48. CLAIMS**

- A. No claim may be made until Department's Assistant Public Works Director has reviewed Energy Engineer's decision as provided for in Article 35 of General Conditions of Contract. If any claim remains unresolved after such review by Department's Assistant Public Works Director the claim may be filed under Wisconsin Statute 893.80. Work shall progress during period of any dispute or claim. Unless specifically agreed between parties, venue will be in Dane County, Wisconsin.

#### **49. ANTITRUST AGREEMENT**

- A. Contractor and County recognize that in actual economic practice, overcharges resulting from antitrust violations are in fact usually borne by County. Therefore, Contractor hereby assigns to County any and all claims for such overcharges as to goods and materials purchased in connection with this Contract, except as to overcharges which result from

antitrust violations commencing after price is established under this Contract and any change order thereto.

## 50. INSURANCE

### A. Contractor Carried Insurance:

1. Contractor shall not commence work under this Contract until Contractor has obtained all insurance required under this Article and has provided evidence of such insurance to Risk Manager, 425 City-County Building, 210 Martin Luther King Jr. Blvd., Madison, WI 53703. Contractor shall not allow any subcontractor to commence work until insurance required of subcontractor has been so obtained and approved. Company providing insurance must be licensed to do business in Wisconsin.
2. Worker's Compensation Insurance:
  - a) Contractor shall procure and shall maintain during life of this Contract, Worker's Compensation Insurance as required by statute for all of Contractor's employees engaged in work at site of project under this Contract and, in case of any such work sublet, Contractor shall require subcontractor similarly to provide Worker's Compensation Insurance for all of latter's employees to be engaged in such work unless such employees are covered by protection afforded by Contractor's Worker's Compensation Insurance.
  - b) If any claim of employees engaged in hazardous work on project under this Contract is not protected under Worker's Compensation Statute, Contractor shall provide and shall cause each subcontractor to provide adequate Employer's Liability Insurance for protection of such of Contractor's employees as are not otherwise protected.
3. Contractor's Public Liability and Property Damage Insurance:
  - a) Contractor shall procure and maintain during life of this Contract, Contractor's Public Liability Insurance and Contractor's Property Damage Insurance in amount not less than \$1,000,000 bodily injury, including accidental death, to any one person, and subject to same limit for each person, in amount not less than \$1,000,000 on account of one accident, and Contractor's Property Damage Insurance in amount not less than \$1,000,000 or combined single limit of at least \$1,000,000 with excess coverage over and above general liability in amount not less than \$5,000,000. Contractor shall add "Dane County" as additional insured for each project.
  - b) Contractor's Public Liability and Property Damage Insurance shall include Products, Completed Operation, and Contractual Liability under Insurance Contract. "Contractor shall in all instances save, defend, indemnify and hold harmless County and Architect / Engineer against all claims, demands, liabilities, damages or any other costs which may accrue in prosecution of the Work and that Contractor will save, defend, indemnify and hold harmless County and Architect / Engineer from all damages caused by or as result of Contractor's operations" and each shall be listed as additional insured on Contractor's and sub-contractors' insurance policies.
  - c) Obligations of Contractor under Article 50.A.2.b) shall not extend to liability of Architect / Engineer, agents or employees thereof, arising out of:
    - 1) Preparation or approval of maps, drawings, opinions, reports, surveys, change orders, designs or specifications; or
    - 2) Giving of or failure to give directions or instructions by Architect / Engineer, agents or employees thereof provided such giving or failure to give is primary cause of injury or damage.
  - d) Contractor shall procure and shall maintain during life of this Contract, Comprehensive Automobile Liability Insurance covering owned, non-owned and hired automobiles for limits of not less than \$1,000,000 each accident single limit,

bodily injury and property damage combined with excess coverage over and above general liability in amount not less than \$5,000,000.

- e) Contractor shall either:
  - 1) Require each subcontractor to procure and to maintain during life of subcontract, subcontractor's Public Liability Property Damage Insurance, and Comprehensive Automobile Liability Insurance of type and in same amount specified in preceding paragraphs; or
  - 2) Insure activities of subcontractors in Contractor's own policy.
- 4. Scope of Insurance and Special Hazards: Insurance required under Article 50.A.2 & 50.A.3. hereof shall provide adequate protection for Contractor and subcontractors, respectively, against damage claims which may arise from operations under this Contract, whether such operation be by insured or by anyone directly or indirectly employed by insured and also against any of special hazards which may be encountered in performance of this Contract as enumerated in Supplementary Conditions.
- 5. Proof of Carriage of Insurance: Contractor shall furnish Risk Manager with certificates showing type, amount, class of operations covered, effective dates, dates of expiration of policies and "Dane County" listed as additional insured. Such certificates shall also contain (substantially) following statement: "Insurance covered by this certificate will not be canceled or materially altered, except after ten (10) business days written notice has been received by Risk Manager."

B. Builder's Risk:

- 1. County shall provide Builder's Risk insurance coverage for its insurable interests in construction or renovation projects with completed value of \$500,000 or less. Therefore, if project completed value is more than \$500,000, Contractor shall obtain and maintain in force, at its own expense, Builder's Risk Insurance on all risks for amount equal to full completed value of covered structure or replacement value of alterations or additions. Any deductible shall not exceed \$25,000 for each loss. Policy shall include occupancy clause and list Dane County as loss payee.

C. Indemnification / Hold Harmless:

- 1. Contractor shall indemnify, hold harmless and defend Dane County, its boards, commissions, agencies, officers, employees and representatives from and against all claims, damages, losses and expenses including attorneys' fees arising out of or resulting from performance of the Work, provided that any such claim, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself) including loss of use resulting therefrom, and is caused in whole or in part by any act or omission of Contractor, any subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, regardless of whether or not it is caused in part by part indemnified hereunder.
- 2. In any and all claims against Dane County, its boards, commissions, agencies, officers, employees and representatives or by any employee of Contractor, any subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, indemnification obligation under this Contract shall not be limited in any way by any limitation on amount or type of damages, compensation or benefits payable by or for Contractor or any subcontractor under worker's compensation acts, disability benefits or other employee benefit acts.
- 3. Obligations of Contractor under this Contract shall not extend to liability of Architect / Engineer, its agents or employees arising out of:
  - a) Preparation or approval of maps, drawings, opinion, reports, surveys, change orders, designs or specifications; or

- b) Giving of or failure to give directions or instruction by Architect / Engineer, its agents or employees provided such giving or failure to give is primary cause of injury or damage.
- 4. Dane County shall not be liable to Contractor for damages or delays resulting from work by third parties or by injunctions or other restraining orders obtained by third parties.

**51. WISCONSIN LAW CONTROLLING**

- A. It is expressly understood and agreed to by parties hereto that in event of any disagreement or controversy between parties, Wisconsin law shall be controlling.

## SUPPLEMENTARY CONDITIONS

### 1. APPLICATION & CERTIFICATE FOR PAYMENT

- A. Every contractor engaged in performance of any contract for Department of Public Works, Highway & Transportation shall submit partial and final Application & Certificate for Payment for work under said contract. Form shall provide similar information as shown on AIA G702™ and G703™ forms (samples shown below). Forms shall be submitted to Public Works Project Manager for approval.


**AIA Document G702™ – 1992**

**Application and Certificate for Payment**

<b>TO OWNER:</b>	<b>PROJECT:</b>	<b>APPLICATION NO.:</b>	<b>Distribution to:</b>
		<b>PERIOD TO:</b>	OWNER <input type="checkbox"/>
		<b>CONTRACT FOR:</b>	ARCHITECT <input type="checkbox"/>
<b>FROM CONTRACTOR:</b>	<b>VIA ARCHITECT:</b>	<b>CONTRACT DATE:</b>	CONTRACTOR <input type="checkbox"/>
		<b>PROJECT NOS.:</b>	FIELD <input type="checkbox"/>
			OTHER <input type="checkbox"/>

**CONTRACTOR'S APPLICATION FOR PAYMENT**  
Application is made for payment, as shown below, in connection with the Contract Continuation Sheet, AIA Document G703, is attached.

1. ORIGINAL CONTRACT SUM \$ \_\_\_\_\_

2. Net change by Change Orders \$ \_\_\_\_\_

3. CONTRACT SUM TO DATE (Line 1 + 2) \$ \_\_\_\_\_

4. TOTAL COMPLETED & STORED TO DATE (Column G on G703) \$ \_\_\_\_\_

5. RETAINAGE

a. % of Completed Work (Column D – E on G703) \$ \_\_\_\_\_

b. % of Stored Material (Column F on G703) \$ \_\_\_\_\_

Total Retainage (Sum to a or b or Total in Column I of G703) \$ \_\_\_\_\_

6. TOTAL EARNED LESS RETAINAGE \$ \_\_\_\_\_  
(Line 4 less Line 5 Total)

7. LESS PREVIOUS CERTIFICATES FOR PAYMENT \$ \_\_\_\_\_  
(Line 6 from prior Certificates)

8. CURRENT PAYMENT DUE \$ \_\_\_\_\_  
(Line 6 less Line 7)

9. BALANCE TO FINISH, INCLUDING RETAINAGE \$ \_\_\_\_\_  
(Line 3 less Line 6)

The undersigned Contractor certifies that to the best of the Contractor's knowledge, information and belief the Work covered by this Application for Payment has been completed in accordance with the Contract Documents, that all amounts here shown paid by the Contractor for Work for which previous Certificates for Payment were issued and payments received from the Owner, and that current payments shown herein are now due.

**CONTRACTOR:**  
 By: \_\_\_\_\_ Date: \_\_\_\_\_  
 Name of \_\_\_\_\_  
 County of \_\_\_\_\_  
 Subscribed and sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_  
 Notary Public \_\_\_\_\_  
 My Commission expires \_\_\_\_\_

**ARCHITECT'S CERTIFICATE FOR PAYMENT**  
In accordance with the Contract Documents, based on on-site observations and the data comprising this application, the Architect certifies to the Owner that to the best of the Architect's knowledge, information and belief the Work has progressed as indicated, the quality of the Work is in accordance with the Contract Documents, and the Contractor is entitled to payment of the AMOUNT CERTIFIED.

**AMOUNT CERTIFIED** \$ \_\_\_\_\_  
(Attach explanation if amount certified differs from the amount applied. Attach all figures on this Application and on the Continuation Sheet that are changed in response with the amount certified.)

**ARCHITECT:**  
 By: \_\_\_\_\_ Date: \_\_\_\_\_

This Certificate is not negotiable. The AMOUNT CERTIFIED is payable only to the Contractor named herein. Issuance, payment and acceptance of payment are without prejudice to any rights of the Owner or Contractor under this Contract.

CHANGE ORDER SUMMARY	ADDITIONS	DEDUCTIONS
Total changes approved in previous months by Owner	\$	\$
Total approved this Month	\$	\$
<b>TOTALS</b>	<b>\$</b>	<b>\$</b>
<b>NET CHANGES by Change Order</b>	<b>\$</b>	<b>\$</b>

AIA Document G702™ – 1992 Copyright © 1993, 1995, 1997, 1978, 1985 and 1992 by The American Institute of Architects. All rights reserved. **WARNING:** This AIA™ Document is protected by U.S. Copyright Law and International Treaties. Unauthorized reproduction or distribution of this AIA™ Document, or any portion of it, may result in severe civil and criminal penalties, and will be prosecuted to the maximum extent possible under the law. Purchasers are permitted to reproduce for internal use only one copy of this document when completed. To report copyright violations of AIA Contract Documents, e-mail The American Institute of Architects' legal counsel, [copyright@aia.org](mailto:copyright@aia.org).

**AIA** Document G703™ – 1992

**Continuation Sheet**

AIA Document G703, APPLICATION AND CERTIFICATION FOR PAYMENT, containing Contractor's signed certification is attached.  
 In tabulations below, amounts are stated in the nearest dollar.  
 Use Columns D on Contracts where variable insurance for loss items may apply.

APPLICATION NO:  
 APPLICATION DATE:  
 PERIOD TO:  
 ARCHITECT'S PROJECT NO:

A ITEM NO.	B DESCRIPTION OF WORK	C SCHEDULED VALUE	D WORK COMPLETED		F MATERIALS PRESENTLY STORED (GROSS - DOLLARS)	G TOTAL COMPLETED AND TOWARD TO DATE (D+E+F)	H % (G ÷ C)	I BALANCE TO FINISH (C - G)	J RETAINAGE OR VARIABLE RATE
			E FROM PREVIOUS APPLICATION (D + E)	F THIS PERIOD					

**CAUTION:** You should sign an original AIA Contract Document, on which this text appears in RED. An original assures that changes will not be processed.  
 AIA Document G703™ – 1992 Copyright © 1992, 1993, 1994, 1987, 1975, 1976, 1983 and 1992 by The American Institute of Architects. All rights reserved. (AIA/Arch). This AIA® Document is protected by U.S. Copyright Law and International Treaties. Unauthorized reproduction or distribution of this AIA® Document, or any portion of it, may result in severe civil and criminal penalties, and will be prosecuted to the maximum extent possible under the law. Purchasers are permitted to reproduce (1) copies of this document when completed, to apply copyright notices of AIA Contract Documents, and (2) The American Institute of Architects logo (aia.org).

**2. PREVAILING WAGE RATE DETERMINATION**

- A. A prevailing wage rate determination (PWRD) may be required on this project depending on the total project cost. A PWRD is not required if the total bid is below \$100,000. If the bid is \$100,000 or more, the Contractor shall apply the PWRD. The PWRD shall also be applied if the bid is a single trade project for \$48,000 or more. A single trade project is one in which no single trade accounts for eighty-five percent (85%) or more of the total labor cost of the project.
- B. These supplements shall modify, delete, and / or add to General Conditions of Contract. Where any article, paragraph, or subparagraph in General Conditions of Contract is supplemented by one of these paragraphs, provisions of such article, paragraph, or subparagraph shall remain in effect and supplementary provisions shall be considered as added thereto. Where any article, paragraph, or subparagraph in General Conditions of Contract is amended, voided, or superseded by any of these paragraphs, provisions of such article, paragraph, or subparagraph not so amended, voided, or superseded shall remain in effect.
  - 1. General Conditions of Contract Article 47, “Minimum Wages”, paragraph B. Following Prevailing Wage Rate Determination No. 201600504 is added to General Conditions of Contract.
- C. These State of Wisconsin forms, hereinafter set forth in this section, shall be filled out and submitted to Department of Public Works, Highway & Transportation:
  - 1. Disclosure of Ownership (ERD-7777)
  - 2. Prime Contractor Affidavit of Compliance With Prevailing Wage Rate Determination (ERD-5724)

3. List of Agents and Subcontractors (Page 2 - ERD-5724)
4. Agent or Subcontractor Affidavit of Compliance With Prevailing Wage Rate Determination (ERD-10584)
5. List of Agents and Subcontractors (Page 2 - ERD-10584)
6. Request To Employ Subjourneyperson (ERD-10880)

D. At a minimum, these wage rates must be displayed in a place where all workers can access them, but not inside the job trailer. If this isn't easily done based on job conditions, the State requires they be displayed at a library or other public building.

SAMPLE ONLY .

NOT FOR

SUBMITTAL

State of Wisconsin Department of Workforce Development Equal Rights Division	<b>DEPARTMENTAL ORDER</b>
<b>ISSUE DATE:</b> 2/12/2016	
<b>PROJECT:</b>	
EXPOSITION HALL LIGHTING UPGRADES ALLIANT ENERGY CENTER MADISON TOWN, DANE COUNTY, WI Determination No. 201600504 [Owner Project No. 316002]	
<b>PROJECT OWNER:</b>	<b>REQUESTER:</b>
ERIC URTES, PROJECT MANAGER DANE COUNTY PUBLIC WORKS 1919 ALLIANT ENERGY CENTER WAY MADISON, WI 53713	ERIC URTES, PROJECT MANAGER DANE COUNTY PUBLIC WORKS 1919 ALLIANT ENERGY CENTER WAY MADISON, WI 53713
<b>ADDITIONAL CONTACT:</b>	<b>NOTE:</b> The Requester must provide a copy of this Project Determination and enclosures to the Project Owner and Additional Contact.
<p>The department received an application for prevailing wage rate determination for the above-captioned project. The department conducted a survey to determine the prevailing wage rate for the trade(s) or occupation(s) needed to complete the project. The survey's findings appear in the attached project determination.</p> <p>If you believe that the wage rate for any trade or occupation does not accurately reflect the prevailing wage rate in the city, village or town where the project is located, you may ask the department to conduct an administrative review of such wage rate. You must submit this request in writing within 30 days from the date indicated above. Additionally, your request must include wage rate information from at least three similar projects in the city, village or town where the proposed project is located and on which some work has been performed by the contested trade(s) during the current survey period and was previously considered by the department in issuing the attached determination. See DWD 290.10 of the Wisconsin Administrative Code and either s. 66.0903(3)(br), Stats., or s. 103.49(3)(c), Stats., for a complete explanation of the administrative review process.</p> <p>Enclosures</p>	
<p>It is hereby ordered that the prevailing wage rates set forth in the attached project determination shall only be applicable to the above referenced project. This order is a <b>FINAL ORDER</b> of the department unless a timely request for an administrative review is filed with the department.</p> <p><b>ISSUED BY:</b></p> <p style="text-align: center;">         Equal Rights Division          Labor Standards Bureau          Construction Wage Standards Section          P.O. Box 8928, Madison, WI 53708-8928          (608)266-6861       </p> <p style="text-align: center;">         Web Site: <a href="http://dwd.wisconsin.gov/er/">http://dwd.wisconsin.gov/er/</a> </p>	

**PREVAILING WAGE RATE DETERMINATION**

Issued by the State of Wisconsin  
Department of Workforce Development  
Pursuant to s. 66.0903, Wis. Stats.  
Issued On: 2/12/2016

**DETERMINATION NUMBER:** 201600504

**EXPIRATION DATE:** Prime Contracts MUST Be Awarded or Negotiated On Or Before 12/31/2016. If NOT, You MUST Reapply.

**PROJECT NAME:** EXPOSITION HALL LIGHTING UPGRADES ALLIANT ENERGY CENTER  
PROJECT NO: 316002

**PROJECT LOCATION:** MADISON TOWN, DANE COUNTY, WI

**CONTRACTING AGENCY:** DANE COUNTY PUBLIC WORKS

<b>CLASSIFICATION:</b>	Contractors are responsible for correctly classifying their workers. Either call the Department of Workforce Development (DWD) with trade or classification questions or consult DWD's Dictionary of Occupational Classifications & Work Descriptions on the DWD website at: <a href="http://dwd.wisconsin.gov/er/prevailing_wage_rate/Dictionary/dictionary_main.htm">dwd.wisconsin.gov/er/prevailing_wage_rate/Dictionary/dictionary_main.htm</a> .
<b>OVERTIME:</b>	Time and one-half must be paid for all hours worked: <ul style="list-style-type: none"><li>- over 10 hours per day on prevailing wage projects</li><li>- over 40 hours per calendar week</li><li>- Saturday and Sunday</li><li>- on all of the following holidays: January 1; the last Monday in May; July 4; the 1st Monday in September; the 4th Thursday in November; December 25;</li><li>- The day before if January 1, July 4 or December 25 falls on a Saturday;</li><li>- The day following if January 1, July 4 or December 25 falls on a Sunday.</li></ul> Apply the time and one-half overtime calculation to whichever is higher between the Hourly Basic Rate listed on this project determination or the employee's regular hourly rate of pay. Add any applicable Premium or DOT Premium to the Hourly Basic Rate before calculating overtime.  A DOT Premium (discussed below) may supersede this time and one-half requirement.
<b>FUTURE INCREASE:</b>	When a specific trade or occupation requires a future increase, you MUST add the full hourly increase to the "TOTAL" on the effective date(s) indicated for the specific trade or occupation.
<b>PREMIUM PAY:</b>	If indicated for a specific trade or occupation, the full amount of such pay MUST be added to the "HOURLY BASIC RATE OF PAY" indicated for such trade or occupation, whenever such pay is applicable.
<b>DOT PREMIUM:</b>	This premium only applies to highway and bridge projects owned by the Wisconsin Department of Transportation and to the project type heading "Airport Pavement or State Highway Construction." DO NOT apply the premium calculation under any other project type on this determination.
<b>APPRENTICES:</b>	Pay apprentices a percentage of the applicable journey person's hourly basic rate of pay and hourly fringe benefit contributions specified in this determination. Obtain the appropriate percentage from each apprentice's contract or indenture.
<b>SUBJOURNEY:</b>	Subjourney wage rates may be available for some of the trades or occupations indicated below with the exception of laborers, truck drivers and heavy equipment operators. Any employer interested in using a subjourney classification on this project MUST complete Form ERD-10880 and request the applicable wage rate from the Department of Workforce Development PRIOR to using the subjourney worker on this project.

This document **MUST BE POSTED** by the **CONTRACTING AGENCY** in at least one conspicuous and easily accessible place **on the site of the project**. A local governmental unit may post this document at the place normally used to post public notices if there is no common site on the project. This document **MUST** remain posted during the entire time any worker is employed on the project and **MUST** be physically incorporated into the specifications and all contracts and subcontracts. If you have any questions, please write to the Equal Rights Division, Labor Standards Bureau, P.O. Box 8928, Madison, Wisconsin 53708 or call (608) 266-6861.

---

**The following statutory provisions apply to local governmental unit projects of public works and are set forth below pursuant to the requirements of s. 66.0903(8), Stats.**

**s. 66.0903 (1) (f) & s. 103.49 (1) (c) "PREVAILING HOURS OF LABOR"** for any trade or occupation in any area means 10 hours per day and 40 hours per week and may not include any hours worked on a Saturday or Sunday or on any of the following holidays:

1. January 1.
2. The last Monday in May.
3. July 4.
4. The first Monday in September.
5. The 4th Thursday in November.
6. December 25.
7. The day before if January 1, July 4 or December 25 falls on a Saturday.
8. The day following if January 1, July 4 or December 25 falls on a Sunday.

**s. 66.0903 (10) RECORDS; INSPECTION; ENFORCEMENT.**

(a) Each contractor, subcontractor, or contractor's or subcontractor's agent performing work on a project of public works that is subject to this section shall keep full and accurate records clearly indicating the name and trade or occupation of every person performing the work described in sub. (4) and an accurate record of the number of hours worked by each of those persons and the actual wages paid for the hours worked.

**s. 66.0903 (11) LIABILITY AND PENALTIES.**

(a) 1. Any contractor, subcontractor, or contractor's or subcontractor's agent who fails to pay the prevailing wage rate determined by the department under sub. (3) or who pays less than 1.5 times the hourly basic rate of pay for all hours worked in excess of the prevailing hours of labor is liable to any affected employee in the amount of his or her unpaid wages or his or her unpaid overtime compensation and in an additional amount as liquidated damages as provided under subd. 2., 3., whichever is applicable.

2. If the department determines upon inspection under sub. (10) (b) or (c) that a contractor, subcontractor, or contractor's or subcontractor's agent has failed to pay the prevailing wage rate determined by the department under sub. (3) or has paid less than 1.5 times the hourly basic rate of pay for all hours worked in excess of the prevailing hours of labor, the department shall order the contractor to pay to any affected employee the amount of his or her unpaid wages or his or her unpaid overtime compensation and an additional amount equal to 100 percent of the amount of those unpaid wages or that unpaid overtime compensation as liquidated damages within a period specified by the department in the order.

3. In addition to or in lieu of recovering the liability specified in subd. 1. as provided in subd. 2., any employee for and in behalf of that employee and other employees similarly situated may commence an action to recover that liability in any court of competent jurisdiction. If the court finds that a contractor, subcontractor, or contractor's or subcontractor's agent has failed to pay the prevailing wage rate determined by the department under sub. (3) or has paid less than 1.5 times the hourly basic rate of pay for all hours worked in excess of the prevailing hours of labor, the court shall order the contractor, subcontractor, or agent to pay to any affected employee the amount of his or her unpaid wages or his or her unpaid overtime compensation and an additional amount equal to 100 percent of the amount of those unpaid wages or that unpaid overtime compensation as liquidated damages.

5. No employee may be a party plaintiff to an action under subd. 3. unless the employee consents in writing to become a party and the consent is filed in the court in which the action is brought. Notwithstanding s. 814.04 (1), the court shall, in addition to any judgment awarded to the plaintiff, allow reasonable attorney fees and costs to be paid by the defendant.

<b>BUILDING OR HEAVY CONSTRUCTION</b>
---------------------------------------

Includes sheltered enclosures with walk-in access for the purpose of housing persons, employees, machinery, equipment or supplies and non-sheltered work such as canals, dams, dikes, reservoirs, storage tanks, etc. A sheltered enclosure need not be "habitable" in order to be considered a building. The installation of machinery and/or equipment, both above and below grade level, does not change a project's character as a building. On-site grading, utility work and landscaping are included within this definition. Residential buildings of four (4) stories or less, agricultural buildings, parking lots and driveways are NOT included within this definition.

---

**SKILLED TRADES**

---

<b>Fringe Benefits Must Be Paid On <u>All</u> Hours Worked</b>		<b>HOURLY BASIC RATE OF PAY</b>	<b>HOURLY FRINGE BENEFITS</b>	<b>TOTAL</b>
<b>CODE</b>	<b>TRADE OR OCCUPATION</b>	<b>\$</b>	<b>\$</b>	<b>\$</b>
101	Acoustic Ceiling Tile Installer Future Increase(s): Add \$1.42/hr on 6/1/2016.	33.02	17.12	50.14
102	Boilermaker	33.35	28.29	61.64
103	Bricklayer, Blocklayer or Stonemason Future Increase(s): Add \$1.45 on 06/06/2016 Premium Increase(s): DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day.	32.86	20.03	52.89
104	Cabinet Installer Future Increase(s): Add \$1.42/hr on 6/1/2016.	33.02	17.12	50.14
105	Carpenter Future Increase(s): Add \$1.42/hr on 6/1/2016. Premium Increase(s): DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day.	33.02	17.12	50.14
106	Carpet Layer or Soft Floor Coverer Future Increase(s): Add \$1.42/hr on 6/1/2016.	33.02	17.12	50.14
107	Cement Finisher	33.15	16.40	49.55
108	Drywall Taper or Finisher	29.97	20.08	50.05
109	Electrician Future Increase(s): Add \$1.25/hr on 6/1/16. Premium Increase(s): DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day.	35.75	19.97	55.72
110	Elevator Constructor	46.05	27.09	73.14
111	Fence Erector	18.72	5.78	24.50

<b>Fringe Benefits Must Be Paid On <u>All</u> Hours Worked</b>		<b>HOURLY BASIC RATE OF PAY</b>	<b>HOURLY FRINGE BENEFITS</b>	<b>TOTAL</b>
<b>CODE</b>	<b>TRADE OR OCCUPATION</b>	<b>\$</b>	<b>\$</b>	<b>\$</b>
112	Fire Sprinkler Fitter	36.78	19.97	56.75
113	Glazier	38.27	14.42	52.69
114	Heat or Frost Insulator	33.53	27.31	60.84
115	Insulator (Batt or Blown) Future Increase(s): Add \$1.42/hr on 6/1/2016.	33.02	17.12	50.14
116	Ironworker	32.50	20.58	53.08
117	Lather	32.72	16.00	48.72
118	Line Constructor (Electrical)	40.81	18.06	58.87
119	Marble Finisher	25.72	18.54	44.26
120	Marble Mason	32.82	18.67	51.49
121	Metal Building Erector	22.40	6.27	28.67
122	Millwright Future Increase(s): Add \$1.47/hr on 6/1/2016.	34.79	17.17	51.96
123	Overhead Door Installer	31.93	13.39	45.32
124	Painter	26.70	16.65	43.35
125	Pavement Marking Operator	30.00	18.81	48.81
126	Piledriver Future Increase(s): Add \$1.44/hr on 6/1/2016. Premium Increase(s): DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day.	33.56	17.12	50.68
127	Pipeline Fuser or Welder (Gas or Utility)	44.20	18.26	62.46
129	Plasterer	32.82	18.81	51.63
130	Plumber	38.82	18.02	56.84
132	Refrigeration Mechanic	45.55	18.71	64.26
133	Roofer or Waterproofer	29.65	1.71	31.36
134	Sheet Metal Worker	35.55	24.67	60.22
135	Steamfitter	45.55	18.71	64.26
137	Teledata Technician or Installer	22.50	12.74	35.24
138	Temperature Control Installer	34.97	19.67	54.64
139	Terrazzo Finisher	25.72	18.54	44.26

<b>Fringe Benefits Must Be Paid On <u>All</u> Hours Worked</b>		<b>HOURLY BASIC RATE OF PAY</b>	<b>HOURLY FRINGE BENEFITS</b>	<b>TOTAL</b>
<b>CODE</b>	<b>TRADE OR OCCUPATION</b>	<b>\$</b>	<b>\$</b>	<b>\$</b>
140	Terrazzo Mechanic Future Increase(s): Add \$1.60 on 06/06/2016	33.98	18.96	52.94
141	Tile Finisher	30.00	0.00	30.00
142	Tile Setter Future Increase(s): Add \$1.45/hr on 6/06/2016.	31.59	19.61	51.20
143	Tuckpointer, Caulker or Cleaner Future Increase(s): Add \$1.45 on 06/06/2016 Premium Increase(s): DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day.	32.86	20.03	52.89
144	Underwater Diver (Except on Great Lakes)	36.74	16.00	52.74
146	Well Driller or Pump Installer Future Increase(s): Add \$1/hr on 6/1/2016; Add \$1/hr on 6/1/2017.	25.32	16.40	41.72
147	Siding Installer	17.00	6.71	23.71
150	Heavy Equipment Operator - ELECTRICAL LINE CONSTRUCTION ONLY	36.73	20.41	57.14
151	Light Equipment Operator -ELECTRICAL LINE CONSTRUCTION ONLY	32.65	15.52	48.17
152	Heavy Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	28.57	13.71	42.28
153	Light Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	26.53	13.55	40.08
154	Groundman - ELECTRICAL LINE CONSTRUCTION ONLY	25.00	12.55	37.55

**TRUCK DRIVERS**

<b>Fringe Benefits Must Be Paid On <u>All</u> Hours Worked</b>		<b>HOURLY BASIC RATE OF PAY</b>	<b>HOURLY FRINGE BENEFITS</b>	<b>TOTAL</b>
<b>CODE</b>	<b>TRADE OR OCCUPATION</b>	<b>\$</b>	<b>\$</b>	<b>\$</b>
201	Single Axle or Two Axle	33.69	19.78	53.47
203	Three or More Axle	18.25	21.61	39.86
204	Articulated, Euclid, Dumptor, Off Road Material Hauler Future Increase(s): Add \$1.60/hr on 6/3/2016.	34.69	20.38	55.07
205	Pavement Marking Vehicle	18.25	21.61	39.86
207	Truck Mechanic	18.25	21.61	39.86

---

**LABORERS**


---

<b>Fringe Benefits Must Be Paid On <u>All</u> Hours Worked</b>		<b>HOURLY BASIC RATE OF PAY</b>	<b>HOURLY FRINGE BENEFITS</b>	<b>TOTAL</b>
<b>CODE</b>	<b>TRADE OR OCCUPATION</b>	<b>\$</b>	<b>\$</b>	<b>\$</b>
301	General Laborer Future Increase(s): Add \$1.25/hr eff. 06/06/2016 Premium Increase(s): Add \$1.00/hr for certified welder and pipelayer; Add \$.25/hr for mason tender.	25.81	15.63	41.44
302	Asbestos Abatement Worker	17.00	4.22	21.22
303	Landscaper	21.90	9.83	31.73
310	Gas or Utility Pipeline Laborer (Other Than Sewer and Water)	20.83	18.39	39.22
311	Fiber Optic Laborer (Outside, Other Than Concrete Encased)	19.35	0.00	19.35
314	Railroad Track Laborer	17.00	3.96	20.96
315	Final Construction Clean-Up Worker	29.01	7.20	36.21

---

**HEAVY EQUIPMENT OPERATORS  
SITE PREPARATION, UTILITY OR LANDSCAPING WORK ONLY**


---

<b>Fringe Benefits Must Be Paid On <u>All</u> Hours Worked</b>		<b>HOURLY BASIC RATE OF PAY</b>	<b>HOURLY FRINGE BENEFITS</b>	<b>TOTAL</b>
<b>CODE</b>	<b>TRADE OR OCCUPATION</b>	<b>\$</b>	<b>\$</b>	<b>\$</b>
501	Air Track, Rotary or Percussion Drilling Machine &/or Hammers, Blaster; Asphalt Milling Machine; Boring Machine (Directional, Horizontal or Vertical); Backhoe (Track Type) Having a Mfgr's Rated Capacity of 130,000 Lbs. or Over; Backhoe (Track Type) Having a Mfgr's Rated Capacity of Under 130,000 Lbs., Backhoe (Mini, 15,000 Lbs. & Under); Bulldozer or Endloader (Over 40 hp); Compactor (Self-Propelled 85 Ft Total Drum Width & Over, or Tractor Mounted, Towed & Light Equipment); Concrete Batch Plant, Batch Hopper; Concrete Breaker (Large, Auto, Vibratory/Sonic, Manual or Remote); Crane, Shovel, Dragline, Clamshells; Forklift (Machinery Moving or Steel Erection, 25 Ft & Over); Gradall (Cruz-Aire Type); Grader or Motor Patrol; Master Mechanic; Mechanic or Welder; Robotic Tool Carrier (With or Without Attachments); Scraper (Self Propelled or Tractor Drawn) 5 cu yds or More Capacity; Tractor or Truck Mounted Hydraulic Backhoe; Tractor or Truck Mounted Hydraulic Crane (10 Tons or Under); Tractor (Scraper, Dozer, Pusher, Loader); Trencher (Wheel Type or Chain Type Having Over 8 Inch Bucket). Future Increase(s): Add \$1.60/hr on 6/3/2016.	35.22	20.38	55.60
502	Backfiller; Broom or Sweeper; Bulldozer or Endloader (Under 40 hp); Environmental Burner; Forestry Equipment, Timbco, Tree Shear, Tub Grinder, Processor; Jeep Digger; Screed (Milling Machine); Skid Rig; Straddle Carrier or Travel Lift; Stump Chipper; Trencher (Wheel Type or Chain Type Having 8 Inch Bucket & Under). Future Increase(s): Add \$1.60/hr on 6/3/2016.	34.69	20.38	55.07

<b>Fringe Benefits Must Be Paid On <u>All</u> Hours Worked</b>				
<b>CODE</b>	<b>TRADE OR OCCUPATION</b>	<b>HOURLY BASIC RATE OF PAY</b>	<b>HOURLY FRINGE BENEFITS</b>	<b>TOTAL</b>
		<b>\$</b>	<b>\$</b>	<b>\$</b>
503	Air Compressor (&/or 400 CFM or Over); Augers (Vertical & Horizontal); Compactor (Self-Propelled 84 Ft Total Drum Width & Under, or Tractor Mounted, Towed & Light Equipment); Crusher, Screening or Wash Plant; Farm or Industrial Type Tractor; Forklift; Generator (&/or 150 KW or Over); Greaser; High Pressure Utility Locating Machine (Daylighting Machine); Mulcher; Oiler; Post Hole Digger or Driver; Pump (3 Inch or Over) or Well Points; Refrigeration Plant or Freeze Machine; Rock, Stone Breaker; Skid Steer Loader (With or Without Attachments); Vibratory Hammer or Extractor, Power Pack. Future Increase(s): Add \$1.60/hr on 6/3/2016.	32.62	20.38	53.00
504	Work Performed on the Great Lakes Including Diver; Wet Tender or Hydraulic Dredge Engineer.	41.65	21.71	63.36
505	Work Performed on the Great Lakes Including Crane or Backhoe Operator; Assistant Hydraulic Dredge Engineer; Hydraulic Dredge Leverman or Diver's Tender; Mechanic or Welder; 70 Ton & Over Tug Operator. Future Increase(s): Add \$1.25/hr on 1/1/2017. Premium Increase(s): Add \$.50/hr for Friction Crane, Lattice Boom or Crane Certification (CCO).	44.05	23.24	67.29
506	Work Performed on the Great Lakes Including Deck Equipment Operator or Machineryman (Maintains Cranes Over 50 Tons or Backhoes 115,000 Lbs. or More); Tug, Launch or Loader, Dozer or Like Equipment When Operated on a Barge, Breakwater Wall, Slip, Dock or Scow, Deck Machinery. Future Increase(s): Add \$1.25/hr on 1/1/2017.	39.20	23.09	62.29
507	Work Performed on the Great Lakes Including Deck Equipment Operator, Machineryman or Fireman (Operates 4 Units or More or Maintains Cranes 50 Tons or Under or Backhoes 115,000 Lbs. or Under); Deck Hand, Deck Engineer or Assistant Tug Operator; Off Road Trucks - Great Lakes ONLY.	36.72	21.15	57.87

**HEAVY EQUIPMENT OPERATORS  
EXCLUDING SITE PREPARATION, UTILITY, PAVING LANDSCAPING WORK**

<b>Fringe Benefits Must Be Paid On <u>All</u> Hours Worked</b>				
<b>CODE</b>	<b>TRADE OR OCCUPATION</b>	<b>HOURLY BASIC RATE OF PAY</b>	<b>HOURLY FRINGE BENEFITS</b>	<b>TOTAL</b>
		<b>\$</b>	<b>\$</b>	<b>\$</b>
508	Boring Machine (Directional); Crane, Tower Crane, Pedestal Tower or Derrick, With or Without Attachments, With a Lifting Capacity of Over 100 Tons, Self-Erecting Tower Crane With a Lifting Capacity of Over 4,000 Lbs., Crane With Boom Dollies; Crane, Tower Crane, Pedestal Tower or Derrick, With Boom, Leads &/or Jib Lengths Measuring 176 Ft or Over; Master Mechanic. Future Increase(s): Add \$1.60/hr on 6/3/2016. Premium Increase(s):	37.67	20.38	58.05

<b>Fringe Benefits Must Be Paid On <u>All</u> Hours Worked</b>		<b>HOURLY BASIC RATE OF PAY</b>	<b>HOURLY FRINGE BENEFITS</b>	<b>TOTAL</b>
<b>CODE</b>	<b>TRADE OR OCCUPATION</b>	<b>\$</b>	<b>\$</b>	<b>\$</b>
	Add \$.50/hr for >200 Ton; Add \$1/hr at 300 Ton; Add \$1.50/hr at 400 Ton; Add \$2/hr at 500 Ton & Over.			
509	Backhoe (Track Type) Having a Mfgr's Rated Capacity of 130,000 Lbs. or Over; Boring Machine (Horizontal or Vertical); Caisson Rig; Crane, Tower Crane, Portable Tower, Pedestal Tower or Derrick, With or Without Attachments, With a Lifting Capacity of 100 Tons or Under, Self-Erecting Tower Crane With A Lifting Capacity Of 4,000 Lbs. & Under; Crane, Tower Crane, Portable Tower, Pedestal Tower or Derrick, With Boom, Leads &/or Jib Lengths Measuring 175 Ft or Under; Pile Driver; Versi Lifts, Tri-Lifts & Gantrys (20,000 Lbs. & Over). Future Increase(s): Add \$1.60/hr on 6/3/2016. Premium Increase(s): Add \$.25/hr for all >45 Ton lifting capacity cranes.	36.42	20.38	56.80
510	Backhoe (Track Type) Having a Mfgr.'s Rated Capacity of Under 130,000 Lbs., Backhoe (Mini, 15,000 Lbs. & Under); Concrete Bump Cutter, Grinder, Planing or Grooving Machine; Concrete Laser/Screed; Concrete Paver (Slipform); Concrete Pump (Over 46 Meter), Concrete Conveyor (Rotec or Bidwell Type); Concrete Slipform Placer Curb & Gutter Machine; Concrete Spreader & Distributor; Dredge (NOT Performing Work on the Great Lakes); Forklift (Machinery Moving or Steel Erection, 25 Ft & Over); Gradall (Cruz-Aire Type); Hydro-Blaster (10,000 PSI or Over); Milling Machine; Skid Rig; Traveling Crane (Bridge Type). Future Increase(s): Add \$1.60/hr on 6/3/2016.	35.22	20.38	55.60
511	Air, Track, Rotary or Percussion Drilling Machine &/or Hammers, Blaster; Bulldozer or Endloader (Over 40 hp); Compactor (Self-Propelled 85 Ft Total Drum Width & Over, or Tractor Mounted, Towed & Light Equipment); Concrete Pump (46 Meter & Under), Concrete Conveyor (Rotec or Bidwell Type); Crane (Carry Deck, Mini) or Truck Mounted Hydraulic Crane (10 Tons or Under); Environmental Burner; Gantrys (Under 20,000 Lbs.); Grader or Motor Patrol; High Pressure Utility Locating Machine (Daylighting Machine); Manhoist; Material or Stack Hoist; Mechanic or Welder; Railroad Track Rail Leveling Machine, Tie Placer, Extractor, Tamper, Stone Leveler or Rehabilitation Equipment; Roller (Over 5 Ton); Scraper (Self Propelled or Tractor Drawn) 5 cu yd or More Capacity; Screed (Milling Machine); Sideboom; Straddle Carrier or Travel Lift; Tining or Curing Machine; Tractor (Scraper, Dozer, Pusher, Loader); Tractor or Truck Mounted Hydraulic Backhoe; Tractor or Truck Mounted Hydraulic Crane (10 Tons or Under); Trencher (Wheel Type or Chain Type Having Over 8-Inch Bucket). Future Increase(s): Add \$1.60/hr on 6/3/2016.	34.69	20.38	55.07

<b>Fringe Benefits Must Be Paid On <u>All</u> Hours Worked</b>		<b>HOURLY BASIC RATE OF PAY</b>	<b>HOURLY FRINGE BENEFITS</b>	<b>TOTAL</b>
<b>CODE</b>	<b>TRADE OR OCCUPATION</b>	<b>\$</b>	<b>\$</b>	<b>\$</b>
512	Backfiller; Broom or Sweeper; Bulldozer or Endloader (Under 40 hp); Compactor (Self-Propelled 84 Ft Total Drum Width & Under, or Tractor Mounted, Towed & Light Equipment); Concrete Batch Plant, Batch Hopper; Concrete Breaker (Large, Auto, Vibratory/Sonic, Manual or Remote); Concrete Conveyor System; Concrete Finishing Machine (Road Type); Fireman (Pile Driver & Derrick NOT Performing Work on the Great Lakes); Grout Pump; Hoist (Tugger, Automatic); Industrial Locomotives; Jeep Digger; Lift Slab Machine; Mulcher; Roller (Rubber Tire, 5 Ton or Under); Screw or Gypsum Pumps; Stabilizing or Concrete Mixer (Self-Propelled or 14S or Over); Stump Chipper; Trencher (Wheel Type or Chain Type Having 8-Inch Bucket & Under); Winches & A-Frames. Future Increase(s): Add \$1.60/hr on 6/3/2016.	32.62	20.38	53.00
513	Air Compressor (&/or 400 CFM or Over); Air, Electric or Hydraulic Jacking System; Augers (Vertical & Horizontal); Boatmen (NOT Performing Work on the Great Lakes); Boiler (Temporary Heat); Crusher, Screening or Wash Plant; Elevator; Farm or Industrial Type Tractor; Fireman (Asphalt Plant NOT Performing Work on the Great Lakes); Forklift; Generator (&/or 150 KW or Over); Greaser; Heaters (Mechanical); Loading Machine (Conveyor); Oiler; Post Hole Digger or Driver; Prestress Machine; Pump (3 Inch or Over) or Well Points; Refrigeration Plant or Freeze Machine; Robotic Tool Carrier (With or Without Attachments); Rock, Stone Breaker; Skid Steer Loader (With or Without Attachments); Vibratory Hammer or Extractor, Power Pack. Future Increase(s): Add \$1.60/hr on 6/3/2016.	31.99	20.38	52.37
514	Gas or Utility Pipeline, Except Sewer & Water (Primary Equipment). Future Increase(s): Add \$1/hr on 5/30/2016.	37.04	22.44	59.48
515	Gas or Utility Pipeline, Except Sewer & Water (Secondary Equipment).	33.82	20.30	54.12
516	Fiber Optic Cable Equipment	29.50	0.68	30.18

<b>SEWER, WATER OR TUNNEL CONSTRUCTION</b>
--

Includes those projects that primarily involve public sewer or water distribution, transmission or collection systems and related tunnel work (excluding buildings).

---

**SKILLED TRADES**

---

CODE	TRADE OR OCCUPATION	FRINGE BENEFITS MUST BE PAID ON <u>All</u> Hours Worked	HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
			\$	\$	\$
103	Bricklayer, Blocklayer or Stonemason		32.82	18.67	51.49
105	Carpenter		32.72	16.00	48.72
107	Cement Finisher Future Increase(s): Add \$1.75 on 6/1/16. Premium Increase(s): DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add \$1.40/hr when the Wisconsin Department of Transportation or responsible governing agency requires that work be performed at night under artificial illumination with traffic control and the work is completed after sunset and before sunrise.		35.97	17.85	53.82
109	Electrician		52.00	1.50	53.50
111	Fence Erector		18.72	5.78	24.50
116	Ironworker		32.50	20.58	53.08
118	Line Constructor (Electrical)		40.81	18.06	58.87
125	Pavement Marking Operator		30.00	18.81	48.81
126	Piledriver		33.24	16.00	49.24
130	Plumber Future Increase(s): Add \$1.50 on 6/1/16		39.95	19.45	59.40
135	Steamfitter		44.20	18.26	62.46
137	Teledata Technician or Installer		22.50	12.74	35.24
143	Tuckpointer, Caulker or Cleaner		32.82	18.67	51.49
144	Underwater Diver (Except on Great Lakes)		31.00	20.43	51.43
146	Well Driller or Pump Installer Future Increase(s): Add \$1/hr on 6/1/2016; Add \$1/hr on 6/1/2017.		25.32	16.40	41.72
150	Heavy Equipment Operator - ELECTRICAL LINE CONSTRUCTION ONLY		36.73	15.92	52.65
151	Light Equipment Operator -ELECTRICAL LINE CONSTRUCTION ONLY		32.65	15.52	48.17

<b>Fringe Benefits Must Be Paid On <u>All</u> Hours Worked</b>		<b>HOURLY BASIC RATE OF PAY</b>	<b>HOURLY FRINGE BENEFITS</b>	<b>TOTAL</b>
<b>CODE</b>	<b>TRADE OR OCCUPATION</b>	<b>\$</b>	<b>\$</b>	<b>\$</b>
152	Heavy Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	28.57	13.71	42.28
153	Light Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	26.53	13.55	40.08
154	Groundman - ELECTRICAL LINE CONSTRUCTION ONLY	21.75	12.97	34.72

**TRUCK DRIVERS**

<b>Fringe Benefits Must Be Paid On <u>All</u> Hours Worked</b>		<b>HOURLY BASIC RATE OF PAY</b>	<b>HOURLY FRINGE BENEFITS</b>	<b>TOTAL</b>
<b>CODE</b>	<b>TRADE OR OCCUPATION</b>	<b>\$</b>	<b>\$</b>	<b>\$</b>
201	Single Axle or Two Axle	19.00	0.00	19.00
203	Three or More Axle	19.00	0.00	19.00
204	Articulated, Euclid, Dumptor, Off Road Material Hauler	33.69	19.78	53.47
205	Pavement Marking Vehicle	19.00	0.00	19.00
207	Truck Mechanic	19.00	0.00	19.00

**LABORERS**

<b>Fringe Benefits Must Be Paid On <u>All</u> Hours Worked</b>		<b>HOURLY BASIC RATE OF PAY</b>	<b>HOURLY FRINGE BENEFITS</b>	<b>TOTAL</b>
<b>CODE</b>	<b>TRADE OR OCCUPATION</b>	<b>\$</b>	<b>\$</b>	<b>\$</b>
301	General Laborer Future Increase(s): Add \$1.25/hr eff. 06/06/2016 Premium Increase(s): Add \$.20 for blaster, bracer, manhole builder, caulker, bottomman and power tool; Add \$.55 for pipelayer; Add \$1.00 for tunnel work 0-15 lbs. compressed air; Add \$2.00 for over 15-30 lbs. compressed air; Add \$3.00 for over 30 lbs. compressed air.	27.18	15.64	42.82
303	Landscaper	41.00	0.00	41.00
304	Flagperson or Traffic Control Person	20.92	14.80	35.72
311	Fiber Optic Laborer (Outside, Other Than Concrete Encased)	19.35	0.00	19.35
314	Railroad Track Laborer	17.00	3.96	20.96

---

**HEAVY EQUIPMENT OPERATORS  
SEWER, WATER OR TUNNEL WORK**

---

<b>Fringe Benefits Must Be Paid On <u>All</u> Hours Worked</b>		<b>HOURLY BASIC RATE OF PAY</b>	<b>HOURLY FRINGE BENEFITS</b>	<b>TOTAL</b>
<b>CODE</b>	<b>TRADE OR OCCUPATION</b>	<b>\$</b>	<b>\$</b>	<b>\$</b>
521	Backhoe (Track Type) Having a Mfgr.'s Rated Capacity of 130,000 Lbs. or Over; Caisson Rig; Crane, Tower Crane, Pedestal Tower or Derrick, With Boom, Leads &/or Jib Lengths Measuring 176 Ft or Over; Crane, Tower Crane, Pedestal Tower or Derrick, With or Without Attachments, With a Lifting Capacity of Over 100 Tons, Self-Erecting Tower Crane With a Lifting Capacity Of Over 4,000 Lbs., Crane With Boom Dollies; Master Mechanic; Pile Driver. Premium Increase(s): Add \$.25/hr for operating tower crane.	38.09	20.80	58.89
522	Backhoe (Track Type) Having a Mfgr.'s Rated Capacity of Under 130,000 Lbs., Backhoe (Mini, 15,000 Lbs. & Under); Boring Machine (Directional); Concrete Bump Cutter, Grinder, Planing or Grooving Machine; Concrete Laser/Screed; Concrete Paver (Slipform); Concrete Pump (Over 46 Meter), Concrete Conveyor (Rotec or Bidwell Type); Concrete Spreader & Distributor; Crane, Tower Crane, Portable Tower, Pedestal Tower or Derrick, With Boom, Leads &/or Jib Lengths Measuring 175 Ft or Under; Crane, Tower Crane, Portable Tower, Pedestal Tower or Derrick, With or Without Attachments, With a Lifting Capacity of 100 Tons or Under, Self-Erecting Tower Crane With a Lifting Capacity of 4,000 Lbs. & Under; Dredge (NOT Performing Work on the Great Lakes); Milling Machine; Skid Rig; Telehandler; Traveling Crane (Bridge Type). Future Increase(s): Add \$1.60/hr on 6/3/2016.	35.22	20.38	55.60
523	Air Track, Rotary or Percussion Drilling Machine &/or Hammers, Blaster; Boring Machine (Horizontal or Vertical); Bulldozer or Endloader (Over 40 hp); Crane (Carry Deck, Mini) or Truck Mounted Hydraulic Crane (10 Tons or Under); Concrete Pump (46 Meter & Under), Concrete Conveyor (Rotec or Bidwell Type); Concrete Slipform Placer Curb & Gutter Machine; Gradall (Cruz-Aire Type); Grader or Motor Patrol; Hydro-Blaster (10,000 PSI or Over); Manhoist; Material or Stack Hoist; Mechanic or Welder; Roller (Over 5 Ton); Scraper (Self Propelled or Tractor Drawn) 5 cu yd or More Capacity; Screed (Milling Machine); Sideboom; Straddle Carrier or Travel Lift; Tractor (Scraper, Dozer, Pusher, Loader); Tractor or Truck Mounted Hydraulic Backhoe; Tractor or Truck Mounted Hydraulic Crane (10 Tons or Under); Trencher (Wheel Type or Chain Type Having Over 8-Inch Bucket). Future Increase(s): Add \$1.60/hr on 6/3/2016.	34.69	20.38	55.07

<b>Fringe Benefits Must Be Paid On <u>All</u> Hours Worked</b>		<b>HOURLY BASIC RATE OF PAY</b>	<b>HOURLY FRINGE BENEFITS</b>	<b>TOTAL</b>
<b>CODE</b>	<b>TRADE OR OCCUPATION</b>	<b>\$</b>	<b>\$</b>	<b>\$</b>
524	Backfiller; Broom or Sweeper; Bulldozer or Endloader (Under 40 hp); Compactor (Self-Propelled 85 Ft Total Drum Width & Over, or Tractor Mounted, Towed & Light Equipment); Concrete Batch Plant, Batch Hopper; Concrete Breaker (Large, Auto, Vibratory/Sonic, Manual or Remote); Concrete Conveyor System; Concrete Finishing Machine (Road Type); Environmental Burner; Fireman (Pile Driver & Derrick NOT Performing Work on the Great Lakes); Forestry Equipment, Timbco, Tree Shear, Tub Grinder, Processor; Hoist (Tugger, Automatic); Grout Pump; Jeep Digger; Lift Slab Machine; Mulcher; Power Subgrader; Pump (3 Inch or Over) or Well Points; Robotic Tool Carrier (With or Without Attachments); Roller (Rubber Tire, 5 Ton or Under); Screw or Gypsum Pumps; Stabilizing or Concrete Mixer (Self-Propelled or 14S or Over); Stump Chipper; Tining or Curing Machine; Trencher (Wheel Type or Chain Type Having 8-Inch Bucket & Under); Winches & A-Frames.	33.69	21.75	55.44
525	Air Compressor (&/or 400 CFM or Over); Air, Electric or Hydraulic Jacking System; Augers (Vertical & Horizontal); Compactor (Self-Propelled 84 Ft Total Drum Width & Under, or Tractor Mounted, Towed & Light Equipment); Crusher, Screening or Wash Plant; Farm or Industrial Type Tractor; Fireman (Asphalt Plant NOT Performing Work on the Great Lakes); Generator (&/or 150 KW or Over); Heaters (Mechanical); High Pressure Utility Locating Machine (Daylighting Machine); Loading Machine (Conveyor); Post Hole Digger or Driver; Refrigeration Plant or Freeze Machine; Rock, Stone Breaker; Skid Steer Loader (With or Without Attachments); Vibratory Hammer or Extractor, Power Pack. Future Increase(s): Add \$1.60/hr on 6/3/2016.	31.99	20.38	52.37
526	Boiler (Temporary Heat); Forklift; Greaser; Oiler.	30.99	19.78	50.77
527	Work Performed on the Great Lakes Including Diver; Wet Tender or Hydraulic Dredge Engineer.	41.65	21.71	63.36
528	Work Performed on the Great Lakes Including 70 Ton & Over Tug Operator; Assistant Hydraulic Dredge Engineer; Crane or Backhoe Operator; Hydraulic Dredge Leverman or Diver's Tender; Mechanic or Welder.	41.65	21.71	63.36
529	Work Performed on the Great Lakes Including Deck Equipment Operator or Machineryman (Maintains Cranes Over 50 Tons or Backhoes 115,000 Lbs. or More); Tug, Launch or Loader, Dozer or Like Equipment When Operated on a Barge, Breakwater Wall, Slip, Dock or Scow, Deck Machinery.	36.72	21.15	57.87
530	Work Performed on the Great Lakes Including Deck Equipment Operator; Machineryman or Fireman (Operates 4 Units or More or Maintains Cranes 50 Tons or Under or Backhoes 115,000 Lbs. or Under), Deck Hand, Deck Engineer or Assistant Tug Operator; Off Road Trucks - Great Lakes ONLY.	36.72	21.15	57.87

<b>LOCAL STREET OR MISCELLANEOUS PAVING CONSTRUCTION</b>
--

Includes roads, streets, alleys, trails, bridges, paths, racetracks, parking lots and driveways (except residential or agricultural), public sidewalks or other similar projects (excluding projects awarded by the Wisconsin Department of Transportation).

---

**SKILLED TRADES**

---

<b>CODE</b>	<b>TRADE OR OCCUPATION</b>	<b>HOURLY BASIC RATE OF PAY</b>	<b>HOURLY FRINGE BENEFITS</b>	<b>TOTAL</b>
		\$	\$	\$
103	Bricklayer, Blocklayer or Stonemason	32.82	18.67	51.49
105	Carpenter Future Increase(s): Add \$1.42/hr on 6/1/2016. Premium Increase(s): DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day.	33.02	17.12	50.14
107	Cement Finisher Future Increase(s): Add \$1.75 on 6/1/16. Premium Increase(s): DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add \$1.40/hr when the Wisconsin Department of Transportation or responsible governing agency requires that work be performed at night under artificial illumination with traffic control and the work is completed after sunset and before sunrise.	35.97	17.85	53.82
109	Electrician Future Increase(s): Add \$1.25/hr on 6/1/16. Premium Increase(s): DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day.	35.75	19.97	55.72
111	Fence Erector	18.72	5.78	24.50
116	Ironworker	32.50	20.58	53.08
118	Line Constructor (Electrical)	40.81	18.06	58.87
124	Painter	26.70	16.65	43.35
125	Pavement Marking Operator	30.00	18.81	48.81
126	Piledriver Future Increase(s): Add \$1.44/hr on 6/1/2016. Premium Increase(s): DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day.	33.56	17.12	50.68

<b>Fringe Benefits Must Be Paid On <u>All</u> Hours Worked</b>		<b>HOURLY BASIC RATE OF PAY</b>	<b>HOURLY FRINGE BENEFITS</b>	<b>TOTAL</b>
<b>CODE</b>	<b>TRADE OR OCCUPATION</b>	<b>\$</b>	<b>\$</b>	<b>\$</b>
133	Rofer or Waterproofer	29.65	1.71	31.36
137	Teledata Technician or Installer	22.50	12.74	35.24
143	Tuckpointer, Caulker or Cleaner	32.82	18.67	51.49
144	Underwater Diver (Except on Great Lakes)	36.74	16.00	52.74
150	Heavy Equipment Operator - ELECTRICAL LINE CONSTRUCTION ONLY	36.73	15.92	52.65
151	Light Equipment Operator -ELECTRICAL LINE CONSTRUCTION ONLY	32.65	15.52	48.17
152	Heavy Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	28.57	13.71	42.28
153	Light Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	26.53	13.55	40.08
154	Groundman - ELECTRICAL LINE CONSTRUCTION ONLY	21.75	12.97	34.72

---

**TRUCK DRIVERS**

---

<b>Fringe Benefits Must Be Paid On <u>All</u> Hours Worked</b>		<b>HOURLY BASIC RATE OF PAY</b>	<b>HOURLY FRINGE BENEFITS</b>	<b>TOTAL</b>
<b>CODE</b>	<b>TRADE OR OCCUPATION</b>	<b>\$</b>	<b>\$</b>	<b>\$</b>
201	Single Axle or Two Axle	18.00	0.00	18.00
203	Three or More Axle	18.00	0.00	18.00
204	Articulated, Euclid, Dumptor, Off Road Material Hauler Future Increase(s): Add \$1.60/hr on 6/3/2016.	34.69	20.38	55.07
205	Pavement Marking Vehicle	18.00	0.00	18.00
206	Shadow or Pilot Vehicle	18.00	0.00	18.00
207	Truck Mechanic	18.00	0.00	18.00

---

**LABORERS**

---

<b>Fringe Benefits Must Be Paid On <u>All</u> Hours Worked</b>		<b>HOURLY BASIC RATE OF PAY</b>	<b>HOURLY FRINGE BENEFITS</b>	<b>TOTAL</b>
<b>CODE</b>	<b>TRADE OR OCCUPATION</b>	<b>\$</b>	<b>\$</b>	<b>\$</b>
301	General Laborer	26.34	15.17	41.51

<b>Fringe Benefits Must Be Paid On <u>All</u> Hours Worked</b>		<b>HOURLY BASIC RATE OF PAY</b>	<b>HOURLY FRINGE BENEFITS</b>	<b>TOTAL</b>
<b>CODE</b>	<b>TRADE OR OCCUPATION</b>	<b>\$</b>	<b>\$</b>	<b>\$</b>
303	Landscaper Future Increase(s): Add \$1.00/hr eff. 06/01/2016; Add \$1.00/hr eff. 06/01/2017 Premium Increase(s): DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add \$1.25/hr for work on projects involving temporary traffic control setup, for lane and shoulder closures, when work under artificial illumination conditions is necessary as required by the project provisions (including prep time prior to and/or cleanup after such time period).	30.67	15.65	46.32
304	Flagperson or Traffic Control Person	20.92	14.80	35.72
311	Fiber Optic Laborer (Outside, Other Than Concrete Encased)	19.35	0.00	19.35
314	Railroad Track Laborer	17.00	3.96	20.96

**HEAVY EQUIPMENT OPERATORS  
CONCRETE PAVEMENT OR BRIDGE WORK**

<b>Fringe Benefits Must Be Paid On <u>All</u> Hours Worked</b>		<b>HOURLY BASIC RATE OF PAY</b>	<b>HOURLY FRINGE BENEFITS</b>	<b>TOTAL</b>
<b>CODE</b>	<b>TRADE OR OCCUPATION</b>	<b>\$</b>	<b>\$</b>	<b>\$</b>
541	Crane, Tower Crane, Pedestal Tower or Derrick, With or Without Attachments, With a Lifting Capacity of Over 100 Tons, Self-Erecting Tower Crane With a Lifting Capacity Of Over 4,000 Lbs., Crane With Boom Dollies; Crane, Tower Crane, Pedestal Tower or Derrick, With Boom, Leads &/or Jib Lengths Measuring 176 Ft or Over; Master Mechanic. Future Increase(s): Add \$1.60/hr on 6/3/2016. Premium Increase(s): Add \$.50/hr for >200 Ton; Add \$1/hr at 300 Ton; Add \$1.50/hr at 400 Ton; Add \$2/hr at 500 Ton & Over.	37.67	20.38	58.05

<b>Fringe Benefits Must Be Paid On <u>All</u> Hours Worked</b>		<b>HOURLY BASIC RATE OF PAY</b>	<b>HOURLY FRINGE BENEFITS</b>	<b>TOTAL</b>
<b>CODE</b>	<b>TRADE OR OCCUPATION</b>	<b>\$</b>	<b>\$</b>	<b>\$</b>
542	<p>Backhoe (Track Type) Having a Mfgr.'s Rated Capacity of 130,000 Lbs. or Over; Caisson Rig; Crane, Tower Crane, Portable Tower, Pedestal Tower or Derrick, With or Without Attachments, With a Lifting Capacity of 100 Tons or Under, Self-Erecting Tower Crane With a Lifting Capacity of 4,000 Lbs. &amp; Under; Crane, Tower Crane Portable Tower, Pedestal Tower or Derrick, With Boom, Leads &amp;/or Jib Lengths Measuring 175 Ft or Under; Dredge (NOT Performing Work on the Great Lakes); Licensed Boat Pilot (NOT Performing Work on the Great Lakes); Pile Driver.</p> <p>Future Increase(s): Add \$1.30/hr on 6/1/2016; Add \$1.25/hr on 6/1/2017.</p> <p>Premium Increase(s): DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day &amp; Christmas Day. 2) Add \$1.50/hr night work premium. See DOT'S website for details about the applicability of this night work premium at: <a href="http://wisconsin.gov/Pages/doing-bus/civil-rights/labornwage/prevailing-wage-compliance.aspx">http://wisconsin.gov/Pages/doing-bus/civil-rights/labornwage/prevailing-wage-compliance.aspx</a>.</p>	37.77	21.85	59.62
543	<p>Air Track, Rotary or Percussion Drilling Machine &amp;/or Hammers, Blaster; Automatic Subgrader (Concrete); Backhoe (Track Type) Having a Mfgr.'s Rated Capacity of Under 130,000 Lbs., Backhoe (Mini, 15,000 Lbs. &amp; Under); Boring Machine (Directional, Horizontal or Vertical); Bridge (Bidwell) Paver; Bulldozer or Endloader; Concrete Batch Plant, Batch Hopper; Concrete Breaker (Large, Auto, Vibratory/Sonic, Manual or Remote); Concrete Bump Cutter, Grinder, Planing or Grooving Machine; Concrete Conveyor System; Concrete Laser/Screed; Concrete Paver (Slipform); Concrete Pump, Concrete Conveyor (Rotec or Bidwell Type); Concrete Slipform Placer Curb &amp; Gutter Machine; Concrete Spreader &amp; Distributor; Crane (Carry Deck, Mini) or Truck Mounted Hydraulic Crane (10 Tons or Under); Crane With a Lifting Capacity of 25 Tons or Under; Forestry Equipment, Timbco, Tree Shear, Tub Grinder, Processor; Gradall (Cruz-Aire Type); Grader or Motor Patrol; Grout Pump; Hydro-Blaster (10,000 PSI or Over); Loading Machine (Conveyor); Manhoist; Material or Stack Hoist; Mechanic or Welder; Milling Machine; Post Hole Digger or Driver; Scraper (Self Propelled or Tractor Drawn) 5 cu yds or More Capacity; Shoulder Widener; Sideboom; Skid Rig; Stabilizing or Concrete Mixer (Self-Propelled or 14S or Over); Straddle Carrier or Travel Lift; Tractor (Scraper, Dozer, Pusher, Loader); Tractor or Truck Mounted Hydraulic Backhoe; Trencher (Wheel Type or Chain Type); Tube Finisher; Tugger (NOT Performing Work on the Great Lakes); Winches &amp; A-Frames.</p> <p>Future Increase(s): Add \$1.30/hr on 6/1/2016; Add \$1.25/hr on 6/1/2017.</p> <p>Premium Increase(s): DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day &amp; Christmas Day. 2) Add \$1.50/hr night work premium. See DOT'S website for details about the applicability of this night work premium at: <a href="http://wisconsin.gov/Pages/doing-bus/civil-rights/labornwage/prevailing-wage-compliance.aspx">http://wisconsin.gov/Pages/doing-bus/civil-rights/labornwage/prevailing-wage-compliance.aspx</a>.</p>	37.27	21.85	59.12

<b>Fringe Benefits Must Be Paid On <u>All</u> Hours Worked</b>		<b>HOURLY BASIC RATE OF PAY</b>	<b>HOURLY FRINGE BENEFITS</b>	<b>TOTAL</b>
<b>CODE</b>	<b>TRADE OR OCCUPATION</b>	<b>\$</b>	<b>\$</b>	<b>\$</b>
544	Backfiller; Belting, Burlap, Texturing Machine; Broom or Sweeper; Compactor (Self-Propelled or Tractor Mounted, Towed & Light Equipment); Concrete Finishing Machine (Road Type); Environmental Burner; Farm or Industrial Type Tractor; Fireman (Pile Driver & Derrick NOT Performing Work on the Great Lakes); Forklift; Greaser; Jeep Digger; Joint Sawyer (Multiple Blade); Launch (NOT Performing Work on the Great Lakes); Lift Slab Machine; Mechanical Float; Mulcher; Power Subgrader; Robotic Tool Carrier (With or Without Attachments); Self Propelled Chip Spreader; Shouldering Machine; Skid Steer Loader (With or Without Attachments); Telehandler; Tining or Curing Machine. Future Increase(s): Add \$1.30/hr on 6/1/2016; Add \$1.25/hr on 6/1/2017. Premium Increase(s): DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add \$1.50/hr night work premium. See DOT'S website for details about the applicability of this night work premium at: <a href="http://wisconsindot.gov/Pages/doing-bus/civil-rights/labornwage/prevailing-wage-compliance.aspx">http://wisconsindot.gov/Pages/doing-bus/civil-rights/labornwage/prevailing-wage-compliance.aspx</a> .	37.27	21.85	59.12
545	Air Compressor (&/or 400 CFM or Over); Air, Electric or Hydraulic Jacking System; Automatic Belt Conveyor & Surge Bin; Boiler (Temporary Heat); Concrete Proportioning Plant; Crusher, Screening or Wash Plant; Generator (&/or 150 KW or Over); Heaters (Mechanical); High Pressure Utility Locating Machine (Daylighting Machine); Mudjack; Oiler; Prestress Machine; Pug Mill; Pump (3 Inch or Over) or Well Points; Rock, Stone Breaker; Screed (Milling Machine); Stump Chipper; Tank Car Heaters; Vibratory Hammer or Extractor, Power Pack.	31.62	19.78	51.40
546	Fiber Optic Cable Equipment.	29.50	0.68	30.18
547	Work Performed on the Great Lakes Including Diver; Wet Tender or Hydraulic Dredge Engineer.	41.65	21.71	63.36
548	Work Performed on the Great Lakes Including 70 Ton & Over Tug Operator; Assistant Hydraulic Dredge Engineer; Crane or Backhoe Operator; Hydraulic Dredge Leverman or Diver's Tender; Mechanic or Welder. Future Increase(s): Add \$1.25/hr on 1/1/2017. Premium Increase(s): Add \$.50/hr for Friction Crane, Lattice Boom or Crane Certification (CCO).	44.05	23.24	67.29
549	Work Performed on the Great Lakes Including Deck Equipment Operator or Machineryman (Maintains Cranes Over 50 Tons or Backhoes 115,000 Lbs. or more); Tug, Launch or Loader, Dozer or Like Equipment When Operated on a Barge, Breakwater Wall, Slip, Dock or Scow, Deck Machinery.	36.72	21.15	57.87

550	Work Performed on the Great Lakes Including Deck Equipment Operator; Machineryman or Fireman (Operates 4 Units or More or Maintains Cranes 50 Tons or Under or Backhoes 115,000 Lbs. or Under); Deck Hand, Deck Engineer or Assistant Tug Operator; Off Road Trucks - Great Lakes ONLY.	36.72	21.15	57.87
-----	---	-------	-------	-------

**HEAVY EQUIPMENT OPERATORS  
ASPHALT PAVEMENT OR OTHER WORK**

<b>Fringe Benefits Must Be Paid On <u>All</u> Hours Worked</b>		<b>HOURLY BASIC RATE OF PAY</b>	<b>HOURLY FRINGE BENEFITS</b>	<b>TOTAL</b>
<b>CODE</b>	<b>TRADE OR OCCUPATION</b>	<b>\$</b>	<b>\$</b>	<b>\$</b>
551	Crane, Tower Crane, Pedestal Tower or Derrick, With or Without Attachments, With a Lifting Capacity of Over 100 Tons, Self Erecting Tower Crane With a Lifting Capacity of Over 4,000 Lbs., Crane With Boom Dollies; Crane, Tower Crane, Pedestal Tower or Derrick, With Boom, Leads and/or Jib Lengths Measuring 176 Ft or Over; Master Mechanic.	36.67	19.78	56.45
552	Backhoe (Track Type) Having a Mfgr.'s Rated Capacity of 130,000 Lbs. or Over; Caisson Rig; Crane, Tower Crane, Portable Tower, Pedestal Tower or Derrick, With or Without Attachments, With a Lifting Capacity of 100 Tons or Under, Self-Erecting Tower Crane With a Lifting Capacity Of 4,000 Lbs. & Under; Crane, Tower Crane, Portable Tower, Pedestal Tower or Derrick, With Boom, Leads &/or Jib Lengths Measuring 175 Ft or Under; Dredge (NOT Performing Work on the Great Lakes); Licensed Boat Pilot (NOT Performing Work on the Great Lakes); Pile Driver. Future Increase(s): Add \$1.30/hr on 6/1/2016; Add \$1.25/hr on 6/1/2017. Premium Increase(s): DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add \$1.50/hr night work premium. See DOT'S website for details about the applicability of this night work premium at: <a href="http://wisconsindot.gov/Pages/doing-bus/civil-rights/labornwage/prevaling-wage-compliance.aspx">http://wisconsindot.gov/Pages/doing-bus/civil-rights/labornwage/prevaling-wage-compliance.aspx</a> .	37.77	21.85	59.62

<b>Fringe Benefits Must Be Paid On <u>All</u> Hours Worked</b>		<b>HOURLY BASIC RATE OF PAY</b>	<b>HOURLY FRINGE BENEFITS</b>	<b>TOTAL</b>
<b>CODE</b>	<b>TRADE OR OCCUPATION</b>	<b>\$</b>	<b>\$</b>	<b>\$</b>
553	Air, Track, Rotary or Percussion Drilling Machine &/or Hammers, Blaster; Asphalt Heater, Planer & Scarifier; Asphalt Milling Machine; Asphalt Screed; Backhoe (Track Type) Having a Mfgr.'s Rated Capacity of Under 130,000 Lbs., Backhoe (Mini, 15,000 Lbs. & Under); Bituminous (Asphalt) Plant & Paver, Screed; Boring Machine (Directional, Horizontal or Vertical); Bulldozer or Endloader; Concrete Breaker (Large, Auto, Vibratory/Sonic, Manual or Remote); Concrete Conveyor System; Concrete Laser/Screed; Concrete Slipform Placer Curb & Gutter Machine; Crane (Carry Deck, Mini) or Truck Mounted Hydraulic Crane (10 Tons or Under); Crane With a Lifting Capacity of 25 Tons or Under; Forestry Equipment, Timbco, Tree Shear, Tub Grinder, Processor; Gradall (Cruz-Aire Type); Grader or Motor Patrol; Hydro-Blaster (10,000 PSI or Over); Loading Machine (Conveyor); Manhoist; Material or Stack Hoist; Mechanic or Welder; Milling Machine; Post Hole Digger or Driver; Railroad Track Rail Leveling Machine, Tie Placer, Extractor, Tamper, Stone Leveler or Rehabilitation Equipment; Roller (Over 5 Ton); Scraper (Self Propelled or Tractor Drawn) 5 cu yds or More Capacity; Shoulder Widener; Sideboom; Skid Rig; Stabilizing or Concrete Mixer (Self-Propelled or 14S or Over); Tractor (Scraper, Dozer, Pusher, Loader); Tractor or Truck Mounted Hydraulic Backhoe; Trencher (Wheel Type or Chain Type); Tube Finisher; Tugger (NOT Performing Work on the Great Lakes); Winches & A-Frames. Future Increase(s): Add \$1.60/hr on 6/3/2016.	34.69	20.38	55.07
554	Backfiller; Broom or Sweeper; Compactor (Self-Propelled or Tractor Mounted, Towed & Light Equipment); Concrete Finishing Machine (Road Type); Environmental Burner; Farm or Industrial Type Tractor; Fireman (Asphalt Plant, Pile Driver & Derrick NOT Performing Work on the Great Lakes); Forklift; Greaser; Hoist (Tugger, Automatic); Jeep Digger; Joint Sawyer (Multiple Blade); Launch (NOT Performing Work on the Great Lakes); Lift Slab Machine; Mechanical Float; Mulcher; Power Subgrader; Robotic Tool Carrier (With or Without Attachments); Roller (Rubber Tire, 5 Ton or Under); Self-Propelled Chip Spreader; Shouldering Machine; Skid Steer Loader (With or Without Attachments); Telehandler.	36.17	19.19	55.36
555	Air Compressor (&/or 400 CFM or Over); Air, Electric or Hydraulic Jacking System; Augers (Vertical & Horizontal); Automatic Belt Conveyor & Surge Bin; Boiler (Temporary Heat); Crusher, Screening or Wash Plant; Generator (&/or 150 KW or Over); Heaters (Mechanical); High Pressure Utility Locating Machine (Daylighting Machine); Mudjack; Oiler; Prestress Machine; Pug Mill; Pump (3 Inch or Over) or Well Points; Rock, Stone Breaker; Screed (Milling Machine); Stump Chipper; Tank Car Heaters; Vibratory Hammer or Extractor, Power Pack. Future Increase(s): Add \$1.60/hr on 6/3/2016.	32.62	20.38	53.00
556	Fiber Optic Cable Equipment.	29.50	0.68	30.18

\*\*\*\*\* END OF RATES \*\*\*\*\*

The documents following the Prevailing Wage Rate Determination consist of twenty pages (including this one) of various forms/documents that will be used throughout the completion of the project. This prevailing wage rate determination and its underlying legal requirements outlined in the attached documents apply for the life of this project even though work on the project continues into 2017 or beyond. The chart below lists the form number, form/document name, the party who uses the document, and the document's number of pages. If you have any questions regarding these forms please call the Prevailing Wage Office at (608)266-6861.

ERD Form Number	Form Name	Party Who Uses the Form	Pages
	July 2015 description of recent changes to Wisconsin's prevailing wage laws resulting from enactment of the 2015-17 State Budget Bill.		1
	Prevailing Wage - Public Entity Project Owners	Explanation of project owner responsibilities	2
16056	Post the White Sheet	Contracting agency	1
10908	Consolidated List of Debarred Contractors	Any party contracting someone to complete work on a prevailing wage project	4
	Prevailing Wage – Contractors	Explanation of contractor responsibilities	2
7777	Disclosure of Ownership	Contractors that meet the criteria set out in (3)(A)&(B) of the form	1
5724	Prime Contractor Affidavit of Compliance	Prime contractor files with contracting agency upon completion of the work before receiving final payment	2
10584	Agent or Subcontractor Affidavit of Compliance	Subcontractors file with their awarding contractor upon completion of their work on the project before receiving final payment	2
10880	Request to Employ Subjourneyperson	Contractors wishing to employ a subjourneyperson(s)	1
	Additional General Prevailing Wage Law Information	General information for public entity or any other interested party	3

12/22/2015

---

***THE 2015-17 BUDGET BILL MADE SIGNIFICANT CHANGES TO WISCONSIN'S PREVAILING WAGE LAWS. HOWEVER, THOSE CHANGES DO NOT GO INTO EFFECT UNTIL JANUARY 1, 2017.***

During calendar year 2016, DWD will continue to enforce prevailing wage laws for local governmental unit and state agency public works projects under current prevailing wage laws.

2015 Wisconsin Act 55 (the budget bill) repealed the state prevailing wage law for **local governmental units** such as villages, towns, cities, school districts, or sewerage districts effective January 1, 2017. However, if a local governmental unit:

- issues a Request for Bids before January 1, 2017, for a project of public works that is subject to bidding or,
- enters into a contract before January 1, 2017, for a project of public works that is not subject to bidding,

then those public works projects are subject to the current prevailing wage law (§66.0903, Wis. Stats.) through the life of the project. Projects of public works with prevailing wage project determinations issued prior to 2017 continue to be subject to the current prevailing wage law through the life of the project even though the project may have work going on in 2017 or subsequent years.

Contractors working on local governmental unit projects with prevailing wage rate determinations must continue to pay employees the appropriate prevailing wage and maintain required prevailing wage payroll records. For instance, if a contractor is working in 2018 on a public works project with a project determination issued prior to 2017, then the contractor is required to comply with the "old" prevailing wage rate law (§66.0903, Wis. Stats.). After January 1, 2017, DWD will continue to enforce prevailing wage requirements for projects with DWD prevailing wage determinations issued under the "old" prevailing wage laws (§§ 66.0903 & 103.49, Wis. Stats.).

For new public works projects starting on January 1, 2017, state prevailing wage law will only apply to **state agency** and **state highway** projects. Prevailing wage rates applicable to state agencies will be those issued by the U.S. Department of Labor under the Davis-Bacon Act, 40 U.S.C. 3142. The Wisconsin Department of Administration will enforce the new state agency prevailing wage law (§16.856, Wis. Stats.) and the Wisconsin Department of Transportation will continue to enforce prevailing wage on state highway projects (under a law renumbered as §84.062, Wis. Stats.).

## PREVAILING WAGE – Public Entity Project Owners

Any public works project that has a total estimated project cost that equals or exceeds single-trade or multiple-trade project thresholds requires a prevailing wage rate determination issued by the Department of Workforce Development (DWD). Public works include erecting, constructing, remodeling, repairing, demolishing, alterations, painting and decorating projects for a local governmental unit or state agency. State law excludes minor service or maintenance work, warranty work, or work under a supply-and-installation contract. There is a statutory definition for most of these exclusions. The prevailing wage law that applies to local governmental units is §66.0903, Wis. Stats. The prevailing wage law that applies to state agencies is §103.49, Wis. Stats. The applicable administrative rules for all public entities are DWD 290 and DWD 294, Wis. Adm. Code.

### Thresholds

- A "single-trade project of public works" means a project in which a single trade accounts for 85% or more of the total labor cost of the project. The single trade threshold is \$48,000.
- A "multiple-trade project of public works" means a project in which no single trade accounts for 85% or more of the total labor cost of the project.
- (a) The multiple-trade threshold is \$100,000, unless a municipality falls under the description in (b).
  - (b) The multiple-trade threshold of \$234,000 applies to public works projects erected, constructed, repaired, remodeled, or demolished by a private contractor for •a city or village with a population less than 2500 or •a town.

A local governmental unit or state agency that has a public works project that equals or exceeds the prevailing wage thresholds must do all of the following:

- Request a prevailing wage rate determination for the project from DWD at least 30 days before soliciting bids or negotiating contracts. An Application for Prevailing Wage Rate Determination is available on the DWD website: [http://dwd.wisconsin.gov/er/prevailing\\_wage\\_rate/default.htm](http://dwd.wisconsin.gov/er/prevailing_wage_rate/default.htm)  
To avoid waiting for a project determination use the on-line application system that permits the user to generate a determination immediately and save all documents in PDF form to the user's computer. Use this project determination on line application at the following address:

[http://dwd.wisconsin.gov/er/prevaling\\_wage\\_rate/pw\\_online\\_determinations.htm](http://dwd.wisconsin.gov/er/prevaling_wage_rate/pw_online_determinations.htm)

- Tell potential contractors the project is subject to state prevailing wage law when soliciting bids.
- Include the prevailing wage rate determination in the construction contract, or if there is no written contract, provide a copy of the project determination to each prime contractor.
- Award contracts to contractors who do *not* appear on the “Consolidated List of Debarred Contractors.”
- Notify contractors that they are required to have a written substance abuse testing program in place that fulfills the requirements of §103.503, Wis. Stats., before commencing work on the prevailing wage project.
- Post the prevailing wage rate determination on the project site. (This document is often referred to as “the white sheet.”)
- Notify project contractors that if DWD finds that a contractor violated the prevailing wage law, DWD will assess liquidated damages of 100% of the wages owed to employees.
- Obtain an Affidavit of Compliance from each prime contractor before making final payment for the project.

If the total estimated cost of the project exceeds the prevailing wage thresholds, a local governmental unit or state agency also must obtain a prevailing wage rate determination under the following circumstances:

- when a completed facility is leased, purchased, lease-purchased or otherwise acquired by or dedicated to a public entity in lieu of the public entity contracting for the project,
- when one public entity does work for another public entity,
- when a *private* entity will construct a road, street, bridge, sanitary sewer or water main project and dedicate it to a local governmental unit or the state for its ownership or maintenance (except for some residential subdivisions).

For more information, visit the prevailing wage website: [http://dwd.wisconsin.gov/er/prevaling\\_wage\\_rate/default.htm](http://dwd.wisconsin.gov/er/prevaling_wage_rate/default.htm). For further assistance, call the Equal Rights Division at 608-266-6861 and ask for prevailing wage.

## **POST THE WHITE SHEET**

As the public entity receiving this prevailing wage rate determination, **YOU ARE REQUIRED** by law to post the prevailing wage rate determination (i.e., white sheet) in at least one conspicuous and easily accessible place on the project site that is available to all construction workers. The white sheet must remain posted from the onset of the project until all construction labor on the project has been completed.

[See, Wis. Admin. Code §DWD 290.12(1)]

Posting the white sheet inside the general contractor's trailer does not meet this requirement. That placement is not available/accessible to all workers and is not a location over which you have control.

If you have questions about posting, please call (608)266-6861 and ask for prevailing wage intake.

State of Wisconsin - Department of Workforce Development

This list has been prepared in accordance with the provisions of §§66.0903(12) and 103.49(7), Wis. Stats., and Chapter DWD 294 of the Wisconsin Administrative Code. All contractors on this list were found to have committed a "debarable offense" related to certain labor standard provisions determined or established for a state or local public works project. No state agency, local governmental unit or owner or developer may knowingly solicit bids from, negotiate with or award any contracts to or approve or allow any subcontracts with a debarred contractor, including all divisions, affiliates or other organizational elements of such contractor that are engaged in construction business activities, until the debarment is terminated. The name of each debarred contractor must remain on this list for a period of three (3) years from the termination date indicated below. The contractor is, however, only "debarred" from the "effective date" through the "termination date" indicated for that contractor. Questions regarding this list should be addressed to Jim Chiolino, Equal Rights Division, P. O. Box 8928, Madison, WI 53708 or call (608) 266-3345. Deaf, hearing or speech-impaired callers may contact the department by calling its TDD number (608) 264-8752.

<u>Name of Contractor</u>	<u>Address</u>	<u>Effective Date</u>	<u>Termination Date</u>	<u>Cause Code</u>	<u>Date of Violation(s)</u>	<u>Limitations/Deviations</u>
A-1 Duran Roofing & Insulation Services, Inc.	3700 N Fratney St Milwaukee, WI 53212	11/1/14	10/31/17	1, 2 and 4	2011- 2012	None
	or 8095 NW 64 <sup>th</sup> St Miami, FL 33166					
Abel, Mike	See, Abel Electric, Inc					
Abel Electric, Inc	3385 Belmar Rd Green Bay, WI 54313	9/1/12	8/31/15	1	2011	None
Alpha Electric, LLC	350 Business Park Dr Sun Prairie, WI 53590	8/1/15	7/31/18	4	2014	None
Arnie Christiansen Mason Contractors, LLC	2304 65 <sup>th</sup> Dr Franksville, WI 53126	9/1/14	8/31/16	1, 2 and 4	2011	None
Atkins, Scott	See, Freedom Insulation, Inc					
Boecker, Roger	See, R-Way Pumping, Inc					
Brechtl, Mark G	See, Ecodec, Inc					
Cargill Heating and Air Conditioning Company, Inc	3049 Edgewater La La Crosse, WI 54603	3/1/14	2/28/17	1 and 2	2011	None

<u>Name of Contractor</u>	<u>Address</u>	<u>Effective Date</u>	<u>Termination Date</u>	<u>Cause Code</u>	<u>Date of Violation(s)</u>	<u>Limitations/Deviations</u>
Castlerock Commercial Construction, Inc	PO Box 11699 Milwaukee, WI 53211-0699	2/1/12	1/31/15	1, 2 and 4	2009 & 2010	None
Christiansen, Andy	See, Arnie Christiansen Mason Contractors, LLC					
Christiansen, Arnold	See, Arnie Christiansen Mason Contractors, LLC					
Darnick, Gregory L	See, Darnick Trucking, LLC					
Darnick Trucking, LLC	W914 County Rd V Berlin, WI 54923	11/1/14	10/31/15	1, 2 and 4	2012 & 2013	None
Dem/Ex Group, Inc	805 S Adams St Manito, IL 61546	12/1/11	11/30/14	1 and 2	2010	None
Duran, Bernardo	See, A-1 Duran Roofing & Insulation Services and RRS2 Inc					
Ecodec, Inc	5106 Wintergreen Dr Madison, WI 53704	10/1/14	9/30/17	1	2011 & 2012	None
Fisher, Ed &/or Fisher, Rhonda	See, Dem/Ex Group, Inc					
Freedom Insulation, Inc	117925 219th Ave Chippewa Falls, WI 54729	9/1/11	8/31/14	1	2008- 2010	None
Froode, Kathleen M	See, Masonry Specialists II, LLC					
Galstad, Michael E (aka Michael Earl Galstad)	See, Cargill Heating and Air Conditioning Company, Inc					
Gjolaj, Ded	See, Horizon Bros Painting Corp					

<u>Name of Contractor</u>	<u>Address</u>	<u>Effective Date</u>	<u>Termination Date</u>	<u>Cause Code</u>	<u>Date of Violation(s)</u>	<u>Limitations/Deviations</u>
Grade A Construction, Inc	157 Enterprise Rd Delafield, WI 53018	1/1/16	12/31/19	1, 2 and 4	2014	None
Horizon Bros Painting Corp	1053 Kendra La Howell, MI 48843	10/1/14	9/30/16	4	2012	None
JT Roofing, Inc	350 Tower Dr Saukville, WI 53080	6/1/12	5/31/15	1, 2 and 4	2007 & 2008	None
Jinkins, Richard	See, Castlerock Commercial Construction, Inc					
John's Concrete	See, Wagner Companies, Inc, dba John's Concrete					
Kott, Joseph J	See, Alpha Electric, LLC					
Masonry Specialists II, LLC	5109 Briarwood Ct Racine, WI 53402	8/1/15	7/31/18	4	2014	None
Mid-W Enterprises, Inc	1730 22 <sup>nd</sup> Avenue Kenosha, WI 53140	6/1/15	5/31/17	1, 2 and 4	2013	None
Midwest Construction Co, Inc	See, Mid-W Enterprises, Inc					
Oden, Cassie	See, A-1 Duran Roofing & Insulation Services and RRS2 Inc					
Ofstie, Darin	See, Precision Excavating and Grading, LLC					
Peret, Robert	See, A-1 Duran Roofing & Insulation Services and RRS2 Inc					

<u>Name of Contractor</u>	<u>Address</u>	<u>Effective Date</u>	<u>Termination Date</u>	<u>Cause Code</u>	<u>Date of Violation(s)</u>	<u>Limitations/Deviations</u>
Precision Excavating and Grading, LLC or Precision Excavating Enterprises, LLC	2104 Pierce Saint Croix Rd Baldwin, WI 54002	5/1/11	4/30/14	1, 2 and 4	2006- 2008	None
R-Way Pumping, Inc	3023 Lake Maria Rd Freeport, MN 56331	3/1/12	2/28/15	1, 2 and 4	2008	None
RRS2 Inc.	133 N Jackson St, #427 Milwaukee, WI 53202 or 1313 N Franklin Pl, #805 Milwaukee, WI 53202	11/1/14	10/31/17	1, 2 and 4	2011- 2012	None
Thull, Gerald T	See, JT Roofing, Inc					
Ventura, Robert	See, Mid-W Enterprises, Inc					
Wagner, Cory L	See, Wagner Companies, Inc					
Wagner Companies, Inc, dba John's Concrete	2063 Georgia Ave Racine, WI 53404	8/1/15	7/31/18	1	2013	None
Yaresh, Kathleen R	See, Grade A Construction, Inc					

Cause Code: 1 = Failure to Pay Straight Time 2 = Failure to Pay Overtime 3 = Kickback 4 = Payroll Records.

---

## PREVAILING WAGE – Contractors

Any public works project that has a total estimated project cost that equals or exceeds prevailing wage project thresholds requires a prevailing wage rate determination issued by the Department of Workforce Development (DWD). Public works include erecting, constructing, remodeling, repairing, demolishing, alterations, painting and decorating projects for a local governmental unit or state agency. State law excludes minor service or maintenance work, warranty work, or work under a supply-and-installation contract. There is a statutory definition for most of these exclusions. The prevailing wage laws that apply to local governmental units and their contractors are §§66.0903 and 103.503, Wis. Stats. The prevailing wage laws that apply to state agencies and their contractors are §§103.49 and 103.503, Wis. Stats. The applicable administrative rules for all prevailing wage projects are DWD 290 and DWD 294, Wis. Adm. Code. These laws include provisions that apply to all contractors and subcontractors working on prevailing wage projects.

Any contractor or subcontractor working on a local governmental unit or state agency's public works project that equals or exceeds current prevailing wage project thresholds must do all of the following:

- Receive and review the project's prevailing wage rate determination (i.e., white sheet).
- Tell subcontractors the project is subject to state prevailing wage law and include the prevailing wage rate determination in the construction contract, or if there is no written contract, provide a copy of the project determination to each subcontractor.
- Hire subcontractors who do *not* appear on the "Consolidated List of Debarred Contractors."
- Have a written substance abuse testing program in place that fulfills the requirements of §103.503, Wis. Stats., before commencing work on the project.

- Notify subcontractors that if DWD finds that a contractor or subcontractor violated the prevailing wage law, DWD will assess liquidated damages of 100% of the wages owed to employees.
- Apply to DWD for subjourney wage rates prior to employing these individuals on the project.
- Receive and retain a completed Affidavit of Compliance from each subcontractor brought on to the project before providing final payment to those subcontractors.
- Submit a completed Affidavit of Compliance to the contractor who brought the subcontractor on to the project before receiving final payment for the project.
- Maintain payroll records for 3 years that comply with §§66.0903(10)(a) or 103.49(5)(a), Stats. and DWD 274.06.
- Respond to requests from DWD or the project owner to provide payroll records and/or respond to prevailing wage complaints filed by employees or third parties.

For more information, visit the prevailing wage website: [http://dwd.wisconsin.gov/er/prevailing\\_wage\\_rate/default.htm](http://dwd.wisconsin.gov/er/prevailing_wage_rate/default.htm). For further assistance, call the Equal Rights Division at 608-266-6861 and ask for prevailing wage.

## Disclosure of Ownership

The statutory authority for the use of this form is prescribed in Sections 66.0903(12)(d), 66.0904(10)(d) and 103.49(7)(d), Wisconsin Statutes.

The use of this form is mandatory. The penalty for failing to complete this form is prescribed in Section 103.005(12), Wisconsin Statutes.

Personal information you provide may be used for secondary purposes [Privacy Law, s. 15.04(1) (m), Wisconsin Statutes].

- (1) On the date a contractor submits a bid to or completes negotiations with a state agency, local governmental unit, or developer, investor or owner on a project subject to Section 66.0903, 66.0904 or 103.49, Wisconsin Statutes, the contractor shall disclose to such state agency, local governmental unit, or developer, investor or owner, the name of any "other construction business," which the contractor, or a shareholder, officer or partner of the contractor, owns or has owned within the preceding three (3) years.
- (2) The term "other construction business" means any business engaged in the erection, construction, remodeling, repairing, demolition, altering or painting and decorating of buildings, structures or facilities. It also means any business engaged in supplying mineral aggregate, or hauling excavated material or spoil as provided by Sections 66.0903(3), 66.0904(2), 103.49(2) and 103.50(2), Wisconsin Statutes.
- (3) This form must ONLY be filed, with the state agency project owner, local governmental unit project owner, or developer, investor or owner of a publicly funded private construction project that will be awarding the contract, if **both (A) and (B) are met.**
  - (A) The contractor, or a shareholder, officer or partner of the contractor:
    - (1) Owns at least a 25% interest in the "other construction business," indicated below, on the date the contractor submits a bid or completes negotiations; or
    - (2) Has owned at least a 25% interest in the "other construction business" at any time within the preceding three (3) years.
  - (B) The Wisconsin Department of Workforce Development (DWD) has determined that the "other construction business" has failed to pay the prevailing wage rate or time and one-half the required hourly basic rate of pay, for hours worked in excess of the prevailing hours of labor, to any employee at any time within the preceding three (3) years.

### Other Construction Business

Business Name			
Street Address or P O Box	City	State	Zip Code
Business Name			
Street Address or P O Box	City	State	Zip Code
Business Name			
Street Address or P O Box	City	State	Zip Code
Business Name			
Street Address or P O Box	City	State	Zip Code

**I hereby state under penalty of perjury that the information, contained in this document, is true and accurate according to my knowledge and belief.**

Print the Name of Authorized Officer			
Authorized Officer Signature	Date Signed		
Corporation, Partnership or Sole Proprietorship Name			
Street Address or P O Box	City	State	Zip Code

**If you have any questions call (608) 266-6861**



## List of Agents and Subcontractors

Name			Name		
Street Address			Street Address		
City	State	Zip Code	City	State	Zip Code
Telephone Number			Telephone Number		
Name			Name		
Street Address			Street Address		
City	State	Zip Code	City	State	Zip Code
Telephone Number			Telephone Number		
Name			Name		
Street Address			Street Address		
City	State	Zip Code	City	State	Zip Code
Telephone Number			Telephone Number		
Name			Name		
Street Address			Street Address		
City	State	Zip Code	City	State	Zip Code
Telephone Number			Telephone Number		
Name			Name		
Street Address			Street Address		
City	State	Zip Code	City	State	Zip Code
Telephone Number			Telephone Number		
Name			Name		
Street Address			Street Address		
City	State	Zip Code	City	State	Zip Code
Telephone Number			Telephone Number		

**If you have any questions call (608) 266-6861**

## Agent or Subcontractor Affidavit of Compliance With Prevailing Wage Rate Determination

Authorization for this form is provided under Sections 66.0903(9)(b), 66.0904(7)(b) and 103.49(4r)(9b), Wisconsin Statutes. The use of this form is mandatory. The penalty for failing to complete this form is prescribed in Section 103.005(12), Wisconsin Statutes.

Personal information you provide may be used for secondary purposes [Privacy Law, Section 15.04(1)(m), Wisconsin Statutes].

This form must **ONLY** be filed with the **Awarding Contractor** indicated below.

State Of _____ )  )SS  County Of _____ )	Project Name	
	DWD Determination Number	Project Number (if applicable)
	Date Determination Issued	Date of Subcontract
	Awarding Contractor	
	Date Work Completed	

After being duly sworn, the person whose name and signature appears below hereby states under penalty of perjury that

- **I am** the duly authorized officer of the corporation, partnership, sole proprietorship or business indicated below. We have recently completed all of the work required under the terms and conditions of a subcontract with the above-named awarding contractor. We make this affidavit in accordance with the requirements set forth in Section 66.0903(9)(b), 66.0904(7)(b) or 103.49(4r)(b), Wisconsin Statutes and Chapter DWD 290 of the Wisconsin Administrative Code in order to obtain FINAL PAYMENT from such awarding contractor.
- **I have** fully complied with the entire wage and hour requirements applicable to this project, including all of the requirements set forth in the prevailing wage rate determination indicated above which was issued for such project by the Department of Workforce Development on the date indicated above.
- **I have** received the required affidavit of compliance from each of my agents and subcontractors that performed work on this project and have listed each of their names and addresses on page 2 of this affidavit.
- **I have** full and accurate records that clearly indicate the name and trade or occupation of every worker(s) that I employed on this project, including an accurate record of the hours worked and actual wages paid to such worker(s).
- **I will** retain the records and affidavit(s) described above and make them available for inspection for a period of at least three (3) years from the completion date indicated above at the address indicated below and shall not remove such records or affidavit(s) without prior notification to the awarding contractor.

Name of Corporation, Partnership, Sole Proprietorship, Business, State Agency or Local Governmental Unit				
Street Address or PO Box	City	State	Zip Code	Telephone Number (    )
Print Name of Authorized Officer			Date Signed	
Authorized Officer Signature				

## List of Agents and Subcontractors

Name			Name		
Street Address			Street Address		
City	State	Zip Code	City	State	Zip Code
Telephone Number (    )			Telephone Number (    )		
Name			Name		
Street Address			Street Address		
City	State	Zip Code	City	State	Zip Code
Telephone Number (    )			Telephone Number (    )		
Name			Name		
Street Address			Street Address		
City	State	Zip Code	City	State	Zip Code
Telephone Number (    )			Telephone Number (    )		
Name			Name		
Street Address			Street Address		
City	State	Zip Code	City	State	Zip Code
Telephone Number (    )			Telephone Number (    )		
Name			Name		
Street Address			Street Address		
City	State	Zip Code	City	State	Zip Code
Telephone Number (    )			Telephone Number (    )		
Name			Name		
Street Address			Street Address		
City	State	Zip Code	City	State	Zip Code
Telephone Number (    )			Telephone Number (    )		

**If you have any questions call (608) 266-6861**

## Request to Employ Subjourneyperson

The use of this form is mandatory. The penalty for failing to complete this form is prescribed in Section 103.005(12), Wisconsin Statutes. Personal information you provide may be used for secondary purposes (Privacy Law, s. 15.04(1)(m), Wisconsin Statutes).

The employer indicated below requests that the Department of Workforce Development (DWD) determine the prevailing wage rate(s) and related qualifications to enable such employer to use a subjourneyperson(s) on the following prevailing wage project, in accordance with the provisions of Section DWD 290.025, Wisconsin Administrative Code.

1. Name of Project Appearing on the Project Determination			
County	City, Village or Town		
DWD Project Determination Number	Project Number (if applicable)		
2. Job Classification(s) for which you request a subjourney rate (i.e., carpenter, electrician, plumber, etc.)			
a.	b.		
c.	d.		
3. Employer Name (Print)			
Address		City	State
Telephone Number (       )		Zip Code	
Requester Title		Requester Name (Print)	
Email address (if you prefer to receive your response via email)		Fax Number (if you prefer to receive your response via fax) (       )	

**READ CAREFULLY:** I understand that this request is ONLY applicable to the project and job classification(s) listed above and that subjourney employees primarily work under the direction of and assist a skilled trade employee by frequently using the tools of a skilled trade and will NOT regularly perform the duties of a general laborer, heavy equipment operator or truck driver. If the subjourney employee regularly performs the work of a different trade or occupation, he/she will be compensated for such work at the applicable journeyperson prevailing wage rate. I agree to compensate subjourney employees in strict accordance with the directions received from the DWD.

Requester Signature	Date Signed
---------------------	-------------

MAIL the completed request to:  
 EQUAL RIGHTS DIVISION, LABOR STANDARDS BUREAU  
 PO BOX 8928, MADISON WI 53708

**OR**

FAX the completed request to: (608) 267-4592 / **DO NOT e-mail your request.**  
 Call (608) 266-6861 for assistance in completing this form.

## ADDITIONAL GENERAL PREVAILING WAGE LAW INFORMATION

(This document updated July 2015)

**NOTE:** Recent prevailing wage law changes enacted by the 2015-17 Budget Bill (2015 Wisconsin Act 55) do not go into effect until calendar year 2017.

For prevailing wage laws and frequently asked questions, refer to the prevailing wage website at:  
[http://dwd.wisconsin.gov/er/prevailing\\_wage\\_rate/default.htm](http://dwd.wisconsin.gov/er/prevailing_wage_rate/default.htm)

Topic	Who's affected?	Brief description of requirement under §66.0903 or §103.49
Non-applicability	All public entities	Prevailing wage rates do not apply to minor service or maintenance work, warranty work, or work under a supply and installation contract.
Non-applicability: Minor service or maintenance work	Local governmental units & Contractors	Minor service or maintenance work means a project of public works that is limited to <ul style="list-style-type: none"> <li>• minor crack filling, chip or slurry sealing, or other minor pavement patching, not including overlays, that has a projected life span of no longer than 5 years or that is performed for a TOWN and is not funded under §86.31, regardless of projected life span;</li> <li>• the depositing of gravel on an existing gravel road applied solely to maintain the road;</li> <li>• road shoulder maintenance;</li> <li>• cleaning of drainage or sewer ditches or structures; or</li> <li>• any other limited, minor work on public facilities or equipment that is routinely performed to prevent breakdown or deterioration.</li> </ul>
Non-applicability: Minor service or maintenance work	State agencies	Minor service or maintenance work means a project of public works that is limited to <ul style="list-style-type: none"> <li>• minor crack filling, chip or slurry sealing, or other minor pavement patching, not including overlays, that has a projected life span of no longer than 5 years;</li> <li>• cleaning of drainage or sewer ditches or structures; or</li> <li>• any other limited, minor work on public facilities or equipment that is routinely performed to prevent breakdown or deterioration.</li> </ul>
Non-applicability: Supply & installation contract	All public entities	Supply and installation contract means a contract under which the material is installed by means of simple fasteners or connectors such as screws or nuts and bolts and no other work is performed on the site of the project of public works, and the total labor cost to install the material does not exceed 20 percent of the total cost of the contract.
Non-applicability: Work which a contractor or individual donates to a public entity	All public entities	Prevailing wage laws §§66.0903 & 103.49, Stats., do not apply to work performed on a project of public works for which the local governmental unit or the state or the state agency contracting for the project is not required to compensate any contractor, subcontractor, contractor's or subcontractor's agent, or individual for performing the work.

Topic	Who's affected?	Brief description of requirement under §66.0903 or §103.49
Non-applicability: Residential	All public entities	A prevailing wage rate determination is not required for the erection, construction, repair, remodeling, or demolition of a residential property containing 2 dwelling units or less.
Non-applicability: Residential subdivision infrastructure	All public entities	A prevailing wage rate determination is not required for a road, street, bridge, sanitary sewer, or water main project that is a part of a development in which at least 90 percent of the lots contain or will contain 2 dwelling units or less, as determined by the local governmental unit at the time of approval of the development, and that, on completion, is acquired by, or dedicated to, a local governmental unit (including under §236.13(2), Stats.), or the state, for ownership or maintenance by the local governmental unit or the state.
Electronic certified payroll record	Contractors	The requirement that every contractor on a prevailing wage project submit to DWD monthly a certified record of employees who worked on the project and that DWD post these certified records on its Internet website was discontinued effective July 1, 2011. Contractors are still required to maintain payroll records and provide them upon request from DWD &/or the project owner.
Payroll record inspection request by any person	Contractors & Complainants	Any person may request DWD to inspect the payroll records of any contractor working on a prevailing wage project. On receipt of such a request, the contractor must submit to DWD a certified record of its payroll records, other than personally identifiable information relating to an employee of the contractor, for no longer than a 4-week period. DWD may request records from a contractor under this provision no more than once per calendar quarter for each project of public works on which the contractor is performing work. The department may not charge a requester a fee for obtaining that information. DWD must make these certified records available for public inspection.
Statewide uniformity	Local governmental units	A local governmental unit may not enact & administer a prevailing wage ordinance/provision for public works or publicly funded private construction projects. Any extant laws to that effect are void.
Substance Abuse Testing	Contractors & Workers	Before commencing work on a prevailing wage project, a contractor must have a written substance abuse testing program in place that complies with §103.503, Wis. Stats. No employee may use, possess, attempt to possess, distribute, deliver, or be under the influence of a drug or under the influence of alcohol while performing work on a prevailing wage project.

Topic	Who's affected	Brief description of requirement under §66.0903 or §103.49
<p>Covered employees</p>	<p>Truck drivers &amp; Other workers &amp; Contractors</p>	<p>A laborer, worker, mechanic, or truck driver who is employed to process, manufacture, pick up, or deliver materials or products from a commercial establishment that has a fixed place of business from which the establishment supplies processed or manufactured materials or products or from a facility that is not dedicated exclusively, or nearly so, to a project of public works is NOT entitled to receive the prevailing wage rate UNLESS any of the following applies:</p> <ol style="list-style-type: none"> <li>1) the laborer, worker, mechanic, or truck driver is employed to go to the source of mineral aggregate such as sand, gravel, or stone and deliver that mineral aggregate to the site of a project of public works by depositing the material directly in final place, from the transporting vehicle or through spreaders from the transporting vehicle.</li> <li>2) the laborer, worker, mechanic, or truck driver is employed to go to the site of a project of public works, pick up excavated material or spoil from the site of the project, and transport that excavated material or spoil away from the site of the project.</li> </ol>

## SECTION 01 00 00

### PART 1 GENERAL

#### 1.1 SECTION SUMMARY

- A. Section Includes:
1. Section Summary
  2. Summary of the Work
  3. Contractor Use of Premises
  4. Applications for Payment
  5. Change Procedures
  6. Alternates
  7. Coordination
  8. Cutting and Patching
  9. Conferences
  10. Progress Meetings
  11. Submittal Procedures
  12. Proposed Products List
  13. Shop Drawings
  14. Product Data
  15. Samples
  16. Manufacturers' Instructions
  17. Manufacturers' Certificates
  18. Quality Assurance / Quality Control of Installation
  19. References
  20. Interior Enclosures
  21. Protection of Installed Work
  22. Parking
  23. Staging Areas
  24. Occupancy During Construction and Conduct of Work
  25. Protection
  26. Progress Cleaning
  27. Products
  28. Transportation, Handling, Storage and Protection
  29. Product Options
  30. Substitutions
  31. Starting Systems
  32. Demonstration and Instructions
  33. Contract Closeout Procedures
  34. Final Cleaning
  35. Adjusting
  36. Operation and Maintenance Data
  37. Spare Parts and Maintenance Materials
  38. As-Built and Record Drawings and Specifications

## 1.2 SUMMARY OF THE WORK

- A. Project Description: Perform the Work as specified and detailed in Construction Documents package. Contractor to provide lighting and control improvements for the Exposition Hall at the Alliant Energy Center.
- B. Permits: Prior to commencement of the Work, Contractor to secure any and all necessary permits for completion of the Work and facility occupancy.

## 1.3 CONTRACTOR USE OF PREMISES

- A. Limit use of premises to allow work by Contractors or Subcontractors and access by Owner.
- B. Coordinate utility outages and shutdowns with (including electrical panel disconnects) with AEC Staff.

## 1.4 APPLICATIONS FOR PAYMENT

- A. Submit two (2) original copies with “wet” signatures of each application on AIA G702™ and G703™ forms or approved contractors invoice form.
- B. Content and Format: Utilize Schedule of Values for listing items in Application for Payment.
- C. Payment Period: Monthly.
- D. Submit Applications for Payment to Public Works Project Manager for approval & processing for payment.

## 1.5 CHANGE PROCEDURES

- A. Contractor's costs for Products, delivery, installation, labor, insurance, payroll, taxes, bonding, equipment rental, overhead and profit will be included in Change Order Requests for Change Orders authorizing expenditure of funds from contingency allowance.

## 1.6 ALTERNATES

- A. Not Applicable

## 1.7 COORDINATION

- A. Coordinate scheduling, submittals, and work of various sections of Specifications to assure efficient and orderly sequence of installation of interdependent construction elements.
- B. Verify utility requirement characteristics of operating equipment are compatible with building utilities.

- C. Coordinate space requirements and installation of mechanical and electrical work that are indicated diagrammatically on Drawings.

#### 1.8 CUTTING AND PATCHING

- A. Employ a skilled and experienced installer to perform cutting and patching new work; restore work with new Products.
- B. Submit written request in advance of cutting or altering structural or building enclosure elements.
- C. Fit work tight to adjacent elements. Maintain integrity of wall, ceiling, or floor construction; completely seal voids.
- D. Refinish surfaces to match adjacent finishes.

#### 1.9 CONFERENCES

- A. There will be pre-bid conference for this project; see Instructions to Bidders.
- B. Owner will schedule a pre-construction conference after Award of Contract for all affected parties.
- C. Contractor shall submit Construction Schedule at pre-construction meeting.
- D. When required in individual Specification section, convene a pre-installation conference at project site prior to commencing work of Section.

#### 1.10 PROGRESS MEETINGS

- A. Schedule and administer meetings throughout progress of the Work at minimum of one ( ) per week with Public Works Project Manager.
- B. Preside at meetings, record minutes, and distribute copies within two (2) business days to those affected by decisions made.

#### 1.11 SUBMITTAL PROCEDURES

- A. Submittal form to identify Project, Contractor, Subcontractor or supplier; and pertinent Construction Documents references.
- B. 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 requirements of the Work and Construction Documents.
- C. Identify variations from Construction Documents and Product or system limitations that may be detrimental to successful performance of completing the Work.

- D. Revise and resubmit submittals as required; identify all changes made since previous submittal.
- 1.12 PROPOSED PRODUCTS LIST
- A. Within fifteen (25) business days after date of Award of Contract, submit complete list of major Products proposed for use, with name of manufacturer, trade name, and model number of each Product.
- 1.13 SHOP DRAWINGS
- A. Refer to General Conditions – Article 4: SHOP DRAWINGS, PRODUCT DATA AND SAMPLES
- 1.14 PRODUCT DATA
- A. Refer to General Conditions – Article 4: SHOP DRAWINGS, PRODUCT DATA AND SAMPLES
- 1.15 SAMPLES
- A. Refer to General Conditions – Article 4: SHOP DRAWINGS, PRODUCT DATA AND SAMPLES
- 1.16 MANUFACTURERS' 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.
- 1.17 MANUFACTURERS' CERTIFICATES
- A. When specified in individual Specification sections, submit manufacturers' certificate to Public Works Project Manager 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.
- 1.18 QUALITY ASSURANCE / QUALITY CONTROL OF INSTALLATION
- A. Monitor quality control over suppliers, manufacturers, Products, services, site conditions, and workmanship, to produce work of specified quality.
  - B. Comply fully with manufacturers' instructions.
  - C. Comply with specified standards as minimum quality for the Work except when more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.

#### 1.19 REFERENCES

- A. Conform to reference standard by date of issue current as of date for receiving bids.
- B. Should specified reference standard conflict with Construction Documents, request clarification from Public Works Project Manager before proceeding.

#### 1.20 INTERIOR ENCLOSURES

- A. Provide temporary partitions as required to separate work areas from Owner occupied areas, to prevent distribution of dust and moisture into Owner occupied areas, and to prevent damage to existing materials and equipment.

#### 1.21 PROTECTION OF INSTALLED WORK

- A. Protect installed work and provide special protection where specified in individual Specification sections.

#### 1.22 PARKING

- A. One stall shall be dedicated on the loading dock for Contractor use throughout the project. The stall location will be assigned by the AEC staff. Additional parking areas outside of the loading dock area will be made available to accommodate construction vehicle and employee parking.

#### 1.23 STAGING AREAS

- A. Coordinate staging areas inside the building and on the loading dock with Public Works Project Manager prior to starting the Work. Contractor shall be responsible for safety of equipment and materials that are stored on site.

#### 1.24 OCCUPANCY DURING CONSTRUCTION AND CONDUCT OF WORK

- A. Areas of existing facility will be occupied during period when the Work is in progress. Work may be done during normal business hours (7:00 am to 4:30 pm), but confer with Owner, schedule work and store materials so as to interfere as little as possible with normal use of premises. Notify Owner when coring or similar noise making work is to be done and obtain Owner's written approval of schedule. If schedule is not convenient for Owner, reschedule and resubmit new times for Owner approval. Coring of floor along with other noisy work may have to be done on second and third shifts.
- B. Work shall be done and temporary facilities furnished so as not to interfere with access to any occupied area and so as to cause least possible interference with normal operation of facility or any essential service thereof.
- C. Contractor shall, at all times, provide approved, safe walkways and facility entrances for use by Owner, employees and public.

- D. Contractor shall provide adequate protection for all parts of facility, its contents and occupants wherever the Work under this Contract is to be performed.
- E. Contractor is not responsible for providing & maintaining temporary toilet facilities.
- F. Each Contractor shall arrange with Owner to make necessary alterations, do new work, make connections to all utilities, etc., at such times as will not cause interruption of utility services to facility. Contractor doing this work shall protect, cap, cut off and / or replace and relocate existing pipes, electrical work and other active utilities encountered which may interfere with new construction work.
- G. New work in extension of existing work shall correspond in all respects with that to which it connects or similar existing work unless otherwise indicated or specified.
  - 1. Existing work shall be cut, altered, removed or replaced as necessary for performance of Contract obligations.
  - 2. Work remaining in place, damaged or defaced by reason of work done under this Contract shall be restored equal to its condition at time of Award of Contract.
  - 3. If removal of work exposes discolored or unfinished surfaces or work out of alignment, such surfaces shall be refinished or materials replaced as necessary to make continuous work uniform and harmonious.

#### 1.25 PROTECTION

- A. Contractor shall protect from injury all walks and driveways and pay for any damage to same resulting from insufficient or improper protection.
- B. Contractor shall provide and maintain barricades & signage to prohibit public access to construction site.

#### 1.26 PROGRESS CLEANING

- A. Maintain areas free of waste materials, debris, and rubbish. Maintain site in clean and orderly condition. Refer to General Conditions – Article 6: Cleaning Up.

#### 1.27 PRODUCTS

- A. Products: Means new material, machinery, components, equipment, fixtures, and systems forming the Work, but does not include machinery and equipment used for preparation, fabrication, conveying and erection of the Work. Products may also include existing materials or components specifically identified for reuse.
- B. Do not use materials and equipment removed from existing premises, except as specifically identified or allowed by Construction Documents.

#### 1.28 TRANSPORTATION, HANDLING, STORAGE AND PROTECTION

- A. Transport, handle, store and protect Products in accordance with manufacturer's instructions.

### 1.29 PRODUCT OPTIONS

- A. Where definite material is specified, it is not intentional to discriminate against "equal" product made by another manufacturer. Intention is to set definite standard of material quality.
- B. Products and materials that are not specified, but have been approved for use by Public Works Project Manager shall be identified in addenda to all bidding contractors.
- C. Owner reserves right to approve or reject substitutions based on Specification requirements and intended use.

### 1.30 SUBSTITUTIONS

- A. Public Works Project Manager shall consider requests for Substitutions only within fifteen (15) calendar days after date of Public Works Construction Contract.
- B. Public Works Project Manager shall consider requests for Substitutions only up to seven (7) business days prior to date of Bid Due Date.
- C. Document each request with complete data substantiating compliance of proposed Substitution with Construction Documents.
- D. Submit three (3) copies of requests for Substitution for consideration. Limit each request to one (1) proposed Substitution.
- E. Substitutions shall not change contract price established at Bid Due Date.

### 1.31 STARTING SYSTEMS

- A. Provide written notification prior to start-up of each equipment item or system.
- B. Ensure that each piece of equipment or system is ready for operation.
- C. Execute start-up under supervision of responsible persons in accordance with manufacturers' instructions.
- D. Submit written report that equipment or system has been properly installed and is functioning correctly.

### 1.32 DEMONSTRATION AND INSTRUCTIONS

- A. Demonstrate operation and maintenance of Products to Owner's personnel prior to date of final inspection.
- B. Demonstrate start-up, operation, control, adjustment, trouble-shooting, servicing, maintenance, and shutdown of each item of equipment at agreed-upon times, at designated location.

- C. Owner may choose to videotape demonstration session; demonstration and demonstrator shall be to level of satisfaction of Owner.

#### 1.33 CONTRACT CLOSEOUT PROCEDURES

- A. Submit written certification that Construction Documents have been reviewed, the Work has been inspected, and the Work is complete in accordance with Construction Documents and ready for Public Works Project Manager's inspection.
- B. Submit final Application for Payment identifying total adjusted Contract Sum / Price, previous payments, and amount remaining due.

#### 1.34 FINAL CLEANING

- A. Execute final cleaning prior to final inspection.
- B. Remove waste and surplus materials, rubbish, and construction facilities from site.

#### 1.35 ADJUSTING

- A. Adjust operating Products and equipment to ensure smooth and unhindered operation.

#### 1.36 OPERATION AND MAINTENANCE MANUAL

- A. Provide operation and maintenance manual for all mechanical and electrical equipment and systems supplied and installed in the Work.

#### 1.37 SPARE PARTS AND MAINTENANCE MATERIALS

- A. Provide Products, spare parts, maintenance and extra materials in quantities specified in individual Specification Sections.
- B. Deliver to the Work site and place in location as directed.

#### 1.38 AS-BUILT AND RECORD DRAWINGS AND SPECIFICATIONS

- A. Contractor-produced Drawings and Specifications shall remain property of Contractor whether Project for which they are made is executed or not. Contractor shall furnish Public Works Project Manager with original marked up redlines of Construction Documents' drawings and specifications that shall include all Addendums, Change Orders, Construction Bulletins, on-site changes, field corrections, etc. These are project As-Built Drawings & Specifications
- B. Architect / Engineer shall update original Construction Documents to include all Addendums & any other changes including those provided by Contractor in As-Built Drawings & Specifications. These updates are project Record Drawings & Specifications.

- C. Architect / Engineer shall furnish Public Works Project Manager with Record Drawings as detailed in Professional Services Agreement.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

END OF SECTION

## SECTION 01 74 19

### RECYCLING

#### PART 1 GENERAL

##### 1.1 SUMMARY

- A. Section Includes:
  - 1. Summary
  - 2. Waste Management Goals
  - 3. Waste Management Plan
  - 4. Reuse
  - 5. Recycling
  - 6. Materials Sorting and Storage On Site
  - 7. Lists of Recycling Facilities Processors and Haulers
  - 8. Waste Management Plan Form
  
- B. Related Sections:
  - 1. Section 01 00 00 - Basic Requirements

##### 1.2 WASTE MANAGEMENT GOALS

- A. Dane County requires that as many waste materials as possible produced as result of this project be salvaged, reused or recycled in order to minimize impact of construction waste on landfills and to minimize expenditure of energy and cost in fabricating new materials. Additional information may be found in The Dane County Green Building Policy, Resolution 299, 1999-2000.
  
- B. Contractor shall develop, with assistance of Public Works Project Manager and Energy Engineer, Waste Management Plan (WMP) for this project. Outlined in RECYCLING section of this specification are examples of materials that can be recycled or reused as well as recommendations for waste sorting methods.

##### 1.3 WASTE MANAGEMENT PLAN

- A. Contractor shall complete WMP and include cost of recycling / reuse in Bid. WMP will be submitted to Public Works Project Manager within fifteen (15) business days of Notice to Proceed date. Copy of blank WMP form is in this Section. Submittal shall include cover letter and WMP form with:
  - 1. Information on:
    - a. Types of waste materials produced as result of work performed on site;
    - b. Estimated quantities of waste produced;
    - c. Identification of materials with potential to be recycled or reused;
    - d. How materials will be recycled or reused;
    - e. On-site storage and separation requirements (on site containers);
    - f. Transportation methods; and
    - g. Destinations.

#### 1.4 REUSE

- A. Contractors and subcontractors are encouraged to reuse as many waste materials as possible. Salvage should be investigated for materials not reusable on site.

#### 1.5 RECYCLING

- A. These materials can be recycled in Dane County area:
  1. Wood.
  2. Wood Pallets.
  3. Fluorescent Lamps.
  4. Foam Insulation & Packaging (extruded and expanded).
  5. PVC Plastic (pipe, siding, etc.).
  6. Asphalt & Concrete.
  7. Bricks & Masonry
  8. Corrugated Cardboard.
  9. Metal.
  10. Carpet Padding.
  11. Gypsum Drywall.
  12. Shingles.
  13. Barrels & Drums.
  14. Solvents.

#### 1.6 MATERIALS SORTING AND STORAGE ON SITE

- A. Contractor shall provide separate containers for recyclable materials. Number of containers will be dependent upon project and site conditions.
- B. Contractor shall provide on-site locations for subcontractors supplied recycling containers to help facilitate recycling.

#### 1.7 LISTS OF RECYCLING FACILITIES PROCESSORS AND HAULERS

- A. Web site [www.countyofdane.com/pwht/recycle/categories.aspx](http://www.countyofdane.com/pwht/recycle/categories.aspx) lists current information for Dane County Recycling Markets. Contractors can also contact Jan Neitzel-Knox at 608/266-4029, or local city, village, town recycling staff listed at site [www.countyofdane.com/pwht/recycle/contacts.aspx](http://www.countyofdane.com/pwht/recycle/contacts.aspx). Statewide listings of recycling / reuse markets are available from UW Extension at [www4.uwm.edu/shwec/wrmd/search.cfm](http://www4.uwm.edu/shwec/wrmd/search.cfm).

1.8 WASTE MANAGEMENT PLAN FORM

A. Contractor Information:

Name: \_\_\_\_\_

Address: \_\_\_\_\_

Phone No.: \_\_\_\_\_ Recycling Coordinator: \_\_\_\_\_

MATERIAL	ESTIMATED QUANTITY	DISPOSAL METHOD (CHECK ONE)		RECYCLING / REUSE COMPANY OR DISPOSAL SITE
Salvaged & reused building materials	_____ cu. yds. _____ tons	_____ Recycled	_____ Reused	Name: _____
Glass	_____ cu. yds. _____ tons	_____ Recycled	_____ Reused	Name: _____
Wood	_____ cu. yds. _____ tons	_____ Recycled	_____ Reused	Name: _____
Wood Pallets	_____ units	_____ Recycled	_____ Reused	Name: _____
Fluorescent Lamps	_____ cu. ft. _____ lbs.	_____ Recycled	_____ Reused	Name: _____
Foam Insulation	_____ cu. ft. _____ lbs.	_____ Recycled	_____ Reused	Name: _____
Asphalt & Concrete	_____ cu. ft. _____ lbs.	_____ Recycled	_____ Reused	Name: _____
Bricks & Masonry	_____ cu. ft. _____ lbs.	_____ Recycled	_____ Reused	Name: _____
PVC Plastic	_____ cu. ft. _____ lbs.	_____ Recycled	_____ Reused	Name: _____
Corrugated Cardboard	_____ cu. ft. _____ lbs.	_____ Recycled	_____ Reused	Name: _____
Metals	_____ cu. yds. _____ tons	_____ Recycled	_____ Reused	Name: _____
Carpet Padding	_____ cu. ft. _____ lbs.	_____ Recycled	_____ Reused	Name: _____
Gypsum / Drywall	_____ cu. yds. _____ tons	_____ Recycled	_____ Reused	Name: _____

Shingles	_____ cu. yds. _____ tons	_____ Recycled _____ Landfilled	_____ Reused _____ Other	Name: _____
Barrels & Drums	_____ units	_____ Recycled _____ Landfilled	_____ Reused _____ Other	Name: _____
Solvents	_____ gallons	_____ Recycled _____ Landfilled	_____ Reused _____ Other	Name: _____
Other	_____	_____ Recycled _____ Landfilled	_____ Reused _____ Other	Name: _____
Other	_____	_____ Recycled _____ Landfilled	_____ Reused _____ Other	Name: _____
Other	_____	_____ Recycled _____ Landfilled	_____ Reused _____ Other	Name: _____
Other	_____	_____ Recycled _____ Landfilled	_____ Reused _____ Other	Name: _____
Other	_____	_____ Recycled _____ Landfilled	_____ Reused _____ Other	Name: _____

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

END OF SECTION

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60  
61  
62  
63

**SECTION 26 05 00**  
**COMMON WORK RESULTS FOR ELECTRICAL**

**PART 1 - GENERAL**

The electrical work included in all other divisions is the responsibility of the contractor performing the division 26 work unless noted otherwise.

**PROJECT OVERVIEW**

The work under this section includes electrical work for lighting design for partial replacement of existing lighting, head end and local controls to replace existing controls, as well as power and wiring for lighting systems.

**SCOPE**

The work under this section includes basic electrical requirements, which are applicable to all Division 26 sections. This section includes information common to two or more technical specification sections or items that are of a general nature, not conveniently fitting into other technical sections. Included are the following topics:

**PART 1 - GENERAL**

- Project Overview
- Scope
- Related Work
- Reference Standards
- Regulatory Requirements
- Quality Assurance
- Continuity of Existing Services and Systems
- Protection of Finished Surfaces
- Approved Electrical Testing Laboratories
- Sleeves and Openings
- Sealing and Fire Stopping
- Intent
- Omissions
- Submittals
- Project/Site Conditions
- Work Sequence and Scheduling
- Offsite Storage
- Salvage Materials
- Certificates and Inspections
- Operating and Maintenance Data
- Record Drawings

**PART 2 - PRODUCTS**

- Access Panels and Doors
- Sealing and Fire Stopping

**PART 3 - EXECUTION**

- Cutting and Patching
- Equipment Access
- Coordination
- Sleeves and Openings
- Sealing and Fire Stopping
- Housekeeping and Clean Up
- Agency Training

**RELATED WORK**

Applicable provisions of Division 1 govern work under this Section.

**REFERENCE STANDARDS**

Abbreviations of standards organizations referenced in this and other sections are as follows:

ANSI	American National Standards Institute
ASTM	American Society for Testing and Materials
EPA	Environmental Protection Agency
ETL	Electrical Testing Laboratories, Inc.

- 1 IEEE Institute of Electrical and Electronics Engineers
- 2 IES Illuminating Engineering Society
- 3 NEC National Electric Code
- 4 NEMA National Electrical Manufacturers Association
- 5 NFPA National Fire Protection Association
- 6 UL Underwriters Laboratories Inc.

7

8 **REGULATORY REQUIREMENTS**

9 All work and materials are to conform in every detail to applicable rules and requirements of the Wisconsin  
10 State Electrical Code (SPS 316), the National Electrical Code (NFPA 70), other applicable National Fire  
11 Protection Association codes and present manufacturing standards (including NEMA).

12

13 All Division 26 work shall be done under the direction of a currently licensed State of Wisconsin Master  
14 Electrician.

15

16 **QUALITY ASSURANCE**

17 Where equipment or accessories are used which differ in arrangement, configuration, dimensions, ratings,  
18 or engineering parameters from those indicated on the contract documents, the contractor is responsible for  
19 all costs involved in integrating the equipment or accessories into the system and the assigned space, and  
20 for obtaining the performance from the system into which these items are placed.

21

22 Manufacturer references used herein are intended to establish a level of quality and performance  
23 requirements unless more explicit restrictions are stated to apply.

24

25 All materials shall be listed by and shall bear the label of an approved electrical testing laboratory.

26

27 **CONTINUITY OF EXISTING SERVICES AND SYSTEMS**

28 No outages shall be permitted on existing systems except at the time and during the interval specified by  
29 the owner. Any outage must be scheduled when the interruption causes the least interference. No extra  
30 costs will be paid to the Contractor for such outages which must occur outside of regular weekly working  
31 hours.

32

33 This Contractor shall restore any circuit interrupted as a result of this work to proper operation as soon as  
34 possible. Note that institutional operations are on a seven-day week schedule.

35

36 **PROTECTION OF FINISHED SURFACES**

37 Furnish one can of touch-up paint for each different color factory finish furnished by the Contractor.  
38 Deliver touch-up paint with other "loose and detachable parts" as covered in the General Requirements.

39

40 **APPROVED ELECTRICAL TESTING LABORATORIES**

41 The following laboratories are approved for providing electrical product safety testing and listing services  
42 as required in these specifications:

43

- 44 Underwriters Laboratories Inc.
- 45 Electrical Testing Laboratories, Inc.

46

47 **SEALING AND FIRE STOPPING**

48 Sealing and fire stopping of sleeves/openings shall be the responsibility of the contractor whose work  
49 penetrates the opening.

50

51 **INTENT**

52 The Contractor shall furnish and install all the necessary materials, apparatus, and devices to complete the  
53 electrical equipment and systems installation herein specified, except such parts as are specifically  
54 exempted herein.

55

56 If an item is either called for in the specifications or shown on the plans, it shall be considered sufficient for  
57 the inclusion of said item in this contract. If a conflict exists within the Specifications or exists within the  
58 Drawings, the Contractor shall furnish the item, system, or workmanship, which is the highest quality,  
59 largest to satisfy the intent. Refer to the General Conditions of the Contract for further clarification.

60

61 It must be understood that the details and drawings are diagrammatic. The Contractor shall verify all  
62 dimensions at the site and be responsible for their accuracy.

63



1  
2 In addition to the general content specified under GENERAL REQUIREMENTS supply the following  
3 additional documentation:

- 4 1. Manufacturer's wiring diagrams for electrically powered equipment.  
5

#### 6 **RECORD DRAWINGS**

7 The Contractor shall maintain at least one copy each of the specifications and drawings on the job site at all  
8 times.  
9

10 The owner will provide the Contractor with a suitable set of contract drawings on which daily records of  
11 changes and deviations from contract shall be recorded. Dimensions and elevations on the record drawings  
12 shall locate all buried or concealed piping, conduit, or similar items.  
13

14 The daily record of changes shall be the responsibility of Contractor's field superintendent. No arbitrary  
15 mark-ups will be permitted.  
16

17 At completion of the project, the Contractor shall submit the marked-up record drawings to the  
18 Architect/Engineer prior to final payment.  
19

### 20 **PART 2 - PRODUCTS**

#### 21 **ACCESS PANELS AND DOORS**

22 Lay-in Ceilings:

23 Removable lay-in ceiling tiles in 2 x 2 foot or 2 x 4 foot configuration provided under other divisions are  
24 sufficient; no additional access provisions are required unless specifically indicated.  
25  
26

27 Plaster Walls and Ceilings:

28 16 gauge frame with not less than a 20 gauge hinged door panel, painted to match existing, stainless steel  
29 for use in toilets, showers and similar wet areas, concealed hinges, screwdriver operated cam latch for  
30 general application, key lock for use in public areas, UL listed for use in fire rated partitions if required by  
31 the application. Use the largest size access opening possible, consistent with the space and the equipment  
32 needing service; minimum size is 12" by 12".  
33

#### 34 **SEALING AND FIRE STOPPING**

35 Avoid penetrating any rated enclosure where possible.  
36

37 FIRE AND/OR SMOKE RATED PENETRATIONS:

38 Provide all fire stopping of fire rated penetrations and sealing of smoke rated penetrations.  
39

40 NON-RATED PENETRATIONS:

41 At conduit penetrations of non-rated interior partitions, floors and exterior walls above grade, use urethane  
42 caulk in annular space between conduit and sleeve, or the core drilled opening.  
43

### 44 **PART 3 - EXECUTION**

#### 45 **CUTTING AND PATCHING**

46 Refer to Division 1, General Requirements, Cutting and Patching.  
47  
48

#### 49 **EQUIPMENT ACCESS**

50 Install all piping, conduit, ductwork, and accessories to permit access to equipment for maintenance.  
51 Coordinate the exact location of wall and ceiling access panels and doors with the owner, making sure that  
52 access is available for all equipment and specialties. Where access is required in plaster or drywall walls or  
53 ceilings, furnish the access doors.  
54

#### 55 **COORDINATION**

56 The Contractor shall cooperate with owner in locating work in a proper manner. Should it be necessary to  
57 raise or lower or move longitudinally any part of the electrical work to better fit the general installation,  
58 such work shall be done at no extra cost, provided such decision is reached prior to actual installation. The  
59 Contractor shall check location of electrical outlets with respect to other installations before installing.  
60

61 The Contractor shall verify that all devices are compatible for the surfaces on which they will be used.  
62 This includes, but is not limited to light fixtures, panelboards, devices, etc.  
63



1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60  
61  
62

**SECTION 26 05 02**  
**ELECTRICAL DEMOLITION FOR REMODELING**

**PART 1 - GENERAL**

**SCOPE**

The work under this section includes demolition of existing lighting fixtures and control as well as associated power and control wiring and raceway.

**PART 1 - GENERAL**

Scope

Related Work

**PART 2 - PRODUCTS**

Materials and Equipment

**PART 3 - EXECUTION**

Examination

Demolition and Extension of the Existing Electrical Work

PCB Ballast Handling

Lamp and PCB Ballast Disposal

**RELATED WORK**

Applicable provisions of Division 1 govern work under this Section.

**PART 2 - PRODUCTS**

**MATERIALS AND EQUIPMENT**

Materials and equipment for patching and extending work as specified in the individual Sections.

**PART 3 - EXECUTION**

**EXAMINATION**

Verify field measurements and circuiting arrangements as shown on Drawings.

Verify that abandoned wiring and equipment serve only abandoned facilities.

All materials, fixtures, equipment removed are property of the contractor to remove and disposed of at the contractor's expense. Coordinate removal and disposal of hazardous materials such as lamps and ballasts with owner's requirements.

If PCB light fixture ballasts exist, then follow owner's requirements. Coordinate requirement with owner prior to start of work.

Demolition Drawings are based on casual field observation and/or existing record documents. Report discrepancies to the owner and Architect/Engineer before disturbing existing installation.

Beginning of demolition means installer accepts existing conditions.

**DEMOLITION AND EXTENSION OF EXISTING ELECTRICAL WORK**

Demolish and extend existing electrical work to meet all requirements of these specifications.

If certain raceways and boxes are abandoned but not scheduled for removal, those items must be shown on the "As Built Drawings".

Remove, relocate, and extend existing installations to accommodate new construction.

Remove abandoned wiring to source of supply.

Provide revised typed circuit directory in panelboards that have circuits removed.

Remove exposed abandoned conduit and abandoned conduit above accessible ceiling finishes. Cut conduit flush with walls and floors, and patch surfaces.

1 Disconnect abandoned outlets and remove devices. Remove abandoned outlets if conduit and wiring  
2 servicing them is abandoned and removed. Provide blank cover for abandoned outlets which are not  
3 removed.

4  
5 Disconnect and remove electrical devices and equipment serving utilization equipment that has been  
6 removed.

7  
8 Disconnect and remove abandoned luminaires. Remove brackets, stems, hangers, and other accessories.

9  
10 Repair adjacent construction and finishes damaged during demolition and extension work.

11  
12 Maintain access to existing electrical installations which remain active. Modify installation or provide  
13 access panel as appropriate.

14  
15 Extend existing installations using materials and methods compatible with existing electrical installations,  
16 or as specified. This includes the extension of the circuit from the last active device to the next device in  
17 the system to be activated.

18  
19 **PCB BALLAST HANDLING**

20 If present, coordinate removal, handling and disposal with owner

21  
22 **LAMP AND PCB BALLAST DISPOSAL**

23 All lamps (fluorescent, incandescent, and HID) contain mercury and/or lead (in the base) as well as other  
24 heavy metals and compounds which are regulated by the EPA and DNR during the disposal process. As a  
25 result, regulations have been issued covering the handling and disposal of all lamps. Coordinate disposal of  
26 lamps and ballasts which have been removed from service with the owner.

27  
28  
29  
30

END OF SECTION

1  
2 **SECTION 26 05 19**  
3 **LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLE**

4 **PART 1 - GENERAL**  
5

6 **SCOPE**

7 The work under this section includes furnishing and installing required wiring and cabling systems  
8 including pulling, terminating and splicing. Included are the following topics:  
9

10 **PART 1 - GENERAL**

11 Scope  
12 Related Work  
13 References  
14 Project Conditions

15 **PART 2 - PRODUCTS**

16 General  
17 Building Wire  
18 Wiring Connectors

19 **PART 3 - EXECUTION**

20 General Wiring Methods  
21 Wiring Installation in Raceways  
22 Wiring Connections and Terminations  
23 Field Quality Control  
24 Wire Color  
25 Branch Circuits  
26

27 **RELATED WORK**

28 Applicable provisions of Division 1 govern work under this Section.  
29

30 **REFERENCES**

31 Wisconsin Administrative Code SPS 316 - Electrical  
32

33 **PROJECT CONDITIONS**

34 Verify that field measurements are as shown on Drawings.  
35

36 Conductor sizes are based on copper.  
37

38 Wire and cable routing shown on Drawings is approximate unless dimensioned. Route wire and cable as  
39 required to meet project conditions.  
40

41 Where wire and cable routing is not shown, and destination only is indicated, determine exact routing and  
42 lengths required.  
43

44 **PART 2 - PRODUCTS**  
45

46 **GENERAL**

47 All wire shall be new, delivered to the site in unbroken cartons and shall be less than one-year-old out of  
48 manufacturer's stock.  
49

50 All conductors shall be copper. Aluminum conductors size #1/0 and larger may be substituted for copper  
51 and used for phase and neutral conductors for panelboard feeders. All ground conductors shall be copper.  
52

53 The following requirements shall be met when aluminum conductors are used:  
54

55 Aluminum alloy conductors shall be compact stranded conductors of a recognized Aluminum  
56 Association 8000 Series aluminum alloy conductor material (AA-8000 series alloy).  
57

58 It is the responsibility of the contractor to increase the size of the conduit, wire gutter, or  
59 enclosure, if necessary, to accommodate the aluminum conductors and meet allowable code  
60 requirements.  
61

62 It is the responsibility of the contractor to increase the size of the aluminum conductor and  
63 associated termination lugs to match the ampacity of the copper conductor circuit shown on the  
64 Drawings.

1  
2 All aluminum conductors shall terminate on a mechanical screw-type connector or mechanical  
3 compression-type connector. Connector shall be dual rated (AL7CU or AL9CU) and Listed by  
4 UL for use with aluminum and copper conductors, and sized to accept aluminum conductors of the  
5 required ampacity. When using compression-type connectors, the lugs shall be marked with wire  
6 size, die index, number and location of crimps and shall be suitably color-coded. Using a suitable  
7 stripping tool, remove insulation from the required length of the conductor. Wire brush the  
8 conductor and apply a Listed joint compound. Tighten or crimp the connection per the connector  
9 manufacturer's recommendation. Wipe off any excess joint compound.

10  
11 When terminating aluminum conductors to aluminum bus, prepare a mechanical screw-type or  
12 compression-type connection. Bolts shall be anodized alloy and conform to current ANSI and  
13 ASTM chemical and mechanical property limits. Nuts shall be aluminum alloy and conform to  
14 current ANSI standards. Washers shall be flat aluminum alloy, Type A plain, standard wide series  
15 conforming to current ANSI standards. Lubricate and tighten the hardware per manufacturer's  
16 recommendations.

17  
18 When terminating aluminum conductors to copper bus, prepare a mechanical screw-type or  
19 compression-type connection. Bolts shall be plated or galvanized medium carbon steel; heat  
20 treated, quenched and tempered equal to current ASTM standard or SAE grade 5. Nuts shall  
21 conform to current ANSI standards. Washers shall be steel, Type A plain, standard wide series  
22 conforming to current ANSI standards. Belleville conical spring washers shall be of hardened  
23 steel, cadmium plated or silicone bronze. Lubricate and tighten the hardware per manufacturer's  
24 recommendations.

25  
26 The final tightening torque shall be recorded for all aluminum conductor mechanical screw-type  
27 connections and provided in report form, in the completed O&M manuals.

28  
29 **No copper-to-aluminum transitions permitted when splicing onto existing copper feeders.**

30  
31 Insulation shall have a 600 volt rating.

32  
33 All conductors shall be stranded.

34  
35 Stranded conductors may only be terminated with UL OR ETL Listed type terminations or  
36 methods: e.g. stranded conductors may not be wrapped around a terminal screw but must be  
37 terminated with a crimp type device or must be terminated in an approved back wired method.

### 38 39 **BUILDING WIRE**

40 Description: Single conductor insulated wire 90 degree C.

41  
42 Insulation: Type THHN/THWN-2, XHHW-2 insulation.

### 43 44 **WIRING CONNECTORS**

45 Split Bolt Connectors: Not acceptable.

46  
47 Solderless Pressure Connectors: High copper alloy terminal. May be used only for cable termination to  
48 equipment terminals. Not approved for splicing.

49  
50 Twist Type Wire Connectors: Solderless twist type spring connector (wire-nut) with insulating cover for  
51 copper wire splices and taps. Use for conductor sizes 10 AWG and smaller. The manufacturer's wire fill  
52 capacity must be followed.

53  
54 Compression (crimp) Connectors: Long barrel; seamless, tin-plated electrolytic copper tubing; internally  
55 beveled barrel ends. Connector shall be clearly marked with the wire size and type and proper number and  
56 location of crimps. Connector must be installed with a crimper tool listed for use with the manufacturer and  
57 type of compression connector.

58  
59 Insulation Piercing Connectors: Molded insulated body, copper teeth, wrench tightened, UL 486B Listed.  
60 May be used only for connection of a tap conductor in run and tap type applications when main conductor  
61 is 8 AWG and larger.

## 62 63 **PART 3 - EXECUTION**

1 **GENERAL WIRING METHODS**

2 All wire and cable shall be installed in conduit.

3  
4 Do not use wire smaller than 12 AWG for power and lighting circuits.

5  
6 All phase, neutral and ground conductors shall be sized to prevent excessive voltage drop at rated circuit  
7 ampacity. As a minimum use 10 AWG conductors for 20 ampere, 120 volt branch circuit home runs longer  
8 than 100 feet (30 m), and for 20 ampere, 277 volt branch circuit home runs longer than 200 feet (61 m).

9  
10 Splice only in junction or outlet boxes.

11  
12 Identify ALL low voltage wire, 600V and lower, per section 26 05 53.

13  
14 Neatly train and lace wiring inside boxes, equipment, and panelboards.

15  
16 **WIRING INSTALLATION IN RACEWAYS**

17 Pull all conductors into a raceway at the same time. Use Listed water or silicone based wire pulling  
18 lubricant for pulling 4 AWG and larger wires and for other conditions when necessary. Wax based  
19 lubricants are not allowed. Pulling lubricant is not required for low friction type products where the cable  
20 manufacturer recommends that cables be pulled without lube.

21  
22 Install wire in raceway after interior of building has been physically protected from the weather and all  
23 mechanical work likely to injure conductors has been completed.

24  
25 Completely and thoroughly swab raceway system before installing conductors.

26  
27 Place all conductors of a given circuit (this includes phase wires, neutral (if any), and ground conductor) in  
28 the same raceway. If parallel phase and/or neutral wires are used, then place an equal number of phase and  
29 neutral conductors in same raceway or cable.

30  
31 In high ambient spaces, mechanical rooms, utility rooms and exterior exposed conduit, 90-degree C  
32 conductors shall be utilized.

33  
34 **WIRING CONNECTIONS AND TERMINATIONS**

35 Splice only in accessible junction boxes.

36  
37 Wire splices and taps shall be made firm, and adequate to carry the full current rating of the respective wire  
38 without soldering and without perceptible temperature rise.

39  
40 All splices shall be so made that they have an electrical resistance not in excess of two feet (600 mm) of the  
41 conductor.

42  
43 Use solderless twist type spring connectors (wire nuts) with insulating covers for wire splices and taps, 10  
44 AWG and smaller.

45  
46 Use mechanical or compression connectors for wire splices and taps, 8 AWG and larger. Tape uninsulated  
47 conductors and connectors with electrical tape to 150 percent of the insulation value of the wiring.

48  
49 Thoroughly clean wires before installing lugs and connectors.

50  
51 At all splices and terminations, leave tails long enough to cut splice out and completely re-splice.

52  
53 **FIELD QUALITY CONTROL**

54 Additional testing as follows shall be performed if aluminum conductors are used:

55  
56       Feeders terminated with aluminum conductors shall be tested with a thermal imager and recorded.

57  
58       Conductors shall be closely checked for loose or poor connections, and for signs of overheating or  
59       corrosion.

60  
61       Test procedures shall meet NETA guidelines.

62  
63       Test results and report shall be provided to the engineer and included in O&M manual under AL  
64       conductors/ tests.

1  
2 Contractor shall correct all deficiencies reported in the test report.  
3

4 **WIRE COLOR**

5 General:

6 Solid colored insulation is required for all THHN/THWN-2 wire. For other wire types use colored  
7 wire or identify wire with colored tape at all terminals, splices and boxes. Wire shall be colored as  
8 indicated below.  
9

10 In existing facilities, use existing color scheme.

11  
12 In new facilities, use black and red for single phase circuits at 120/240 volts, use Phase A black,  
13 Phase B red and Phase C blue for circuits at 120/208 volts single or three phase, and use Phase A  
14 brown, Phase B orange and Phase C yellow for circuits at 277/480 volts single or three phase.  
15 Note: This includes fixture whips except for Listed whips mounted by the fixture manufacturer on  
16 the fixture and Listed as a System.  
17

18 Switch legs shall be the same color as their associated circuit, except for the second switch leg  
19 used for dual-level switching. The second switch leg shall be the next phase color, e.g. if the first  
20 switch leg is brown (277/480V phase A), the second switch leg shall be orange (277/480V phase  
21 B).  
22

23 Traveler conductors run between 3 and 4 way switches shall be colored pink or purple.

24  
25 Neutral Conductors: White for 120/208V and 120/240V systems, Gray for 277/480V systems. Where there  
26 are two or more neutrals in one conduit, each shall be individually identified with a different stripe.  
27

28 Branch Circuit Conductors: Three or four wire home runs shall have each phase uniquely color coded.  
29

30 Feeder Circuit Conductors: Each phase shall be uniquely color coded.  
31

32 Ground Conductors: Green colored insulation for THHN/THWN-2 wire. For other wire types use green  
33 colored wire or identify wire with green tape at both ends and at all access points, such as panelboards,  
34 motor starters, disconnects and junction boxes. When isolated grounds are required, contractor shall  
35 provide green with yellow tracer.  
36

37 **BRANCH CIRCUITS**

38 The use of single-phase, multi-wire branch circuits with a common neutral is not permitted. All single-  
39 phase branch circuits shall be furnished and installed with an individual accompanying neutral, sized the  
40 same as the phase conductors.  
41

42 END OF SECTION

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60  
61  
62  
63  
64

**SECTION 26 05 23**  
**CONTROL-VOLTAGE ELECTRICAL POWER CABLES**

**PART 1 - GENERAL**

**SCOPE**

The work under this section includes furnishing and installing required remote control and signal cabling. Included are the following topics:

**PART 1 - GENERAL**

- Scope
- Related Work
- References
- Project Conditions

**PART 2 - PRODUCTS**

- General
- Remote Control and Signal Cable
- Wiring Connectors

**PART 3 - EXECUTION**

- General Wiring Methods
- Wiring Installation in Raceways
- Free-Air Cable Installation
- Wiring Connections and Terminations
- Field Quality Control

**RELATED WORK**

Applicable provisions of Division 1 govern work under this Section.

**REFERENCES**

NFPA 70 - National Electrical Code.

**PROJECT CONDITIONS**

Verify that field measurements are as shown on Drawings.

Conductor sizes are based on copper.

Wire and cable routing shown on Drawings is approximate unless dimensioned. Route wire and cable as required to meet Project Conditions.

Where wire and cable routing is not shown, and destination only is indicated, determine exact routing and lengths required.

**PART 2 - PRODUCTS**

**GENERAL**

All wire shall be new, delivered to the site in unbroken cartons and shall be less than one-year-old out of manufacturer's stock.

All conductors shall be copper.

Insulation shall have a 600-volt rating.

All conductors must be suitable for the application intended. Conductors #12 and smaller may be solid or stranded with the following requirements or exceptions:

- All conductors terminated with crimp type devices must be stranded.

- Stranded conductors may only be terminated with UL OR ETL Listed type terminations or methods: e.g. stranded conductors may not be wrapped around a terminal screw but must be terminated with a crimp type device or must be terminated in an approved back wired method.

**REMOTE CONTROL AND SIGNAL CABLE**

All other systems cabling shall meet the requirements of NEC Article 725 and the following:

1 Control Cable for Class 1 Remote Control and Signal Circuits: 600-volt insulation, individual  
2 conductors twisted together, shielded, and covered with an overall PVC jacket. Cable shall be  
3 Listed, temperature rated, and general purpose, riser or plenum rated for the application as  
4 required in the National Electrical Code.

5  
6 Control Cable for Class 2 or Class 3 Remote Control and Signal Circuits shall be Listed,  
7 temperature rated, and general purpose, riser or plenum rated for the application as required in the  
8 National Electrical Code.

9  
10 **WIRING CONNECTORS**

11 Split Bolt Connectors: Not acceptable.

12  
13 Spring Wire Connectors: Solderless spring type pressure connector with insulating covers for copper wire  
14 splices and taps. Use for conductor sizes 10 AWG and smaller.

15  
16 **PART 3 - EXECUTION**

17  
18 **GENERAL WIRING METHODS**

19 Low voltage control and signal cables may be installed without conduit above accessible ceilings if the  
20 cable meets NEC requirements for the application, unless specified to be in conduit in other sections of the  
21 specifications. See requirements for free-air cable installation below.

22  
23 Control cables for controlling lighting equipment connected to emergency power shall be routed in  
24 raceway.

25  
26 Do not use wire smaller than 14 AWG for control wiring greater than 60 volts, or 18 AWG for voltages less  
27 than 60 volts, all sizes subject to NEC 725 requirements.

28  
29 Splice only in junction boxes.

30  
31 Neatly train and lace wiring inside boxes, and equipment.

32  
33 **WIRING INSTALLATION IN RACEWAYS**

34 Pull all conductors into a raceway at the same time. Use Listed wire pulling lubricant for pulling  
35 conditions when necessary.

36  
37 Install wire in raceway after interior of building has been physically protected from the weather and all  
38 mechanical work likely to injure conductors has been completed.

39  
40 **FREE-AIR CABLE INSTALLATION**

41 Cabling shall be neatly run at right angles and be kept clear of other trades work.

42  
43 Cabling shall be supported at a maximum of 4-foot intervals utilizing 'bridal-type' mounting rings  
44 anchored to ceiling concrete, piping supports or structural steel beams. If cable sag at mid-span exceeds  
45 12-inches, another support shall be provided. Mounting rings shall be designed to maintain cables bend to  
46 larger than the minimum bed radius (typically 4 x cable diameter).

47  
48 Cabling shall not be attached to or supported by existing cabling, plumbing or steam piping, ductwork,  
49 suspended ceiling supports or electrical or communications conduit. Additionally, cabling shall not be laid  
50 directly on the ceiling grid.

51  
52 To reduce or eliminate Electro-Magnetic Interference (EMI), the following minimum separation distances  
53 for 'Free-Air' cabling installations shall be adhered to:

- 54  
55
- 56 • Twelve (12) inches from power lines of less than 5kV.
  - 57 • Thirty-nine (39) inches from power lines of 5kV or greater.
  - 58 • Five (5) inches from lighting fixtures.
  - 59 • Thirty-nine (39) inches from transformers and motors.

60  
61 A coil of 4 feet in each cable shall be placed in the ceiling at each 'free-air' wired device. These coils shall  
62 be secured (wire tied) at the last cable support before the cable reaches the device and shall be coiled from  
63 100% to 200% of the cable recommended minimum bend radius.

- 1 All cable shall be free of tension at both ends. Nylon strain relief connectors shall be provided at each  
2 device and junction box where cables enter. In cases where the cable must bear some stress, Kellum type  
3 grips may be used to spread the strain over a longer length of cable.  
4  
5 Cable manufacturers minimum bend radius shall be observed in all instances. Care should be taken in the  
6 use of cable ties to secure and anchor the station cabling. Ties should not be over tightened as to compress  
7 the cable jacket. No sharp burrs should remain where excess length of the cable tie has been cut.  
8  
9 All exposed vertical cable extensions to devices located below the finished ceiling shall be in conduit.  
10  
11 Provide protection for exposed cables where subject to damage.  
12  
13 Use suitable cable fittings and connectors.  
14  
15 When permitted in exposed ceiling areas as designated on the plan drawings, Free-Air wiring runs shall  
16 avoid areas of high traffic (i.e. aisle way), shall be run as close as possible to outlining walls and shall be a  
17 minimum of ten (10) feet above finished floor.  
18  
19 **WIRING CONNECTIONS AND TERMINATIONS**  
20 Splice only in accessible junction boxes (except splices to low voltage occupancy sensor power packs and  
21 terminations to temperature control devices).  
22  
23 All splices shall be so made that they have an electrical resistance not in excess of two feet (600 mm) of the  
24 conductor.  
25  
26 Use solderless spring type pressure connectors with insulating covers for wire splices and taps, 10 AWG  
27 and smaller.  
28  
29 Thoroughly clean wires before installing lugs and connectors.  
30  
31 At all splices and terminations, leave tails long enough to cut splice out and completely re-splice.  
32

33 END OF SECTION  
34

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60  
61  
62  
63

**SECTION 26 05 29**  
**HANGERS AND SUPPORTS FOR ELECTRICAL SYSTEMS**

**PART 1 - GENERAL**

**SCOPE**

The work under this sections includes conduit and equipment supports, straps, clamps, steel channel, etc., and fastening hardware for supporting electrical work. Included are the following topics:

**PART 1 - GENERAL**

Scope  
Related Work  
Quality Assurance

**PART 2 - PRODUCTS**

Material

**PART 3 - EXECUTION**

Installation

**RELATED WORK**

Applicable provisions of Division 1 govern work under this Section.

**QUALITY ASSURANCE**

Support systems shall be adequate for weight of equipment and conduit, including wiring, which they carry.

**PART 2 - PRODUCTS**

**MATERIAL**

Support Channel: Steel, Galvanized, Enameled or other corrosion resistant.

Hardware: Corrosion resistant.

Minimum sized threaded rod for supports shall be 3/8" for trapezes and single conduits 1-1/4" and larger, and 1/4" for single conduits 1" and smaller.

Conduit clamps, straps, supports, etc., shall be steel or malleable iron. One-hole straps shall be heavy duty type. All straps shall have steel or malleable backing plates when rigid steel conduit is installed on the interior or exterior surface of any exterior building wall.

**PART 3 - EXECUTION**

**INSTALLATION**

Fasten hanger rods, conduit clamps, outlet, junction and pull boxes to building structure using pre-cast insert system, preset inserts, beam clamps, expansion anchors, or spring steel clips (interior metal stud walls only).

Use toggle bolts or hollow wall fasteners in hollow masonry, plaster, or gypsum board partitions and walls; expansion anchors or preset inserts in solid masonry walls; self-drilling anchors or expansion anchors on concrete surfaces; sheet metal screws in sheet metal studs and wood screws in wood construction. If nail-in anchors are used, they must be removable type anchors.

File and de-bur cut ends of support channel and spray paint with cold galvanized paint to prevent rusting.

Do not fasten supports to piping, ductwork, mechanical equipment, cable tray or conduit. Do not fasten to suspended ceiling grid system.

Support wires that are installed in addition to the ceiling grid support wires to provide secure support for raceways, cables assemblies, boxes, cabinets, and fittings shall be secured at both ends (e.g. the ceiling structure at the top and the ceiling grid at the bottom) per NEC 300.11(A).

Do not drill structural steel members unless approved by owner.

1 Fabricate supports from galvanized structural steel or steel channel, rigidly welded or bolted to present a  
2 neat appearance. Use hexagon head bolts with spring lock washers under all nuts.

3  
4 Install surface-mounted cabinets and panelboards with a minimum of four anchors. At all cabinet and  
5 panelboard locations on concrete or concrete block walls, and at ALL locations below grade, provide steel  
6 channel supports to stand cabinet one inch (25 mm) off wall (7/8" Uni-strut or 3/4" painted fire-retardant  
7 plywood is acceptable). In above-grade equipment rooms that have drywall walls, the cabinets and  
8 panelboards may be mounted to the drywall if backing is provided in the stud walls behind the equipment.

9  
10 Furnish and install all supports as required to fasten all electrical components required for the project,  
11 including free standing supports required for those items remotely mounted from the building structure,  
12 catwalks, walkways etc.

13  
14 END OF SECTION

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60  
61  
62  
63  
64

**SECTION 26 05 33**  
**RACEWAY AND BOXES FOR ELECTRICAL SYSTEMS**

**PART 1 - GENERAL**

**SCOPE**

This section describes the products and execution requirements relating to furnishing and installing raceways and boxes and related systems as part of a raceway system for electrical and low-voltage systems for the project. Included are the following topics:

**PART 1 - GENERAL**

- Scope
- Related Work
- References

**PART 2 - PRODUCTS**

- General
- Electrical Metallic Tubing (EMT) and Fittings
- Flexible Metal Conduit (FMC) and Fittings
- Pull and Junction Boxes

**PART 3 - EXECUTION**

- Conduit Sizing, Arrangement, and Support
- Conduit Installation
- Conduit Installation Schedule
- Coordination of Box Locations
- Pull and Junction Box Installation
- Outlet Box Installation

**RELATED WORK**

Applicable provisions of Division 1 govern work under this section.

**REFERENCES**

Wisconsin Administrative Code SPS 316 - Electrical

**PART 2 - PRODUCTS**

**GENERAL**

All steel fittings and conduit bodies shall be galvanized.

No cast metal or split-gland type fittings permitted.

Mogul-type condulets larger than 2 inch (50 mm) not permitted except as approved or detailed.

All conduit covers must be fastened to the conduit body with screws and be of the same manufacture.

C-condulets shall not be used in lieu of pull boxes.

All boxes shall be of sufficient size to provide free space for all conductors enclosed in the box and shall comply with NEC requirements.

**ELECTRICAL METALLIC TUBING (EMT) AND FITTINGS**

Conduit: Steel, galvanized tubing.

Fittings: All steel, set screw type. No push-on or indenter types permitted.

Conduit Bodies: All steel threaded conduit bodies.

**FLEXIBLE METAL CONDUIT (FMC) AND FITTINGS**

Conduit: steel, galvanized, spiral strip.

Fittings and Conduit Bodies: All steel, galvanized, or malleable iron (except as allowed in specification 26 51 13).

**CONDUIT WATER SEALANT**

Description: Conduit sealant used to prevent water from entering buildings via conduits.

1  
2 Sealant shall seal conduits against water and gas intrusion, such as Polywater® FST™-250 Foam Duct  
3 Sealant, Raychem RDSS Rayplate Duct Sealing System, or approved alternate. Sealant shall be re-  
4 enterable, shall be compatible with the conduit and conductor types being used, and shall comply with NEC  
5 225.27, 230.8, and 300.5(G).  
6

7 Manufacturer names and catalog numbers are used to develop quality and performance requirements only.  
8 Products manufactured by others may be acceptable provided they meet or exceed the specifications.  
9

#### 10 **PULL AND JUNCTION BOXES**

11 Interior Sheet Metal Boxes: code gauge galvanized steel, screw covers, flanged and spot welded joints and  
12 corners.  
13

14 Interior Sheet Metal Boxes larger than 12 inches (300 mm) in any dimension shall have a hinged cover or a  
15 chain installed between box and cover.  
16

17 Exterior Boxes and Wet Location Installations: Type 4 and Type 6, flat-flanged, surface-mounted junction  
18 box, UL listed as rain-tight. Galvanized cast box and cover with ground flange, neoprene gasket and cover  
19 screws.  
20

21 Box extensions and adjacent boxes within 48 inches of each other are not allowed for the purpose of  
22 creating more wire capacity.  
23

24 Junction boxes 6 inch-by-6 inch or larger size shall be without stamped knock-outs.  
25

26 Wireways shall not be used in lieu of junction boxes.  
27

#### 28 **OUTLET BOXES**

29 Sheet Metal Outlet Boxes: galvanized steel, with stamped knockouts.  
30

31 Luminaire and Equipment Supporting Boxes: Rated for weight of equipment supported; include 3/8-inch  
32 male fixture studs where required.  
33

34 Cast Boxes: Cast ferrous alloy or aluminum, deep type, gasketed cover, threaded hubs.  
35  
36

### 37 **PART 3 - EXECUTION**

#### 38 **CONDUIT SIZING, ARRANGEMENT, AND SUPPORT**

39 EMT is permitted to be used in sizes 4 inch (100 mm) and smaller for power and low-voltage systems. See  
40 CONDUIT INSTALLATION SCHEDULE below for other limitations for EMT and other types of conduit.  
41  
42

43 Size power conductor raceways for conductor type installed. Conduit size shall be 1/2 inch (16 mm)  
44 minimum except **all homerun conduits shall be 3/4 inch (21 mm)**, or as specified elsewhere. **Caution:**  
45 **Per the NEC, the allowable conductor ampacity is reduced when more than three current-carrying**  
46 **conductors are installed in a raceway. Contractor must take the NEC ampacity adjustment factors**  
47 **into account when sizing the raceway and wiring system.**  
48

49 Size low-voltage systems raceways as follows:  
50

51 Control, security, signal, video, and other low-voltage applications: 3/4 inch minimum.  
52

53 Arrange conduit to maintain 6'-8" clear headroom and present a neat appearance.  
54

55 Route exposed conduit and conduit above accessible ceilings parallel and perpendicular to walls and  
56 adjacent piping.  
57

58 Maintain minimum 6 inch (150 mm) clearance between conduit and piping. Maintain 12 inch (300 mm)  
59 clearance between conduit and heat sources such as flues, steam pipes, and heating appliances.  
60

61 Arrange conduit supports to prevent distortion of alignment by wire pulling operations. Fasten conduit  
62 using galvanized pipe straps, conduit racks (lay-in adjustable hangers), clevis hangers, or bolted split  
63 stamped galvanized hangers.  
64

1 Group conduit in parallel runs where practical and use conduit rack (lay-in adjustable hangers) constructed  
2 of steel channel with conduit straps or clamps. Provide space for 25 percent additional conduit.  
3  
4 Do not fasten conduit with wire or perforated pipe straps. Before conductors are pulled, remove all wire  
5 used for temporary conduit support during construction.  
6  
7 Support and fasten metal conduit at a maximum of 8 feet (2.4 m) on center.  
8  
9 Supports shall be independent of the installations of other trades, e.g. ceiling support wires, HVAC pipes,  
10 other conduits, etc., unless so approved or detailed.  
11  
12 Conceal all conduits except exposed structure areas.  
13  
14 Changes in direction shall be made with symmetrical bends, cast steel boxes, stamped metal boxes or cast  
15 steel conduit bodies.  
16  
17 For indoor conduits, no continuous conduit run shall exceed 100 feet (30 meters) without a junction box.  
18  
19 All conduits installed in exposed areas shall be installed with a box offset before entering box.  
20  
21 **CONDUIT INSTALLATION**  
22 Cut conduit square; de-burr cut ends.  
23  
24 Conduit shall not be fastened to the corrugated metal roof deck.  
25  
26 Bring conduit to the shoulder of fittings and couplings and fasten securely.  
27  
28 Use conduit hubs for fastening conduit to cast boxes. Use sealing locknuts or conduit hubs for fastening  
29 conduit to sheet metal boxes in damp or wet locations.  
30  
31 Terminate all conduit (except for terminations into conduit bodies) using conduit hubs, or connectors with  
32 one locknut, or utilize double locknuts (one each side of box wall).  
33  
34 Provide bushings for the ends of all conduit not terminated in box walls. Refer to Section 26 05 26 –  
35 Grounding and Bonding for Electrical Systems for grounding bushing requirements.  
36  
37 Provide insulated bushings where raceways contain 4 AWG or larger conductors.  
38  
39 Install no more than the equivalent of:  
40  
41       Three 90-degree bends between boxes for electrical systems.  
42       Two 90-degree bends between boxes for communications and other low voltage systems.  
43       No single bend may exceed 90 degrees.  
44  
45 Use hydraulic one-shot conduit bender or factory elbows for bends in conduit larger than 2 inch (50 mm)  
46 size unless sweep elbows are required.  
47  
48 Bend conduit according to manufacturer's recommendations.  
49  
50 Use suitable conduit caps or other approved seals to protect installed conduit against entrance of dirt and  
51 moisture.  
52  
53 Provide 1/8 inch (3 mm) nylon pull string in empty conduit, except sleeves and nipples.  
54  
55 Install expansion-deflection joints where conduit crosses building expansion joints. Note: expansion-  
56 deflection joints are not required where conduit crosses building control joints if the control joint does not  
57 act as an expansion joint.  
58  
59 Avoid moisture traps where possible. Where moisture traps are unavoidable, provide junction boxes with  
60 drain fittings at conduit low points.  
61  
62 Where conduit passes between areas of differing temperatures such as unheated and heated spaces,  
63 buildings, etc., provide conduit or box with duct seal or other means to prevent the passage of moisture  
64 and water vapor through the conduit.

1  
2 **CONDUIT INSTALLATION SCHEDULE**

3 Conduit other than that specified below for specific applications shall not be used.

- 4  
5
  - 6 • Concealed Dry Interior Locations: Electrical metallic tubing.
  - 7 • Exposed Dry Interior Locations: Electrical metallic tubing.
  - 8 • Light fixtures: Refer to specification section 26 51 13.

9

10  
11 **COORDINATION OF BOX LOCATIONS**

12 Provide electrical boxes as shown on Drawings, and as required for splices, taps, wire pulling, equipment  
13 connections, and code compliance.

14  
15 Electrical box locations shown on Contract Drawings are approximate unless dimensioned. Verify location  
16 of floor boxes and outlets in offices and work areas prior to rough-in.

17  
18 No outlet, junction, or pull boxes shall be located where it will be obstructed by other equipment, piping,  
19 lockers, benches, counters, etc.

20  
21 Conduit and boxes shall not be fastened to the metal roof deck. If conduit and boxes are required to be  
22 located and installed on roof decks, the conduit and boxes are required to be spaced minimum 1-5/8 inch  
23 off the lowest part of the metal roof decking material, per NEC 300.4 (E).

24  
25 The proper location of each outlet is considered a part of this contract and no additional compensation will  
26 be paid to the Contractor for moving outlets which were improperly located.

27  
28 Locate and install boxes to allow access to them. Where installation is inaccessible, coordinate locations  
29 and provide 18 inch (450 mm) by 24 inch (600 mm) access doors. Boxes must be installed within 12" from  
30 edge of the access door.

31  
32 Locate and install to maintain headroom and to present a neat appearance.

33  
34 Install boxes to preserve fire resistance rating of partitions and other elements, using approved materials  
35 and methods.

36  
37 **PULL AND JUNCTION BOX INSTALLATION**

38 Pull boxes and junction boxes shall be minimum 4 inches square (100 mm) by 2 1/8 inches (54 mm) deep  
39 for use with 1 inch (25 mm) conduit and smaller. On conduit systems using 1 1/4 inch (31.75 mm) conduit,  
40 minimum junction box size shall be 4 11/16 inches square by 2 1/8 inches deep.

41  
42 Where used with raceway(s) containing conductors of 4 AWG or larger, pull box shall be sized as required  
43 unless otherwise noted on the drawings.

44  
45 Locate pull boxes and junction boxes above accessible ceilings, in unfinished areas or furnish and install  
46 access panels in non-accessible ceilings where boxes are installed. All boxes are to be readily-accessible.

47  
48 Provide Pull and Junction boxes for low voltage applications (a) in any section of conduit longer than 100  
49 feet, (b) where there are bends totaling more than 180 degrees between pull points or pull boxes and (c)  
50 wherever there is a reverse bend in run. Locate boxes on straight section of raceway (e.g. do not use boxes  
51 in place of raceway bends).

52  
53 Support pull and junction boxes independent of conduit.

54  
55 Use multiple-gang boxes where multiple devices are mounted together; do not use sectional boxes. Provide  
56 non-metallic barriers to separate wiring of different voltage systems.

57  
58 Install boxes in walls without damaging wall insulation.

59  
60 **END OF SECTION**

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60  
61  
62  
63

**SECTION 26 05 53**  
**IDENTIFICATION FOR ELECTRICAL SYSTEMS**

**PART 1 - GENERAL**

**SCOPE**

The work under this section includes the products and execution requirements relating to labeling of power, control, and signal wiring. Further, this section includes the installation of labels, nameplates, and directories for electrical junction boxes, wiring devices, and electrical equipment. Included are the following topics:

**PART 1 - GENERAL**

Scope  
Related Work

**PART 2 - PRODUCTS**

Materials

**PART 3 - EXECUTION**

General  
Junction and Pullbox Identification  
Power, Control and Signal Wire Identification  
Nameplate Engraving for Electrical Equipment  
Panelboard Directories

**RELATED WORK**

Applicable provisions of Division 1 shall govern work under this section.

**PART 2 - PRODUCTS**

**MATERIALS**

Labels: All labels shall be permanent, and machine generated. NO HANDWRITTEN OR NON-PERMANENT LABELS ARE ALLOWED.

All wiring labels shall be white/transparent vinyl or vinyl-cloth, self-laminating, wraparound type. Flag type labels are not allowed. The labels shall be of adequate size to accommodate the circumference of the cable being labeled and properly self-laminate over the full extent of the printed area of the label.

Tape (wiring phase identification only): Scotch #35 tape in appropriate colors for system voltage and phase.

Nameplates: Engraved three-layer laminated plastic. Normal system shall use nameplates with black letters on white background, emergency system (NEC 700) shall use white letters on red background, legally required standby system (NEC 701) shall use white letters on blue background, and optional standby system (NEC 702) shall use white letters on yellow background.

Adhesive type labels not permitted except for identification of wires, wiring devices (device plates), 8" square and smaller junction boxes, and control devices.

See Junction and Pullbox Identification and Wiring Device Identification sections for allowed usage of permanent marker.

**PART 3 - EXECUTION**

**GENERAL**

Where mixed voltages are used in one building each junction box, equipment, etc., on each system shall be labeled for voltage in addition to other requirements listed herein.

All branch circuit panels shall be identified with the same designation used in circuit directory at its source.

Clean all surfaces before attaching labels with the label manufacturer's recommended cleaning agent. Install all labels firmly as recommended by the label manufacturer. Labels shall be installed plumb and neatly on all equipment.

1 Install nameplates parallel to equipment lines. Secure nameplates to equipment fronts using screws, rivets  
2 or manufacturer approved adhesive or cement.

3  
4 Embossed tape will not be permitted for any application.

5  
6 **JUNCTION AND PULLBOX IDENTIFICATION**

7 The following junction and pullboxes shall be identified utilizing spray painted covers:

8  
9

<u>System</u>	<u>Color(s)</u>
10 Secondary Power – 480Y/277V	Brown
11 Secondary Power – 208Y/120V, 240/120V	White

12

13 Additional required junction and pullbox identification shall include:

14  
15 Provide circuit numbers and source panel designations for power wiring junction boxes. Other  
16 system junction boxes shall be identified as shown on details or approved shop drawings.

17  
18 Where exposed, junction boxes larger than 8” square shall utilize engraved nameplates with ½”  
19 minimum letter height. Identify system source(s) and load(s) served.

20  
21 Where exposed, 8” square and smaller junction boxes shall utilize machine generated, adhesive  
22 labels.

23  
24 Where located above an accessible ceiling, junction boxes may be neatly identified using a  
25 permanent marker.

26  
27 **POWER, CONTROL AND SIGNAL WIRE IDENTIFICATION**

28 Provide wire labels on each conductor in panelboard gutters, pull boxes, outlet and junction boxes, and at  
29 load connection. Identify with branch circuit or feeder number for power and lighting circuits, and with  
30 wire number as indicated on schematic and interconnection diagrams or equipment manufacturer's shop  
31 drawings for control and signal wiring.

32  
33 All wiring shall be labeled within 2 to 4 inches of terminations. Each end of a wire or cable shall be  
34 labeled as soon as it is terminated including wiring used for temporary purposes.

35  
36 **WIRING DEVICE IDENTIFICATION**

37 Wall switches, occupancy sensors, wall dimmers, device plates and box covers, photocells, and time clocks  
38 shall be identified with circuit numbers and source (ex. Panel ABC-3). In exposed areas, identifications  
39 should be made inside of device covers, unless directed otherwise. Use machine-generated adhesive labels,  
40 or neatly hand-written permanent marker.

41  
42 **NAMEPLATE ENGRAVING FOR ELECTRICAL EQUIPMENT**

43 Provide nameplates of minimum letter height as scheduled below.

44  
45 Branch Panelboards: 1 inch (25 mm); identify equipment designation. 1/2 inch (13 mm); identify voltage  
46 rating, source and room location of the source.

47  
48 **PANELBOARD DIRECTORIES**

49 Typed directories for panels must be covered with clear plastic, and have a metal frame. Room number on  
50 directories shall be Owner's numbers, not Plan numbers unless Owner so specifies.

51  
52 **END OF SECTION**

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60  
61  
62  
63  
64

**SECTION 26 09 28**  
**LIGHTING CONTROL**

**PART 1 - GENERAL**

**SCOPE**

The work under this section includes power supplies, relays, control equipment, enclosures, and low-voltage switches and controllers associated with low voltage lighting control. Included are the following topics:

**PART 1 - GENERAL**

- Scope
- Submittals
- Record Documents
- Operation and Maintenance Data
- Warranty

**PART 2 - PRODUCTS**

- System Performance /Operation
- Operator Interface
- Inputs and Outputs
- Diagnostic Aids
- Communication Accessories
- Programming Software
- System Management Software
- Miscellaneous

**PART 3 - EXECUTION**

- Examination
- Installation
- Factory Commissioning and Programming
- Factory Support
- Agency Training

**SUBMITTALS**

Preapproval:

Substitute equipment other than that identified in the design documents, which meets the requirements and design intent of this contract must be submitted for preapproval by A/E prior to formal shop drawing submittal.

Shop drawing submittal:

Submit product data indicating system and component construction, ratings, and operating parameters.

Due to the variations between systems include a narrative of how each item in the PRODUCTS section below is addressed

Submit manufacturer's installation instructions.

**RECORD DOCUMENTS**

Provide drawings showing where the lighting control panels are located within the building. Provide schedules indicating switch locations (room numbers) in the building and the associated relay number(s) in the panels. If multiple lighting control panels are networked together, provide a riser diagram showing how the lighting control panels are connected to each other.

**OPERATION AND MAINTENANCE DATA**

All operations and maintenance data shall comply with the submission and content requirements specified under section GENERAL REQUIREMENTS.

**WARRANTY**

Manufacturer shall supply a 3-year warranty on all hardware and software. A limited 10-year warranty shall be provided on all relay cards.

**PART 2 - PRODUCTS**

1 **SYSTEM PERFORMANCE/OPERATION**

2 Due to the various lighting control system types, architecture and networking capabilities, the following  
3 products and descriptions as well as associated drawings are intended to identify the performance basis of  
4 the system. The goal being to provide a functional yet cost effective system for this facility. As such panel  
5 based or distributed type systems are acceptable if providing the same functionality described herewith.  
6

7 The new system will be a full replacement of eight (8) existing Lithonia Lighting control relay panels and  
8 the associated head end computer, software and all control wiring and interfaces. This will replace the  
9 majority of controls in place however some areas currently have local control. Areas with local controls  
10 will remain as is however the new system must be flexible and scalable to allow adding these areas in the  
11 future.  
12

13 Due to the size and complexity of the facility all new control equipment, relays, dimming modules, power  
14 supplies, etc. serving an area must be group mounted in accessible locations. In general, the drawings  
15 indicate locating the new equipment where the existing lighting control panels are being removed due to  
16 access to existing circuits however any accessible location is acceptable if approved by the owner.  
17

18 Programming of the complete system shall be accomplished via head end PC. In addition each control  
19 location shall have local programmability, control and diagnostic functions.  
20

21 Remote access shall be provided via the local area network and also WEB based for access remote  
22 locations and wired or wireless devices.  
23

24 **Building Wide Control:**

25 The proposed building wide control shall consist of a programmable, remotely accessible, web based  
26 operating system with main head end workstation and software, local network interface(s), controllers and  
27 a data network controlling networked low voltage relay and dimming modules. All control functions shall  
28 be accessible from the head end workstation. In addition, Hall A, B, C & D require local control.  
29

30 The basis for this design is Acuity nLight controls. This control will be replacing 8 existing Lithonia low  
31 voltage lighting relay panels, head end workstation and software. Local touch screen control is also  
32 required based on the Acuity Fresco touch screen.  
33

34 **Provision for Future Expansion for On/Off Control of Utility Areas:**

35 Areas such as mechanical spaces, storage areas and other areas currently have only local switching. The  
36 new system shall have network and control capacity to be expanded by a minimum of 50% for additional  
37 panels, control circuits etc. providing control of these areas in the future.  
38

39 **Provision for Future Expansion for Meeting Room Control:**

40 In addition to the above expansion provisions expansion of the building wide control system must allow for  
41 the addition of 3 separate control areas each comprised of 4 meeting rooms each. These three areas are the  
42 lower level atrium meeting rooms, both north and south as well as the mezzanine Lake Room meeting  
43 rooms. This expansion capability must allow these future areas to be grouped for control in any  
44 configuration providing both on/off and 1-10V dimming capabilities. When grouped the grouped areas  
45 shall be controlled as one room. These areas will also have provisions for local control stations to provide  
46 the same level of control.  
47

48 **SYSTEM REQUIRMENTS**

49 Programmable intelligence shall include Time-Of-Day control, 32 holiday dates, exterior lighting control  
50 photo sensor, warn occupants of an impending off, timed inputs, preset control, auto daylight savings,  
51 astronomical clock w/offsets, local control, digital switches, and network overrides:  
52

53 Time-Of-Day Scheduling

54 64 Time-Of-Day/holiday schedules for 365-day programming

55  
56 Holidays

57 32 holiday dates

58  
59 Warn Off

60 Flash lights and provide an extra 1 second to 99 minutes of illumination

61  
62 Preset

63 Pre-programmed switch patterns  
64

1 Timed Inputs  
2 Switch input timers 1-999 minutes  
3  
4 Timed Overrides  
5 Timed override from the touch-screen 1-999 Overrides minutes, resumes to normal schedule  
6  
7 Local Controls  
8 Touch-screen and local switches as indicated on drawings  
9  
10 Astronomical Clock  
11 Longitude and latitude input with sunset-sunrise offsets to customize outdoor lighting  
12  
13 Auto Daylight Savings Adjust  
14 Automatically adjusts the clock at the appropriate dates, selectable  
15  
16 Priorities  
17 Establishes a hierarchy for inputs and network control commands  
18  
19 Masking  
20 Masking provides permissions related to switch inputs and network commands, thereby ensuring  
21 software security.  
22  
23 Soft-Linking  
24 Group linking for rapid programming  
25  
26 Global Linking  
27 Each panel shall provide 64 addressable groups for network linking of control commands  
28  
29 Analog Inputs  
30 Four analog inputs  
31  
32 The control shall:  
33  
34 Be capable of reporting whether the relays are overridden via software, override switches, or via  
35 on board hardware override. Relay status shall not only disclose commanded relay status but next  
36 scheduled state to occur.  
37  
38 Provide a Warn Off (flashing of the lights) to inform the occupants of an impending OFF  
39 command. The Warn Off command shall provide adjustable time duration of 1 second to 99 extra  
40 minutes. The occupants may exit the premises with adequate lighting or cancel the Warn Off by  
41 overriding the lighting zone. This option occurs with all OFF commands except local overrides.  
42  
43 Permit lighting to be overridden ON for after-hours use or cleaning. The controller shall provide  
44 optional switch timer assignments or timed overrides. The override choices for various relays shall  
45 provide special event occurrences and the controller shall return to the programmed state after the  
46 override event. Also, the controller shall provide priority and masking choices to customize the  
47 functions of switch inputs, thereby enabling switches to function differently at different times of  
48 the day to meet special facility operational requirements. These overrides shall be digital, network,  
49 or hard-wired inputs.  
50  
51 The lighting control system shall be fully programmed through PC programming software.  
52  
53 Programming of the individual controllers shall be accomplished through the local user interface.  
54 Descriptive information shall assist the user to employ the system without a programming manual.  
55  
56 Priorities shall be assigned to inputs and global commands to ensure building integrity. Priorities enable or  
57 disable the inputs based on user actuation of overrides and permit: ON only, OFF only and ON & OFF  
58 control for intelligent after-hours utilization of the controlled facility based on Time-Of-Day scheduling in  
59 the controller.  
60  
61 The control system shall provide networking between lighting control panels but allow each controller to  
62 operate independently in the event networking is interrupted. One network may support a maximum of 254  
63 control panels. Panels shall permit data sharing for global control. All inputs (no limitation) are  
64 transferable over the network to create any switching pattern required. The maximum length of the lighting

1 control network shall be 1500 feet. Provide repeaters to extend the network as needed. Networks that rely  
2 on a single time clock for system operation shall not be acceptable.

3  
4 The lighting control system shall log all control events. The controller shall monitor all relay actuations,  
5 switch inputs and user intervention. Log reports shall be available for any duration of time the operator  
6 chooses through the user interface or through the network software.

### 7 8 **OPERATOR INTERFACE**

9 The control programming shall be by software residing on the head end cpu. capable of linking switch  
10 inputs to relay outputs and schedule assignments. Systems that utilize blocking diode technology for relay  
11 assignments shall not be acceptable.

12  
13 The software shall provide access to all programming features and permit the user to manually command  
14 any or all relays individually. Each area's grouped equipment shall control its own loads from internal  
15 memory. A control system that solely relies on a central control computer/processor or external time clocks  
16 shall not be permitted.

### 17 18 **INPUTS AND OUTPUTS**

19 The controller shall provide timers for each input/output. Each input/output timer shall be capable of 0-999  
20 minutes. Software shall enable or disable input/outputs based on Priorities, Masks or Time-Of-Day  
21 scheduling.

### 22 23 **ON/OFF/DIMMING Control Stations**

24 The lighting controller shall support digitally addressable switches and touch screen controllers. The digital  
25 switches and controllers shall be programed to control any relay group combination on the lighting control  
26 network.

#### 27 28 **Dry Contact Inputs**

29 The control system shall permit 32 dry contacts inputs for override purposes. Momentary 3 wire or 2 wire  
30 (toggle) inputs shall be supported. Inputs shall be dry contacts (24 VDC @ 12 ma. internally supplied to  
31 the inputs).

#### 32 33 **Photocell Control**

34 The controller shall accept either dry contact or analog ambient light sensors. The controller shall provide  
35 power for the sensor thereby eliminating any external power supply. Sensors shall provide for outdoor,  
36 indoor or skylight applications and issue a command to the controller once the threshold is reached. The  
37 sensor shall provide either software or user adjustable dead band control.

#### 38 39 **Network Overrides**

40 The controller shall accept network commands issued from other inputs or controllers on the network. The  
41 controller shall provide this feature without the need to add extra equipment to the controller. Network  
42 overrides can be issued from the Photocells, Motion Sensors, Digital or Dry Contact Switches, or other  
43 controllers.

#### 44 45 **Service Override & Priority Override**

46 Service override provides the option of All Off, Auto, and All On, respectively. This shall override and  
47 supersede all commands from the logic board when in the All On or All Off mode.

48  
49 The system shall report all master service overrides and shall be accessible via network query.

50  
51 The system shall remember the last command to the individual relays. Upon returning the master override  
52 switch to the Auto position, the relays shall return to the most recent command state. This will occur even if  
53 the last command happened during the master override condition.

54  
55 Additionally, the system shall provide external priority override for a controller. Through an externally  
56 maintained contact the override card shall place the panel in a priority state. This external contact will  
57 supersede any other programmed state and will command all the relays ON or OFF depending on  
58 operational choice. This priority state will continue until the external contact is removed. Once the external  
59 override is removed the control panel will return the relays to the appropriate programmed state.

#### 60 61 **Building Automation System Interface**

62 The Lighting Control Panel network shall permit data protocol translation through an Automation Interface  
63 Module. The Automation Interface Module permits systems that utilize the BACnet communication  
64 protocol to operate individual relays or relay groups and to read system status.

1  
2 Relay Card: The system shall utilize normally open magnetically held control relays, which are rated to 20  
3 amps at 120/277 VAC. The relays shall be rated for 10 million mechanical operations. The wire  
4 terminations shall be able to accept 10 AWG. A limited 10-year warranty shall be provided on the  
5 individual relays. Provide 2-pole relays as required for loads.  
6

#### 7 **DIAGNOSTIC AIDS**

8 Each controller shall incorporate diagnostic aids for confirmation of proper operation, or in case of failure  
9 these aids shall guide the individual in rapid troubleshooting of the system.

10 The control panels shall employ both a backlit touch-screen and LED's to indicate:

- 11 • POWER (LED)
- 12 • SYSTEM OK (LED)
- 13 • NETWORK COMMUNICATIONS (LED)
- 14 • ON/OFF STATUS of EACH RELAY (LED & touch-screen)
- 15 • SYSTEM CLOCK and DATE (touch-screen)
- 16 • PROGRAMMING CONFIRMATION (touch-screen)
- 17 • CONTROL PANEL SUBNET NETWORK COMMUNICATIONS (TX & RX LED's)

#### 18 **Status Indication of Relays**

19 The system shall provide visible status indication of all relays through the window of each control panel.  
20 The visual indication shall disclose On/Off status and relay number.  
21

22 Relay status shall also be visible via actual indication on the relay card. The serial standard relay cards shall  
23 provide visual status of the relay state and also the override state. The relay status LED shall also provide  
24 indication to the user if the relay is in a hand actuation condition. Each serial standard relay card shall  
25 permit manual overrides for each individual relay. The serial latched relay card shall provide relay status  
26 and permit hand actuation.  
27

#### 28 **COMMUNICATION ACCESSORIES**

29 Provide two (2) mobile wireless remote control devices, (iPad, laptop PC, proprietary remote, etc.) for  
30 access to local and master control functions. Device shall include control software and be programmable to  
31 allow password protected custom access levels to user. Device shall allow WEB Based access to assigned  
32 functions when onsite or at a remote location.  
33

#### 34 **Ethernet Interface Module (EIM)**

35 The EIM control system accessory provides easy access to control panels over a TCP/IP. Manufacturer  
36 shall provide proper cabling from lighting control panel controller to Ethernet Interface Modules. The EC  
37 shall provide data cabling from the EIM to the owner's data rack. The owner shall provide the IP address.  
38

#### 39 **VPN hardware device accessory**

40 Provide a VPN hardware device to the lighting control network and building LAN to ensure security of the  
41 building LAN and lighting control network. The controller shall provide an RJ-12 connection for RS-232  
42 communications. Programming shall be permitted through either a local connection or remotely through a  
43 modem.  
44

#### 45 **Automation Interface Module**

46 The Lighting Control Panel network shall permit data protocol translation through an Automation Interface  
47 Module. The Automation Interface Module permits systems that utilize the BACnet communication  
48 protocol to operate individual relays or relay groups and to read system status (status read).  
49

#### 50 **PROGRAMMING SOFTWARE**

51 The PC based interface software accessory provides access to lighting control system files within a  
52 Microsoft Windows®, environment. The software shall support Windows 7 and above. The software shall  
53 allow individual and network panel programming to be executed locally via direct connection, or remotely  
54 through a TCP/IP connection or modem. The central programming software shall permit the user to modify  
55 the control panel programming or configuration in an "OFF-LINE" mode. This software package shall  
56 store all programmed data and archive for future use. Systems using third party software are not acceptable.  
57 Systems that are not capable of creating program backups are not acceptable.  
58

59 The following features shall be standard in the PC based software:

- 60 Standard Software Features:
  - 61 • Real Time Relay Status Monitoring
  - 62 • Alpha-Numeric Descriptors
  - 63 • Communications: Direct, Network, TCP/IP and Modem

- Network Status Indication
- Global Software Modifications
- Manual Relay Commands
- Remote Pattern Commands
- Preset Options
- User Management – Password protection and privilege modification for multi-user security
- Logging of Controller Actions (switch inputs, TIM commands, and relay actuations)
- Remote Commander – (entire network global commands from one screen)

#### File Maintenance:

Archive Programs

Data Base Restoration

Uploading and Downloading of Programs

Snap Shots indication of changes and flawless panel restoration.

Software package shall permit the PC to be utilized for other functions (i.e. word processing, database, etc.) besides lighting control. Systems that require an “on-line” dedicated computer for control system operation shall not be acceptable.

### **SYSTEM MANAGEMENT SOFTWARE**

System Management Software requires the Ethernet Interface Module (EIM) accessory, connection to the building LAN, and Windows® 7 operating system or above.

The lighting zones may be controlled through a graphical representation software package. The software permits up to 255 floors or site plans to be illustrated for intuitive control. The software provides real-time feedback to the operator of network control overrides. The software shall be accessible through an Ethernet network permitting more than one location control access to the site. The software shall accept AutoCAD® drawing files to reduce programming set up of the control software.

### **MISCELLANEOUS**

#### Modular Design

The control system shall employ all modular connectors.

#### Memory Back-up

The system shall utilize an integrated memory back-up device. The data in Flash Memory shall be protected against power interruptions for the life of the product. The power interrupt protection circuit shall be entirely maintenance-free.

#### Power Supply

A power supply shall be provided integral to the lighting controllers. The power supply shall incorporate the use of a multi-tapped transformer. The panel shall not require specification of voltage for each control location.

#### Enclosure

Each controller shall be enclosed in a lockable NEMA class 1 enclosure. Include space for 10-percent minimum additional relays in each cabinet and enclosure.

#### Barriers

The control panel enclosure shall be provided with barriers for separating line and low voltage circuits. Barriers shall also be provided for voltage separation or for separation of emergency circuits from normal power circuits. Emergency circuit barriers shall be painted red to denote the emergency circuits.

#### Switch Plates

Switch Plates shall be thermoplastic. The switch plate color shall match the switches furnished by the Lighting Control Panel manufacturer.

## **PART 3 - EXECUTION**

### **INSTALLATION**

Install in accordance with manufacturer's instructions.

Network all components together.

1 Connect the lighting controllers to the facility's data network. Coordinate required IP addresses with  
2 facility staff.

3  
4 **FACTORY COMMISSIONING and PROGRAMMING**

5 Provide factory commissioning for a complete and operational system. Program the system for scheduled  
6 time or local switch ON operation of local lighting, with sweep OFF operation at times as directed by the  
7 facility staff.

8  
9 Provide one additional factory commissioning follow-up site visit for making any agency-desired  
10 programming changes after one month of operation.

11  
12 Turn over programming software to user agency staff.

13  
14 **FACTORY SUPPORT**

15 Factory telephone support shall be available 24 hours per day 365 days per year. Factory assistance shall  
16 consist of solving programming or application questions concerning the control equipment. Phone support  
17 shall include the ability for telephone support to provide remote control of lighting control PC to assess and  
18 resolve technical or software issues.

19 If required a factory trained technician must be available to be on site within one business day of request.

20 All factory support shall be available free of charge during warranty period.

21  
22 **AGENCY TRAINING**

23 Provide two eight-hour training sessions to owner's staff on two separate days. These days may be spaced  
24 apart as designated by the owner to allow operations staff to develop a working understanding of the  
25 system and develop operation and maintenance questions.

26  
27 **END OF SECTION**

28

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60  
61

**SECTION 26 51 13**  
**INTERIOR LIGHTING FIXTURES, LAMPS, AND BALLASTS**

**PART 1 - GENERAL**

**SCOPE**

The work under this section includes interior luminaires and accessories. Included are the following topics:

**PART 1 - GENERAL**

- Scope
- Related Work
- Reference Standards
- Definitions
- Submittals
- Operation and Maintenance Data
- Extra Material

**PART 2 - PRODUCTS**

- Interior Luminaires and Accessories
- LED Luminaires

**PART 3 - EXECUTION**

- Installation
- Adjusting and Cleaning
- Interface with Other Products
- Field Quality Control
- Agency Training

**RELATED WORK**

Applicable provisions of Division 1 govern work under this Section.

**REFERENCE STANDARDS**

RoHS - Restriction of Hazardous Substances. Council of the European Union (EC) Directive 2002/95/EC on the restriction of the use of certain hazardous substances in electrical and electronic equipment.

LM-79-08 (or latest) - IES Approved Method for the Electrical and Photometric Measurements of Solid-State Lighting Products.

LM-80-08 (or latest) - IES Approved Method for Measuring Lumen Maintenance of LED Light Sources.

TM-21-11 (or latest) - IES Technical Memorandum on Projecting Long Term Lumen Maintenance of LED Light Sources.

NEMA SSL 1-2010 (or latest) - Electronic Drivers for LED Devices, Arrays, or Systems.

**DEFINITIONS**

Driver - the power supply used to power LED luminaires, modules, or arrays.

L70, L<sub>70</sub>, or L<sub>70%</sub> - The reported life of an LED component or system to reach 70% lumen maintenance, or 70% of the LED's original light output. This test is being developed by the IES and is currently described by TM-21-11.

LED's - Broadly defined as complete luminaire with light emitting diode (LED) packages, modules, light bars or arrays, complete with driver.

LED luminaire failure - Negligible light output from more than 10 percent of the LED's constitutes luminaire failure.

**SUBMITTALS**

Preapproval:

Substitute equipment other than that identified in the design documents, which meets the requirements and design intent of this contract must be submitted for preapproval by A/E prior to formal shop drawing submittal.

Shop drawing submittal:

Include outline drawings, lamp and ballast data, support points, weights, accessory information and performance data for each luminaire type.

1 For each luminaire type, submit luminaire information including catalog cuts with highlighted catalog  
2 numbers and required accessories:

- 3
- 4 • Luminaire:
  - 5 ○ Manufacturer and catalog number.
  - 6 ○ Type (identification) as indicated on the plans and schedule.
  - 7

#### 8 **OPERATION AND MAINTENANCE DATA**

9 All operations and maintenance data shall comply with the submission and content requirements specified  
10 under section GENERAL REQUIREMENTS.

#### 11 **EXTRA MATERIAL**

12 Provide one (1) of each type of LED module, light bar, or array (if applicable). If the LED's are integrated  
13 into the luminaire and are not separate components, then extra LED's are not required.

14  
15 Provide one (1) ballast of each type. This includes LED drivers.

### 16 **PART 2 - PRODUCTS**

#### 17 **INTERIOR LUMINAIRES AND ACCESSORIES**

18 See the Luminaire Schedule on the drawings for type of luminaires and catalog numbers. Catalog numbers  
19 are shown on the drawings for quality and performance requirements only. Luminaires manufactured by  
20 others are equally acceptable provided they meet or exceed the performance of the indicated luminaires,  
21 meet the intent of the design and receive pre approval by A/E.

22 Luminaire shall be certified by a Nationally Recognized Testing Laboratory (UL, ETL, or IEC).

23 Provide luminaires with quick-connect disconnecting means, similar to Thomas & Betts Sta-Kon.

#### 24 **LED LUMINAIRES**

- 25 • LED Luminaires shall meet all DesignLights Consortium® (DesignLights.org) Product  
26 Qualification Criteria. This does not require that the luminaire be listed on the DesignLights  
27 Consortium's® Qualified Products List, but they must meet the Product Qualification Criteria.  
28 The technical requirements that the luminaire shall meet for each Application Category are:
  - 29 ○ Minimum Light Output.
  - 30 ○ Zonal Lumen Requirements.
  - 31 ○ Minimum Luminaire Efficacy.
  - 32 ○ Minimum CRI.
  - 33 ○ L70 Lumen Maintenance.
  - 34 ○ Minimum Luminaire Warranty of 5 years (not pro-rated) to include LED driver and all  
35 LED components.

#### 36 *Additional requirements:*

- 37 • Color Temperature of 4000K for interior luminaires as listed in the Luminaire Schedule on the  
38 plans.
- 39 • Color Consistency: LED manufacturer shall use a maximum 3-step MacAdam Ellipse binning  
40 process to achieve consistent luminaire-to-luminaire color for interior luminaires. Exterior  
41 luminaires shall use a maximum 5-step MacAdam Ellipse binning process.
- 42 • Glare Control: Exterior luminaires shall meet DesignLights Consortium's® criteria for Zonal  
43 Lumen Distribution requirements or Backlight-Uplight-Glare (BUG) standards for exterior  
44 luminaires.
- 45 • Luminaire shall be mercury-free, lead-free, and RoHS compliant.
- 46 • Luminaire shall comply with FCC 47 CFR part 15 non-consumer RFI/EMI standards.
- 47 • Light output of the LED system shall be measured using the absolute photometry method  
48 following IES LM-79 and IES LM-80 requirements and guidelines.
- 49 • Luminaire shall maintain 70% lumen output (L70) for a minimum of 50,000 hours.
- 50 • Driver shall have a rated life of 50,000 hours, minimum.
- 51 • Lumen output shall not depreciate more than 20% after 10,000 hours of use.
- 52 • Driver and LEDs shall be furnished from a single manufacturer to ensure compatibility.
- 53 • Luminaire Color Rendering Index (CRI) shall be a minimum of 80 for interior luminaires, and a  
54 minimum of 70 for exterior luminaires.
- 55 • LED luminaire shall be thermally designed as to not exceed the maximum junction temperature of  
56 the LED for the ambient temperature of the location the luminaire is to be installed. Rated case  
57 temperature shall be suitable for operation in the ambient temperatures typically found for the

- 1 intended installation. Exterior luminaires to operate in ambient temperatures of -20°F to 122°F (-  
2 29°C to 50°C).
- 3 • LED driver shall have a minimum power factor (pf) of 0.9 and a maximum crest factor (cf) of 1.5  
4 at full input power and across specified voltage range.
  - 5 • Luminaire shall operate normally for input voltage fluctuations of plus or minus 10 percent.
  - 6 • Luminaire shall have a maximum Total Harmonic Distortion (THD) of 20% at full input power  
7 and across specified voltage range.
  - 8 • Wiring connections to LED drivers shall utilize polarized quick-disconnects for field maintenance.
  - 9 • All connections to luminaires shall be reverse polarity protected and provide high voltage  
10 protection in the event connections are reversed or shorted during the installation process.
  - 11 • Fuse Protections: All luminaires shall have built-in fuse protection. All power supply outputs shall  
12 be either fuse protected or be Polymeric Positive Temperature Coefficient (PTC)-protected as per  
13 Class 2 UL listing.
  - 14 • All luminaires shall be provided with knockouts for conduit connections.
  - 15 • The LED luminaire shall carry a limited 5-year warranty minimum for LED light engine(s)/board  
16 array, and driver(s).
  - 17 • Provide all of the following data on submittals:
    - 18 ○ Delivered lumens
    - 19 ○ Input watts
    - 20 ○ Efficacy
    - 21 ○ Color rendering index.
- 22
- 23 *LED Luminaires used for Emergency Egress Lighting:*
- 24 • The failure of one LED shall not affect the operation of the remaining LEDs.
- 25
- 26 *Dimming:*
- 27 • LED driver shall be compatible with dimming controls where dimming is indicated on the plans.  
28 Dimmable drivers shall use Dimming Constant Current (DCC) or Pulse Width Modulation  
29 (PWM) operation.
  - 30 • LED luminaires shall dim as specified in the Luminaire Schedule on the plans without visible  
31 flicker or “popcorn effect”. “Popcorn effect” is defined as the luminaire being on a pre-set dimmed  
32 level (less than 100%), and going to 100% prior to returning to the pre-set level when power is  
33 returned to the luminaire.
- 34  
35

### 36 **PART 3 - EXECUTION**

#### 37 **INSTALLATION**

38 Verify ceiling types with existing ceilings. Verify specified luminaires are compatible with specified  
39 ceiling type(s) prior to ordering luminaires.

40  
41 Install in accordance with manufacturer’s instructions.

42  
43 Install suspended luminaires using aircraft cable, or pendants supported from swivel hangers. Heavy duty  
44 chain supports may be used where indicated on the luminaire schedule. Provide aircraft cable, pendants, or  
45 chain lengths required to suspend luminaire at indicated height. All aircraft cables or pendant supported  
46 luminaires shall have an independent support to structure at all cable or pendant support locations. When  
47 chain is used, tie-wrap the luminaire whip to the chain.

48  
49 Support luminaires larger than 2 x 4 foot (600 x 1200 mm) size independent of ceiling framing.

50  
51 Provide independent support for all luminaires over 50 lbs.

52  
53 Install surface mounted luminaires plumb and adjust to align with building lines and with each other.  
54 Secure to prohibit movement.

55  
56 The Contractor shall install luminaire supports as required. Luminaire installations with luminaires  
57 supported only by insecure boxes will be rejected. It shall be the Contractor's responsibility to support all  
58 luminaires adequately, providing extra steel work for the support of luminaires if required. Any  
59 components necessary for mounting luminaires shall be provided by the Contractor. No plastic,  
60 composition or wood type anchors shall be used.

61  
62 Install recessed luminaires using accessories and firestopping materials to meet regulatory requirements for  
63 fire rating.  
64

1  
2 Install code required hardware to secure recessed grid-supported luminaires in place.

3  
4 Install wall mounted luminaires and exit signs at height as scheduled. Use pendants supported from swivel  
5 hangers in exposed ceiling/structure locations where necessary to mount exit signs at the specified height.

6  
7 Install accessories furnished with each luminaire.

8  
9 Make wiring connections to branch circuit using building wire with insulation suitable for temperature  
10 conditions within luminaire.

11  
12 Bond luminaires and metal accessories to branch circuit equipment grounding conductor.

13  
14 Dimmed luminaire circuits shall have separate neutrals.

15  
16 Dimmed LED luminaires shall have a positive OFF, which requires turning off the circuit to the luminaire  
17 so that the luminaires don't "glow" at the lowest dimmed setting. This shall be accomplished using a  
18 switch, relay, or some other means.

19  
20 **ADJUSTING AND CLEANING**

21 Align luminaires and clean lenses and diffusers at completion of Work. Clean paint splatters, dirt, and  
22 debris from installed luminaires.

23  
24 Aim and adjust luminaires as indicated on Drawings or as directed by the A/E.

25  
26 Touch up luminaire finish at completion of work.

27  
28 **FIELD QUALITY CONTROL**

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

30  
31 **LUMINAIRE CONNECTIONS**

32 Provide direct box or conduit connections for surface mounted and recessed luminaires. Use a luminaire  
33 fixture whip from a J-box for recessed lay-in luminaires. Luminaire fixture whips shall be aluminum or  
34 steel AC Cable (Armored Cable) or Flexible Metal Conduit (FMC). Cable/Conduit whips shall be 3/8" (10  
35 mm) minimum diameter and six foot (1.8 m) maximum length. Flexible whips between master and satellite  
36 luminaires may be supported off of the ceiling grid wires. Cable/conduit whip length shall allow movement  
37 of the luminaire for maintenance purposes. Flexible metal conduit shall not be used for connections to  
38 luminaires where the conduit is exposed in finished spaces.

39  
40 The flexible connectors shall be steel, galvanized, clamp type with locknut, snap-in type with locknut, or  
41 snap-in connector type, including those used on the master-satellite unit.

42  
43 **AGENCY TRAINING**

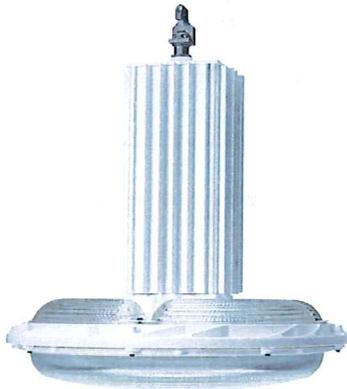
44 All training provided for agency shall comply with the format, general content requirements and  
45 submission guidelines.

46  
47 **END OF SECTION**



# Phuzion™ PHS

LED High Bay with Uplight



Catalog Number	
Notes	Type

### Description

The Phuzion PHS LED High Bay luminaire takes high-bay lighting to new levels of lumen output with intentional uplight. By marrying the latest in LED technology with the legendary illuminating dynamics of Holophane's prismatic glass, PHS is designed for use in applications where uplight may be desired.

### Optics

- Prismatic borosilicate glass maintains highest levels of luminosity over time.
- Glass doesn't fade, discolor or otherwise degrade in harsh environments.
- Two distributions (narrow and wide).
- Highly engineered LED system ensures superior uniformity and maximizes spacing.
- 14% uplight on all lumen packages.

### Mechanical

- Robust cast aluminum housing with low copper content (0.6% CU content) withstands hot and dirty environments.
- Pendant mount standard. (3/4" entry)
- Suitable for use in ambient temperatures for -4 °F (-20 °C) to 122 °F (50 °C)
- Several mounting options available, Pendant mount (3/4" entry), Quick Disconnect (3/4" entry or surface mounted), Non-disconnect thru wiring (3/4" entry or surface mounted), Quick Disconnect retrofit, can mount to existing quick disconnect, Non-disconnect retrofit, can mount to existing non-disconnect.

### Electrical

- Features eldoLED® driver with 1% dimming capability, flicker free performance and low current inrush.
- 70, 80 and 90 CRI are available.
- 3000K, 3500K, 4000K OR 5000K CCT available.
- Fault-tolerant LED light engine continues to provide light even in failure of one LED.
- 20kA/10kV in line surge standard. Provides end of life protection on all 4 drivers in the event of a surge.
- 88 % lumen maintenance at 60,000 hours

### Listings

- 12000LM, 15000LM, 18000LM 50°C rated, 24000LM 45°C rated.
- DesignLights Consortium® (DLC) qualified product. Not all versions of this product may be DLC qualified. Please check the DLC Qualified Products List at [www.designlights.org](http://www.designlights.org) to confirm which versions are qualified.
- CSA Certified for use in damp locations.
- Patents pending

### Warranty

5-year limited warranty. Complete warranty terms located at: [www.acuitybrands.com/CustomerResources/Terms\\_and\\_Conditions.aspx](http://www.acuitybrands.com/CustomerResources/Terms_and_Conditions.aspx)

NOTE: Actual performance may differ as a result of end-user environment and application.

All values are design or typical values, measured under laboratory conditions at 25 °C.

Specifications subject to change without notice.

Typical Applications	
• Retail	• Light manufacturing
• Institutional	• Warehousing
• Industrial	• Convention Centers

Dimensions: Inches (millimeters) unless otherwise noted.	
Diameter:	22.00 (558.8)
Height:	21.50-25.40 (546.140-645.16)
Weight:	49.5

## ORDERING INFORMATION

Example: PHS 18000LM 40K 80CRI AS P GR N

Series	Lumens	Color temperature	Color rendering index	Voltage	Mounting	Finish	Optics
PHS	12000LM	12,000 nominal lumens	30K 3000 K CCT 35K 3500 K CCT	70 CRI	AS Auto sensing (120-277)	GR Gray	N Narrow
	15000LM	15,000 nominal lumens	40K 4000 K CCT	80 CRI	12 120V	WH White	W Wide
	18000LM	18,000 nominal lumens	50K 5000 K CCT	90 CRI	20 208V	SN Satin nickel paint	
	24000LM	24,000 nominal lumens <sup>1</sup>			24 240V 27 277V AH Auto sensing (347/480) 34 347V 48 480V	TDC Custom paint Tiger Drylac	
					P Pendant Q Quick disconnect N Non-disconnect thru-wiring QR Quick disconnect retrofit NR Non-disconnect thru-wiring retrofit		

Options			
MSI6DL	High bay 360° motion sensor, fixture mounted, line voltage passive infrared 15-45 ft., on/off. (CMRB 6)	FR Frosted glass	PF-121-A Safety hook, 3/4" male <sup>15</sup>
MSI6 DSCDL	High bay 360° photocell sensor, fixture mounted, line voltage passive infrared 15-45 ft.. Two modes of operation: On/off mode: Photocell has full control during periods of occupancy. Inhibit mode: Photocell can prevent light from turning on if adequate daylight is available, but cannot turn off. (CMRB 6 P) <sup>2</sup>	CDP-L5-15-X 120V cord and plug <sup>5,6</sup> CDP-L6-15-X 208V/240V cord and plug <sup>6,7</sup> CDP-L7-15-X 277V cord and plug <sup>6,8</sup> CDP-L24-20-X 347V cord and plug <sup>6,9</sup> CDP-L8-20-X 480V cord and plug <sup>6,10</sup>	PF-455 Safety hook, 3/4" male cast aluminum <sup>16</sup> CD-3 3 ft. cord <sup>17</sup> CD-6 6 ft. cord <sup>17</sup> CD-X X ft. cord <sup>18</sup> WG Wire guard installed C3 3 ft safety chain C6 6 ft safety chain CX X ft safety chain <sup>19</sup> SC10 10 ft safety cable JP8 Bulk pack of 8 units <sup>20</sup>
MSI6XADL	XPoint™ Wireless High bay 360° is a relay sensor and photo controller all in one device, fixture mounted, passive infrared 15-45 ft., on/off. Sensor is a point of control for a flexible wireless network. XPoint™ Wireless enabled, dimmed 1% <sup>2</sup>	A Hook and Holoflex I, 6 foot cord drop <sup>11</sup> S Hook and Holoflex II, 5 foot cord drop <sup>11</sup> PHCB Powerhook cord for 120V-277V, 347V <sup>12</sup> PHCB-L8-480 Powerhook cord for 480V <sup>13</sup> PF-129-A Anti-rotational hook, 3/4" male <sup>14</sup> PF-105-A Loop, 3/4" male <sup>15</sup>	
EXA1	XPoint™ wireless enabled, dimmed 1% <sup>2</sup>		
D	Dimming terminal <sup>3</sup>		
EL	Remote emergency battery pack <sup>4</sup>		

For footnotes, see page 2.

**ORDERING INFORMATION (cont'd.)**

Accessories: Order as separate catalog number.					
ILCHAIN3	3 ft. safety chain	UPH-35-L8-480-WH	Thru-way powerhook for 480V	PF-455	Safety hook, 3/4" male cast aluminum
ILCHAIN6	6 ft. safety chain	UPH-36-***-WH	Powerhook for 120V, 208V, 240V, 277V and 347V <sup>20</sup>	PF-129-A	Anti-rotational hook, 3/4" male
ILCHAINX	X ft. safety chain <sup>19</sup>	UPH-36-L8-480-WH	Pendant powerhook for 480V	PF-105-B	Loop, 3/4" male
WGPHS	Wire guard	PF-116-A	Loop, 3/4" female	PF-121-A	Safety hook, 3/4" male
UPH-35-***-WH	Thru-way powerhook for 120V, 208V, 240V, 277V and 347V <sup>21</sup>	PF-122-A	Safety hook, 3/4" female		

**Notes**

- 1 Max. 45 °C rated.
- 2 Not available with "D" option.
- 3 Not available with MSIGDL, MSIG D5CDL, MSIGC01DL DCC01L, MSIGXADL, EXA1 options.
- 4 Available with P mount only. Available with AS, 12, 20, 24, 27 voltages. Not available with CDP cord/plug options. Available with CD cord options. X = Color, Match color from Step 7. Option requires unswitched power for the emergency module, fixture can use switched power. Max ambient rating 45 °C 1
- 5 Available with 12 voltage only. Must order Hook or Loop option. 3ft and 6ft length standard. P or N mount only
- 6 X = Length of cord in feet; 3 and 6 feet is standard.
- 7 Available with 20, 24 voltages only. Must order Hook or Loop option. 3ft and 6ft length standard. P or N mount only
- 8 Available with 27 voltage only. Must order Hook or Loop option. 3ft and 6ft length standard. P or N mount only
- 9 Available with 34 voltage only. Must order Hook or Loop option. 3ft and 6ft length standard. P or N mount only.
- 10 Available with 48 voltage only. Must order Hook or Loop option. 3ft and 6ft length standard. P or N mount only.
- 11 Includes PF-455 Safety Hook. Pendant mount only. Not available with Hook or Loop option. Must specify voltage. Dry location only.
- 12 Available with 12, 20, 24, 27, 34 voltages. For new installation, order matching UPH accessory. For existing installation with UPH accessory, match PHCB voltage to existing UPH.
- 13 Available with 48 voltage only. For new installation, order matching UPH accessory. For existing installation with UPH accessory, match PHCB voltage to existing UPH.
- 14 Not available with PF-105-B, PF-121-A, PF-455.
- 15 Not available with PF-129-A, PF-121-A, PF-455.
- 16 Not available with PF-129, PF-105. P or N mount only.
- 17 Must order Hook or Loop option. P or N mount only.
- 18 Must order Hook or Loop option. P or N mount only. X = Length
- 19 X = Length of chain in feet.
- 20 Bulk pack consists of 8 luminaires: otherwise each luminaire ships in a single carton.
- 21 \*\*\* = Voltage.

**OPERATIONAL DATA**

**Ambient Temperature Ratings**

Mounting	Lumen Package	Voltage	Ambient	Supply Wire Temperature
ALL	12000LM	120-277 347/480	50C	90C
ALL	15000LM	120-277 347/480	50C	90C
ALL	18000LM	120-277 347/480	50C	90C
ALL	24000LM	120-277 347/480	45C	90C

**Wattage**

Lumen Package	120V	277V	347V	480V
12000LM	107	111	114	118
15000LM	140	142	144	149
18000LM	166	168	173	176
24000LM	232	230	237	238

**Projected Lumen Maintenance (TM-21)**

Lumen Package	Ambient	0 Hours	15,000 Hours	30,000 Hours	45,000 Hours	60,000 Hours	100,000 Hours
12000LM	25C	1.00	0.96	0.93	0.90	0.87	0.80
15000LM							
18000LM							
24000LM							
12000LM	50C	1.00	0.93	0.89	0.86	0.83	0.74
15000LM							
18000LM							
24000LM	45C						

**OPERATIONAL DATA (continued)**

**Operating Characteristics\***

Lumen Package	Distribution	"Delivered Lumens 3000K 70 CRI @ 25C"	"Delivered Lumens 3000K 80 CRI @ 25C Frosted"	"Delivered Lumens 3500K 70 CRI @ 25C"	"Delivered Lumens 3500K 80 CRI @ 25C Frosted"	"Delivered Lumens 4000K 70 CRI @ 25C"	"Delivered Lumens 4000K 80 CRI @ 25C Frosted"	"Delivered Lumens 5000K 70 CRI @ 25C"	"Delivered Lumens 5000K 80 CRI @ 25C Frosted"
12000LM	N	12347	10772	12223	10664	12483	10891	13824	12060
15000LM		15533	13551	15377	13415	15705	13701	17391	15173
18000LM		17936	15648	17756	15491	18135	15821	20082	17520
24000LM		22863	19414	22634	19746	23116	20167	25598	22333
12000LM	W	12895	11018	12766	10908	13038	11140	14438	12337
15000LM		16223	13862	16060	13723	16403	14015	18164	15520
18000LM		18733	16006	18545	15846	18941	16184	20975	17922
24000LM		23879	20403	23639	20198	24143	20629	26736	22844

Lumen Package	Distribution	"Delivered Lumens 3000K 80 CRI @ 25C"	"Delivered Lumens 3000K 80 CRI @ 25C Frosted"	"Delivered Lumens 3500K 80 CRI @ 25C"	"Delivered Lumens 3500K 80 CRI @ 25C Frosted"	"Delivered Lumens 4000K 80 CRI @ 25C"	"Delivered Lumens 4000K 80 CRI @ 25C Frosted"	"Delivered Lumens 5000K 80 CRI @ 25C"	"Delivered Lumens 5000K 80 CRI @ 25C Frosted"
12000LM	N	11266	9828	11153	9730	11390	9937	12614	11004
15000LM		14173	12365	14031	12241	14330	12502	15869	13844
18000LM		16366	14278	16202	14135	16547	14436	18324	15986
24000LM		20861	18200	20652	18017	21092	18401	23357	20377
12000LM	W	11766	10054	11648	9953	11897	10165	13174	11257
15000LM		14803	12648	14654	12521	14967	12788	16574	14161
18000LM		17093	14605	16591	14458	17282	14767	19138	16352
24000LM		21788	18616	21570	18430	22029	18823	24395	20844

Lumen Package	Distribution	"Delivered Lumens 3000K 90 CRI @ 25C"	"Delivered Lumens 3000K 90 CRI @ 25C Frosted"	"Delivered Lumens 3500K 90 CRI @ 25C"	"Delivered Lumens 3500K 90 CRI @ 25C Frosted"	"Delivered Lumens 4000K 90 CRI @ 25C"	"Delivered Lumens 4000K 90 CRI @ 25C Frosted"	"Delivered Lumens 5000K 90 CRI @ 25C"	"Delivered Lumens 5000K 90 CRI @ 25C Frosted"
12000LM	N	8932	7793	8843	7714	9031	7879	10001	8725
15000LM		11237	9804	11125	9804	11362	9912	12582	10977
18000LM		12976	11320	12897	11207	13120	11446	14529	12675
24000LM		16540	14430	16374	14285	16723	14590	18519	16157
12000LM	W	9329	7971	9236	7891	9433	8059	10445	8925
15000LM		11737	10028	11619	9928	11867	10139	13141	10139
18000LM		13553	11580	13417	11464	13703	11708	15174	11708
24000LM		17275	14761	17102	14613	17467	14924	19342	16527

**Emergency Lumens\***

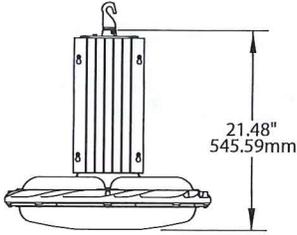
Distribution	Delivered Lumens 3000K CCT 70 CRI @ 25C	Delivered Lumens 3500K CCT 70 CRI @ 25C	Delivered Lumens 4000K CCT 70 CRI @ 25C	Delivered Lumens 5000K CCT 70 CRI @ 25C
N	1916	2015	2091	2230
W	1847	1942	2015	2149

Distribution	Delivered Lumens 3000K CCT 70 CRI @ 25C	Delivered Lumens 3500K CCT 70 CRI @ 25C	Delivered Lumens 4000K CCT 70 CRI @ 25C	Delivered Lumens 5000K CCT 70 CRI @ 25C
N	1864	1960	2024	2169
W	1796	1889	1951	2090

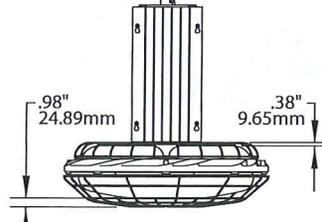
Distribution	Delivered Lumens 3000K CCT 70 CRI @ 25C	Delivered Lumens 3500K CCT 70 CRI @ 25C	Delivered Lumens 4000K CCT 70 CRI @ 25C	Delivered Lumens 5000K CCT 70 CRI @ 25C
N	1814	1907	1970	2111
W	1748	1838	1899	2035

\* Values based on testing at 25°C.

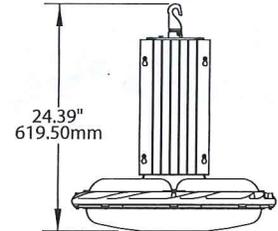
**DIMENSIONAL DATA**



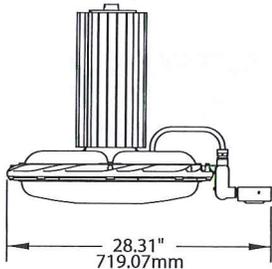
Pendant (P)



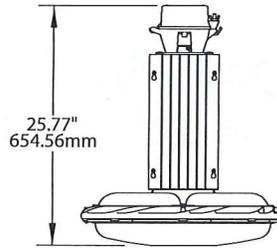
Wire Guard (WG)



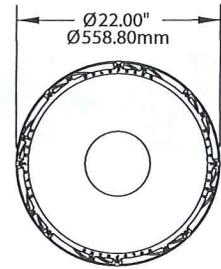
Hook



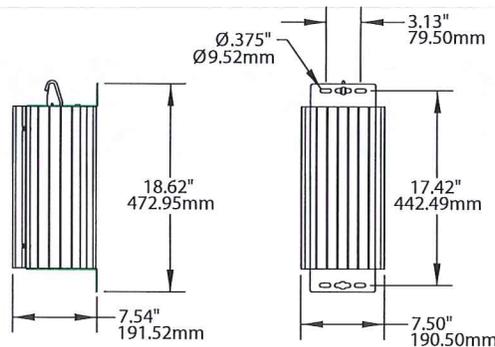
Occupancy Sensor



Quick Disconnect (Q)

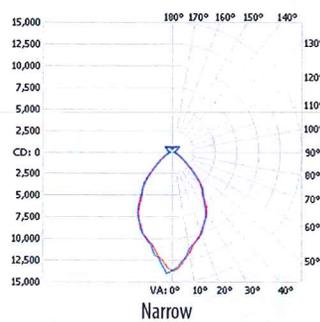
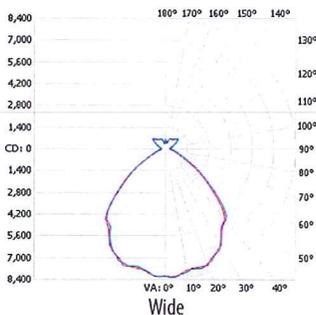


Diameter

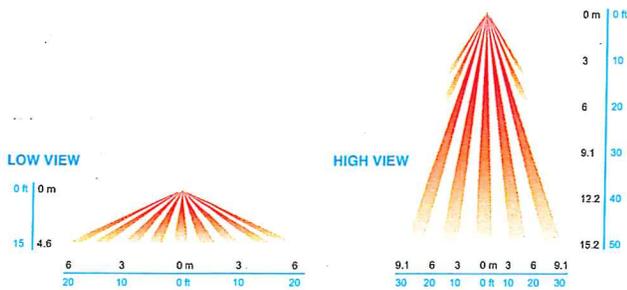


Emergency Battery Pack

**DISTRIBUTION DATA**



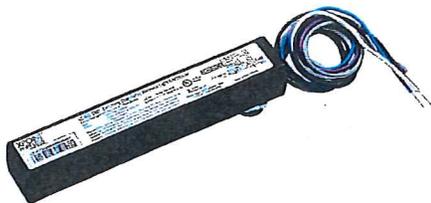
**CONTROLS**



**MSI6NDL, MSI6 DSCDL, MSI6 XADL, EXA1; Sensor Coverage Data**

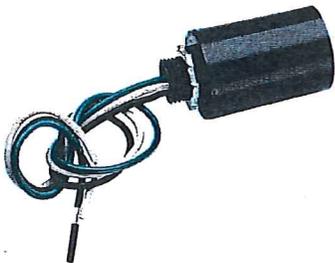
- Best choice for 15 to 45 ft. (4.57 to 13.72 m) mounting heights
- 15 to 20 ft. (4.57 to 6.10 m) radial coverage overlaps area lit by a typical high bay fixture
- Large motion (e.g., walking) detection up to a 35-ft. (10.76 m) mounting height
- Extra large motion (e.g., forklifts) detection up to a 45-ft. (13.72 m) mounting height
- EXA1, means wireless dimming control with XPoint™ Wireless, down to 1%. Lights on 100% output when energized. The 0-10 dimming leads of the drivers are connected internally to the XPoint™ Wireless device so the fixtures are capable of dimming, but only in response to XPoint™ Wireless mesh network.
- MSI6 XADL, means XPoint™ Wireless High Bay 360° is a relay sensor and photocell all in one, fixture mounted. Sensor is a point of control for a flexible XPoint™ Wireless mesh network. Fixture operation is 100% on at start up and dims to 30% when not occupied.
- Photocell is disabled by default until an XPoint™ Wireless control mesh network has been field programmed.

**COMPONENTS & OPTIONS DATA**

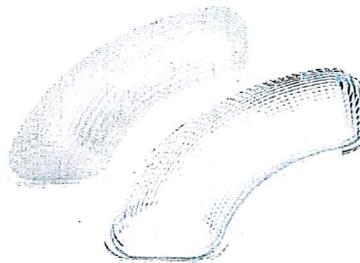


**XPoint™ wireless**  
Integrated wireless control technology connecting fixtures, sensors, and other modules together.

**Dimming drivers standard**  
Drivers use 0-10V protocol with dimming down to 1% dimming power.

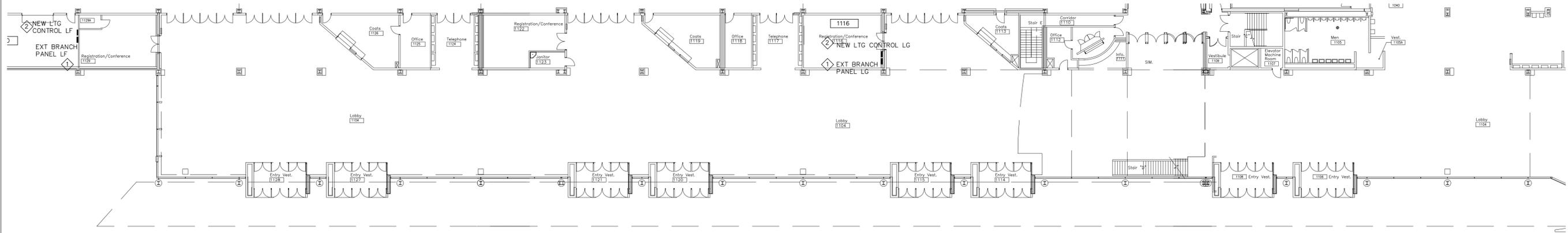


**Surge protection**  
Phuzion surge protection is standard and provides 20kV of protection.



**Uplight Optics**  
Standard prismatic, borosilicate glass that doesn't fade or degrade. Optional frosted optics.





**PLAN NOTES**

- 1. EXISTING BRANCH PANEL. REUSE EXISTING CIRCUITS TO SERVE NEW LIGHTING.
- 2. PROVIDE NEW LIGHTING CONTROL MODULES IN COMMON ENCLOSURE. NEW ENCLOSURE IS SHOWN IN LOCATION OF EXISTING RELAY PANEL. REMOVE EXISTING RELAY PANEL.

**DEMOLITION NOTES**

- 1. PROVIDE DEMOLITION OF EXISTING LIGHTING CONTROL PANELS. MAINTAIN CIRCUITING FOR REUSE WITH NEW CONTROL SYSTEM.

**LIGHTING CONTROL LF (SOUTH CONCOURSE)**

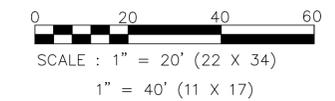
ZONE	RELAY MODULE				CIRCUIT		AREA CONTROLLED	FUNCTION
	TYPE	POLE	MAX LOAD	CONTROL	VOLT	PANEL CCT#		
LFa	ON/OFF	1	16A	MASTER ONLY	277	LF	SOUTH CONCOURSE	ON/OFF
LFb	ON/OFF	1	16A	MASTER ONLY	277	LF	SOUTH CONCOURSE	ON/OFF
LFc	ON/OFF	1	16A	MASTER ONLY	277	LF	SOUTH CONCOURSE	ON/OFF
LFd	ON/OFF	1	16A	MASTER ONLY	277	LF	SOUTH CONCOURSE	ON/OFF
LFe	ON/OFF	1	16A	MASTER ONLY	277	LF	SOUTH CONCOURSE	ON/OFF
LFf	ON/OFF	1	16A	MASTER ONLY	277	LF	SOUTH CONCOURSE	ON/OFF

NOTES: THIS IS A ONE FOR ONE REPLACEMENT OF EXSITING CONTROL DEVICES ON EXISTING CIRCUIT IN ASSOCIATED PANEL.

**LIGHTING CONTROL LG (MID CONCOURSE)**

ZONE	RELAY MODULE				CIRCUIT		AREA CONTROLLED	FUNCTION
	TYPE	POLE	MAX LOAD	CONTROL	VOLT	PANEL CCT#		
LGa	ON/OFF	1	16A	MASTER ONLY	277	LG3	LOBBY 1104 DN LT	ON/OFF
LGb	ON/OFF	1	16A	MASTER ONLY	277	LG4	LOBBY 1104 DN LT	ON/OFF
LGc	ON/OFF	1	16A	MASTER ONLY	277	LG5	VESTIBULES	ON/OFF
LGd	ON/OFF	1	16A	MASTER ONLY	277	LG6	LOBBY 1104 TORCHIER	ON/OFF
LGe	ON/OFF	1	16A	MASTER ONLY	277	LG7	LOBBY 1104 TORCHIER	ON/OFF
LGf	ON/OFF	1	16A	MASTER ONLY	277	LG8	EXTERIOR CANOPY (HID)	ON/OFF
LGg	ON/OFF	1	16A	MASTER ONLY	277	LG9	EXTERIOR CANOPY (HID)	ON/OFF
LGh	ON/OFF	1	16A	MASTER ONLY	277	LG12	LOBBY 1104 FLOUR	ON/OFF
LGi	ON/OFF	1	16A	MASTER ONLY	277	LG13	LOBBY 1104 FLOUR	ON/OFF
LGj	ON/OFF	1	16A	MASTER ONLY	277	LG14	NEON	ON/OFF
LGk	ON/OFF	1	16A	MASTER ONLY	277	LG16	EXTERIOR STEP LTG	ON/OFF
LGl	ON/OFF	1	16A	MASTER ONLY	277	LG17	EXTERIOR STEP LTG	ON/OFF
LGm	ON/OFF	1	16A	MASTER ONLY	277	LG20	EXTERIOR CANOPY (HID)	ON/OFF

NOTES: THIS IS A ONE FOR ONE REPLACEMENT OF EXSITING CONTROL DEVICES ON EXISTING CIRCUIT IN ASSOCIATED PANEL.



Spring Creek Engineering LLC  
 218 S. Main Street Ste. A  
 Lodi, WI 53555  
 1-608-712-5597  
 www.springcreekengineering.com

ALLIANT ENERGY CENTER  
 EXHIBITION HALL  
 DANE COUNTY

1919 ALLIANT ENERGY CENTER WAY  
 MADISON, WISCONSIN

LIGHTING UPGRADE  
 ALLIANT ENERGY CENTER

Sheet Title:  
 PARTIAL PLAN - SOUTH LOBBY/CONCOURSE

Revisions:

No.	Date:	Description:

Graphic Scale	SEE DRAWING
Project Number	15007
Set Type	RE-BID REVIEW
Date Issued	06/24/16
Sheet Number	E2.01

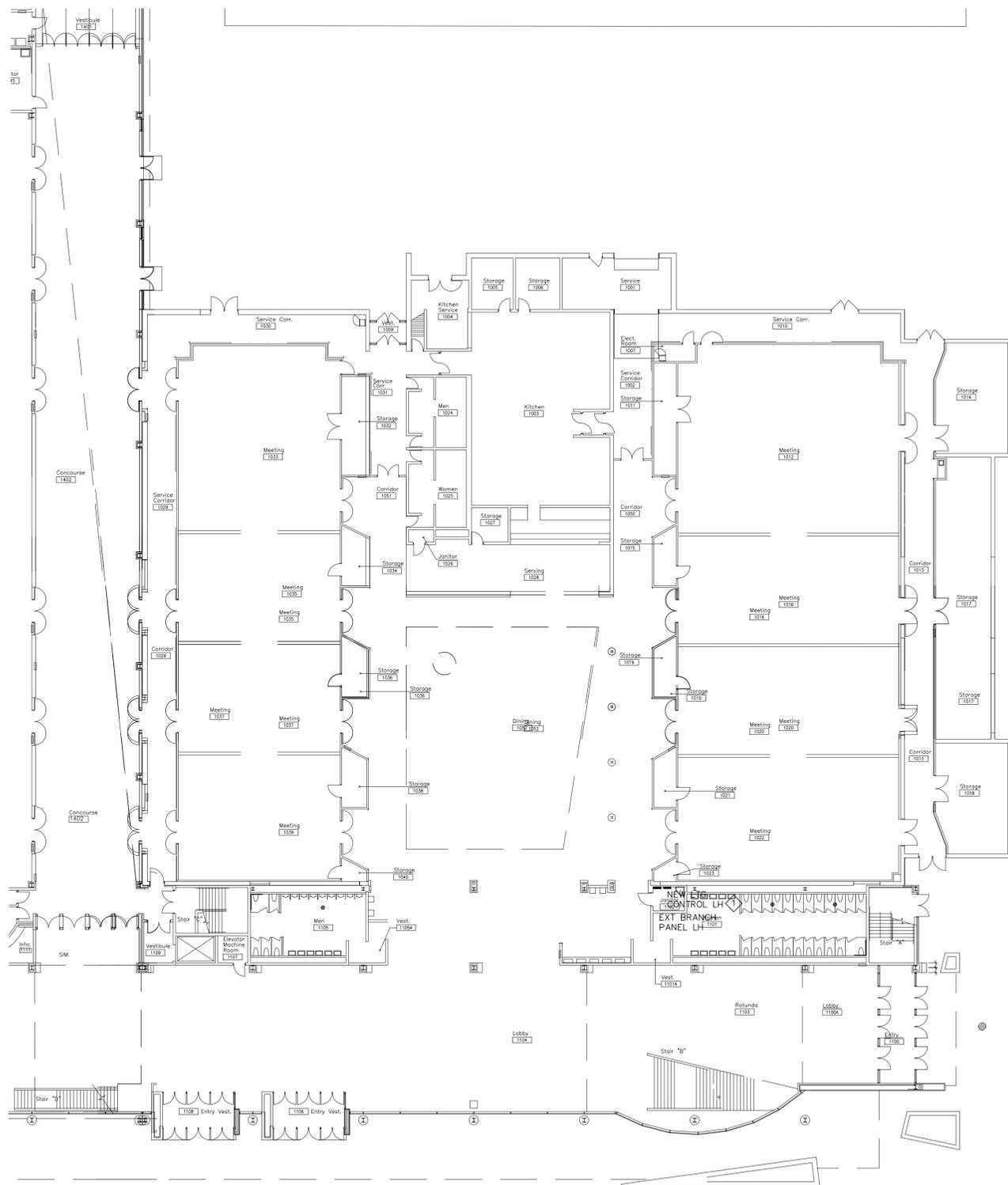


218 S. Main Street Ste. A  
Lodi, WI 53555  
1-608-712-5597  
www.springcreekengineering.com

ALLIANT ENERGY CENTER  
EXHIBITION HALL  
DANE COUNTY

1919 ALLIANT ENERGY CENTER WAY  
MADISON, WISCONSIN

LIGHTING UPGRADE  
ALLIANT ENERGY CENTER  
PARTIAL PLAN - ATRIUM & EAST/WEST CORRIDOR  
Sheet Title:



**LIGHTING CONTROL LH**

ZONE	RELAY MODULE				CIRCUIT		AREA	FUNCTION
	TYPE	POLE	MAX LOAD	CONTROL	VOLT	PANEL CCT#		
Ha	ON/OFF	1	16A	MASTER ONLY	277	LH1	ELEV & STAIR	ON/OFF
Hb	ON/OFF	1	16A	MASTER ONLY	277	LH2	CORRIDOR 1402	ON/OFF
Hc	ON/OFF	1	16A	MASTER ONLY	277	LH3	CORRIDOR 1402	ON/OFF
Hd	ON/OFF	1	16A	MASTER ONLY	277	LH4	CORRIDOR 1402	ON/OFF
He	ON/OFF	1	16A	MASTER ONLY	277	LH5	CORRIDOR 1402	ON/OFF
Hf	ON/OFF	1	16A	MASTER ONLY	277	LH6	LOBBY	ON/OFF
Hg	ON/OFF	1	16A	MASTER ONLY	277	LH7	LOBBY	ON/OFF
Hh	ON/OFF	1	16A	MASTER ONLY	277	LH8	LOBBY	ON/OFF
Hi	ON/OFF	1	16A	MASTER ONLY	277	LH9	TORCHIERE LTS	ON/OFF
Hj	ON/OFF	1	16A	MASTER ONLY	277	LH10	TORCHIERE LTS	ON/OFF
Hk	ON/OFF	1	16A	MASTER ONLY	277	LH11	DINING COVE LTS	ON/OFF
Hl	ON/OFF	1	16A	MASTER ONLY	277	LH12	DINING COVE LTS	ON/OFF
Hm	ON/OFF	1	16A	MASTER ONLY	277	LH13	EXT WALL LTG	ON/OFF
Hn	ON/OFF	1	16A	MASTER ONLY	277	LH14	DINING LTS	ON/OFF
Ho	ON/OFF	1	16A	MASTER ONLY	277	LH15	DINING LTS	ON/OFF
Hp	ON/OFF	1	16A	MASTER ONLY	277	LH16	VEST & DINING LTS	ON/OFF
Hq	ON/OFF	1	16A	MASTER ONLY	277	LH17	VEST & DINING LTS	ON/OFF
Hr	ON/OFF	1	16A	MASTER ONLY	277	LH18	BATHROOM LTS	ON/OFF
Hs	ON/OFF	1	16A	MASTER ONLY	277	LH19	NORTH ENTRY LTS	ON/OFF
Ht	ON/OFF	1	16A	MASTER ONLY	277	LH20	CONCESSION LTS	ON/OFF
Hu	ON/OFF	1	16A	MASTER ONLY	277	LH21	SOUTH CORR. LTS	ON/OFF
Hv	ON/OFF	1	16A	MASTER ONLY	277	LH22	MEZZ EAST CORR LTS	ON/OFF
Hw	ON/OFF	1	16A	MASTER ONLY	277	LH23	MEZZ LOUNGE LTS	ON/OFF
Hx	ON/OFF	1	16A	MASTER ONLY	277	LH24	MEZZ BATHROOM LTS	ON/OFF
Hy	ON/OFF	1	16A	MASTER ONLY	277	LH25	CHANDELIER LOBBY	ON/OFF
Hz	ON/OFF	1	16A	MASTER ONLY	277	LH26	CHANDELIER LOBBY	ON/OFF
Haa	ON/OFF	1	16A	MASTER ONLY	277	LH27	NORTH CORR LTS	ON/OFF
Hbb	ON/OFF	1	16A	MASTER ONLY	277	LH28	CHANDELIER LOBBY	ON/OFF
Hcc	ON/OFF	1	16A	MASTER ONLY	277	LH29	NORTH STORAGE ROOM LTS	ON/OFF
Hdd	ON/OFF	1	16A	MASTER ONLY	277	LH30	CHANDELIER LOBBY	ON/OFF
Hee	ON/OFF	1	16A	MASTER ONLY	277	LH31	NORTH POLE LT	ON/OFF
Hff	ON/OFF	1	16A	MASTER ONLY	277	LH33	BYPASS EM COIL CONT MEZZ	ON/OFF
Hgg	ON/OFF	1	16A	MASTER ONLY	277	LH35	LTG CONTROL PRJG LOT #2	ON/OFF

NOTES: THIS IS A ONE FOR ONE REPLACEMENT OF EXISTING CONTROL DEVICES ON EXISTING CIRCUIT IN ASSOCIATED PANEL.

**LIGHTING FIXTURES**

MARK	FIXTURE		VOLT.	LAMP	MOUNTING		MANUFACTURER		REMARKS	
	TYPE	DIFFUSER		# -WATTS	TYPE	HT.	NAME	CAT. NO.		
A	85% DN/15% UP	GLASS/WIDE DIST	277	240	LED	PEND	APPROX 35'	HOLOPHANE	PHZ	NOM 24,000 LUMENS, 4k, 80CRI, DIMMABLE, STEM MTD AT BOTTOM OF ROOF STRUCTURE
	NOTES 1, 2									

NOTES: 1. PROVIDE TYPE 'A' FIXTURE WITH SEPARATE UP AND DOWN LIGHT DIMMING CAPABILITIES.  
2. ALTERNATE BID 'A' PROVIDES FOR SEPARATE CONTROL OF THE UP AND DOWN LIGHT DIMMING. SHOULD ALTERNATE 'A' NOT BE ACCEPTED THE UP AND DOWN LIGHT DIMMING WILL BE ON THE SAME CONTROL CIRCUIT AND DIM AS ONE UNIT.

**ABBREVIATIONS**

MARK	MEANING	MARK	MEANING
AFF	Above finished floor	LTS	Lights
AFG	Above final grade	LTG	Lighting
AL	Aluminum	LTNG	Lightning
ALT	Alternate	PH	Phase
ARCH	Architect/Architectural	PNL	Panel
ATS	Automatic Transfer Switch	MAG	Magnetic
AWG	American wire gage	MAN	Manual
BFG	Below final grade	MC	Mechanical contractor
BLDG	Building	MIN	Minimum
C	Conduit	MFG	Manufacturer
CB	Circuit Breaker	MT	Mount
CAT	Catalog	MTD	Mounted
CCT	Circuit	N	Neutral
CLG	Ceiling	NC	Normally Closed
COM	Common	NO	Normally Open
DISC	Disconnect	OFCl	Owner Furnished Contractor Installed
DN	Down	PARA	Parabolic
DWG	Drawing	PVC	Polyvinylchloride Conduit
EC	Electrical contractor	REC	Recessed
EGS	Emergency Generation System	RECEP	Receptacle
ER	Existing to Remain	REL	Relocate
EX	Existing to Remove	SPEC	Specification
EXT	Existing	SQ	Square
FIX	Fixture	SURF	Surface
FVNR	Full voltage non-reversing	SW	Switch
GC	General contractor	TRANS	Transformer
GND	Ground	TYP	Typical
GRC	Galvanized Rigid Conduit	UC	Under Cabinet
HOA	Hand (manual on) Off Automatic	V	Volt(s)
HT	Height	VFD	Variable frequency motor drive
LED	Light emitting diode	W	Wire
LT	Light	W/	With

**SYMBOL LEGEND**

SYMBOL	DESCRIPTION
	FIXTURE TYPE
	CONTROL
	PENDANT MOUNTED INDUSTRIAL LED LIGHTING
	BRANCH PANEL WITH DESIGNATION
	CONTROL STATION TYPE AS NOTED

**PLAN NOTES**

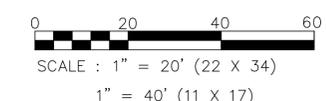
1. ALL EXISTING LIGHTING FIXTURES AND WIRING WILL REMAIN AS IS. EXISTING LIGHTING WILL HAVE NEW CONTROL VIA "LIGHTING CONTROL LH". LIGHTING POWER CIRCUIT WORK IS LIMITED TO WORK REQUIRED AT NEW CONTROL PANEL.

**PLAN NOTES**

1. PROVIDE NEW LIGHTING CONTROL MODULES IN COMMON ENCLOSURE. NEW ENCLOSURE IS SHOWN IN LOCATION OF EXISTING RELAY PANEL. REMOVE EXISTING RELAY PANEL.

**DEMOLITION NOTES**

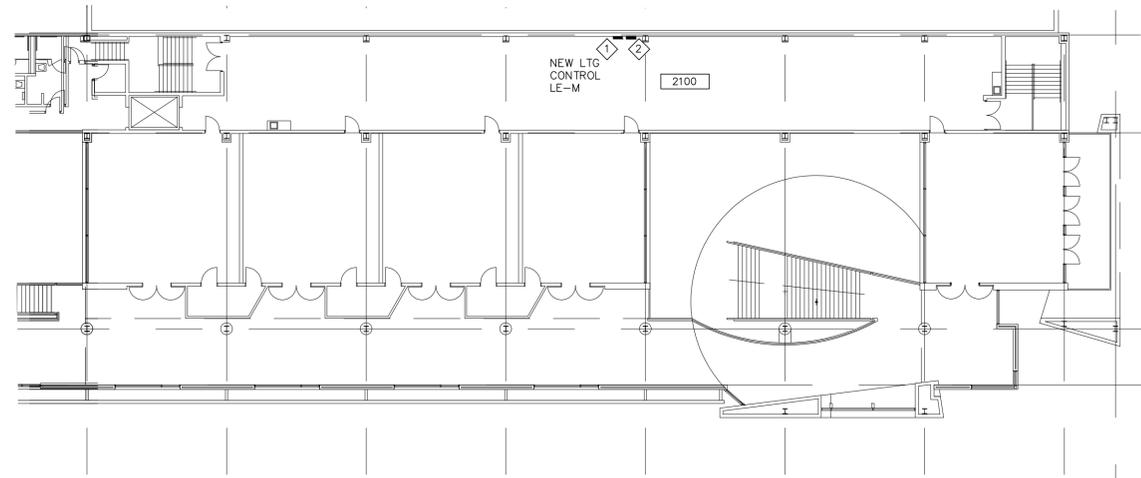
1. PROVIDE DEMOLITION OF EXISTING LIGHTING CONTROL PANEL. MAINTAIN CIRCUITING FOR REUSE WITH NEW CONTROL SYSTEM.



Revisions:

No.	Date:	Description:

Graphic Scale	SEE DRAWING
Project Number	15007
Set Type	RE-BID REVIEW
Date Issued	06/24/16
Sheet Number	E2.02



**PLAN NOTES**

- 1 PROVIDE NEW LIGHTING CONTROL MODULES IN COMMON ENCLOSURE. NEW ENCLOSURE IS SHOWN IN LOCATION OF EXISTING RELAY PANEL. REMOVE EXISTING RELAY PANEL.
- 2 EXISTING EMERGENCY LIGHTING CIRCUIT TRANSFER SWITCHES. MAINTAIN ALL EMERGENCY CIRCUIT WIRING FOR EMERGENCY "ON" FUNCTION OF LIGHTING.

**DEMOLITION NOTES**

- 1. PROVIDE DEMOLITION OF EXISTING LIGHTING CONTROL PANELS ONLY. LIGHTING CIRCUITS AND LAYOUT WILL REMAIN AS IS.

**LIGHTING CONTROL LEM (MEZZ EMERGENCY LTG)**

ZONE	RELAY MODULE				CIRCUIT		AREA	FUNCTION
	TYPE	POLE	MAX LOAD	CONTROL	VOLT	PANEL CCT#	CONTROLLED	
EMa	ON/OFF	1	16A	MASTER ONLY	277	LEF	ATRIUM/MEZZ	ON/OFF
EMb	ON/OFF	1	16A	MASTER ONLY	277	LEF	ATRIUM/MEZZ	ON/OFF
EMc	ON/OFF	1	16A	MASTER ONLY	277	LEF	ATRIUM/MEZZ	ON/OFF
EMd	ON/OFF	1	16A	MASTER ONLY	277	LEF	ATRIUM/MEZZ	ON/OFF
EMe	ON/OFF	1	16A	MASTER ONLY	277	LEF	ATRIUM/MEZZ	ON/OFF
EMf	ON/OFF	1	16A	MASTER ONLY	277	LEF	ATRIUM/MEZZ	ON/OFF
EMg	ON/OFF	1	16A	MASTER ONLY	277	LEF	ATRIUM/MEZZ	ON/OFF
EMh	ON/OFF	1	16A	MASTER ONLY	277	LEF	ATRIUM/MEZZ	ON/OFF
EMi	ON/OFF	1	16A	MASTER ONLY	277	LEF	ATRIUM/MEZZ	ON/OFF
EMj	ON/OFF	1	16A	MASTER ONLY	277	LEF	ATRIUM/MEZZ	ON/OFF
EMk	ON/OFF	1	16A	MASTER ONLY	277	LEF	ATRIUM/MEZZ	ON/OFF
<b>NOTES:</b>	1. THIS IS A ONE FOR ONE REPLACEMENT OF EXISTING CONTROL DEVICES ON EXISTING CIRCUIT IN ASSOCIATED PANEL.							
	2. MAINTAIN USE OF EMERGENCY BYPASS CONTACTORS FOR OVERRIDE OF LIGHTING UPON POWER LOSS							
	3. MAINTAIN SEPARATION OF EMERGENCY AND NORMAL POWER CIRCUITS							

Spring Creek Engineering LLC  
 218 S. Main Street Ste. A  
 Lodi, WI 53555  
 1-608-712-5597  
 www.springcreekengineering.com

ALLIANT ENERGY CENTER  
 EXHIBITION HALL  
 DANE COUNTY

1919 ALLIANT ENERGY CENTER WAY  
 MADISON, WISCONSIN

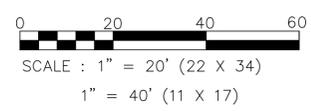
LIGHTING UPGRADE  
 ALLIANT ENERGY CENTER

Sheet Title:  
 PARTIAL PLAN - MEZZ

Revisions:

No.	Date:	Description:

Graphic Scale	SEE DRAWING
Project Number	15007
Set Type	RE-BID REVIEW
Date Issued	06/24/16
Sheet Number	E2.03







218 S. Main Street Ste. A  
Lodi, WI 53555  
1-608-712-5597  
www.springcreekengineering.com

ALLIANT ENERGY CENTER  
EXHIBITION HALL  
DANE COUNTY  
1919 ALLIANT ENERGY CENTER WAY  
MADISON, WISCONSIN

LIGHTING UPGRADE  
ALLIANT ENERGY CENTER  
PARTIAL PLAN - UPPER LEVEL EXHIBIT HALL B  
Sheet Title:



LIGHTING CONTROL HALL B

ZONE	RELAY MODULE			CIRCUIT		AREA CONTROLLED	FUNCTION
	TYPE	POLE	MAX LOAD	CONTROL	VOLT		
Ba	ON/OFF/0-10V DIM	1	16A	MASTER/LOCAL	277	LB1	HALL B ON/OFF/1%-100% DIM
Bb	ON/OFF/0-10V DIM	1	16A	MASTER/LOCAL	277	LB1	HALL B ON/OFF/1%-100% DIM
Bc	ON/OFF/0-10V DIM	1	16A	MASTER/LOCAL	277	LB2	HALL B ON/OFF/1%-100% DIM
Bd	ON/OFF/0-10V DIM	1	16A	MASTER/LOCAL	277	LB2	HALL B ON/OFF/1%-100% DIM
Be	ON/OFF/0-10V DIM	1	16A	MASTER/LOCAL	277	LB2	HALL B ON/OFF/1%-100% DIM
Bf	ON/OFF/0-10V DIM	1	16A	MASTER/LOCAL	277	LB3	HALL B ON/OFF/1%-100% DIM
Bg	ON/OFF/0-10V DIM	1	16A	MASTER/LOCAL	277	LB3	HALL B ON/OFF/1%-100% DIM
Bh	ON/OFF/0-10V DIM	1	16A	MASTER/LOCAL	277	LB4	HALL B ON/OFF/1%-100% DIM
Bi	ON/OFF/0-10V DIM	1	16A	MASTER/LOCAL	277	LB4	HALL B ON/OFF/1%-100% DIM
Bj	ON/OFF/0-10V DIM	1	16A	MASTER/LOCAL	277	LB4	HALL B ON/OFF/1%-100% DIM
Bk	ON/OFF/0-10V DIM	1	16A	MASTER/LOCAL	277	LB5	HALL B ON/OFF/1%-100% DIM
Bl	ON/OFF/0-10V DIM	1	16A	MASTER/LOCAL	277	LB5	HALL B ON/OFF/1%-100% DIM
Bm	ON/OFF	1	16A	MASTER ONLY	277	LB16	BATH LTS ON/OFF
Bn	ON/OFF	1	16A	MASTER ONLY	277	LB17	HALL B (FLUOR) ON/OFF
Bo	ON/OFF	1	16A	MASTER ONLY	277	LB21	1ST FLOOR 'C' ON/OFF
Bp	ON/OFF	1	16A	MASTER ONLY	277	LB22	HALL B (FLUOR) ON/OFF

GENERAL NOTES

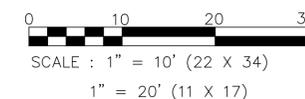
- EXHIBIT HALL LIGHTING IS A ONE FOR ONE REPLACEMENT OF EXISTING INDUSTRIAL HID FIXTURES.
- WIRING TO EACH ROW OF LIGHTING APPEARS TO BE RUN IN ONE CONTINUOUS CONDUIT RUNNING EAST TO WEST. EXISTING WIRING MAY BE REUSED TO SERVE NEW LIGHTING TO MINIMIZE REWIRING. FIELD VERIFY ALL WIRING FOR REUSE.
- ALTERNATE BID "A" - PROVIDE TYPE "A" FIXTURE WITH SEPARATE DIMMING DRIVER FOR UP AND DOWN LIGHT. PROVIDE ADDITIONAL CONTROL MODULES AND WIRING TO ACCOMMODATE SEPARATE DIMMING CONTROL.

PLAN NOTES

- EXISTING BRANCH PANEL HAS NUMEROUS CIRCUITS TO REUSE TO SERVE NEW LIGHTING. MARK ALL UNUSED BREAKERS AS SPARE.
- PROVIDE NEW LIGHTING CONTROL MODULES IN COMMON ENCLOSURE. NEW ENCLOSURE IS SHOWN IN LOCATION OF EXISTING RELAY PANEL. REMOVE EXISTING RELAY PANEL.
- SURFACE MOUNTED LOCAL TOUCH PAD CONTROLLER AT EXPO HALL LEVEL.
- LOCATE NEW HEAD END PC AND INTERFACES FOR LAN AND BAS IN ROOM 1319 ON FLOOR BELOW. ROOM CONTAINS EXISTING HEAD END AND IT NETWORK EQUIPMENT. LOCATE PHOTO SENSOR FOR EXTERIOR LIGHTING ON ROOF ABOVE FACING NORTH. COORDINATE REMOVAL OF EXISTING EQUIPMENT AND LOCATION OF NEW EQUIPMENT WITH OWNER.
- EXISTING EMERGENCY LIGHTING CIRCUIT TRANSFER SWITCHES. MAINTAIN ALL EMERGENCY CIRCUIT WIRING FOR EMERGENCY "ON" FUNCTION OF LIGHTING.

DEMOLITION NOTES

- EXISTING INDUSTRIAL FLUORESCENT FIXTURES USED FOR EMERGENCY LIGHTING SHALL REMAIN IN USE.
- PROVIDE DEMOLITION OF EXISTING LIGHTING RELAY PANEL.
- PROVIDE DEMOLITION OF EXISTING LIGHTING CONTROL HEAD END PC AND INTERFACES IN ROOM 1319.



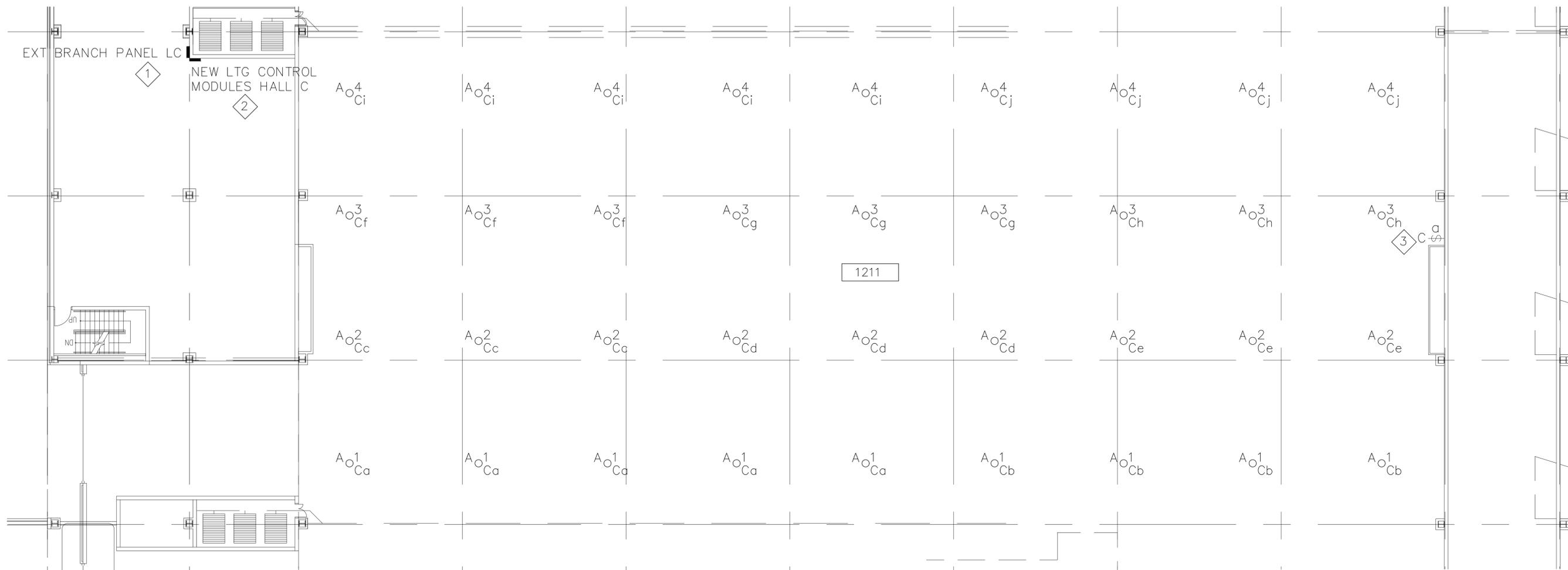
Revisions:

No.	Date:	Description:

Graphic Scale	SEE DRAWING
Project Number	15007
Set Type	RE-BID REVIEW
Date Issued	06/24/16
Sheet Number	E3.02



218 S. Main Street Ste. A  
Lodi, WI 53555  
1-608-712-5597  
www.springcreekengineering.com



LIGHTING CONTROL HALL C

ZONE	RELAY MODULE			CONTROL	CIRCUIT		AREA	FUNCTION
	TYPE	POLE	MAX LOAD		VOLT	PANEL CCT#		
Ca	ON/OFF/0-10V DIM	1	16A	MASTER/LOCAL	277	LC1	HALL C	ON/OFF/1%-100% DIM
Cb	ON/OFF/0-10V DIM	1	16A	MASTER/LOCAL	277	LC1	HALL C	ON/OFF/1%-100% DIM
Cc	ON/OFF/0-10V DIM	1	16A	MASTER/LOCAL	277	LC2	HALL C	ON/OFF/1%-100% DIM
Cd	ON/OFF/0-10V DIM	1	16A	MASTER/LOCAL	277	LC2	HALL C	ON/OFF/1%-100% DIM
Ce	ON/OFF/0-10V DIM	1	16A	MASTER/LOCAL	277	LC2	HALL C	ON/OFF/1%-100% DIM
Cf	ON/OFF/0-10V DIM	1	16A	MASTER/LOCAL	277	LC3	HALL C	ON/OFF/1%-100% DIM
Cg	ON/OFF/0-10V DIM	1	16A	MASTER/LOCAL	277	LC3	HALL C	ON/OFF/1%-100% DIM
Ch	ON/OFF/0-10V DIM	1	16A	MASTER/LOCAL	277	LC3	HALL C	ON/OFF/1%-100% DIM
Ci	ON/OFF/0-10V DIM	1	16A	MASTER/LOCAL	277	LC4	HALL C	ON/OFF/1%-100% DIM
Cj	ON/OFF/0-10V DIM	1	16A	MASTER/LOCAL	277	LC4	HALL C	ON/OFF/1%-100% DIM
Ck	ON/OFF	1	16A	MASTER ONLY	277	LC14	HALL C (FLUOR)	ON/OFF
Cl	ON/OFF	1	16A	MASTER ONLY	277	LC15	HALL C (FLUOR)	ON/OFF
Cm	ON/OFF	1	16A	MASTER ONLY	277	LC18	HALL C ENTRY	ON/OFF
Cn	ON/OFF	1	16A	MASTER ONLY	277	LC21	EXT CANOPY	ON/OFF
Co	ON/OFF	1	16A	MASTER ONLY	277	LC22	EXT CANOPY	ON/OFF
Cp	ON/OFF	1	16A	MASTER ONLY	277	LC23	EXT PARKING	ON/OFF
Cq	ON/OFF	1	16A	MASTER ONLY	277	LC24	EXT PARKING	ON/OFF
Cr	ON/OFF	1	16A	MASTER ONLY	277	LC25	EXT PARKING	ON/OFF
Cs	ON/OFF	1	16A	MASTER ONLY	277	LC26	EXT PARKING	ON/OFF
Ct	ON/OFF	1	16A	MASTER ONLY	277	LC27	EXT PARKING	ON/OFF
Cu	ON/OFF	1	16A	MASTER ONLY	277	LC28	EXT ROAD	ON/OFF
Cv	ON/OFF	1	16A	MASTER ONLY	277	LC29	EXT WALK	ON/OFF
Cw	ON/OFF	1	16A	MASTER ONLY	277	LC31	EXT PARKING	ON/OFF

GENERAL NOTES

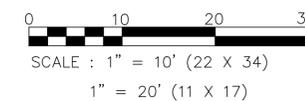
- EXHIBIT HALL LIGHTING IS A ONE FOR ONE REPLACEMENT OF EXISTING INDUSTRIAL HID FIXTURES.
- WIRING TO EACH ROW OF LIGHTING APPEARS TO BE RUN IN ONE CONTINUOUS CONDUIT RUNNING EAST TO WEST. EXISTING WIRING MAY BE REUSED TO SERVE NEW LIGHTING TO MINIMIZE REWIRING. FIELD VERIFY ALL WIRING FOR REUSE.
- ALTERNATE BID "A" - PROVIDE TYPE "A" FIXTURE WITH SEPARATE DIMMING DRIVER FOR UP AND DOWN LIGHT. PROVIDE ADDITIONAL CONTROL MODULES AND WIRING TO ACCOMMODATE SEPARATE DIMMING CONTROL.

PLAN NOTES

- EXISTING BRANCH PANEL HAS NUMEROUS CIRCUITS TO REUSE TO SERVE NEW LIGHTING. MARK ALL UNUSED BREAKERS AS SPARE.
- PROVIDE NEW LIGHTING CONTROL MODULES IN COMMON ENCLOSURE. NEW ENCLOSURE IS SHOWN IN LOCATION OF EXISTING RELAY PANEL. REMOVE EXISTING RELAY PANEL.
- SURFACE MOUNTED LOCAL TOUCH PAD CONTROLLER AT EXPO HALL LEVEL.

DEMOLITION NOTES

- EXISTING INDUSTRIAL FLUORESCENT FIXTURES USED FOR EMERGENCY LIGHTING SHALL REMAIN IN USE.
- PROVIDE DEMOLITION OF EXISTING LIGHTING RELAY PANEL.



ALLIANT ENERGY CENTER  
EXHIBITION HALL  
DANE COUNTY

LIGHTING UPGRADE  
ALLIANT ENERGY CENTER

Revisions:

No.	Date:	Description:

Graphic Scale	SEE DRAWING
Project Number	15007
Set Type	RE-BID REVIEW
Date Issued	06/24/16
Sheet Number	E3.03

1919 ALLIANT ENERGY CENTER WAY  
MADISON, WISCONSIN

PARTIAL PLAN - UPPER LEVEL EXHIBIT HALL C

