

BID OF _____

2012

PROPOSAL, CONTRACT, BOND AND SPECIFICATIONS

FOR

**FOREST HILL CEMETERY RECEIVING VAULT - PRESERVATION OF THE NORTH
WALL**

CONTRACT NO. 6829

IN

MADISON, DANE COUNTY, WISCONSIN

AWARDED BY THE COMMON COUNCIL
MADISON, WISCONSIN ON _____

PLEASE RETURN PLANS AND SPECIFICATIONS TO:

**CITY ENGINEERING DIVISION
1600 EMIL STREET
MADISON, WISCONSIN 53713**

www.cityofmadison.com/business/pw

**FOREST HILL CEMETERY RECEIVING VAULT - PRESERVATION OF THE NORTH
WALL
CONTRACT NO. 6829**

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This Proposal, and Agreement have
been prepared by:

**CITY ENGINEERING DIVISION
CITY OF MADISON
MADISON, DANE COUNTY, WISCONSIN**


FOP Robert F. Phillips, P.E., City Engineer

SECTION A: ADVERTISEMENT FOR BIDS

REQUEST FOR BID FOR PUBLIC WORKS CONSTRUCTION CITY OF MADISON, WISCONSIN

A BEST VALUE CONTRACTING MUNICIPALITY

CONTRACT NO.	PROJECT NAME:
6829	Forest Hill Cemetery Receiving Vault - Preservation of the North Wall

Plans and Specifications are available at 1600 Emil Street, Madison, WI 53713; 608-267-1197 or on our website at www.cityofmadison.com/business/pw/contracts/openforBid.cfm.

PREQUALIFICATIONS

Bidders who have not been prequalified by the City Engineer and Affirmative Action Director for the period of **February 1, 2012 to January 31, 2013** must submit their application on or before 1:00 p.m., JULY 13, 2012, Room 115, City-County Building, Madison, WI 53703. Postmark is not applicable. Contractors be prequalified by the City Engineer including an affirmative action plan approved by the Affirmative Action Director prior to the bid opening or the bid will be rejected. Forms are available at the same location or on our website at www.cityofmadison.com/business/pw/forms.cfm.

OTHER REQUIREMENTS

Sealed bids must be accompanied with a Bid Bond equal to at least 5% of the bid or a Certificate of Annual/Biennial Bid Bond or certified check, payable to the City Treasurer.

Prevailing Wage Rates may be required and are attached in Section I of the contract. See Special Provisions to determine applicability.

Deadline for the Submittal of Bid is JULY 20, 2012 by 1:00 PM, at 1600 Emil Street, Madison, WI 53713.

Bid Opening will be on JULY 20, 2012 at 1:30 PM at 1600 Emil Street, Madison, WI 53713.

REQUEST FOR BIDS FOR PUBLIC WORKS CONSTRUCTION FOR THE CITY OF MADISON, WISCONSIN

A BEST VALUE CONTRACTING MUNICIPALITY

Plans and Specifications for Public Works Projects that are open for bid are available on the City of Madison website at <http://www.cityofmadison.com/business/PW/contracts/openforBid.cfm> or by calling City Engineering at 608-266-4751.

Sealed bids must be accompanied with a Bid Bond equal to at least 5% of the bid or a Certificate of Annual/Biennial Bid Bond or certified check, payable to the City Treasurer.

Prevailing Wage Rates may be required and are attached in Section I of the contract. See Special Provisions to determine applicability.

Bidders must be prequalified with the City Engineer and the Affirmative Action Director. Deadline date for submittal of application is noticed on our website. Forms are available on the web at <http://www.cityofmadison.com/business/pw/forms.cfm> or by contacting City Engineering at 608-266-4620

Publ. WSJ 7/6/12 & 7/13/12

SECTION B: INSTRUCTIONS TO BIDDERS

The City of Madison Standard Specifications for Public Works Construction - 2012 Edition, as supplemented and amended from time to time, forms a part of these contract documents as if attached hereto.

These standard specifications are available on the City of Madison Public Works website at www.cityofmadison.com/Business/PW/specs.cfm or by contacting City Engineering Division, Room 115, City-County Building, 210 Martin Luther King Jr. Blvd., Madison, WI 53703.

The Contractor shall review these Specifications prior to preparation of proposals for the work to be done under this contract, with specific attention to Article 102 **“BIDDING REQUIREMENTS AND CONDITIONS”** and Article 103 **“AWARD AND EXECUTION OF THE CONTRACT.”** For the convenience of the bidder, below are highlights of three subsections of the specifications.

Section 102.1: Pre-Qualification of Bidders

In accordance with Wisconsin State Statutes 66.0901 (2) and (3), all bidders must submit to the Board of Public Works proof of responsibility on forms furnished by the City. The City requires that all bidders be qualified on a biennial basis.

Bidders must present satisfactory evidence that they have been regularly engaged in the type of work specified herein and they are fully prepared with necessary capital, materials, machinery and supervisory personnel to conduct the work to be contracted for to the satisfaction of the City. All bidders must be pre-qualified by the Board of Public Works for the type of construction on which they are bidding prior to the opening of the bid.

In accordance with Section 39.02(9)(a)l. of the Madison General Ordinances, all bidders shall submit in writing to the Affirmative Action Division Manager of the City of Madison, a Certificate of Compliance or an Affirmative Action Plan at the same time or prior to the submission of the proof of responsibility forms. The bidder shall be disqualified if the bidder fails to or refuses to, prior to opening of the bid, submit a Certificate of compliance, Affirmative Action Plan or Affirmative Action Data Update, as applicable, as defined by Section 39.02 of the Madison General Ordinances (entitled Affirmative Action) and as required by Section 102.11 of the Standard Specifications.

Section 102.4: Proposals

No bid will be accepted that does not contain an adequate or reasonable price for each and every item named in the Schedule of Unit Prices.

A lump sum bid for the work in accordance with the plans and specifications is required. The lump sum bid must be the same as the total amounts bid for the various items and it shall be inserted in the space provided.

All papers bound with or attached to the proposal form are considered a part thereof and must not be detached or altered when the proposal is submitted. The plans, specifications and other documents designated in the proposal form will be considered a part of the proposal whether attached or not.

A proposal submitted by an individual shall be signed by the bidder or by a duly authorized agent. A proposal submitted by a partnership shall be signed by a member/partner or by a duly authorized agent thereof. A proposal submitted by a corporation shall be signed by an authorized officer or duly authorized registered agent of such corporation, and the proposal shall show the name of the State under the laws of

which such corporation was chartered. The required signatures shall in all cases appear in the space provided therefore on the proposal.

Each proposal shall be placed, together with the proposal guaranty, in a sealed envelope, so marked as to indicate name of project, the contract number or option to which it applies, and the name and address of the Contractor. Proposals will be received at the place and until the hour on the date designated in the advertisement. When sent by mail, the sealed proposal marked as indicated above shall be enclosed in an additional envelope. Proposals sent by mail, submitted in person or otherwise delivered must be in the hands of the official conducting the letting by the hour on the date designated in the advertisement. Proposals received after the date designated will be returned to the bidder unopened.

The Bidder shall execute form ERD-7777 (R.9/03), a part of these proposal pages and submit same with the bidder's proposal, if applicable. REFER TO PROPOSAL SECTION.

Section 102.5: Bid Deposit (Proposal Guaranty)

No proposal shall be considered unless either (i) it is accompanied by a bid deposit of the character and amount described in the Advertisement for Bids or (ii) a biennial bid bond in an amount and form acceptable to the City of Madison has been previously submitted.

Bid deposits of unsuccessful bidders shall be returned following the award of the contract by the Common Council. Bid deposit of the successful bidders shall be returned within forty-eight (48) hours following execution of the contract and bond as required.

Bidders for this Contract(s) must be Pre-Qualified for at least one of the following type(s) of construction denoted by an

Building Demolition

- | | |
|---|--|
| 101 <input type="checkbox"/> Asbestos Removal | 110 <input type="checkbox"/> Building Demolition |
| 120 <input type="checkbox"/> House Mover | |

Street, Utility and Site Construction

- | | |
|---|---|
| 201 <input type="checkbox"/> Asphalt Paving | 265 <input type="checkbox"/> Retaining Walls, Precast Modular Units |
| 205 <input type="checkbox"/> Blasting | 270 <input type="checkbox"/> Retaining Walls, Reinforced concrete |
| 210 <input type="checkbox"/> Boring/Pipe Jacking | 275 <input type="checkbox"/> Sanitary, Storm Sewer & Water Main Const. |
| 215 <input type="checkbox"/> Concrete Paving | 280 <input type="checkbox"/> Sewer Lateral Drain Cleaning/Internal TV Insp. |
| 220 <input type="checkbox"/> Con. Sidewalk/Curb & Gutter/Misc. Concrete Work | 285 <input type="checkbox"/> Sewer Lining |
| 221 <input type="checkbox"/> Concrete Bases and Other Concrete Work | 290 <input type="checkbox"/> Sewer Pipe Bursting |
| 225 <input type="checkbox"/> Dredging | 295 <input type="checkbox"/> Soil Borings |
| 230 <input type="checkbox"/> Fencing | 300 <input type="checkbox"/> Soil Nailing |
| 235 <input type="checkbox"/> Fiber Optic Cable/Conduit Installation | 305 <input type="checkbox"/> Storm & Sanitary Sewer Laterals & Water Svc. |
| 240 <input type="checkbox"/> Grading and Earthwork | 310 <input type="checkbox"/> Street Construction |
| 242 <input type="checkbox"/> Infrared Seamless Patching | 315 <input type="checkbox"/> Street Lighting |
| 245 <input type="checkbox"/> Landscaping, Maintenance | 318 <input type="checkbox"/> Tennis Court Resurfacing |
| 250 <input type="checkbox"/> Landscaping, Site and Street | 330 <input type="checkbox"/> Traffic Control During Construction |
| 251 <input type="checkbox"/> Parking Ramp Maintenance | 320 <input type="checkbox"/> Traffic Signals |
| 255 <input type="checkbox"/> Pavement Sealcoating and Crack Sealing | 325 <input type="checkbox"/> Traffic Signing & Marking |
| 260 <input type="checkbox"/> Petroleum Above/Below Ground Storage Tank Removal/Installation | 335 <input type="checkbox"/> Trucking |
| | 399 <input type="checkbox"/> Other _____ |

Bridge Construction

- 501 Bridge Construction and/or Repair

Building Construction

- | | |
|--|---|
| 401 <input type="checkbox"/> Floor Covering (including carpet, ceramic tile installation, rubber, VCT) | 435 <input checked="" type="checkbox"/> Masonry |
| 402 <input type="checkbox"/> Building Automation Systems | 437 <input type="checkbox"/> Metals |
| 403 <input type="checkbox"/> Concrete | 440 <input type="checkbox"/> Painting and Wallcovering |
| 404 <input type="checkbox"/> Doors and Windows | 445 <input type="checkbox"/> Plumbing |
| 405 <input type="checkbox"/> Electrical - Power, Lighting & Communications | 450 <input type="checkbox"/> Pump Repair |
| 410 <input type="checkbox"/> Elevator - Lifts | 455 <input type="checkbox"/> Pump Systems |
| 412 <input type="checkbox"/> Fire Suppression | 460 <input type="checkbox"/> Roofing and Moisture Protection |
| 413 <input type="checkbox"/> Furnishings - Furniture and Window Treatments | 461 <input type="checkbox"/> Solar Photovoltaic/Hot Water Systems |
| 415 <input checked="" type="checkbox"/> General Building Construction, Equal or Less than \$250,000 | 465 <input type="checkbox"/> Soil/Groundwater Remediation |
| 420 <input type="checkbox"/> General Building Construction, \$250,000 to \$1,500,000 | 466 <input type="checkbox"/> Warning Sirens |
| 425 <input type="checkbox"/> General Building Construction, Over \$1,500,000 | 470 <input type="checkbox"/> Water Supply Elevated Tanks |
| 428 <input type="checkbox"/> Glass and/or Glazing | 475 <input type="checkbox"/> Water Supply Wells |
| 429 <input type="checkbox"/> Hazardous Material Removal | 480 <input type="checkbox"/> Wood, Plastics & Composites-Structural & Architectural |
| 430 <input type="checkbox"/> Heating, Ventilating and Air Conditioning (HVAC) | 499 <input type="checkbox"/> Other _____ |
| 433 <input type="checkbox"/> Insulation - Thermal | |

State of Wisconsin Certifications

- 1 Class 5 Blaster - Blasting Operations and Activities 2500 feet and closer to inhabited buildings for quarries, open pits and road cuts.
- 2 Class 6 Blaster - Blasting Operations and Activities 2500 feet and closer to inhabited buildings for trenches, site excavations, basements, underwater demolition, underground excavations, or structures 15 feet or less in height.
- 3 Class 7 Blaster - Blasting Operations and Activities for structures greater than 15 ' in height, bridges, towers, and any of the objects or purposes listed as "Class 5 Blaster or Class 6 Blaster".
- 4 Petroleum Above/Below Ground Storage Tank Removal and Installation (Attach copies of State Certifications.)
- 5 Hazardous Material Removal (Contractor to be certified for asbestos and lead abatement per the Wisconsin Department of Health Services, Asbestos and Lead Section (A&L.S).) See the following link for application: <http://www.dhs.wisconsin.gov/Asbestos/Cert/Index.htm>. State of Wisconsin Performance of Asbestos Abatement Certificate must be attached.
- 6 Other _____

SECTION C: SBE
Instructions to Bidders
City of Madison
SBE Program Information

SBE (Not Applicable)

SECTION D: SPECIAL PROVISIONS

FOREST HILL CEMETERY RECEIVING VAULT - PRESERVATION OF THE NORTH WALL CONTRACT NO. 6829

It is the intent of these Special Provisions to set forth the final contractual intent as to the matter involved and shall prevail over the Standard Specifications and plans whenever in conflict therewith. In order that comparisons between the Special Provisions can be readily made, the numbering system for the Special Provisions is equivalent to that of the Specifications.

Whenever in these Specifications the term "Standard Specifications" appears, it shall be taken to refer to the City of Madison Standard Specifications for Public Works Construction and Supplements thereto.

SECTION 102.10: MINIMUM RATE OF WAGE SCALE

For this project, payment of prevailing wages (white sheet) is not required if either: a single trade accounts for 85% or more of the total labor costs of the project and the bid is less than \$48,000; or no single trade accounts for 85% or more of the total labor costs of the project and the bid is less than \$100,000. For bids not meeting either of these conditions, prevailing wages shall be required.

If required, the wages and benefits paid on the contract shall not be less than those specified in the Prevailing Wage Determination included with these contract documents for the following types of work:

- Building and Heavy Construction
- Sewer, Water, and Tunnel Construction
- Local Street and Miscellaneous Paving Operations
- Residential and Agricultural Construction

All bidders are notified that all labor employed on City contracts must be paid in accordance with the minimum rate of wage scale included in the Contract Documents.

For the information of the employees working on the project, a copy of the wage scale included in the contract documents and the provisions of Section 66.0903(8) of the Wisconsin Statutes shall be kept posted by the employer and in at least one conspicuous and easily accessible place at the site of the project.

The Contractor shall keep weekly payroll records setting forth the name, address, telephone number, classification, wage rate and fringe benefit package of each employee who worked on such City project and all other projects the employee worked in the same period, and the Contractor must keep records of the individual time each employee worked on the project and for each day of the project. Such records shall also set forth the total number of hours of overtime credited to each such employee for each day and week and the amount of overtime pay received in that week. Such records shall, in addition, set forth the full weekly wages earned by each such employee and the actual hourly wage paid to that employee. The Contractor shall submit payroll records to the Engineer every week for those periods when work is being done on the project. Said submittal shall be within twenty-one (21) calendar days of the end of the Contractor's weekly pay period.

The Contractor shall ensure that employees shall be paid unconditionally and shall receive the full amounts accrued at the time of payment, computed at rates not less than those stated in the City of Madison "Minimum Rate of Wage Scale" and that each employee's rate shall be determined by the work that is done within the trade or occupation classification which should be properly assigned to such

employee. Questions regarding an employee's classification or rate of pay within that classification, shall be resolved by the practice that predominates in the industry and on which the trade or occupation rate/classification is based. Therefore, rate of pay, classification and work jurisdiction disputes shall be resolved by relying upon practices established by collective bargaining agreements and guidelines used in such determinations by appropriate recognized trade unions operating within the City of Madison.

The Contractor shall agree that the normal rate of wage paid to the Contractor's employees on other projects shall not be reduced or otherwise diminished as a result of the requirement to pay no less than the minimum rate of wage scale on a City project. Mulcting of employees on City projects by contractors, such as by kickbacks or other such devices, is prohibited.

These contract provisions shall apply to all work performed on the contract by the Contractor with its own organization and with assistance of laborers under its immediate superintendency and to all work performed by piecework or by subcontract. No laborer, worker, or mechanic shall be employed directly upon the site of the work except on a wage basis, but this shall not be construed to prohibit the rental of equipment from individuals.

In the event of a refusal by the Contractor to submit payroll records as required by the contract, the City of Madison shall have the option to cancel this contract and request the Surety to perform or to relet the balance of the work for bids, and in that event, to charge the Contractor for any loss which the City may incur thereby.

SECTION 102.12: BEST VALUE CONTRACTING

This Contract shall be considered a Best Value Contract if the Contractor's bid is equal to or greater than \$51,500 for a single trade contract; or equal to or greater than \$251,000 for a multi-trade contract pursuant to MGO 33.07(7).

ARTICLE 102.3 EQUAL BENEFITS REQUIREMENT (SEC. 39.07, MGO)

This provision applies to contracts executed by the City on July 1, 2012 or later, unless exempt by Sec. 39.07 of the Madison General Ordinances (MGO).

For the duration of this Contract, the Contractor agrees to offer and provide benefits to employees with domestic partners that are equal to the benefits offered and provided to married employees with spouses, and to comply with all provisions of Sec. 39.07, MGO. If a benefit would be available to the spouse of a married employee, or to the employee based on his or her status as a spouse, the benefit shall also be made available to a domestic partner of an employee, or to the employee based on his or her status as a domestic partner. "Benefits" include any plan, program or policy provided or offered to employees as part of the employer's total compensation package, including but not limited to, bereavement leave, family medical leave, sick leave, health insurance or other health benefits, dental insurance or other dental benefits, disability insurance, life insurance, membership or membership discounts, moving expenses, pension and retirement benefits, and travel benefits.

Cash Equivalent. If after making a reasonable effort to provide an equal benefit for a domestic partner of an employee, the Contractor is unable to provide the benefit, the Contractor shall provide the employee with the cash equivalent of the benefit.

Proof of Domestic Partner Status. The Contractor may require an employee to provide proof of domestic partnership status as a prerequisite to providing the equal benefits. Any such requirement of proof shall comply with Sec. 39.07(4), MGO.

Notice Posting, Compliance. The Contractor shall post a notice informing all employees of the equal benefit requirements of this Contract, the complaint procedure, and agrees to produce records upon request of the City, as required by Sec. 39.07, MGO.

Subcontractors. Contractor shall require all subcontractors, the value of whose work exceeds the single-trade minimum set forth in Sec 33.07(7)(b)5., MGO, to provide equal benefits in compliance with Sec. 39.07, MGO.

See Section 39.07 MGO for exemptions from this requirement. Exemptions from this requirement include a Contractor whose employees are under a collective bargaining agreement that was in effect prior to July 1, 2012, however, the Contractor must agree to propose to the applicable collective bargaining unit(s) that an equal benefit requirement consistent with this ordinance be incorporated into the next collective bargaining agreement or in the existing agreement upon amendment, extension or other modification that occurs after July 1, 2012.

SECTION 105.1: AUTHORITY OF THE ENGINEER

The Engineer shall resolve all questions which arise as to the quality and acceptability of materials furnished, work performed, manner of performance, rate of progress of the work, interpretation of the plans and Specifications, acceptable fulfillment of the contract, compensation, and disputes and mutual rights between Contractors under the Specifications. The Engineer shall determine the amount and quantity of work performed and materials furnished.

All decisions of the Engineer shall, when so requested, be rendered in writing. They shall be final and conclusive in all matters unless within ten (10) days after such decision the Contractor applies in writing to the Board of Public Works for a review of such decision.

Any change proposed by a Contractor in SBE subcontractors, vendors or suppliers from those SBEs indicated on the SBE Compliance Report must be approved by the Engineer and the City's Manager of the Affirmative Action Division (hereafter, AAD). When requested, such decision shall be rendered in writing. Such decisions shall be final and conclusive in all matters unless within ten (10) days after such decision the Contractor or the affected SBE applies in writing to the Board of Public Works for a review of such decision.

In the event the Engineer and the AAD disagree over the proper decision to be made regarding an SBE, the Mayor shall appoint a third person to resolve the disagreement, within 30 days of appointment. The decision thus rendered may be reviewed by the Board of Public Works upon request of the Contractor or the affected SBE as set forth in Sections 105.1 and 105.2 of the City's standard specifications.

SECTION 107.14 WEAPONS PROHIBITION

Contractor shall prohibit, and shall require its subcontractors to prohibit, its employees from carrying weapons, including concealed weapons, in the course of performance of work under this Contract, other than while at the Contractor's or subcontractor's own business premises. This requirement shall apply to vehicles used at any City work site and vehicles used to perform any work under this Contract, except vehicles that are an employee's "own motor vehicle" pursuant to Wis. Stat. sec. 175.60(15m).

SECTION 109.2 PROSECUTION OF THE WORK

The Contractor shall begin work on or before September 10th, 2012. The total time of completion for the contract shall be Sixty(60) CALENDAR DAYS.

Work shall begin only after the start work letter is received. If it is desirable to begin work before the above-mentioned date, the Contractor shall establish a mutually acceptable date with the Project Manager.

SECTION 109.9 LIQUIDATED DAMAGES

The fixed daily liquidated damages shall be in accordance to the section 109.9 of the Standard Specifications for failure to complete work within the allotted timeframe.

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SECTION 01 00 02
GENERAL REQUIREMENTS

PART 1 GENERAL

SCOPE

The work under this section includes general rules for the project. Included are the following topics:

PART 1 – GENERAL

1. Scope of Work
2. Pre-Bid Information
3. Commencement and Completion
4. Contacts
5. Qualifications of Bidder
6. Work by the City and City Furnished Equipment
7. Salvage Materials
8. Provisions for Future Work
9. Special Site Provisions
10. Alternates
11. General
12. Guarantees
13. Sustainable Construction Methods and Materials
14. Schedule of Operations
15. Documents
16. Quality Assurance
17. Codes and Permits
18. Submittals
19. Drawings and Specifications
20. Operation and Maintenance Data
21. Safeguards – Existing Equipment, Underground Utilities and Artifacts
22. Access Panels
23. Sleeves and Openings
24. Lose and Detachable Parts
25. Stairs, Scaffolds, Hoists, Elevators or Cranes

PART 2 - PRODUCTS

1. Specified Items – Substitutes
2. Approved Testing Laboratories

PART 3 - EXECUTION

1. Installation
2. General Installation Methods
3. Delivery, Handling and Storage of Materials
4. Demolition
5. Cutting, Patching and Painting
6. Excavation, Backfill, and Surface Restoration
7. Dewatering
8. Sealing and Firestopping
9. Cleaning
10. Continuity of Service and Shutdown
11. Project Meetings
12. Temporary Construction
13. Identification
14. Lubrication
15. Punch List
16. Tests and Final Acceptance
17. Training and Demonstration
18. Fence
19. Roadway
20. Signs

1. SCOPE OF WORK

Project Location 1: Cemetery Office

Work at the cemetery office is masonry stabilization and includes selective removal and reinstallation of existing sandstone and brick masonry at the north-east column of the north portico and the installation of new steel tie rods at two ache location of the north portico.

1 Project Location 2: Receiving Vault

2 Work at the receiving vault is an investigative study with selective sandstone masonry rehabilitation.
3 Work shall include the bracing and shoring of the building as required to stabilize the structure during the
4 construction period, excavation of the foundation along the north façade, removal and reinstallation of
5 the existing stone foundation as required, and removal and reinstallation of the three stone buttresses
6 along the north façade.

7
8 **2. PRE-BID INFORMATION**

9 Arrange site visits with city project manager.

10
11 **3.CONTRACT TIME-COMMENCEMENT AND COMPLETION**

12
13 This section not used. Refer to section D, 109.2.

14
15 **4. CONTACTS**

16
17 The City's designee for architectural and engineering is: Steven Mar-Pohl
18 Company: InSite Consulting Architects
19 Address: 115 E Main St., Suite 200
20 Phone: (608) 467-0359
21 Email: steve@icsarc.com

22
23 The City's designee for project management: Paul Stauffer
24 Company: City of Madison
25 Address: Room 115, 210 Martin Luther King Jr. Blvd.
26 Phone: 608-266-4366
27 Email: pstafffer@cityofmadison.com

28
29
30 The City's designee for the site contact: Kevin Sorenson
31 Company: City of Madison- Forest Hill Cemetery Manager
32 Address: 1 Speedway Road
33 Phone: 608-266-4741
34 Email: ksorensen@cityofmadison.com

35
36 **5. QUALIFICATIONS OF BIDDER**

37 By submitting the bid, the bidder certifies as to meeting the following requirements:

38
39 Has completed one or more projects of at least 50% of the size or value of the division of work being bid and the
40 type of work completed is similar to that being bid. If a greater magnitude of experience is deemed necessary,
41 other than size or value of the work, such requirements will be described in the appropriate technical section of
42 these specifications.

43
44 Has access to all necessary equipment and has organizational capacity and technical competence necessary to do
45 the work properly and expeditiously.

46
47 Maintains a permanent place of business.

48
49 **6. WORK BY THE CITY AND CITY FURNISHED EQUIPMENT**

50 All asbestos removal. Existing building materials that may have hazardous content and are located within the work
51 area (example: floor tile, ceiling tile, pipe insulation) shall be sampled, tested, and removed by the City. If any sus-
52 pect hazardous building materials are found by the contractor during demolition or renovation work that have not
53 been sampled and tested, work must stop and a certified hazardous material inspector must be contacted by the
54 City to assess the situation. Inaccessible areas may exist within the facility.

55
56
57 The following work will be accomplished by the City or will be let under separate contracts and will not be included
58 under this Contract:

59 No work or equipment will be supplied by the City or let under separate contracts.

60
61 **7. SALVAGE MATERIALS**

62
63 No materials removed from this project shall be reused except as specifically noted below. All materials removed
64 shall become the property of and shall be disposed of by the Contractor.

65
66 **8. PROVISIONS FOR FUTURE WORK**

1 Not applicable to this project
2

3 **9. SPECIAL SITE CONDITIONS**

4 Unless otherwise noted, construction operations shall be limited to the hours between 7:30 a.m. and 6:00 p.m.,
5 Mondays through Fridays, except for holidays. **The contractor will need to provide a schedule that coordinates**
6 **with the scheduled use of the shelter.** A request must be made to the City forty-eight hours in advance for ap-
7 proval of work days or hours other than those stated above. Compliance is required with the City of Madison Noise
8 Ordinance.
9

10 Limited site vehicle parking is available for Contractor's on the drive that goes by the site. The contractor shall be
11 limited to a maximum of three vehicles at the site. Additional parking spaces may be requested thru the site con-
12 tact person. Work trucks and equipment shall be allowed at the work site with the approval of the site contact.
13

14 No permanently reserved on-site loading zone will be provided for Contractor's use. For loading and unloading, a
15 vehicle-parking stall may occasionally be reserved for a short time duration (e.g. one day) if arranged in advance
16 with the site contact. Space will be allowed thru the site contact person for temporary storage of salvaged stone
17 and construction materials.
18

19 No permanently reserved on-site space for a trash container will be provided. Occasionally a trash container may
20 be brought in for a short duration (e.g. two to three days) if arranged in advance with the site contact.
21

22 Remainder of the building and site will be in use during construction. Contractors shall take particular care to avoid
23 disturbance and disruption to the existing building structure and to the ongoing activities of the occupants and visi-
24 tors to the cemetery .
25

26 The Contractor's labor force may not use City restroom facilities. The contractor has the option to provide a porta-
27 ble restroom on site.
28

29 **10. ALTERNATES**

30 Base Bid and Alternates include costs of all supporting elements required, so that the combination of
31 Base Bid and any Alternates are complete. The scope of work for Alternates shall be in accordance with
32 applicable Drawings and Specifications.

33 Except as otherwise indicated, complete work described in Alternates with no increase in Subcontract
34 Time.

35 This section includes non-technical descriptions of Alternates. Refer to specific sections of the Specifi-
36 cations and to Drawings for technical descriptions of Alternates.

37 Coordinate related work and modify surrounding work as required to integrate Alternates into the Work.

38 Base Bid includes all work indicated, except work described as Alternates.
39

40 **11. GENERAL**

41 The City of Madison Standard Publications for Public Works Construction – current Edition, as supplemented from
42 time to time, forms a part of these contract documents as if attached hereto.
43

44 These Standard Specifications are available upon request from the City Engineer, City Engineering Division, Room
45 115, City County Building, 210 Martin Luther King Jr. Blvd., Madison, WI 53710. An electronic copy is available
46 from the City Website <http://www.cityofmadison.com/business/pw/specs.cfm>. The Contractor shall review these
47 specifications prior to preparation of proposal for the work to be done under this contract. Failure to do so does not
48 relieve the Contractor from meeting all requirements.
49

50 All articles in these General Requirements are applicable to all Divisions and Sections apply to each Division of
51 these Specifications as fully as if repeated within that Division. The Conditions of the Contract, General and Sup-
52 plementary General Conditions, and these General Requirements shall apply to the Contractor and engaged in this
53 work. Items listed under Scope of Work for each Division of the Specifications are not necessarily all inclusive.
54

55 Portions of these specifications are of the abbreviated, simplified type and may include incomplete sentences.
56 Omissions of words or phrases such as "the Contractor shall", "in conformity with", "shall be", "as noted on the
57 drawings", "in accordance with details", are intentional. Omitted words or phrases shall be supplied by inference in
58 the same manner, as they are when a note occurs on the drawings. Such terms as approved, reviewed, equal, as
59 directed, as required, as permitted, acceptable, satisfactory mean by or to the City Engineer or designee.
60

61 These specifications and drawings are intended to include everything necessary to perform the entire work proper-
62 ly. Every item necessarily required might not be specifically mentioned or shown. Unless expressly stated, all sys-
63 tems and equipment shall be complete and operable. The words "furnish", "install", and "provide" shall mean the
64 same in a sense that the Contractor shall furnish and install all the necessary materials, apparatus, and devices to
65 complete the equipment and systems installation herein specified, except such parts as are specifically exempted
66 herein. If an item is either called for in the specifications or shown on the plans, it shall be considered sufficient for

1 the inclusion of said item in this contract. If a conflict exists within the Specifications or exists within the Drawings,
2 the Contractor shall furnish the item, system, or workmanship, which is the highest quality, largest, largest quantity
3 or most closely fits the City's intent. Materials and labor shall be new (unless noted or stated otherwise), first class,
4 and workmanlike, and shall be subject at all times to the City's or designee's inspections, tests and approval from
5 the commencement until the acceptance of the completed work. Whenever a particular manufacturer's product is
6 named, it is intended to establish a level of quality and performance requirements unless more explicit restrictions
7 are stated to apply. It must be understood that the details and drawings are diagrammatic. The Contractor shall
8 verify all dimensions at the site and be responsible for their accuracy. If items are too large to fit into existing space
9 Contractor shall provide smaller model of same type upon approval by The City at no cost to the City. All sizes as
10 given are minimum except as noted. Prior to bidding bidder must visit site to become familiar and verify existing
11 conditions. Failure to do so does not relieve the bidder from the responsibility to verify existing conditions, to point
12 out errors in drawings or specifications or code violations.
13

14 Bidders shall bring inadequacies, omissions or conflicts to the City's attention at least ten (10) days before the date
15 set for bid opening. Prompt clarification will be supplied to all bidders of record by addendum. Failure to request
16 clarification or interpretation of the drawings and specifications will not relieve the successful Bidder of responsibili-
17 ty. Signing of the contract will be considered as implicitly denoting that the Contractor has thorough understanding
18 of the scope of work and comprehension of the contract documents. The City is not responsible for verbal instruc-
19 tions.
20

21 Information pertaining to existing conditions that are described in the specifications or appear on the drawings is
22 based on available records. While such data has been collected with reasonable care, there is no expressed or
23 implied guarantee that conditions so indicated are entirely representative of those actually existing. This informa-
24 tion is provided to inform the Contractor of known, existing conditions so that due diligence is taken by the Contrac-
25 tor to avoid damage. Where site observation or documents indicate existing underground utilities/services in close
26 proximity (within four feet horizontally and/or four feet vertically) to necessary new construction work, the Contractor
27 shall be responsible to test, probe or otherwise determine exact locations so as to prevent damage to such utili-
28 ties/services.
29

30 It is expected that Contractors have access to their own cell phone for their own use. No additional telephone ser-
31 vice will be provided.
32

33 The City will not furnish Watchpersons. The Contractor shall provide such precautionary measures, to include the
34 furnishing of watchpersons if deemed necessary, to protect persons and property from damage or loss where the
35 Contractor's work is involved.
36

37 Contractors shall cooperate with all the testing consultants and verify system completion to the testing consultants.
38 Demonstrate the starting, interlocking and control features of each system so the testing Contractor can perform its
39 work. Testing and balancing (TAB) Contractor shall be direct subcontractor to the Contractor and shall not be the
40 mechanical Contractor or subcontractor to mechanical Contractor.
41

42 The Contractor resumes responsibility for all work specified in this contract except for work explicitly noted as be
43 done by the City or a Contractor separately hired by the City. The Contractor shall immediately inform the City of
44 the name of the person(s) designated as Superintendent representing the Contractor at the site.

45 The Contractor shall take complete charge of the work under this contract and coordinate the work of all trades on
46 the project. All Contractors shall work in cooperation with the Contractor and with each other, and fit their work into
47 the structure as job conditions may demand. The City shall make all final decisions as to the right-of-way and run
48 of pipe, ducts, etc., at prearranged meetings with responsible representatives of the Contractors involved. Contrac-
49 tor(s) shall coordinate the work with adjacent work with other Contractors prior to installation and shall cooperate
50 with all other trades to facilitate the general progress of the work. The Contractor shall coordinate and schedule
51 the work of all its subcontractors, and shall furnish all information required by them for proper scheduling and ex-
52 ecution of the work. In the same manner, the Contractor shall coordinate the work with that of the City, and any
53 other Contractor operating in the area, including reasonable adjustments of schedule in order to allow other Con-
54 tractors or the City to do their work. Coordinate all work with other Contractors prior to installation. Any installed
55 work that is not coordinated and that interferes with other Contractor's work shall be removed or relocated at the
56 installing Contractor's expense.
57

58 Each trade shall afford all other trades every reasonable opportunity for the installation of their work and for the
59 storage of their material. In no case will the Contractor(s) be permitted to exclude from the premises or work, any
60 other Contractor or employees thereof, or interfere with any other Contractor in the executing or installation of their
61 work. In case it is indicated which trade is responsible for which work, this is meant as a suggestion and it is the
62 Contractor's responsibility in its contracts with subcontractors to clarify who ultimately will do the work. If conflicts
63 arise between the Contractor and subcontractor about who is responsible for which work to be done it is the Con-
64 tractor's responsibility to make sure the work gets done in time even if the dispute between Contractor and subcon-
65 tractor gets settled later.
66

1 The City Engineer shall have the right to make final and binding decisions on disputes between the Contractor and
2 any other subcontractor operating in the area regarding: (a) access to the site with work force, equipment, and/or
3 materials to their work area or (b) their adjacent work areas.
4

5 The Contractor shall cooperate with other trades and City personnel in locating work in a proper manner. Should it
6 be necessary to raise or lower or move longitudinally any part of the electrical or piping or ducting work to better fit
7 the general installation, such work shall be done at no extra cost to the City, provided such decision is reached
8 prior to actual installation. The Contractor shall check location of electrical outlets with respect to other installations
9 before installing.
10

11 The Contractor shall provide and maintain in working order during the entire construction period, a minimum of
12 three (3) fire extinguishers on each floor level, including basement of the building, and one (1) in temporary office.
13 Extinguishers shall be nonfreezing type such as A-B-C rated dry chemical, of not less than 10-pound capacity
14 each. In addition, any subcontractor who maintains an enclosed shed on the site shall provide and maintain, in an
15 accessible location, one or more similar nonfreezing type fire extinguisher in each enclosed shed.
16

17 The area to be set aside for the work under this contract is shown on the drawings, and the Contractor shall con-
18 fine the construction to the immediate area within the construction limits. The Contractor shall immediately upon
19 entering the site for purpose of beginning work, locate general reference points and take such action as is neces-
20 sary to prevent their destruction. The Contractor shall lay out its work and be responsible for all lines, elevations
21 and measurements of the building and other work executed under its Contract. The Contractor must exercise
22 proper precaution to verify dimensions on the drawings before laying out work and will be held responsible for any
23 error resulting from failure to exercise such precaution. The Contractor shall verify grades, lines, levels, locations,
24 and dimensions as shown on drawings and report any errors or inconsistencies to the City before commencing
25 work. Starting of work by the Contractor shall imply acceptance of existing conditions. Confine all operations,
26 equipment, apparatus and storage of materials, to the immediate area of work to the greatest possible extent.
27 Contractor shall ascertain, observe and comply with all rules and regulations in effect on the project site, including
28 but not limited to parking and traffic regulations, use of walks, security restrictions and hours of allowable ingress
29 and egress. Any special traffic control during construction involving lane closures shall be in accordance with the
30 federal standard, Manual of Uniform Traffic Control Devices.
31

32 Using datum, the lot lines and present levels have been established as shown on the drawings. Other grades,
33 lines, levels and benchmarks, shall be established and maintained by the Contractor, who shall be responsible for
34 them. As work progresses, the Contractor shall lay out on forms and floor, the locations of all partitions, walls and
35 fix column centerlines as a guide to all trades. The Contractor shall make provision to preserve property line
36 stakes, benchmarks, or datum point. If any are lost, displaced or disturbed through neglect of any Contractor, Con-
37 tractor's agents or employees, the Contractor responsible shall pay the cost of restoration.
38

39 The City's payment and guarantee provisions and when and how the City will accept the work are listed in the
40 Standard Specifications under Sections 105.15 and 110.5.
41

42 **12. GUARANTEES**

43 All work, material and equipment is guaranteed by the Contractor to be free of faults for at least one year or longer
44 if specified elsewhere. This year begins from the date of final acceptance from the City, which is stated in the Stan-
45 dard Specifications under Section 105.16. The Contractor agrees to return to the project and commence work as
46 directed upon notification by the City and will furnish at his own expense all necessary labor and material to make
47 proper repairs or corrections made necessary by defective material or inferior workmanship furnished or performed
48 under this contract. If a subcontractor is not complying, the Contractor is held responsible.
49

50 All corrections and repairs are to be made no more than 30 days after notification of the Contractor for equipment
51 and material that is not critical to the operation of the building. Critical equipment and material, including but not
52 limited to HVAC, roofing, electrical, elevator, shall be repaired or brought into temporary and safe working condition
53 in less than 7 days and temporary alternatives have to be provided by the Contractor. If Contractor fails to do so
54 the City reserves the right to perform the work himself or subcontract a different Contractor and charge the Con-
55 tractor the full cost of the repair and correction and cost of any material, rental fee, labor and equipment to provide
56 temporary relief and protection to enable safe operation of the building.
57

58 **13. SUSTAINABLE CONSTRUCTION METHODS AND MATERIALS**

59 All construction methods and materials shall meet these requirements unless specified differently elsewhere. Con-
60 tractor is to provide all documentations, certifications and other material necessary to prove compliance to the City
61 and third party certifiers.
62

63 Construction Activity Pollution Prevention:

- 64 - Follow Requirements in Storm Water Pollution Prevention Plan (SWPPP) and Erosion and Sedimentation
65 Control (ESC) Plan
- 66 - Stabilize any relocated and moved soil with fast growing grasses and place mulch (hay, woodchips, straw)
67 on it to cover and hold soil

- Divert surface runoff from distributed areas into sediment basin or sediment traps with a mound of stabilized soil
- Construct posts with filter fabric media to remove sediment from stormwater leaving the site.

Site Development:

- Follow requirements in site development plan and don't disturb areas beyond the marked areas

Construction Waste Management:

The contractor shall be responsible for meeting all the requirements of the Madison General Ordinance, Chapter 10, Section 10.185, Recycling and Reuse of Construction and Demolition Debris, for commercial buildings. The contractor shall be required to obtain the Certification and Audit of Compliance as required. In addition the contractor shall make all reasonable efforts to:

- Recycle all recyclable material. This includes any material for which there is a recycling facility in Wisconsin.
- Separate all waste material in plastic, metal, paper, acoustical tile, brick, concrete, clean wood, glass, gypsum drywall, carpet and insulation and provide designated on-site collection areas.
- Keep track of volume and weight of each material and track if it was recycled or disposed otherwise.
- Keep track of volume and weight of donated material and site reused on site
- Haul all recyclable material to recycling facility if one is available in the county at no cost to the City.
- It is permissible to separate waste off-site by specialized recycling contractor. This contractor needs to be provide proof of recycling and needs to be WASTECAP certified as "Accredited Professional in Construction and Demolition Debris Recycling".

Indoor Air Quality:

- During construction the recommended control measures of the Sheet Metal and Air Conditioning Contractors National Association (SMACNA) IAQ guidelines for occupied buildings under construction, (1995, chapter 3) must be met or exceeded.
- Stored on-site or installed absorptive material must be protected from moisture damage.
- In case permanently installed air handlers are used for ventilation, filtration media with a Minimum efficiency Reporting Value (MERV) of 8 shall be used at each return air grille, as determined by ASHRAE 52.2-1999. Contractor shall replace all filtration media immediately prior occupancy.
- All to be installed ductwork, air handlers and other equipment later connected to the indoor air path are to be protected from dirt and debris.

14. SCHEDULE OF OPERATIONS

Within 10 calendar days after the effective date of Start Work Letter, the Contractor shall provide an installation schedule to the project manager. This schedule must show the completion of the project within the stated Contract Time of Completion for the project. Extensions to Contract Time of completion must be made in writing to the project manager or as the requirements of the City's Standard Specifications section 109.8.

The schedule will need to coordinates with the scheduled use of the shelter

Updated scheduled shall be provided to the project manager as the duration of the project changes.

Install work in phases to accommodate City's occupancy requirements. During the construction period coordinate electrical schedule and operations with the City.

15. DOCUMENTS

All electronic files used or created for this project become property of the City. All files have to be submitted to the City upon request and once each phase (design, construction) is completed. Only Microsoft Office, PDF, and AutoCAD version 2008 and lower documents are acceptable. All documents that once existed in Microsoft or AutoCAD version must be submitted in such. AutoCAD files have to be submitted in original drawing form for further use in future projects. Sheet-set files alone will not be sufficient. All AutoCAD files must be submitted as PDF in addition. The Contractor can use CAD files and other files necessary for this project upon request.

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

The daily record of changes shall be the responsibility of Contractor's field superintendent. No arbitrary mark-ups will be permitted. During the first week of each month, the Contractor shall present, at the project site, the job copy showing variations and changes to date to the City for review.

During first week of each month, the Contractor shall present at the project site all changes to architectural/engineering plans for review. At completion of the project, the Contractor shall submit the marked-up record drawings to the City prior to final payment.

1 Contractor shall provide list with all equipment installed. This list shall contain, but not limited to, type, make and
2 special product key and number. For grant purposes the contractor may have to provide detailed information about
3 equipment installed and labor provided to third party institutions, such as Focus on Energy.
4

5 **16. QUALITY ASSURANCE**

6 Any installed material not meeting the specification requirements must be replaced with material that meets these
7 specifications without additional cost to the City.
8

9 All products and materials used are to be new, undamaged, clean and in good condition. Existing products and
10 materials are not to be reused unless specifically indicated.
11

12 Where equipment or accessories are used which differ in arrangement, configuration, dimensions, ratings, or engi-
13 neering parameters from those indicated on the contract documents, the Contractor is responsible for all costs
14 involved in integrating the equipment or accessories into the system and for obtaining the performance from the
15 system into which these items are placed. This may include changes found necessary during the testing, adjust-
16 ing, and balancing phase of the project.
17

18 Welding procedures, welders, and welding operators for all building service piping to be in accordance with certi-
19 fied welding procedures of the National Certified Pipe Welding Bureau and Section 927.5 of ASME B31.9 Building
20 Services Piping or AWS 10.9 Qualification of Welding Procedures and Welders for Piping and Tubing. Before any
21 metallic welding is performed, Contractor to submit his Standard Welding Procedure Specification together with the
22 Procedure Qualification Record as required by Section 927.6 of ASME B31.9 Building Services Piping. Before any
23 metallic welding is performed, Contractor to submit his Standard Welding Procedure Specification together with the
24 Procedure Qualification Record as required by Section IX of the ASME Boiler and Pressure Vessel Code and/or
25 the National Certified Pipe Welding Bureau. Before any polyethylene fusion welding is performed, Contractor to
26 submit certification that the welders to be used on this project have successfully demonstrated proper welding pro-
27 cedures in accordance with the Code of Federal Regulations, Title 49, Part 192, Section 192.285.
28

29 Contractor shall assume the responsibility for the protection of all finished construction under the Contract and
30 shall repair and restore any and all damage of finished work to its original state. Wheeling of any loads over any
31 type of floor, either with or without plank protection, will be permitted only in rubber-tired wheelbarrows, buggies,
32 trucks or dollies. Where structural concrete is also the finished surface, care must be taken to avoid marking or
33 damaging those surfaces. All structures and equipment shall be constructed, installed and operated with guards,
34 controls and other devices in place.
35

36 Contractor shall obtain complete data at the site and inspect surfaces that are to receive the Work before proceed-
37 ing with fabricating, assembling, fitting or erecting any work under this contract. Contractor shall notify the City in
38 writing in case of discrepancies between existing work and drawings, and of any defects in such surfaces that are
39 to receive the Contractor's work. The City will evaluate the notice and direct what remedial action will be taken.
40

41 Starting of work implies acceptance of existing work or the work of others. Removal and replacement of work ap-
42 plied to defective surfaces, in order to correct defects, shall be done at the expense of the Contractor who applied
43 work to defective surfaces.
44

45 The Contractor shall:

- 46 - Provide, erect and maintain all required planking, barricades, guard rails, temporary walkways, etc., of suf-
47 ficient size and strength necessary for protection of stored material and equipment; paved surfaces,
48 walks, curbs, gutters and drives; streets adjacent to or within project area; adjoining property and all
49 project work to prevent accidents to the public and the workmen at the job site.
- 50 - Notify adjacent property owners if their property interferes with the work so that arrangements for proper
51 protection can be made.
- 52 - Provide and maintain proper shoring and bracing to prevent earth from caving or washing into the building
53 excavation. Provide temporary protection around openings through floors and roofs, including elevator
54 openings, stairwells, and edge of slabs.
- 55 - Provide and maintain proper shoring and bracing for existing underground utilities, sewers, etc., encoun-
56 tered during excavation work, to protect them from collapse or other type of damage until such time as
57 they are to be removed, incorporated into the new work, or can be properly backfilled upon completion of
58 new work.
- 59 - Provide protection against rain, snow, wind, ice, storms, or heat to maintain all work, materials, apparatus,
60 and fixtures, incorporated in the work or stored on the site, free from injury or damage. At the end of the
61 day's work, cover all new work likely to be damaged. Remove snow and ice as necessary for safety and
62 proper execution of the work.
- 63 - Protect the building and foundations from damage at all times from rain, ground water and back up from
64 drains or sewers. Provide all equipment and enclosures as necessary to provide this protection.
- 65 - Damaged property shall be repaired or replaced in order to return it to its original condition. Damaged
66 lawns shall be replaced with sod.

- 1 - Protect materials, work and equipment, not normally covered by above protection, until construction
- 2 proceeds to a point where the general building protection of the area where located, dispenses with the
- 3 necessity therefore. Protect work outside of the building lines such as trenches and open excavations, as
- 4 specified above.
- 5 - Take all necessary precautions to protect the City's property as well as adjacent property, including trees,
- 6 shrubs, buildings, sanitary and storm sewers, water piping, gas piping, electric conduit or cable, etc., from
- 7 any and all damage which may result due to work on this project.
- 8 - Repair work outside of property line in accordance with the requirements of the authority having jurisdic-
- 9 tion.
- 10 - Repair any work, damaged by failure to provide proper and adequate protection, to its original state to the
- 11 satisfaction of the City or remove and replace with new work at the Contractor's expense.
- 12 - Protect trees indicated on the drawings to remain and trees in locations that would not interfere with new
- 13 construction, from all damage. Do not injure trunks, branches, or roots of trees that are to remain. Do
- 14 cutting and trimming only as approved and as directed by the City.
- 15 - The value of trees destroyed or damaged will be charged against the account of the Contractor responsi-
- 16 ble for the damage in an amount equal to the expense of replacing the trees with those of similar kind and
- 17 size.

18
19 The contractor shall be fully responsible for inspecting the work of its suppliers, and subcontractors to assure that
20 the work complies with the standards for materials and workmanship required by the contract documents.

21
22 The Contractor shall:

- 23 - Monitor quality control over subcontractors, suppliers, manufacturers, products, services, site conditions,
- 24 and workmanship, to produce work of the quality specified in the contract documents.
- 25 - Comply fully with manufacturer's instructions, including each step in sequence.
- 26 - Request clarification from the City before proceeding with work when manufacturers' instructions or refer-
- 27 ence standards conflict with Subcontract Documents.
- 28 - Comply with specified standards as a minimum quality for the work except when more stringent toler-
- 29 ances, codes, or manufactures instructions require more precise workmanship.
- 30 - Ensure that work is performed by persons specializing in the specific trade and class of work required,
- 31 and qualified to produce workmanship of specified quality.
- 32 - Secure products in place with positive anchorage devices designed and sized to withstand seismic, static
- 33 and dynamic loading, vibration, physical distortion or disfigurement.

34
35 If reference standards or manufacturers' instructions contain provisions that would alter or are at variance with rela-

36 tionships between the parties to the contract set forth in the contract Documents, the provisions in the contract

37 Documents shall take precedence.

38
39 When required by individual Specification sections, Contractor shall provide the following services from a manufac-

40 turer's representative:

- 41 - Review of Specifications and design and concurrence or suggestions for modification.
- 42 - Site observation of conditions of use and substrate.
- 43 - Observation of the installation work in progress and on completion.
- 44 - Start up, testing, and adjustment of equipment.
- 45 - Instruction to the City in operation and maintenance.
- 46 - Provide written signed report by manufacturer's representative documenting services provided and any
- 47 comments or recommendations.

48
49 The work will be inspected by City inspectors and/or independent inspection service personnel under coordination

50 of the City. All work is subject to inspection and shall remain accessible and exposed until it has been inspected by

51 the City. The contractor shall notify the City inspector when critical work inspections points of the project are visible

52 or uncovered as required by the City inspector. Any work covered up or made inaccessible before such inspection

53 shall be uncovered and made accessible without additional expense to the City. The City can request inspection of

54 delivered material to confirm meeting of standards and specifications. An installation under supervision of the City

55 can be requested to check proper installation. Contractor is to grant access to all material and finished and un-

56 finished work at any time upon request. At least 3 business days notice has to be given to the City prior to arrival of

57 material and equipment to be inspected. This includes concrete, which will be sampled and tested by the City.

58
59 Inspection or testing performed by the City Engineer or his designee shall not relieve the Contractor from responsi-

60 bility for performing his own quality control and for complying with the requirements of the contract Documents. The

61 City will not be responsible for the Contractor's failure to carry out work in accordance with the contract Documents.

62
63 Cooperate and arrange meetings with City or designee (Cx) with any commissioning process . Fill out and submit

64 all documents required by Cx. Commissioning checklists need to be filled out truthfully at the time indicated. This

65 includes but is not limited to delivery checklist (at time of delivery), installation checklist (at time of installation) and

66 start up checklist (at time of startup).

67 Commissioning involves among other things:

- 1 - Inspection of material arriving at site regarding right type, number and undamaged package and proper
- 2 storage.
- 3 - Inspection of installation
- 4 - Test of proper function
- 5 - Review of Training and submitted O&M material
- 6 - Test of proper function before end of warranty period

7
8 **17. CODES AND PERMITS**

9 Applicable provisions of Public Law, the Constitution and Laws and Statutes of the State of Wisconsin and the
10 codes and regulations of the Department of Energy are hereby referred to and made a part of this contract and all
11 work performed shall be in accordance with such laws, regulations and the latest edition or supplement or amend-
12 ment thereto in effect at the time of submittal of bid shall be considered to be the issue in effect (unless shown oth-
13 erwise) of all applicable codes including, but not limited to:

- 14
- 15 1. Wisconsin Building Code
- 16 2. Wisconsin Electrical Code
- 17 3. Wisconsin Mechanical Code
- 18 4. Wisconsin Plumbing Code
- 19 5. Wisconsin Energy Code
- 20 6. Wisconsin Fire Code
- 21 7. NFPA 70 National Electrical Code
- 22 8. General Services Administration 41 CFR Part 101-19
- 23 9. Americans with Disabilities Act (ADA)
- 24 10. Energy Conservation Performance Standards,
- 25 11. Local Codes
- 26

27 Contractor is expected to know or to ascertain, in general and in detail, the requirements of all codes and ordin-
28 ances, and all rulings and interpretations of code requirements being made by all authorities having jurisdiction
29 over the work performed by them, applicable to the construction and operation of systems covered by this contract.
30 Where codes or standard specifications other than those listed in this paragraph are referred to in the different
31 Divisions of these specifications, it is understood that they apply as fully as if cited here. Where differences exist
32 between codes affecting this work, the code affording the greatest protection to the City shall govern.

33
34 Maintenance clearances shall be maintained around equipment as required by the Codes and Standards, and as
35 recommended by the equipment manufacturers. The maintenance envelope and equipment access shall be kept
36 clear of any obstruction. It is Contractor's responsibility to enforce these requirements with all the Contractors. The
37 Contractor shall be responsible for correcting any infringement on this requirement at no cost to the City.

38
39 All cost for items and procedures necessary to satisfy requirements of all applicable codes, ordinances and au-
40 thorities, whether or not these are specifically covered by drawings or specifications. All cases of serious conflict or
41 omission between the drawings, specifications, and codes shall be brought to the City's attention as herein before
42 specified. The Contractor shall carry out work and complete construction as required by applicable codes and or-
43 dinances and in such a manner as to obtain approval of all authorities whose approval is required.

44
45 Contractor is responsible for obtaining permits at its own cost including expenses for supporting documents. Deliv-
46 er original permits to the City before work starts. Obtain and pay for all required installation inspections except
47 those provided by the City. Deliver originals of these certificates to the City. Include copies of the certificates in
48 the Operating and Maintenance Instructions. Contractor shall arrange all required inspections and correct all defi-
49 ciencies at no cost to the City.

50
51 The Contractor must maintain all licenses required for the work performed and required by authorities. In addition
52 all licenses and certificates required elsewhere have to be maintained. If a Contractor loses a license for whatever
53 reason he must inform the City immediately after learning about that himself. The Contractor must submit proof of
54 holding the license or certificate upon request.

55
56 **18. SUBMITTALS**

57 Documents have to be submitted in electronic form (PDF) as described elsewhere in addition to hardcopies no
58 later than 3 business days after start work letter is issued. The City or designee will review, and process shop
59 drawings and other required submittals with reasonable promptness. No delay will be allowed in the progress of the
60 job attributable to Contractor's failure to supply submittals in time.

61
62 The Contractor shall submit three (3) prints of all shop drawings, submittal data consisting of brochures, product
63 data sheet, catalogs, material lists, wiring diagrams, Material Safety Data Sheets (MSDS), samples, erection draw-
64 ings, and equipment layouts for review by the City Engineer or his designee. General catalog sheets showing a
65 series of the same device is not acceptable unless the specific model is clearly marked. Submittals shall be
66 processed with such promptness as not to cause delay to the work or to that of any other Contractor. Each submit-
67 tal shall be provided together with a transmittal letter or form. The following information shall be included on all

1 submitted documents: Agency/Location/Address obtained, project number, building name, project name. Submittals shall be grouped to include complete submittals of related systems, products, and accessories in a single submittal. Mark dimensions and values in units to match those specified. Include wiring diagrams of electrically powered equipment.

2
3
4
5
6 Submit all original documents providing information regarding sustainability requirements including but not limited to recycled content, VOC, certified wood, disposal certificates and transportation distance. Contractor is required to prove that material and methods used meet all requirements specified elsewhere.

7
8
9
10 The City or designee will return the marked and stamped drawings together with transmittal letter or form to Contractor. If re-submittal is required, the City Engineer or designee will so note and Contractor shall make another submission for review after correction resolving the review comments on the prior submittals. The above procedure shall be repeated until the City Engineer or designee favorably reviews the submittal. The submittals must be approved before material is ordered and fabrication is authorized.

11
12
13
14
15
16 The City Engineer's or designee's favorable review of shop drawings and other submittals shall not relieve the Contractor of responsibility for deviations from drawings or specifications, unless the Contractor has in writing called the City Engineer's or designee's attention to such deviations at the time of submission, and the City Engineer or designee has acknowledged in writing such deviations; nor shall it relieve the Contractor from responsibility for errors of any sort in such drawings. If deviations, discrepancies, or conflicts between shop drawing submittals and the drawings and specifications are discovered either prior to or after the shop drawing submittals are reviewed by the City Engineer or designee, the drawings and specifications shall control and shall be followed. The Contractor shall be responsible for and shall check the correctness of all documents including those subcontractors prior to submitting them to the City for review.

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26 The Contractor shall furnish prints of the favorably reviewed final shop drawings, erection drawings, equipment layouts and vendor data to subcontractors and suppliers for the proper coordination of their work. The Contractor shall keep one (1) complete set of the above documents at the job site for the use of the City.

27
28
29
30 After the completion of the project, and prior to final payment, submit:

- 31 - One (1) copy of the Waste Manifest Records to the The City, if required in accordance with "Safety and Environment" Requirements Article "HAZARDOUS SUBSTANCES".
- 32 - The original and one (1) copy of all guarantee/warranty documents.

33 34 35 **19. DRAWINGS AND SPECIFICATIONS**

36 Drawings indicate approximate locations of the various items. These items are shown approximately to scale and attempt to show how these items should be integrated with building construction. Locate all the various items on-the-job measurements in conformance with code and cooperation with other trades.

37
38
39 Before locating items, confer with the City as to desired location in the various areas. In no case items shall be located by scaling drawings. Contractor must relocate items and bear cost of redoing work or other trades' work necessitated by failure to comply with this requirement.

40
41
42
43 If electrical items are to be relocated within 10 feet of location shown on drawings and Contractor is informed before work is begun on this portion of the job, the relocation shall be at Contractor's expense.

44
45 Drawings are schematic in nature and are not intended to show exact locations of conduit but rather to indicate distribution, circuitry, and control.

46
47
48 Standard Specifications: Standard Specifications such as ANSI, AASHO, AWWA, AISC, Commercial Standards, Federal Specifications, NEMA, UL, and the like incorporated in the requirements by reference shall be those of the latest edition at time of receiving bids, unless otherwise specified. The manufacturers, producers and their agents of required materials shall have such specifications available for reference and are fully familiar with their requirements as pertains to their product or material.

49
50
51
52
53
54 Contract Drawings and Specifications on the Job: contract drawings shall be kept on the job by the Contractor shall include at least one copy of Drawings and Specifications, all approved shop and erection drawings and schedules, lists of materials and equipment, as-built drawings, addenda and bulletins, documents relevant to the work. The list of Subcontract drawings is attached to these Specifications.

55
56
57
58
59 Maintain a complete, precise, accurate dimensioned record of actual locations of the work, including concealed and embedded work, size and type of equipment, and every change or deviation from original contract drawings at the site. Keep this record legible and correct weekly as the job progresses on black or blue-line prints. Keep Record Drawings available for inspection at all times. Drawings will be inspected before approval of requests for payment.

60
61
62
63
64
65 It shall be the responsibility of the Contractor to submit to the City within ten (10) days after final inspection, one complete marked-up set of contract drawings fully illustrating all revisions made by all the crafts in the course of the work. This shall include all field changes, adjustments, variances, substitutions and deletions, whether covered by

1 Change Order or not. Underground utility installations must be located precisely as constructed on the marked-up
2 drawings.
3

4 The Contractor shall not take advantage of any apparent error or omission in the plans or specifications, and the
5 City shall be permitted to make such corrections and interpretations as may be deemed necessary for the fulfill-
6 ment of the intent of the plans and specifications.
7

8 In addition to verifying at the site all measurements shown on the Drawings, Contractor shall consult the Drawings
9 and Specifications of related work or existing construction that may in any manner affect the work of this contract.
10 Contractor shall promptly report to the City, in writing, any errors, omissions, violations, or inconsistencies that may
11 be discovered as a result of such verifications; otherwise, it shall be understood that Contractor accepts all such
12 related data and conditions without reservations.
13

14 Layout of existing piping, conduits, and locations of equipment are shown as exactly as could be determined during
15 design of the facilities; but their accuracy, particularly when such layouts and drawings are schematic, cannot be
16 guaranteed. Contractor shall check all Specifications including the Drawings for possible interference with electric-
17 al, mechanical, and structural details, as well as interference with existing building or equipment, and shall notify
18 the City of the interference for resolution of the interference before commencing work. Any completed work that
19 interferes shall be corrected by Contractor at Contractor expense so that the original design can be followed.
20

21 **20. OPERATION AND MAINTENANCE DATA**

22 Submit data bound in 8-1/2 x 11 inch (A4) text pages, Use three D side rings if necessary and binders with durable
23 plastic covers. Submit all documents in electronic form as well as in hardcopy. Prepare binder cover with printed
24 title "OPERATION AND MAINTENANCE INSTRUCTIONS", title of project and subject matter of binder when mul-
25 tiple binders are required.
26

27 Internally subdivide the binder contents with permanent page dividers, logically organized as described below; with
28 tab titling clearly printed under reinforced laminated plastic tabs.

29 Contents: Prepare a Table of Contents for each volume, with each Product or system description identified, typed
30 on 20-pound white paper, in three parts as follows:
31

32 - Part 1: Directory, listing names, addresses, and telephone numbers of Architect/Engineer, Contractor, subcon-
33 tractors, and major equipment suppliers.
34

35 - Part 2: Operation and maintenance instructions, arranged by system and subdivided by specification section. For
36 each category, identify names, addresses, and telephone numbers of subcontractors and suppliers. Identify the
37 following:

- 38 1. Significant design criteria.
- 39 2. List of equipment (including assigned equipment numbers).
- 40 3. A description of recommended replacement parts and materials, which the City should stock.
- 41 4. Parts list for each component.
- 42 5. A summary of equipment vendors, or location where replacement parts can be purchased.
- 43 6. List indicating types and grades of oil and/or grease, packing materials, normal and abnormal tolerances
44 for devices, and method of equipment adjustment.
- 45 7. Copies of all approved submittals.
- 46 8. Operating instructions.
- 47 9. Maintenance instructions for equipment and systems, Preventive maintenance recommendations.
- 48 10. Maintenance instructions for finishes, including recommended cleaning methods and materials, and spe-
49 cial precautions identifying detrimental agents.
- 50 11. Manufacturer's wiring diagrams for electrically powered equipment.
- 51 12. A complete set of record control drawings.
- 52 13. Additional information as indicated in the technical specification sections

53
54 - Part 3: Project documents and certificates, including the following:

- 55 1. Product data.
- 56 2. Air and water balance reports.
- 57 3. Certificates.
- 58 4. Photocopies of warranties.
- 59 5. Name, address, and telephone number of the person or office to contact for service during the warranty
60 period.
- 61 6. Name, address, and telephone number of the person or service organization to be contacted for service
62 after the warranty period.
63

64 Submit 1 draft copy of completed volumes 15 [fifteen] days after approval of applicable submittal or receipt of the
65 product. Revise content of all document sets as required prior to final submission. Submit 2 [two] sets of revised
66 final volumes, within 10 [ten] days after final inspection.
67

1 **21. SAFEGUARDS - EXISTING EQUIPMENT, UNDERGROUND UTILITIES AND ARTIFACTS**

2 Existing utilities, including those listed as abandoned, shall not be moved or otherwise disturbed without written
3 verification by the City that the utility is abandoned.

4
5 When altering existing facilities, the Contractor shall take every precaution to preserve and protect existing facili-
6 ties, both those to be altered and those to remain unaltered that are within the limits of the work.

7
8 The Contractor shall notify the City of structural members, piping, conduit, or equipment not indicated for removal
9 that may cause interference with the work. Work shall not proceed in the affected area until instructions have been
10 issued. Do not drill or penetrate existing structures without prior permission. The removal of existing work shall be
11 by methods that will not jeopardize the integrity of structures or systems that are to remain.

12
13 Existing utilities, including but not limited to roof drainage systems, underground cables, ducts, roadways, man-
14 holes, building fire alarm, public address or telecommunications wiring shall not be moved or otherwise disturbed,
15 nor electrical circuits or switches operated or taken in or out of service, without prior consent of the City. Contractor
16 shall compensate loss to the City resulting from damage to utilities.

17
18 If bones or artifacts are encountered during digging, the City requires that the Contractor stop work within a 50-foot
19 radius of the find and immediately notify the City. Work may continue only with approval from the City.

20
21 **22. ACCESS PANELS AND DOORS**

22 All serviceable and replaceable devices, including but not limited to valves, boxes, and dampers shall receive an
23 access at a location and in a size that enables proper servicing and repair of the device without removal of other
24 material. The sizes described below are minimum sizes and might be increased if the type and size of device re-
25 quires it. Install all piping, conduit, ductwork, and accessories to permit access to equipment for maintenance.
26 Coordinate the exact location of wall and ceiling access panels and doors with the City or designee making sure
27 that access is available for all equipment and specialties. Relocate access panel or door if equipment is not prop-
28 erly accessible to perform all maintenance and repair at no cost to the City.

29
30 **LAY-IN CEILINGS:**

31 Removable lay-in ceiling tiles in 2 X 2 foot or 2 X 4 foot configuration are sufficient; no additional access provisions
32 are required unless specifically indicated.

33
34 **CONCEALED SPLINE CEILINGS:**

35 Removable sections of ceiling tile held in position with metal slats or tabs compatible with the ceiling system used.

36
37 **METAL PAN CEILINGS:**

38 Removable sections of ceiling tile held in position by a pressure fit will be provided under Section 09500.

39
40 **PLASTER WALLS AND CEILINGS:**

41 16 gauge frame with not less than a 20 gauge hinged door panel, prime coated steel for general applications,
42 stainless steel for use in toilets, showers, and similar wet areas, concealed hinges, screwdriver operated cam latch
43 for general applications, key lock for use in public or secured areas, UL listed for use in fire rated partitions if re-
44 quired by the application. Use the largest size access opening possible, consistent with the space and the item
45 needing service; minimum size is 12" by 12".

46
47 **23. SLEEVES AND OPENINGS**

48 The Contractor requiring sleeved openings shall furnish and install all sleeves required for their penetrations. Con-
49 tractors furnishing sleeves to others for installation shall do this in a timely manner so as not to impede the project
50 schedule.

51
52 Openings that are required and are not shown on the structural and/or architectural drawings shall be the respon-
53 sibility of the Contractor requiring the openings. The Contractor shall install sleeves for these openings or cut open-
54 ings as needed (including floor openings within chases).

55
56 The Contractor shall be responsible for coordinating locations of their sleeves with work of other trades. The Con-
57 tractor who requires sleeves and/or openings shall submit through the Contractor, to the City for review and ap-
58 proval, layout drawings of all such required sleeves and/or openings. Sleeve and opening layout drawings shall be
59 received by the City a minimum of two weeks prior to installation of the sleeves and openings. Sleeve and opening
60 sizes and locations shall be dimensioned from column lines and floor elevations or from a point of reference ap-
61 proved by the City.

62
63 Provide galvanized sheet metal sleeves for pipe and conduit penetrations through interior and exterior walls to pro-
64 vide a backing for sealant or firestopping. Patch wall around sleeve to match adjacent wall construction and finish.
65 Grout area around sleeve in masonry construction. In finished spaces where pipe penetration through wall is ex-
66 posed to view, sheet metal sleeve shall be installed flush with face of wall. Pipe sleeves in new poured concrete
67 construction shall be schedule 40 steel pipe (sized to allow insulated pipe to run through sleeve), cast in place.

1
2 In all piping floor penetrations, fire rated and non-fire rated, top of sleeve shall extend 2 inches above the adjacent
3 finished floor. In existing floor penetrations, core drill sleeve opening large enough to insert schedule 40 sleeve and
4 grout area around sleeve with hydraulic setting, non-shrink grout. If the pipe penetrating the sleeve is supported by
5 a pipe clamp resting on the sleeve, weld a collar or struts to the sleeve that will transfer weight to existing floor
6 structure.
7

8 For floor penetrations through existing floors in mechanical, food service areas, parking ramps, sanitary pumping
9 stations, swimming pool equipment rooms, chemical storage and hazardous waste storage rooms and other wet
10 locations or locations that can get wet by accident or failure of a component, core drill opening and provide a
11 sleeve fastened to floor surrounding the penetration or group of penetrations to prevent water from entering the
12 penetration. Top of sleeve shall be 4 inches above the adjacent floor. Provide urethane caulk between angles and
13 floor and fasten angles to floor a minimum of 8" on center. Seal corners water tight with urethane caulk. Or, core
14 drill sleeve openings large enough to insert schedule 40 sleeve and grout area around sleeve with hydraulic setting
15 non-shrink grout/cement. Size sleeve to allow insulated pipe to pass through sleeve and paint the sleeve.
16

17 Pipe sleeves for conduits 6" in diameter and smaller, in new poured concrete construction, shall be schedule 40
18 steel pipe, plastic removable sleeve or sheet metal sleeve, all cast in place.
19

20 **24. LOOSE AND DETACHABLE PARTS**

21 Contractor shall retain all loose and small detachable parts of apparatus and equipment furnished under this Con-
22 tract, until completion of the work and shall turn them over to the City to receive them.
23

24 Furnish one can of touch-up paint for each different color factory finish furnished by the Contractor. Deliver touch-
25 up paint with other "loose and detachable parts".
26

27 **25. STAIRS, SCAFFOLDS, HOISTS, ELEVATORS OR CRANES**

28 The Contractor shall furnish and maintain equipment such as temporary stairs, fixed ladders, ramps, chutes, run-
29 ways and the like as required for proper execution of work by all trades, and shall remove them on completion of
30 the work. The Contractor shall erect permanent stair framing as soon as possible. Provide stairs with temporary
31 treads, handrails, and shaft protection. Contractors requiring scaffolds shall make arrangements with the Contrac-
32 tor, or shall provide their own and remove them on completion of the work. The Contractor shall underlay its interior
33 scaffolds with planking to prevent uprights from resting directly on the floor construction.
34

35 Contractor shall provide and pay for its own hoist/crane or other apparatus necessary for unloading/setting or mov-
36 ing their equipment and materials. Installation and removal of equipment for this activity must be accounted for in
37 the Project Schedule. Equipment and operations for this activity shall comply with applicable Department of Com-
38 merce and OSHA requirements. No material hoist may be used to transport personnel unless it meets Department
39 of Commerce and OSHA requirements for that purpose.
40

41 Existing elevators may be used on a limited basis with the City's permission and agreement. The Contractor will
42 pay costs of warranty extensions and additional service work required. Appropriate protection must be provided by
43 the using Contractor and that Contractor shall be responsible for any structural, mechanical or finish damage to the
44 elevator and its parts and to adjoining building finishes and components.
45

46 **PART 2 – PRODUCTS**

47 **1. SPECIFIED ITEMS - SUBSTITUTES**

48
49 Wherever catalog numbers and specific or trade names are used in conjunction with a designated material, prod-
50 uct, thing, or service mentioned in these Specifications, they are used to establish the standards of quality, utility,
51 and appearance required. Substitutions, which are equal in quality, utility, and appearance to those specified, will
52 be approved, subject to the following provisions:
53
54

55 All Substitutions must be accepted by the City Engineer or designee in writing. The City Engineer or designee will
56 accept, in writing, such proposed substitutions as are in his or her opinion, equal in quality, utility, and appearance
57 to the items or materials specified. Such acceptance shall not relieve the Contractor from complying with the re-
58 quirements of the drawings and specifications, and the Contractor shall be responsible at Contractor's own ex-
59 pense for any changes resulting from Contractor proposed substitutions which affect the other parts of Contractor's
60 own work or the work of others.
61

62 The manufacturer shall be a company specializing in the manufacture of the specified equipment and accessories
63 with minimum five years documented experience.
64

65 Failure of the Contractor to submit proposed substitutions for approval in the manner described above and within
66 the time prescribed shall be sufficient cause for disapproval by the City Engineer or designee of any substitutions
67 otherwise proposed.

1
2 **2. APPROVED TESTING LABORATORIES**

3 The following laboratories are approved for providing electrical product safety testing and listing services as re-
4 quired in these specifications:

- 5 - Underwriters Laboratories Inc.
- 6 - Electrical Testing Laboratories, Inc.

7
8 **PART 3 – EXECUTION**

9
10 **1. INSTALLATION**

11 Install in accordance with manufacturer's instructions and all code requirements. Provide the City or designee with
12 copy of manufacturer's instructions prior to installation. Coordinate equipment location with piping, ductwork, con-
13 duit and equipment of other trades to allow sufficient clearances. Locate equipment to provide access space for
14 servicing all components. Install in accordance with recognized industry practices. The manufacturer's latest rec-
15 ommendations at the time of bidding shall be used.

16
17 Startup and test equipment and adjust operating and safety controls for proper operation.

18
19 Contractor shall coordinate work with existing equipment so that all systems, equipment and other components will
20 fit the available space, and will allow proper service and repair. Each location needs to be approved by the City or
21 designee. This also applies to existing equipment if newly installed equipment interferes with its accessibility. Loca-
22 tion of equipment has to fit into existing panels, decoration or finish. The City can request minor position changes
23 of equipment before the work has begun.

24
25 The Contractor shall cooperate in reducing objectionable noise or vibration. If noise or vibration is a result of im-
26 proper material or installation, these conditions shall be corrected at no cost to the City. Abnormal buzzing in
27 equipment is not acceptable.

28
29 **Carpentry, Cutting, Patching, and Core Drilling:**

30 Provide carpentry, cutting, patching, and core drilling required for installation of material and equipment specified in
31 the scope of work. Do not cut, core, or drill structural members without consent of the The City.

32
33 **Waterproof Construction:**

34 Maintain waterproof integrity of penetrations of materials intended to be waterproof. Provide flashings at exterior
35 roof penetrations. Caulk penetrations of foundation walls and floors watertight. Provide membrane clamps at pe-
36 netrations of waterproof membranes. Provide waterproof NEMA 3R enclosures for all equipment or devices
37 mounted outside or otherwise exposed to the weather.

38
39 **Workmanship:**

40 Install using procedures defined in NECA Standard of Installation and shall be conform with all codes and regula-
41 tions. Materials and equipment of the types for which there are National Board of Fire Underwriters' Laboratories
42 (UL) listing and label service shall be so labeled and shall be used by Contractor.

43
44 **Modifications to existing construction and Alterations:**

45 Alter, extend and reconnect existing conduit as necessary. Reconnect existing conduits, which were reused, cut or
46 exposed because of construction as quickly as possible. Where wiring is involved, new wires shall be "pulled in"
47 between the nearest available accessible reused outlets to the extent allowed by the governing code. Furnish and
48 install new conduits for wires if they cannot be "pulled in" to existing conduits. All new conduits, wiring, and elec-
49 trical items shall be connected to the existing systems so as to function as a complete unit. Where existing elec-
50 trical equipment, devices, fixtures, electrically operated items, etc., interfere with any remodeling work, they shall
51 be removed and reinstalled in another location to avoid such interferences. all existing and relocated equipment
52 shall be left in good operating condition. Include in bid removal from service of existing electrical material and
53 equipment as specified hereinafter, as noted on the drawings, or as needed by field conditions.

54
55 **Painting of Equipment and Hardware:**

56 Provide moisture resistant paint for all exterior painting. Colors shall be as shown on the drawings unless specified.
57 Refer to individual Sections and construction drawings for painting requirements. All exposed conduits, raceways
58 and gutters inside and outside the building shall be painted to match the wall color.

59
60 **2. DELIVERY, STORAGE AND HANDLING OF MATERIALS**

61 Contractor or the Contractor's authorized representative must be present to accept delivery of all equipment and
62 material shipments. The City will not knowingly accept, unload or store anything delivered to the site for the Con-
63 tractor's use. Inadvertent acceptance of delivered items by any or employee of the City shall not constitute accep-
64 tance or responsibility for any of the materials or equipment. It is the Contractor's responsibility to assume liability
65 for equipment or material delivered to the job site.

1 Comply with manufacturer's ordering instructions and lead-time requirements to avoid construction delays. Mate-
2 rials and equipment shall be delivered to the site in adequate time to ensure uninterrupted progress of the work
3 and inspection of material by the City. Deliver materials in manufacturer's original, unopened, undamaged contain-
4 ers with identification labels intact. Care shall be taken to prevent damage to materials and equipment during load-
5 ing, transporting and unloading. Packaged materials and equipment shall be delivered to the site in original, unda-
6 maged containers bearing manufacturer's name, with seals unbroken. Packaged units shall be delivered in their
7 original crates. Store in a clean and dry space. Maintain factory wrapping or provide an additional heavy canvas
8 or heavy plastic cover to protect units from dirt, water, construction debris, and traffic. Promptly inspect shipments
9 to insure that the material is undamaged and complies with specifications. Materials or equipment, which do not
10 conform to the Specifications or are damaged shall not be incorporated in the work and shall be immediately re-
11 moved from the site.

12
13 Arrange for the necessary openings in the building to allow for admittance of all apparatus. When the building
14 access was not previously arranged and must be provided by this Contractor, restore any opening to its original
15 condition after the apparatus has been brought into the building.

16
17 Contractor shall confine equipment, apparatus, storage of materials and operations to limits indicated on the draw-
18 ings or by specific direction of the City. The storage of materials on the grounds and within the building shall be in
19 strict accordance with the instructions of the City. Storage of materials within the building shall at no time exceed
20 the design carrying capacity of the structural system. The City assumes no responsibility for materials stored in
21 building or on the site. The Contractor assumes full responsibility for damage due to the storage of materials. Re-
22 pairing of areas used for placing of sheds, offices, and for storage of materials shall be done by the Contractor.

23
24 Material shall be stored according to manufacturer's recommendations as a minimum. Provide and maintain water-
25 tight storage sheds on the premises where directed, for storage of materials that might be damaged by weather.
26 Sheds shall have wood floors raised at least 6" above the ground. Materials, construction sheds, and earth stock-
27 piles shall be located so as not to interfere with the installation of the utilities nor cause damage to existing lines.
28 Should it be necessary at any time to move material sheds or storage platforms, the Contractor shall move it at the
29 Contractor's expense, when directed by the City. All materials affected by moisture shall be stored on platforms
30 and protected from the weather. In addition, material must be stored in a location protected from vandalism and
31 weather. If material is stored outside, it must be covered with opaque plastic or canvas with provision for ventilation
32 to prevent condensation and for protection from weather. If necessary, material will be stored off site at the Con-
33 tractor's expense. Offsite storage agreements will not relieve the Contractor from using proper storage techniques.
34 Storage and protection methods must allow inspection to verify products.

35
36 All materials shall be stored in a manner that prevents release of hazardous material to the environment. All ha-
37 zardous materials, including motor fuels, shall be properly handled and contained to prevent spills or other releas-
38 es. The Contractor shall develop and maintain a contingency plan to provide emergency response, containment,
39 and cleanup of spills of hazardous materials resulting from contract activities. All spills and releases shall be re-
40 ported to the City as soon as possible. Please note that the Standard Specifications Section 107.4(f) must be fol-
41 lowed and overrides any provision in these specifications.

42
43 Cover pipes and ducts to prevent corrosion or deterioration while allowing sufficient ventilation to avoid condensa-
44 tion. Do not store materials directly on grade. Protect pipe, duct, tube, and fitting ends so they are not damaged.
45 Where end caps are provided or specified, take precautions so the caps remain in place. Protect fittings, flanges,
46 and unions by storage inside or by durable, waterproof, above ground packaging.

47
48 Store windows and doors in upright position, off ground, under cover and protected from sunlight, weather and
49 construction activities.

50 51 **3. DEMOLITION**

52 Perform all demolition as indicated on the drawings to accomplish new work. Demolition Drawings are based on
53 casual field observation and/or existing record documents. Verify field measurements and circuiting arrangements
54 as shown on Drawings, verify that abandoned wiring, piping, ducting and equipment serve only abandoned facili-
55 ties. Report discrepancies to the City before disturbing existing installation. Beginning of demolition means instal-
56 ler accepts existing conditions.

57
58 Before demolition of any load bearing concrete a ground-penetrating radar or concrete X-ray scan needs to be
59 performed to detect any rebar. This work shall be performed at least a week before demolition starts to give A/E
60 the opportunity to resolve any issues by rebar or other obstacles in unexpected locations. Drawings with existing
61 subsurface obstacles may not be correct and shall not be relied on.

62
63 Where demolition work is to be performed adjacent to existing work that remains in an occupied area, construct
64 temporary dust partition to minimize the amount of contamination of the occupied space. Where pipe or duct is
65 removed and not reconnected with new work, cap ends of existing services as if they were new work. Coordinate
66 work with the City to minimize disruption to the existing building occupants.

1 All pipe, wiring and associated conduit, insulation, ductwork, and similar items demolished, abandoned, or deacti-
2 vated are to be removed from the site by the Contractor. Maintain the condition of material and/or equipment that is
3 indicated to be reused equal to that existing before work began. All piping and ductwork specialties are to be re-
4 moved from the site by the Contractor unless they are dismantled and removed or stored by the City. Verify
5 whether or not PCB ballasts exist in light fixtures, which will be disposed of. If PCB light fixture ballasts exist, then
6 follow requirements in other sections related to electrical work.

7
8 Patch holes and openings caused by removal of material and equipment, or formerly covered by such, with like
9 material and texture of surrounding surface. Painting is not necessary unless noted otherwise.

10
11 Approval of all legal institutions shall be obtained prior to disposal of any equipment and materials. All disposal has
12 to be in compliance with all local, county, state and nationwide regulations. All disconnected wiring shall be re-
13 moved from all raceway systems, panels, enclosures pull boxes, junction boxes etc. irrespective of whether the
14 removal is specified in the construction documents or not. The empty raceway systems shall be tagged spare on
15 both ends of each termination.

16
17 Don't demolition equipment and material that is to stay in place. Repalce and repair any equipment and installa-
18 tions that get damaged during demolition.

19 20 **4. CUTTING, PATCHING AND PAINTING**

21 Cutting and patching required to access work in existing walls, in chases, above inaccessible ceilings, below floors,
22 etc., shall be by the Contractor who requires the access, unless shown on the bid documents otherwise or noted
23 otherwise.

24
25 The Contractor shall do all cutting, or fitting of the work as required to make its several parts fit together, or to re-
26 ceive the work of others, as shown or reasonably implied by the drawings or specifications, or as may be directed
27 by the City. Holes cut in exterior walls and/or roofs shall be waterproofed.

28
29 The Contractor who cuts shall also be responsible for patching. Where cutting and patching is required, the Con-
30 tractor shall hire individuals skilled in such work to do cutting and patching. The Contractor who removes or relo-
31 cates building components which leaves a remaining opening shall be responsible for patching the opening.

32
33 Patching includes repairing openings to match adjacent construction and painting the surface to match existing
34 surface including texture.

35
36 Painting means covering the entire wall where patching is to be done to nearest break point or corner unless indi-
37 cated to be done by other trades. All paining will require patching. This includes all painting included in other sec-
38 tions.

39
40 Contractor shall not endanger any work by cutting, digging or otherwise and shall not cut or alter the work of others
41 without their consent.

42
43 Do not pierce beams or columns without permission of the City and then only as directed in writing. If any duct-
44 work, piping, conduit, etc. is required through walls or floors where no sleeve has been provided, use a core drill or
45 saw cut to prevent damage and structural weakening.

46
47 Wherever any material, finish, or equipment, is damaged, the skilled trade shall accomplish the repair or replace-
48 ment, in that particular work and the cost shall be charged to the party responsible for the damage. The City re-
49 serves the right to disallow any means and/or methods that, in the opinion of the City, are harmful to and/or not in
50 the best interest of preserving the improvements receiving the work.

51 52 **5. CONCRETE WORK**

53 Provide all layout drawings, anchor bolts, metal shapes, and/or templates required to be cast into concrete or used
54 to form concrete for support or installation of electrical, mechanical, plumbing piping, fixtures, specialties and
55 equipment. This includes but is not limited to piping thrust restraints, pipe supports, hydrant supports, manholes,
56 catch basins, grease traps, septic tanks, distribution boxes, valve pits, meter pits, cleanout cover pads, yard hy-
57 drant pads, etc. Coordinate locations of equipment, pipe penetrations in wet areas, etc. with other trades.

58
59 Unless noted otherwise provide cast in place concrete for equipment pads, manhole bases and thrust blocks. Con-
60 crete to be 3,000 psi at 28 days, 3/4 inch aggregate, five bags cement, three inch slump, air entraining admixture.
61 The ACI 614 Recommended Practice for Measuring, Mixing and Placing of Concrete shall constitute the execution
62 requirements.

63 64 **6. EXCAVATION, BACKFILL, AND SURFACE RESTORATION**

65 The Contractor shall take all measures necessary to become acquainted with the location of underground service,
66 utilities, structures, etc., which may be encountered or be affected by the Contractor's work, and shall be responsi-
67 ble for damage caused by neglect to provide proper precautions or protection. As a minimum to become ac-

1 quainted with such underground appurtenances, the Contractor shall: 1) Observe existing conditions visible at the
2 site immediately prior to commencement of work; 2) Review available site plans incorporated in the contract docu-
3 ments and/or provided by the City; 3) Final check with the City for additions to or changes from conditions indicated
4 on site plans for the facility.

5
6 Before excavation in areas with utilities nearby, a ground-penetrating radar or ground radar scan needs to be per-
7 formed to detect any subsurface obstacles. This work shall be performed at least a week before demolition starts to
8 give A/E the opportunity to resolve any issues by utilites or other obstacles in unexpected locations. Drawings with
9 existing utilites may not be correct and shall not be relied on.

10
11 Verify the locations of any water, drainage, gas, sewer, electric, telephone or steam lines which may be encoun-
12 tered in the excavation. Underpin and support all lines. Cut off service connections encountered which are to be
13 removed at the limits of the excavation and cap. Existing pipes, electrical work, and all other utilities encountered,
14 which may interfere with new work, shall be re-routed, capped, cut off, or replaced by the Contractor.

15
16 Perform all excavation and backfill work necessary to accomplish indicated systems installation. Excavate to below
17 bottom of pipe and structure bedding (4" in stable soils, 6" in rock or wet trenches and 8" in unstable soil). Finish
18 bottoms of excavations to true, level surface. Install lines passing under foundations with minimum of 1-1/2 inch
19 clearance to concrete and insure there is no disturbance of bearing soil. Excavate whatever materials are encoun-
20 tered as required to place at the elevations shown, all pipe, manholes, and other work. Remove debris and rubbish
21 from excavations before placing bedding and backfill material.

22
23 Remove rock encountered in the excavation to a minimum dimension of six (6) inches outside the pipe. Rock exca-
24 vation includes all hard, solid rock in ledges, bedded deposits and unstratified masses, all natural conglomerate
25 deposits so firmly cemented as to present all the characteristics of solid rock; which material is so hard or so firmly
26 cemented that in the opinion of the City Engineer it is not practical to excavate and remove same with a power
27 shovel except after thorough and continuous drilling and blasting. Rock excavation includes rock boulders of 1/2
28 cubic yard or more in volume. Rock excavation will be computed on the basis of the depth of rock removed and a
29 trench width two (2) feet larger than the outside diameter of the pipe where one (1) pipe is laid in the trench and
30 three (3) feet larger than the combined outside diameter where two (2) pipes are laid in the trench. Include 6" pipe
31 and structure bedding in rock excavation. Include rock excavation shown on the plans in the Base Bid.

32
33 Bed pipe up to a point 12" above the top of the pipe. Take care during bedding, compaction and backfill not to dis-
34 turb or damage piping. Bedding up to a point 12" inches above the top of a pipe or conduit shall be thoroughly
35 compacted sand or crushed stone chips meeting the following gradations:

36
37

<u>Gradation for Bedding Sand</u>		<u>Gradation for Crushed Stone Chip Bedding</u>	
<u>Sieve Size</u>	<u>% Passing (by Wt)</u>	<u>Sieve Size</u>	<u>% Passing (by Wt)</u>
1 inch	100	1/2 inch	100
No. 16	45 - 80	No. 4	75 - 100
No. 200	2 - 10	No. 100	10 - 25

38
39
40
41
42
43

44 Provide shoring, sheet piling and bracing in conformance with the Wisconsin Administrative Code to prevent earth
45 from caving or washing into the excavation. Shore and underpin to properly support adjacent or adjoining struc-
46 tures. Abandon in place shoring, sheet piling and underpinning below the top of the pipe, or, if approved in ad-
47 vance by the City Engineer, maintained in place until other permanent support approved by the City Engineer is
48 provided.

49
50 Tunnel or remove sidewalk and curb in areas of excavation to the nearest joint. Remove pavements, curbs and
51 gutters to neat and straight lines to the limits of removal. Make sawcut lines parallel to existing joints, or parallel or
52 perpendicular to pavement edges to form a neat patch. Carefully remove remaining pavement within the sawcut
53 area. Leave existing base materials between the area disturbed by the work and the sawcut line undisturbed by
54 the sawcutting, pavement removal, or pavement replacement processes.

55
56 Strip topsoil from area to be excavated, free from subsoil and debris, and store separately for later re-spreading.
57 No topsoil shall be removed from site and all topsoil is property of the City. Remove surplus excavated non-topsoil
58 materials from site and dispose properly.

59
60 At no time place excavated materials where they will impede surface drainage unless such drainage is being safely
61 rerouted away from the excavation.

62
63 Provide and maintain all fencing, barricades, signs, warning lights, and/or other equipment necessary to keep all
64 excavation pits and trenches and the entire subgrade area safe under all circumstances and at all times. No exca-
65 vation shall be left unattended without adequate protection.

1 Elevations shown on the plans are subject to such revisions as may be necessary to fit field conditions. No adjust-
2 ment in compensation will be made for adjustments up to two (2) feet above or below the grades indicated on the
3 plans.
4

5 Three days before backfilling, the City shall be notified so that the City Surveyor can obtain the three-dimensional
6 coordinates of all buried utilities. Buried utilities including the pipeline and any other utilities exposed during con-
7 struction shall not be covered with backfill without the prior approval of the City. Coordination of this survey re-
8 quirement is the responsibility of the Contractor. Surveyors will be provided by the when scheduled. The cost for
9 delay or dig-up related to the Contractor's failure to schedule the utility survey shall be paid by the Contractor. Al-
10 ternately, the Contractor shall install reference points consisting of nail and hub/flagging at all changes in grade or
11 alignment of the new pipeline and for all other utilities exposed by the excavation. The Contractor shall keep a sep-
12 arate written record referenced to each point with the following information:
13

- 14 (1) Offset and depth to top and centerline of utility, accurate to 0.1 feet
 - 15 (2) Type of utility (i.e. gas, water, etc.)
 - 16 (3) Size of utility (i.e. 2", 4", 16" wide duct, etc.)
 - 17 (4) Type of material of utility (i.e. cast iron, PVC, etc.)
- 18 2. Identification tape shall be installed 12" above the buried utility crown. The identification tape shall be
19 continuous for the entire length of utility. Before backfilling for buried utilities over identification tape, the City con-
20 struction inspector will verify that identification tape has been installed.
21

22 Mechanically compact bedding and backfill to prevent settlement. The initial compacted lift to not exceed 24" com-
23 pacted to 95% density per Modified Proctor Test (ASTM D-1557). Subsequent lifts under pavements, curbs, walks
24 and structures are not to exceed 12" and be compacted to 95% density per Modified Proctor Test. In all other areas
25 where construction above the excavation is not anticipated within 2 years, mechanically compact backfill in lifts not
26 exceeding 24" to 90% density per Modified Proctor Test. Route the equipment over each lift of the material so that
27 the compaction equipment contacts all areas of the surface of the lift.
28

29 Backfill above the bedding in lawn areas shall be thoroughly compacted excavated material free of large stones,
30 organic, perishable, and frozen materials.
31

32 Backfill above the bedding under existing and future utilities, paving, sidewalks, curbs, roads and buildings shall be
33 granular materials, pit run sand, gravel, or crushed stone, free from large stones, organic, perishable, and frozen
34 materials.
35

36 Completely restore the surface of all disturbed areas as described below to a like condition of the surface prior to
37 the work. Level off all waste disposal areas and clean up all areas used for the storage of materials or the tempo-
38 rary deposit of excavated earth. Remove all surplus material, tools and equipment. Topsoil shall be spread upon
39 order from the City, typically right before any planting to avoid disturbance of topsoil by construction activities.
40

41 Lawns: Topsoil with 4" of clean, friable, fertile topsoil conforming to D.O.T. Section 625, free from debris, lumps,
42 rocks, roots, plants and seeds. Grade surfaces to match adjacent elevations. Rake smooth, free of lumps and de-
43 bris. Sod with good quality nursery sod conforming to D.O.T. Section 631, be uniform, dense, free from weeds and
44 consist of approximately 60% Kentucky blue grass and the balance perennial rye, fescue and white clover. Place
45 sod with joints staggered and abutting. Maintain lawn areas for one month after installation. Department will be
46 responsible for necessary watering and mowing. Contractor needs to inform Department about watering needs. Do
47 necessary weeding, repair, reseeding or resodding until uniform catch is obtained.
48

49 Curb and Gutter: Concrete curb and gutter conforming to the City requirements and D.O.T. Section 601, Type D or
50 L.
51

52 Sidewalk and Walkways: Non-reinforced concrete conforming to D.O.T. Section 602, thickness to match existing,
53 cross slope of one-fourth inch per foot, scored into squares approximately equal to width.
54

55 Bituminous Concrete Pavements: 4" thick crushed stone base course conforming to D.O.T. Section 304 (excluding
56 304.2.4) and two pass bituminous concrete pavement conforming to D.O.T. Section 407, first course 1-1/2" binder,
57 second course 1-1/2" surface.
58

59 7. DEWATERING

60 Provide, operate and maintain all pumps and other equipment necessary to drain and keep all excavation pits,
61 trenches and the entire subgrade area free from water under all circumstances. Obtain general permit from the
62 Wisconsin Department of Natural Resources district office for discharge of construction dewatering effluent. Obtain
63 well permit from the Wisconsin Department of Natural Resources district office for dewatering wells discharging
64 more than 70 GPM. Comply with permit requirements.
65

66 Temporary pumps required for pumping water from building excavation or from building proper shall be provided by
67 the Contractor, including temporary connections. Permanent sump pumps shall not be installed until building is

1 substantially complete and when approved by the City. The Contractor shall remove temporary pumps and connec-
2 tions when approved by the City.
3

4 **8. SEALING AND FIRESTOPPING**

5 The Contractor penetrating a fire rated wall/floor/ceiling is responsible for sealing this opening to the same rating
6 as the wall/floor/ceiling is rated.
7

8 Sealing and firestopping of sleeves/openings between conduits, cable trays, wire ways, troughs, cablebus, bus-
9 duct, pipes, ducts etc. and the structural or partition opening shall be the responsibility of the Contractor whose
10 work penetrates the opening. The Contractor responsible shall hire individuals skilled in such work to do the seal-
11 ing and firestopping. These individuals hired shall normally and routinely be employed in the sealing and fireproof-
12 ing occupation.
13

14 **FIRE AND/OR SMOKE RATED PENETRATIONS:**

15 Install approved product in accordance with the manufacturer's instructions where an installation penetrates a
16 fire/smoke rated surface. When pipe is insulated, use a product, which maintains the integrity of the insulation and
17 vapor barrier.
18

19 Where firestop mortar is used to infill large fire-rated floor openings that could be required to support weight, pro-
20 vide permanent structural forming. Firestop mortar alone is not adequate to support substantial weight.
21

22 Whenever possible, avoid penetrations of fire and smoke rated partitions. When they cannot be avoided, verify
23 that sufficient space is available for the penetration to be effectively fire and smoke stopped. All firestopping sys-
24 tems shall be by the same manufacturer. Firestop systems shall be UL listed or tested by an independent testing
25 laboratory approved by the Department of Commerce. The Contractor will be responsible for selecting the appro-
26 priate UL tested fire stop system for each application required on the project and will submit this to the City or de-
27 signee for review. Each firestop manufacturer has specific details for different applications they have tested.
28

29 Manufacturers: 3M, STI/SpecSeal, Tremco, Hilti or approved equal.
30

31 Submittals: Contractor shall submit product data for each firestop system. Submittals shall include product charac-
32 teristics, performance and limitation criteria, test data, MSDS sheets, installation details and procedures for each
33 method of installation applicable to this project. For non-standard conditions where no UL tested system exists,
34 submit manufacturer's drawings for UL system with known performance for which an engineering judgment can be
35 based upon. Use a product that has a rating not less than the rating of the wall or floor being penetrated. Refer-
36 ence architectural drawings for identification of fire and/or smoke rated walls and floors.
37

38 Contractor shall use firestop putty, caulk sealant, intumescent wrapstrips, intumescent firestop collars, firestop
39 mortar or a combination of these products to provide a UL listed system for each application required for this
40 project. Provide mineral wool backing where specified in manufacturer's application detail.
41

42 **NON-RATED PENETRATIONS:**

43 **Conduit Penetrations Through Below Grade Walls:**

44 In exterior wall openings below grade, use a modular mechanical type seal consisting of interlocking synthetic rub-
45 ber links shaped to continuously fill the annular space between the uninsulated conduit and the cored opening or a
46 water-stop type wall sleeve.
47

48 **Conduit and Cable Tray Penetrations:**

49 At conduit and cable tray penetrations of non-rated interior partitions, floors and exterior walls above grade, use
50 urethane caulk in annular space between conduit and sleeve, or the core-drilled opening.
51

52 In exterior wall openings below grade, assemble rubber links of mechanical seal to the proper size for the pipe and
53 tighten in place, in accordance with manufacturer's instructions.
54

55 At all interior partitions and exterior walls, pipe penetrations are required to be sealed. Apply sealant to both sides
56 of the penetration in such a manner that the annular space between the pipe sleeve or cored opening and the pipe
57 or insulation is completely blocked.
58

59 **9. CLEANING**

60 The Contractor shall clean up and remove from the premises, on a daily basis accumulation of surplus materials,
61 rubbish, debris and scrap and shall repair all damage to new and existing equipment resulting from its work. When
62 job is complete, this Contractor shall remove all tools, excess material and equipment, etc., from the site.
63

64 All installed items shall be cleaned at time of installation, and all lens exteriors shall be cleaned just prior to final
65 inspection. Equipment shall be thoroughly cleaned of all stains, paint, spots, dirt and dust. All temporary labels not
66 used for instruction or operation shall be removed. Dust, dirt and other foreign matter shall be removed completely

1 from all internal surfaces of all mechanical and electrical units, cabinets, ducts, pipes, etc. Dirt, soil, fingerprints,
2 stains and the like, shall be completely removed from all exposed finished surfaces.

3
4 Contractor shall wash all glass immediately prior to the occupancy of this project. Work shall include the removal
5 of labels, paint splattering, glazing compound and sealant. Surfaces shall include mirrors and both sides of all
6 glass in windows, borrowed lights, partitions, doors and sidelights. In addition to the above, the Contractor shall be
7 responsible for the general "broom" cleaning of the premises and for expediting all of the cleaning, washing, wax-
8 ing and polishing required within the technical sections of the specifications governing work under this Contract.
9 The Contractor shall also perform "final" cleaning of all exposed surfaces to remove all foreign matter, spots, soil,
10 construction dust, etc., so as to put the project in a complete and finished condition ready for acceptance and use
11 intended.

12
13 If rubbish and debris is not removed, or if surfaces are not cleaned as specified above, the City reserves the right
14 to have said work done by others and the related cost(s) will be deducted from monies due the Contractor.

15 16 **10. CONTINUITY OF SERVICE AND SHUTDOWN**

17 Contractor shall provide and maintain continuous service (power, controls, alarms, communication, elevators,
18 HVAC, roads etc.) during the entire construction period. No outages shall be permitted on existing systems except
19 at the time and during the interval specified by the City. Any outage must be scheduled when the interruption
20 causes the least interference with normal institutional schedules and business routines and might be scheduled
21 during after-hours if regular business hours are not acceptable to the City. No extra costs will be paid to the Con-
22 tractor for such outages, which must occur outside of regular weekly working hours. Cost to the utility is paid by
23 Contractor. The Contractor shall provide temporary utility services and bypasses for any disruptions not completed
24 within this period. The Contractor shall restore any circuit interrupted as a result of this work to proper operation as
25 soon as possible.

26
27 If the building is occupied and continues operation during construction, retrofit or demolition, Contractor must
28 maintain ventilation and air conditioning for as large parts of the building as technically feasible. Spreading of dirt,
29 dust and other construction related material must be kept to a minimum. Occupied and work areas must be sepa-
30 rated by seals. All work affecting air conditioning and ventilation must be coordinated with the daily work in the
31 building and approved by the supervisor or department head at the building. If air conditioning, heating and ventila-
32 tion has to be taken out of service for longer periods of time in parts of the building and work would be affected
33 negatively, the Contractor shall provide temporary sufficient air conditioning, heating and ventilation in coordination
34 with the department. All such taking out of service has to be coordinated and approved by the supervisor or de-
35 partment head at the building.

36
37 If the shutdown involves the interface with, or modification of, existing building energy system(s), the Contractor
38 shall be required to show the reviewed submittal and shop drawings of the proposed modifications. Shutdown
39 schedules shall have been reviewed and approved by the City at least 72 hours prior to date of shutdown. Post-
40 ponement by the City of scheduled shutdowns shall not constitute a basis for additional charges to the City.

41
42 Prior to the shutdown of any building energy system(s) the Contractor shall provide the following:

- 43 - Proof of receipt of all materials required for the shutdown or a written commitment from the responsible
44 suppliers that the required materials will be available at the time of the shutdown.
- 45 - A list of the qualified Contractor personnel assigned to perform the work.
- 46 - Analysis of any affect on the utility or building energy system(s) and the estimated duration of the shut-
47 down.
- 48 - Work plan for the shutdown
- 49 - A twenty-four-hour emergency callback phone number to be used by the City in the event of any problems
50 or concerns with the modifications made to the building system(s) after the Contractor has left the site.

51
52 The startup of electrical and mechanical utility systems constructed by Contractor shall be performed by Contractor
53 in coordination with the City.

54 55 **11. PROJECT MEETINGS**

56 Project meetings will be held at the time designated by the City. If the principal of the firm does not attend meet-
57 ings, a responsible representative of the Contractor who can bind the Contractor to a decision at the meetings shall
58 attend. The City or designee will write a report covering all items discussed and decisions reached and copy of
59 such report distributed to all parties involved.

60
61 During construction, weekly project meetings may be held at the discretion of the City. The minutes of these meet-
62 ings will be prepared by the Contractor and one copy issued as expeditiously as possible to the each party. In-
63 volved in the project the Contractor will submit, in writing, questions and/or answers (previously obtained verbally)
64 to be confirmed at each meeting.

65 66 **12. TEMPORARY CONSTRUCTION**

1 Temporary construction shall conform to all requirements and laws of state and local authorities, which pertain to
2 operation, safety, and fire hazards. Contractor shall furnish and install all items necessary for conformance with
3 such requirements, whether called for under separate sections of these Specifications or not. Contractor shall pro-
4 vide, maintain, and remove upon completion of his work:

- 5 - Temporary crossovers and bypass to utilities, electrical connections, traffic and footbridges, and walkways
6 used to maintain services or communications, which cannot be interrupted or curtailed.
- 7 - Temporary rigging, scaffolding, shoring, hoisting equipment, and all other temporary work as required for
8 this project.
- 9 - Temporary barricades around openings and excavations for this project.

10
11 Temporary lighting, if necessary during the period of construction, shall be supplied and maintained by the Con-
12 tractor at Contractor expense so that construction work can be safely performed. The temporary lighting system
13 shall be sufficient to enable all trades to safely complete their work and to enable the City to check all work as it is
14 being done. Illumination shall be 5 foot-candles minimum in all areas and, in addition, shall meet or exceed the
15 requirements of 29 CFR 1926.56 Illumination (OSHA regulations). In accordance with the latest issue of the Na-
16 tional Electrical Code, all temporary electrical circuits for construction purposes shall be equipped with combination
17 ground fault interrupter and circuit breakers meeting the requirements of UL for Class A, Group 1 devices. The
18 ground fault interrupter portion shall be solid-state type, insulated and isolated from the breaker mechanism. A test
19 button shall be provided for checking the device. The breaker mechanism shall provide overload and short circuit
20 protection and shall be operated by a toggle switch with over center switching mechanism so that contact cannot
21 be held closed.

22 23 TEMPORARY HEAT

24 All heating required after enclosure of the building shall be classified as TEMPORARY HEAT and be provided by
25 the Contractor. It shall be the responsibility of the Contractor to see that every precaution is used to prevent unne-
26 cessary escape of heat. The Contractor shall provide and pay for temporary heat. A minimum temperature of 45
27 degrees and a maximum temperature of 65 degrees for the building shall be maintained, except for a period of at
28 least ten days prior to the placing of interior woodwork and throughout the placing of this and other finish, varnish-
29 ing, painting, tiling etc., and until substantial completion to provide sufficient heat to insure a temperature in the
30 spaces involved of not less than 70 degrees nor more than 80 degrees. Temperatures must be checked during
31 nighttime and on weekends. Restitution shall be made by Contractor responsible for damage to building and con-
32 tents caused by overheating, freezing, fumes, soot or residue given off by temporary heating or lack of thereof.

33
34 Permanent heating system may be used for temporary heating. Warranty period may not be affected by use of
35 permanent heating. If permanent system is used, the Heating Trade shall install in their permanent location heating
36 coils or connectors as approved by the City, with controls to maintain temperatures required. Temporary filters
37 shall be used in the permanent system. Provide bases, shields, etc., around heating elements to prevent too rapid
38 drying of adjacent concrete, masonry or plaster. Relocation of some of the permanent heating system equipment
39 may be required during construction to prevent interference with new construction. Temporary units may be in-
40 stalled in such areas during the time permanent equipment is not operating due to relocation. The temporary heat-
41 ing system shall be removed after the permanent heating system has been installed and is operating. Surfaces and
42 structure shall be patched as required. Temporary heating equipment shall be relocated by the Heating Trade as
43 required during construction to prevent interference with new construction.

44
45 The use of temporary units whose product of combustion will damage fresh concrete, mortar or other building ma-
46 terials, will not be allowed. Use of coke or oil salamanders is prohibited. All portable temporary heating units shall
47 be properly ventilated to prevent combustion gases from remaining in the heating area.

48 If electrical power is required for oil or gas portable heating units, it may be taken from the available temporary
49 power source and paid for by the Contractor. Heating units and the area surrounding the units shall be kept in a
50 clean and safe condition.

51 52 TEMPORARY ELECTRICAL SERVICE

53 The Contractor shall make all arrangements with the local utility company for metered electrical service, pay for the
54 installation of all temporary service to utility point of termination shown on drawings, and upon completion of
55 project, pay for removal of temporary service. The Contractor shall patch surfaces and structure after services
56 have been removed. The Contractor shall pay for all electrical energy consumed for construction purposes for all
57 trades including temporary offices, for operation of ventilating equipment, for heating of building, and for testing
58 and operating of all equipment. The Contractor shall continue to pay for energy used until substantial completion
59 even though equipment has been connected to the permanent wiring.

60
61 Contractor shall provide and maintain 200 ampere electrical services in single phase or multiphase as required by
62 equipment to be used. Provide at multiple services to ensure service to run at less than 75% of its capacity at all
63 times and to enable short cable runs of less than 300 ft to equipment to be used.

64
65 The Contractor shall provide meter base and wiring to point of utility termination, provide main fused service switch,
66 and fused or breaker distribution panel(s). The Contractor shall also provide, at no cost to others, all lamps, wiring,

1 switches, sockets and similar equipment required for temporary system until substantial completion. Upon comple-
2 tion of the project, the Contractor shall remove the temporary system.

3
4 After Substantial Completion of the permanent electrical system and building wiring, permanent receptacles may
5 be used during finishing work. Permanent wiring for lighting fixtures, switches and receptacles shall be installed
6 only after all masonry and plastering has been completed, but this wiring shall not be used for motors larger than
7 fractional HP or for welding equipment. Circuits for larger motors and welding equipment may be provided with
8 special circuits to mains of electrical panels at the expense of those trades requiring them, provided that special
9 permission is obtained from the City and the installation is made by skilled electricians.

10
11 All temporary wiring and electrical installations shall be in accordance with applicable codes. Any power outage
12 occasioned by tying into the existing electrical system for temporary or permanent use shall be coordinated with
13 the City. The City does not guarantee the quantities or quality of power or water available for Contractor's use, nor
14 will it be responsible in any manner for interruptions in service or for the effects of interruptions.

15
16 All Trades shall furnish their extension cords and lamps other than those furnished for general lighting. All Trades
17 and other separate Contractors shall be allowed to use the service provided for general lighting and fractional
18 horsepower hand tools at no cost.

19
20 If a Contractor contemplates the use of equipment that requires a different voltage or greater capacity than that
21 specified, then that Contractor must arrange with Utility for this additional service and pay for installation of the ser-
22 vice and the necessary additional switches and wiring required. The meter shall be taken out in the Contractor's
23 name.

24 25 TEMPORARY WATER, SEWER AND PUMPS

26 The Contractor shall supply all water required for construction and other purposes until the permanent water supply
27 system is accepted and in operation. As soon as possible Contractor shall install and pay for permanent water
28 mains into new building, provide temporary gate valve and freezing protection, extend piping and provide a ¾"
29 hose bib for use by all Contractors. Permanent lines maybe used.

30
31 Waste of water shall be avoided and valves, connections, pumps pipes and hoses shall be provided by Contractor
32 kept in perfect condition.

33
34 Sewer work shall be started and finished as soon as possible. Including backfill.

35
36 Water supply used by workmen shall be kept clean and sanitary at all times.

37 38 TOILETS

39 The Contractor shall provide and maintain sanitary temporary toilets, located where directed by the City, in suffi-
40 cient number required for the force employed. The toilets shall comply with International Building Code Chapter 29
41 on Plumbing Systems. Toilets shall be self-contained chemical type.

42
43 As soon as conditions will allow, the Plumbing Trade shall provide temporary toilets within the building, where di-
44 rected, and equip the room with at least two temporary water closets and one temporary lavatory, each with con-
45 nections to cold water and sanitary sewer. The Contractor shall provide a temporary wood enclosure with doors;
46 remove when directed. After directed by the City, the Plumber shall remove the temporary fixtures and replace
47 them with permanent fixtures. After temporary toilet accommodations are provided within the building, the Contrac-
48 tor shall remove the temporary outside toilets.

49
50 The Contractor shall maintain the temporary toilets in a sanitary condition at all times and shall supply toilet paper
51 until completion of the job.

52 53 FIELD OFFICES

54 The Contractor shall provide, maintain and remove upon completion a temporary watertight office where directed
55 for use by the Contractor and Trades. The office shall be equipped with a plan rack, a suitable table for examina-
56 tion of plans and shall have adequate equipment for document files and space for job meetings. Exterior of offices
57 shall be of neat appearance, and if deemed necessary by the City, shall be painted to achieve such appearance;
58 heat offices during cold weather; provide each office with at least one glazed movable window and one door with a
59 cylinder lock and latch set. Provide and maintain artificial light, minimum of 40 foot-candles, and two duplex outlets
60 where directed. When directed, move the office into a suitable area in the building.

61 62 13. IDENTIFICATION

63 Identify all equipment by stenciling (not less than 1 inch high letters/numbers) with one coat of black enamel
64 against a light background or white enamel against a dark background. Use a primer where necessary for proper
65 paint adhesion. Where stenciling is not appropriate for equipment identification, engraved name plates may be
66 used (White letters on a black background, 1/16 inch thick plastic laminate, beveled edges, screw mounting, Set-
67 tonply Style 2060 by Seton Name Plate Company or Emedolite Style EIP by EMED Co., or equal by W. H. Brady)

1
2 Identify interior piping not less than once every 30 feet, not less than once in each room, adjacent to each access
3 door or panel, and on both side of the partition where accessible piping passes through walls or floors. Place flow
4 directional arrows at each pipe identification location. Label all pipes with name of loop and arrows for flow direc-
5 tion with permanent label. Label all gauges. Use one coat of black enamel against a light background or white
6 enamel against a dark background.

7
8 Identify all exterior buried piping for entire length with underground warning tape except for sewer piping which is
9 routed in straight lines between manholes or cleanouts. Place tape 6"-12" below finished grade along entire length
10 of pipe. Extend tape to surface at building entrances, meters, hydrants and valves. Where existing underground
11 warning tape is broken during excavation, replace with new tape identifying appropriate service and securely
12 spliced to ends of existing tape.

13
14 Identify valves with brass tags bearing a system identification and a valve sequence number. Identify medical gas
15 and vacuum valves with brass tags and wall or cabinet mounted color coded engraved nameplate with the follow-
16 ing "(Type of Gas) Shutoff Valve for (Location or Zone)". Valve tags are not required at a terminal device unless the
17 valves are greater than ten feet from the device, located in another room or not visible from device. Provide a
18 typewritten valve schedule and pipe identification schedule indicating the valve number and the equipment or areas
19 supplied by each valve and the symbols used for pipe identification; locate schedules in mechanical room and in
20 each Operating and Maintenance manual. Schedule in mechanical room to be framed under clear plastic.

21
22 Provide all buried utilities, conduit and pipes with detectable underground warning tape, 5.0 mil overall thickness,
23 6" width, .0035" thick aluminum foil core with polyethylene jacket bonded to both sides. Color code tape and print
24 caution along with name of buried service in bold letters on face of tape.

25 Manufacturers: Thor Enterprises Magnatec or equal by Carlton, MSI Marking Services, Seton.

26
27 All underground non-metallic sewers/mains and water services/mains shall be provided with tracer wire installa-
28 tions. Tracer wire installations shall conform with Section 182.0715(2r) of Wisconsin Statutes and prevailing De-
29 partment of Commerce Chapter 84 requirements. Tracer wire shall be continuous solid copper or steel plastic
30 coated with split bolt or compression-type connectors.

31 32 SNAP-AROUND PIPE MARKERS:

33 One-piece, preformed, vinyl construction, snap-around or strap-around pipe markers with applicable labeling and
34 flow direction arrows, 3/4" min. size for lettering. Provide nylon ties on each end of pipe markers. Equal to Seton
35 Setmark.

36 37 VALVE TAGS:

38 Round brass tags with 1/2 inch numbers, 1/4 inch system identification abbreviation, 1-1/4 inch minimum diameter,
39 with brass jack chains, brass "S" hooks or one piece nylon ties around the valve stem, available from EMED Co.,
40 Seton Name Plate Company, or W. H. Brady.

41 42 **14. LUBRICATION**

43 Lubricate all bearings with lubricant as recommended by the manufacturer before the equipment is operated for
44 any reason. Once the equipment has been run, maintain lubrication in accordance with the manufacturer's instruc-
45 tions until the work is accepted by the City. Maintain a log of all lubricants used and frequency of lubrication; in-
46 clude this information in the Operating and Maintenance Manuals at the completion of the project.

47 48 **15. PUNCH LIST**

49 Contractor's supervisor at site shall acknowledge receipt of punch list.

50 Multiple punch lists can be submitted.

51
52
53 If Contractor fails to perform required corrective work in less than 30 days upon receipt of punch list by Contractor,
54 the City can perform corrections himself and charge the Contractor.

55
56 Contractor shall advice the City or designee that the necessary work has been performed. If the City or designee
57 verify if punch list items were not resolved and the work was not performed in less than 30 days upon receipt of
58 punch list by Contractor, the Contractor shall be required to compensate the for additional site visits at a rate of \$
59 100/hour plus mileage with the amount paid to the City or designee prior to processing the final payment.

60 61 **16. TESTS AND FINAL ACCEPTANCE**

62 The complete installation consisting of the several parts and systems and all equipment installed according to the
63 requirements of the Contract Documents, shall be ready in all respects for use by the City and shall be subjected to
64 a test at full operating conditions and pressures for normal conditions of use.

65
66 Proper notice has to be given to enable the City or designee to attend all tests. Failure to give proper notice can
67 result in repeated tests to be paid for by the Contractor. Tests are acceptable on properly working equipment only

1 and have to be repeated as often as required by the City at no cost to the City. If tests have to be repeated by an
2 City-hired Contractor due to equipment not installed or working properly, the Contractor shall reimburse the City for
3 additional testing expenses.
4

5 Contractor shall make all necessary adjustments and replacements affecting the work, which is necessary to fulfill
6 the City's requirements and to comply with the directions and recommendations of the manufacturer of the several
7 pieces of equipment, and to comply with all codes and regulations, which may apply to the entire installation. Con-
8 tractor shall also make all required adjustments to comply with all provisions of the drawings and specifications.
9

10 Prior to acceptance, all elements of operating equipment, including those of mechanical nature and those that
11 slide, swing, turn, or are intended to move in any way and those of an electrical nature, shall be given an operating
12 test to assure to the satisfaction of the City that such equipment operates as required. Contractor shall make all
13 adjustments, replacements, and such other modifications as needed. If it is necessary to run equipment in order to
14 complete the work, for periods that exceed the manufacturer's recommended maintenance interval, the Contractor
15 will provide such required maintenance at no additional cost to the City.
16

17 Notice that the work is ready for final inspection and acceptance shall consist of a written notice issued to the City
18 by the Contractor stating that the Contractor has carefully inspected all portions of the work, has reviewed in detail
19 the drawings and specifications, and that to the best of the Contractor's knowledge all conditions of the contract
20 documents have been fulfilled. Upon receipt of this notice, the City and the Contractor shall make a joint inspec-
21 tion of the work. After deficiencies, if any, have been corrected or accounted for, and after all work is satisfactorily
22 complete, the City will accept the work; and Notice of Completion will be filed by the City.
23

24 Prior to final acceptance, filing of the Notice of Completion or processing of final payment, the following shall be
25 done and submitted reviewed and accepted by the City:

- 26 - Certificates of compliance and guarantees required under various Sections
- 27 - Operating and maintenance manuals
- 28 - Instruction to City personnel, as required
- 29 - Test reports (TAB, fire alarm, elevator etc.)
- 30 - Certifications and registrations (boiler etc.)
- 31 - All keys
- 32 - Replacement material as required in specifications
- 33 - All required operations tests
- 34 - All documents required by commissioning, LEED certification and other project related documents
- 35 - Satisfy all commissioning requirements
- 36 - As -built documents
- 37 - All punch list items resolved
- 38 - All training provided (except deferred seasonal training)
- 39 - All warranty issues brought to Contractor's attention so far resolved
- 40 - Warranty documents signed by representative of manufacturer, guarantee documents, roofing agreement
41 and other warranty related documents
42

43 No official closeout and final payment will be made before all requirements are met.
44

45 **17. TRAINING AND DEMONSTRATION**

46 The City's facility staff (and occupants and service Contractors as needed), shall receive orientation and training on
47 features, systems and equipment in this facility requisite with the complexity and criticality of the system and the
48 City's needs.
49

50 Additional training requirements may be found in specific equipment sections. The City may videotape all training
51 sessions.
52

53 Only training on equipment that works as designed is acceptable.
54

55 The Contractor shall be responsible for training coordination and scheduling and ultimately for ensuring that train-
56 ing is completed on all equipment per the Specifications. Unless otherwise required or approved, the training shall
57 be given during regular business hours during a regular work week.
58

59 The City or designee will be responsible for coordinating and approving the content and adequacy of the training of
60 the City personnel for commissioned equipment. The City or designee will develop an overall training plan after
61 meeting with the City and appropriate facility staff to determine needs and areas of emphasis for this project. The
62 City or designee will develop criteria for determining that the training was satisfactorily completed, including attend-
63 ing some of the training, etc. The City or designee recommends approval of the training to the City.
64

65 Training shall consist of, as needed and at the discretion of the City or designee, the installing technician, installing
66 Contractor and the appropriate trade or manufacturer's representative on each major piece of equipment. Practical
67 building operating expertise as well as in-depth knowledge of all modes of operation of the specific piece of equip-

1 ment as installed in this project is required. More than one party will be required to execute the training on primary
2 equipment. The Contractor shall attend and present at sessions in addition to the controls training, as requested, to
3 discuss the interaction of the controls system as it relates to the equipment being discussed.

4
5 Follow the outline in the table of contents of the operation and maintenance manual and illustrate whenever possi-
6 ble the use of the O&M manuals for reference. Training Shall Include the Following:

- 7 - Use of the printed installation, operation and maintenance instruction material included in the O&M ma-
8 nuals.
- 9 - A review of the written O&M instructions emphasizing safe and proper operating requirements, preventa-
10 tive maintenance, and special tools needed and spare parts inventory suggestions. The training shall in-
11 clude start-up, operation in all modes possible, shutdown, seasonal changeover, as applicable, and any
12 emergency procedures.
- 13 - Discussion of relevant health and safety issues and concerns.
- 14 - Discussion of warranties and guarantees.
- 15 - Common troubleshooting and maintenance issues, problems and solutions.
- 16 - Explanatory information included in the O&M manuals and the location of all related plans and manuals in
17 the facility.
- 18 - Discussion of any peculiarities of equipment installation or operation.
- 19 - The format and training agenda in The HVAC Commissioning Process, ASHRAE Guideline 1 is recom-
20 mended, as applicable.
- 21 - Hands-on training shall include start-up, operation in all modes possible, including manual, shutdown and
22 any emergency procedures and preventative maintenance for all pieces of equipment.
- 23 - Training shall occur after functional testing and piping and equipment labeling are complete unless ap-
24 proved otherwise by the City.

25
26 HVAC control systems:

- 27 - For the primary HVAC equipment, the controls Contractor shall provide a short discussion of the control of
28 the equipment during the mechanical or electrical training conducted by others.
- 29 - The standard operating manual for the system and any special training manuals shall be provided for and
30 retained by each trainee. In addition, the system technical manual shall be demonstrated during training.
31 Manuals shall include detailed description of the subject matter for each session. The manuals shall cover
32 all control sequences and have a definitions section that fully describes all relevant words used in the ma-
33 nuals and in all software displays. Manuals will be approved by the City or designee.
- 34 - The trainings will be tailored to the needs and skill-level of the trainees and be oriented to the specific sys-
35 tem installed in this project.
- 36 - The trainers shall be knowledgeable on the system and its use in buildings. For the on-site sessions, the
37 most qualified trainer(s) shall be used. The City shall approve the instructor prior to scheduling the train-
38 ing.
- 39 - During any demonstration, should the system fail to perform in accordance with the requirements of the
40 O&M manual or sequence of operations, the system shall be repaired or adjusted as necessary and the
41 demonstration repeated.

42
43 There shall be three training sessions:

44 Training I - Control System: The first training shall be 4 hours in length.

45 Training II - Building Systems: The second session shall be held on-site for a period of 12 hours of actual hands-
46 on training after the completion of system commissioning. The session shall include instruction on:

- 47 - A review of the as-built drawings and O&M manuals, a walk-through of the facility to identify control panels
48 and device locations.
- 49 - Specific hardware configuration of installed systems in this building and specific instruction for operating
50 the installed system, including HVAC systems, lighting controls and any interface with security and com-
51 munication systems.
- 52 - Security levels, alarms, system start-up, shut-down, power outage and restart routines, changing set
53 points and alarms and other typical changed parameters, overrides, freeze protection, manual operation
54 of equipment, optional control strategies that can be considered, energy savings strategies and set points
55 that if changed will adversely affect energy consumption, energy accounting, procedures for obtaining
56 vendor assistance, etc.
- 57 - All trending and monitoring features (values, change of state, totalization, etc.), including setting up, ex-
58 ecuting, downloading, viewing both tabular and graphically and printing trends. Trainees will actually set-
59 up trends in the presence of the trainer.
- 60 - Every screen shall be completely discussed, allowing time for questions.
- 61 - Use of keypad or plug-in laptop computer at the zone level.
- 62 - Use of remote access to the system via phone lines or networks.
- 63 - Setting up and changing an air terminal unit controller.
- 64 - Graphics generation.
- 65 - Point database entry and modifications.
- 66 - Understanding FMCS field panel operating programming (when applicable).

1 Training III - Deferred On-Site: The third training will be conducted on-site 6 months after occupancy and consist of
2 8 hours of training in one session. The session will be structured to address specific topics that trainees need to
3 discuss and to answer questions concerning operation of the systems.
4

5 Testing Adjusting and Balancing: The Contractor shall have the following special training responsibilities relative to
6 the testing, adjusting and balancing (TAB) work:

7 The TAB technician shall meet with facility staff after completion of TAB and instruct them on the following:

- 8 - Go over the final TAB report, explaining the layout and meanings of each data type.
- 9 - Discuss any outstanding deficient items in control, ducting or design that may affect the proper delivery of
10 air or water.
- 11 - Identify and discuss any terminal units, duct runs, diffusers, coils, fans and pumps that are close to or are
12 not meeting their design capacity.
- 13 - Discuss any temporary settings and steps to finalize them for any City-furnished, City-installed equipment.
- 14 - Other salient information that may be useful for facility operations, relative to TAB.

15 16 **18. ROADWAY**

17 The Contractor may build a temporary roadway for delivery of materials at the Contractor's own expense and main-
18 tain it until completion of construction or until service drives are installed. Where possible, build temporary road-
19 way within the confines of the new roadway and allow others to use it at no cost. Any gravel topping used for tem-
20 porary roadway shall be at least 6" below finished elevation of permanent drives. If temporary roadway is not in-
21 tended to be converted to a permanent road, all road materials shall be removed upon termination of access need,
22 and the confines of the temporary roadway shall be repaired to match adjacent area.
23

24 **19. FENCE**

25 The Contractor shall provide a neat appearing protective fence where indicated on the drawing, constructed of
26 standard studded T-Posts of sufficient length for line posts and spaced not to exceed 8'-0" apart. Corner posts and
27 gate posts are to be galvanized steel pipe of not less than 2 1/2" o.d. and shall be properly braced. A 4-foot high
28 wooden snow fence shall be securely fastened to the supports. Plastic fencing is not acceptable. The snow fence
29 shall project 4" above the fence posts. Provide gates, properly constructed and braced, complete with hinges,
30 hasps, and padlocks in number and location required for proper control, delivery and distribution of material and
31 equipment. Gateposts shall be adequately back tied and anchored to insure a rigid installation. All protective fenc-
32 ing shall be maintained in an upright, orderly fashion throughout the construction schedule. In areas where existing
33 trees are to be protected, the area inside the protective fencing shall not be used for any purpose related to con-
34 struction activities, such as material storage, vehicle parking, portable toilets, or other disruptive activities that
35 would result in damage of any kind to the site inside the fence.
36

37 **20. SIGNS**

38 Contractor shall furnish and install signs, located as directed by the City. The signs shall be readily legible to the
39 general public, subcontractors, material men, and truck drivers approaching the site and shall include the following
40 information:

- 41 - Project.
- 42 - Subcontract No.
- 43 - Subcontractor Name.
- 44 - Access to Buildings: Contractor shall keep access to existing buildings clear at all times.

45
46 The Contractor shall order, paint and erect the sign. The sign shall be placed on the property where directed and
47 shall be maintained for the duration of the construction period.
48

49 No individual advertising signs, plaques or credits, temporary or permanent, will be permitted on the building or
50 premises, except the name of the Contractor on Contractor's office or material shed.
51

52 **END OF SECTION**

1 PART 1: GENERAL

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1.1. WORK INCLUDED

- a. Provide all labor, materials, services and incidentals necessary to perform the following work:
 - i. Carefully remove, clean and sort by size and store existing Madison sandstone for reuse to the extent shown on the Drawings.
 - ii. Remove and dispose of existing Madison sandstone and masonry to the extent shown on the Drawings.
 - iii. Remove and dispose of existing collateral material associated with the above.

1.2. REGULATORY REQUIREMENTS

- a. The following regulatory requirements shall be followed:
 - i. Local, State and Regional Building Codes
 - ii. Occupational Safety and Health Administration (OSHA).
 - iii. United States Department of Transportation (US DOT).
 - iv. Environmental Protection Agency (EPA).
 - v. National Emission Standards for Hazardous Air Pollutants (NESHAP).
 - vi. National Park Service (NPS).
- b. The Architect is not an advisor of asbestos-related issues. The Contractor shall consult the Owner's Asbestos Personnel for clarifications.

1.3. PROTECTION

- a. When Work involves removal of masonry materials; the following minimum requirements shall be enforced:
 - i. The Contractor shall exercise extreme caution and take all necessary precautions to limit exposing his workmen or bystanders to any dangerous conditions.
 - ii. Protect all existing utilities against damage. Maintain existing utilities during deconstruction operations.
 - iii. Protect passageways and maintain all exit ways to facilitate the safe passage of persons around the area of deconstruction. Do not modify the facilities code compliant status in any way that is not specifically addressed in this Project Manual.
 - iv. Provide interior and exterior shoring, bracing, or support as required to prevent movement, settlement, or collapse of adjacent construction scheduled to remain.
 - v. Protect all remaining portions of the wall, landscaping and other property not scheduled for deconstruction. These areas shall be completely protected during deconstruction and removal of debris. **Any resulting damage shall be repaired or replaced to like-new condition by the Contractor responsible under the direction and approval of the Owner and Architect.**
 - vi. Protect area designated by the Owner and the Architect with necessary framing, plastic sheet, or similar materials to prevent visible dust and debris from entering the ground-based equipment. Remove dust and debris protection materials upon job completion.
 - vii. When the Work involves removal of wall materials containing asbestos, notify the Architect immediately.

1.4. OCCUPANCY

- a. The Owner shall occupy the site during deconstruction and construction and the site shall remain operational.
- b. Coordinate all Work in advance with the Owner, the Owner's on site personnel and the Architect.

1.5. DUST CONTROL

- a. The following **minimum** requirements will be enforced:
 - i. It is imperative that construction related dust be kept to a minimum during removal of the Madison sandstone and masonry.

62 PART 2: PRODUCTS

63

64 2.1. NOT USED.

65

66 PART 3: EXECUTION

67

68 3.1. MADISON SANDSTONE

69

70 a. Remove existing construction as required to complete the installation of all new Work as shown or
71 specified. Refer to the Drawings for the extent of the existing construction that is to be removed.

72 b. Do not start deconstruction of existing materials when severe weather is expected.

73 c. Refer to this section for requirements relating to protection of existing structure and property.

74 d. If during the course of the deconstruction Work portions of the existing structure are opened to the
75 weather, it shall be the Contractor's responsibility to close such openings as required in a
76 weathertight manner at the end of each workday.

77

78 3.2. DISPOSAL OF MATERIALS

79

80 a. The Contractor shall make every attempt to recycle 100% of materials including stone, mortar and
81 wood prior. Provide documentary proof of all recycling efforts.

82 b. The Contractor shall remove all deconstruction material (that is not scheduled for reuse) from the
83 Owner's site.

84 i. No prolonged accumulation of debris will be allowed. Debris shall be removed as it
85 accumulates.

86 ii. Sale of removed items on the site will not be allowed.

87 iii. Debris shall be transported on covered dumpsters or trucks.

88 iv. The site is to be cleaned at the end of each working day.

89 c. No burning on site will be permitted.

90

91

END OF SECTION 02 41 00

1 **PART 1 – GENERAL**

2
3 1.1. CONDITIONS OF THE CONTRACT

- 4
5 a. The conditions of the Contract (General, Supplementary, and Other Conditions) and the
6 requirements of Division 1 are hereby made a part of this Section. Applicable provisions of
7 Division 1 shall govern Work under this Section.

8
9 1.2. WORK INCLUDED

- 10
11 a. Unless otherwise specified, the Contractor shall furnish all materials, tools, equipment, apparatus,
12 transportation, labor and supervision required to furnish and install all the masonry as shown on
13 the Drawings and specified.

14
15 1.3. RELATED SECTIONS

- 16
17 a. Section 02 41 00 – Deconstruction

18
19 1.4. QUALITY ASSURANCE

- 20
21 a. There shall be no deviation made from this Specification, the Drawings and on all approved Shop
22 Drawings without prior written approval by the Architect.
23 i. Prior to covering newly installed Work with permanent materials, the Contractor shall
24 coordinate with the Architect to review all installed components for compliance with the
25 intent of the design as outlined in the drawings and specification of the Project Manual. In
26 addition, the Contractor shall certify that all work was completed in accordance with the
27 Project Manual.
28 b. All Work shall be performed by skilled journeyman masons and laborers who are considered
29 specialists in the field of masonry work similar to that required under this Contract.
30 c. Masons shall have a minimum of five (5) years experience in this type of work.
31 d. Samples (mock-ups) of typical masonry restoration work required by this Specification and as
32 shown on the Drawings shall be installed in unobtrusive areas using materials and methods
33 specified, and made available for viewing by the Architect and Owner. No related work shall
34 proceed until after mock-ups have been inspected and approved by the Architect.
35 e. During the workday, should the weather conditions appear to be changing adversely, the Foreman
36 and crew shall take preventive measures to allow the work area to be closed to a weathertight
37 condition to avoid exposure to building, equipment, and materials.
38 f. Repair any Work, damaged by failure to provide proper and adequate protection, to its original
39 state to the satisfaction of the Owner, or remove and replace with new Work at the Contractor's
40 expense.
41 g. Use of air entraining admixtures, chlorides, or nitrates, are not allowed and will be sufficient cause
42 to require removal and replacement of all masonry restoration work containing or treated with
43 these materials.
44 h. It will be the Architect's prerogative to forbid the use of tools or methods that do not produce the
45 quality of work that is expected and to insist on the use of methods and tools, which will do the
46 Work properly.
47 i. Construct minimum 12 inch by 12-inch prisms for testing purposes as required by the Architect.

48
49 1.5. REFERENCES

- 50
51 a. References shall refer to the most recent standard.
52 i. Brick Institute of America (BIA).
53 ii. American Society for Testing and Materials (ASTM).
54 iii. Masonry Advisory Council (MAC).
55 iv. Federal Specifications (FS).

56
57 1.6. SUBMITTALS

- 58
59 a. Submit product data and certificates for all replacement masonry units and mortar type.
60 b. A total of three (3) copies of each submittal are required. Provide submittals by date as outlined in
61 section 01 33 00-1.2(c).
62 c. Submit not less than two (2) individual samples of proposed replacement face bricks, showing
63 extreme variations in color and texture.

- 64 d. Prism Test Reports (as required)
65 i. Test reports are to be submitted to the Architect for approval.
66 ii. Testing and reports are to be completed by an independent laboratory.
67 iii. Test reports shall show:
68 1. Age at test.
69 2. Storage conditions.
70 3. Dimensions of prism.
71 4. Compressive strength of individual prisms.
72 5. Coefficient of variation (v).
73 6. Ultimate compressive strength of masonry (F'm) that has been corrected for the
74 coefficient of variation (v) and the h/t of the prisms tested.

75
76 1.7. PRODUCT DELIVERY, STORAGE AND HANDLING

- 77
78 a. Deliver all materials in their original unopened containers with all markings intact.
79 b. Store replacement masonry units off ground to prevent contamination by mud, dust or materials
80 likely to cause staining or other defects.
81 c. Cover materials when necessary to protect from the elements.
82 d. Protect masonry reinforcing from the elements.
83

84 1.8. JOB CONDITIONS

- 85
86 a. Protection of Work
87 i. Wall covering:
88 1. During erection, cover top of wall with strong waterproof protective covering at
89 end of each day or shutdown.
90 2. Cover partially completed walls when Work is not in progress.
91 3. Extend protective coverings a minimum of 24 inches (610 mm) down both sides.
92 4. Hold protective coverings securely in place.
93 ii. Load application:
94 1. Do not apply uniform floor or roof loading for at least 12 hours after building
95 masonry columns or walls.
96 2. Do not apply concentrated loads for at least three (3) days after building masonry
97 columns or walls.
98 b. Staining
99 i. Prevent grout or mortar from staining the face of the masonry to be left exposed.
100 1. Immediately remove grout or mortar in contact with the face of such masonry.
101 2. Protect all sills, ledges, and projections from droppings of mortar.
102 3. Protect door and window jambs and heads from staining or damage.
103 c. Cold Weather Protection
104 i. Preparation:
105 1. If ice or snow has formed on replacement masonry bed, remove by carefully
106 applying heat until the top surface is dry to the touch.
107 2. Remove all replacement masonry that is frozen or damaged .
108 ii. Products:
109 1. When brick suction exceeds the initial rate of absorption, sprinkle with heated
110 water.
111 A. When units are 32°F (0°C) heat water above 70°F (21°C).
112 B. When units are below 32°F (0°C) heat water above 130°F
113 (54°C).
114 2. Use only dry replacement masonry units.
115 3. Do not use wet or frozen replacement masonry units.
116 d. Construction requirements while Work is progressing:
117 i. Air temperature 40°F (4°C) to 32°F (0°C):
118 1. Heat mixing water to produce mortar temperatures between 40°F (4°C) and
119 120°F (49°C).
120 ii. Air temperature 32°F (0°C) to 20°F (-7°C):
121 1. Heat sand or mixing water to produce mortar temperatures between 40°F (4°C)
122 and 120°F (49°C).
123 2. Maintain temperatures of mortar on board above freezing.
124 3. Use salamanders or other heat sources on both sides of walls under construction
125 as required to properly protect replacement masonry from freezing.
126 4. Use windbreaks when wind is in excess of 14 MPH.

- 127 5. Air temperatures 20°F (-7°C) and below:
128 A. Heat mixing water to produce mortar temperatures between
129 40°F (4°C) and 120°F (49°C).
130 B. Provide enclosures and auxiliary heat to maintain temperature above
131 32°F (0°C).
132 C. Minimum temperature of new masonry units is to be 20°F (-7°C).
133 iii. Protection requirements for completed replacement masonry and replacement masonry
134 not being worked on.
135 1. Mean daily air temperature 40°F (4°C) to 32°F (0°C):
136 A. Protect replacement masonry from rain or snow for 24 hours with
137 weatherproof covering.
138 2. Mean daily air temperature 32°F (0°C) to 25°F (-4°C):
139 A. Completely cover replacement masonry with weatherproof covering for
140 24 hours.
141 3. Mean daily air temperature 25°F (-4°C) to 20°F (-7°C):
142 A. Completely cover replacement masonry with insulating blankets or
143 equal protection for 24 hours.
144 4. Mean daily air temperature 20°F (-7°C) and below:
145 A. Maintain replacement masonry temperature above 32°F (0°C) for 24
146 hours by constructing a sufficient enclosure with supplementary heat,
147 electric heating blankets, infrared lamps or approved equal.
148

149 1.9. GUARANTEES, WARRANTIES, CERTIFICATES

- 150
151 a. Materials and/or workmanship shall be guaranteed against defects for a period of two (2) years
152 from the date of Substantial Completion as established by the Architect.
153

154 PART 2 PRODUCTS

155 2.1. ACCEPTABLE MANUFACTURERS

- 156
157
158 a. Provide products by Manufacturers specified herein which meet or exceed standards as set forth in
159 this Section. No products specified or approved shall contain asbestos.
160 b. All materials shall be new unless noted otherwise.
161

162 2.2. MATERIALS

- 163
164 a. Not all products included in this list will be required for this project. Provide submittals only for
165 products specifically required.
166 b. Preblended Mortar: "SPEC MIX Portland Lime Sand & Color - Type N," dry preblended mortar mix
167 containing portland cement, hydrated lime, dried masonry sand, and color pigment formulated,
168 conforming to ASTM C 270, as manufactured by Spec Mix, Mendota Heights, Minnesota, or
169 approved equal.
170 c. Replacement Masonry: New, severe weathering (SW) face brick units to match size and color of
171 existing masonry. Final size and color selection shall be by Architect. Replacement masonry shall
172 be manufactured by Belden Brick Company, Canton, Ohio, or approved equal.
173 d. Structural Angle Steel Lintels: hot dipped galvanized ASTM A36 steel.
174 e. Through-wall Flashing: "Polyguard 400 Thru Wall Flashing," a 40 mil, self-adhering, self-healing
175 membrane consisting of a rubberized asphalt waterproofing element, bonded to a strong
176 polyethylene film top surface, as manufactured by Polyguard Products Inc, Ennis, Texas, or "Perm-
177 A-Barrier Wall Flashing," 40-mil, self-adhering membrane wall flashing as manufactured by W.R.
178 Grace & Co., Columbia, Maryland, or approved equal.
179 f. Through-wall Flashing Drip Edge: "Preformed Stainless Steel Drip Edge." 28 gauge (15 mils thick),
180 1-5/8" wide with a 3/8" bend at one end made of Type 304 grade, dull finish stainless steel in
181 conformance with ASTM A 167, as manufactured by Polyguard Products inc, Ennis, Texas, or
182 approved equal.
183 g. Portland Cement: Type "I" Conforming to ASTM C150 standard.
184 h. Lime: Pressure hydrated, non-air entraining, Type "N" conforming to ASTM C207 standard.
185 i. Sand: Clean, sharp, free from loam, silt, vegetable matter, salts, and other injurious substances,
186 conforming to ASTM C144 standard.
187 j. Water: Potable, fresh, clean, clear and free from injurious amounts of sewage, oil, acid, alkali,
188 salts, organic matter or other detrimental substances.
189 k. Color Admixture (if required for matching): Non air-entraining pure mineral pigment which is light

- 190 fast, lime proof, and weatherproof, such as DCS mortar colors by DCS Color and Supply Company
191 of Milwaukee, Wisconsin or approved equal.
- 192 l. Reinforcement: Standard masonry reinforcement, cold drawn steel wire conforming to ASTM A82
193 or welded steel wire fabric conforming to ASTM A185.
- 194 m. Anchors and Ties: Minimum 20 ga. galvanized, type and spacing as shown on the Drawings.
- 195 n. Cement Base Waterproofing: Thoroseal by Standard Dry Wall Products, Inc. of Miami, Florida or
196 approved equal.
- 197 o. Weeps: "# 341 Series Round Plastic Weep Holes," medium density polyethylene, 3/8" outside
198 diameter (O.D.) by 4" long with stainless steel screen insert and double cotton wick, as
199 manufactured by H & B Illinois, Chicago, Illinois.
- 200 p. Other Materials: All other materials not specifically described but required for a complete and
201 proper installation of the Work in this Section, shall be selected by the Contractor subject to the
202 approval of the Architect.
- 203

204 PART 3 – EXECUTION

205 3.1. EXAMINATION

- 206 a. The Masonry Contractor shall have the sole responsibility for the accuracy of all measurements
207 and for the estimate of material quantities required and necessary to satisfy the requirements of the
208 Drawings and these Specifications.

209 3.2. SEQUENCING/SCHEDULING

- 210 a. Perform only as much Work as can be restored to a weathertight condition each day or before
211 showers commence.
- 212 b. All related flashing work shall be completed each day.
- 213 c. All other work required for a complete and proper installation per the Drawings and these
214 Specifications that constitute a complete and proper installation shall be completed each day

215 3.3. SUBSTRATE PREPARATION

- 216 a. Remove all existing materials as specified to perform the Work.
- 217 b. Exterior masonry surfaces to remain in place shall be meticulously inspected for cracks or defects.
- 218 c. Any mortar joint that is loose, porous, crumbled, cracked, badly weathered (deeper than 1/8"
219 behind masonry surface), un-bonded to adjacent masonry units, or a potential source of leakage
220 shall be deemed defective. All spalled, cracked, broken, or otherwise defective brick shall be
221 removed and replaced using brick and mortar as specified herein.
- 222 d. Included in the definition of defective shall be cracked joints that have been sealed.
- 223 e. Any missing brick and/or mortar joints that lack mortar or has lost bond, is spalled, or broken, which
224 can be detected from a maximum distance of ten (10) feet under clear skies during daylight times
225 by an observer with normal vision, shall be deemed profusely defective for this Project.
- 226 f. All cracks, defective, or profusely defective mortar joints shall be cut out or ground out the full width
227 of the joint to a minimum depth of 3/4".
- 228 g. Where mortar is broken or loose beyond a depth of 3/4", remove unsound mortar to where firm
229 solid mortar is encountered prior to pointing. All joints must be cut clean of unsound mortar
230 material in a square manner full depth of cut. Furrow shaped joints will not be acceptable.
- 231 h. The cutting out of joints shall be done with suitable tools, either hand tools or mechanical
232 equipment, in such a manner as will not loosen adjacent joints or injure the edges or corners of the
233 replacement masonry units. Where the mortar is tightly bonded at one side of the joint, and if the
234 contour permits, the cutting shall be done with portable electric grinders with abrasive wheels to
235 minimize spalling at the edges of the replacement masonry units.
- 236 i. After the joint has been cut out, all loose material shall be removed by brush, air jet, or water
237 stream. Following this cleaning, the joint shall be thoroughly moistened. The joint shall be damp,
238 but without free water on the surface at the time of pointing.
- 239 j. Isolated bricks with cracks larger than 1/32" shall be deemed defective and shall be replaced.
- 240 k. Facing brick, which are spalled 1/16" or greater in depth over 10 percent or more of the face area
241 shall be removed and replaced.
- 242 l. Wetting Brick: Wet brick with absorption rates in excess of 30 gal. / 30 in² / minute (30 gal. / 194
243 cm² / minute) determined by ASTM C67, so that the rate of absorption when laid does not exceed
244 this amount. Recommended procedure to insure that bricks are nearly saturated when laid is to
245 place a hose on the pile of brick until the water runs from the pile. This should be done one day
246 before the brick are to be used. In extremely warm weather, place the hose on the pile several
247

hours before the bricks are to be used.

3.4. GENERAL ERECTION REQUIREMENTS

- a. Pattern Bond
 - i. Lay new replacement masonry in 1/2 running bond or match existing.
 - ii. Bond unexposed replacement masonry units wythe-to-wythe by lapping at least 2" (51 mm).
- b. Joining of Work
 - i. Where fresh replacement masonry joins partially set masonry:
 - 1. Remove loose brick and mortar.
 - 2. Clean and lightly wet exposed surface of set masonry.
 - ii. Stop off horizontal run of masonry by racking back 1/2 length of unit in each course.
 - iii. Toothing is not permitted except upon written acceptance of the Architect.
- c. Tooling
 - i. Tool exposed joints when "thumb-print" hard with a round jointer, slightly larger than width of joint.
 - ii. Trowel-point or concave-tool exterior joints below grade.
 - iii. Following at the proper interval, all new mortar joints shall be compressed and tooled with a smooth rounded iron of selected width to produce a smooth, dense surface, very slightly concave, or similar depth as typically existing, and tightly pressed against the edges of the masonry units. Complete by gently brushing the face of the joint to match existing.
- d. Flashing
 - i. Clean surface of masonry smooth and free from projections that might puncture flashing material.
 - 1. Install new thru-wall flashings as shown on the Drawings.
 - 2. Install thru-wall flashings per the Manufacturers recommendations.
 - 3. Place thru-wall flashings on bed of mortar.
 - 4. Cover flashing with mortar.
- e. Weep Holes
 - i. Provide weep holes in head joints in first course immediately above all flashings.
 - ii. Maximum spacing: 24 in. (610 mm) on-center.
 - iii. Keep weep holes and area above through-wall flashing free of mortar drippings.
- f. Sealant Recesses
 - i. Leave joints around outside perimeters of exterior doors, window frames and other wall openings.
 - 1. Depth: Uniform 3/4" (19 mm).
 - 2. Width: 1/4" (6.4 mm) to 3/8" (9.5 mm).
- g. Movement Joints
 - i. Locate as shown on the Drawings.
 - ii. Keep clean from all mortar and debris.
- h. Cutting Brick
 - i. Cut bricks with motor driven saw or other methods that provide cuts that are straight and true.
- i. Mortar Joint Thickness
 - i. Lay brick with joints to match existing but not to exceed 1/2" (12.7 mm).
- j. Construction Tolerances
 - i. Maximum variation from plumb in vertical lines and surfaces of wall arises:
 - 1. 1/4" (6.4 mm) in 10 ft. (3 m).
 - 2. 3/8" (9.6 mm) in a story height not to exceed 20 ft. (6 m).
 - 3. 1/2" (12.7 mm) in 40 ft. (12 m) or more.
 - ii. Maximum variation from plumb for external corners, expansion joints and other conspicuous lines:
 - 1. 1/4" (6.4 mm) in any story or 20 ft. (6 m) maximum.
 - 2. 1/2" (12.7 mm) in 40 ft. (12 m) or more.
 - iii. Maximum variation from level of grades for exposed lintels, sills, parapets, horizontal grooves and other conspicuous lines:
 - 1. 1/4" (6.4 mm) in any bay or 20 ft. (6 m).
 - 2. 1/2" (12.7 mm) in 40 ft. (12 m) or more.
 - iv. Maximum variation from plan location or related portion of walls:
 - 1. 1/2" (12.7 mm) in any bay or 20 ft. (6 m).
 - 2. 3/4" (19 mm) in 40 ft. (12 m) or more.
 - v. Maximum variation in cross-sectional dimensions of columns and thickness of walls from

316 dimensions shown on the Drawings:

- 317 1. Minus 1/4" (6.4 mm).
318 2. Plus 1/2" (12.7 mm).
319

320 3.5. MORTAR MIXES

- 321
322 a. All equipment for mixing, transporting and applying mortar shall be clean and free from hardened
323 mortar, dirt, ice, or other foreign matter.
324 b. Follow printed Manufacturers instructions for mixing preblended mortar.
325 c. Measure materials for mortars by volume, in a manner whereby proportions can be controlled
326 within five percent. The proportions listed hereinafter for conventional mortars are portland cement,
327 lime, and damp loose sand, respectively by volume. The proportions are listed only as a sample
328 for the required type mortar and shall be modified as necessary, within tolerances, to suit the
329 particular masonry sand being used.
330 d. Mix cementitious materials, powdered coloring admixtures and masonry sand dry. Add water and
331 bring to proper consistency for use. Mix materials until evenly distributed throughout the batch and
332 the mixture is uniform in color and consistency. No antifreeze ingredient or similar such
333 contaminant will be tolerated.
334 e. Tuckpointing and brick replacement mortar shall be ASTM C270, Type "N" Lime-Cement Mortar
335 (1:1:6). Mortar shall be mixed and left untouched for one to two hours. Additional water shall then
336 be added and the mortar remixed. Mortar shall be re-tempered as necessary to maintain its
337 workability, but used before it is three (3) hours old or otherwise discarded.
338

339 3.6. TUCKPOINTING

- 340
341 a. See "3.03 Substrate Preparation" for tuckpointing general preparation requirements.
342 b. With joint damp, completely filled with mortar placed in three (3) layers (lifts) and firmly pressed into
343 place. Mortar shall be "thumb-hard" prior to placing next layer (lift).
344 c. Following at the proper interval, the joint shall be compressed and tooled with a smooth rounded
345 iron of selected width to produce a smooth, dense surface, very slightly concave, or similar depth
346 as typically existing, and tightly pressed against the edges of the masonry units. Complete by
347 gently brushing the face of the joint to match existing adjacent rough texture.
348 d. All necessary protection shall be provided to prevent damage to the existing roofs.
349

350 3.7. CLEANING

- 351
352 a. Cut out any defective joints and holes in exposed masonry and re-point with mortar.
353 b. Clean all exposed unglazed masonry.
354 i. Apply cleaning agent to sample wall area of 20 sq. ft. (2 sq. m) in location acceptable to
355 the Architect.
356 ii. Do not proceed with cleaning until the Architect approves sample area.
357 iii. Clean initially with stiff brushes and water.
358 iv. When cleaning agent is required:
359 1. Follow brick Manufacturer's recommendations
360 2. Do not use acid solutions to clean light colored brick.
361 3. Thoroughly wet surface of masonry on which no green efflorescence
362 (staining) appears.
363 4. Scrub with acceptable cleaning agent.
364 5. Immediately rinse with clean water.
365 6. Do small sections at a time.
366 7. Work from top to bottom.
367 8. Protect all sash, metal lintels and other corrodible parts when masonry is
368 cleaned with an acid solution.
369 9. Remove green efflorescence (staining) in accordance with brick
370 manufacturer's recommendations and BIA "Technical Notes 23 Series."
371
372

END OF SECTION 04 01 20

1 PART 1 – GENERAL

2
3 1.1. SCOPE

- 4
5 a. The work under this section shall consist of providing all materials, labor, equipment, tools,
6 protection and supervision necessary for the mobilization; select removal of entire stone units;
7 deconstruction; stone harvesting, redressing and cleaning for reuse; cleaning; wall reconstruction;
8 rebuilding of missing features with substitute stone material; stone surface redressing in situ; stone
9 crack injection; stone crack mortar repair; stone removal and replacement with new stone; stone
10 removal and replacement with reclaimed stone; and stone removal and replacement with harvested
11 stone.

12
13 1.2. RELATED WORK

- 14 a. Applicable provisions of Division 1 shall govern work under this Section.

15
16
17 1.3. DESCRIPTION

- 18
19 a. In addition to all other requirements, all work of this Section shall be performed under the
20 guidelines of the Secretary of the Interior's Standards for the Treatment of Historic Properties and
21 must comply with the Secretary of the Interior's Standards for Rehabilitation.
22 b. The intent of this Section is:
- 23 i. To carefully deconstruct the existing wall in successive segments.
 - 24 ii. To save as much of the historic material as possible.
 - 25 iii. To repair all deteriorated stone that is deemed to be suitable for reuse. See Instructions
26 to Bidders and the Bid Form for Unit Prices developed for the work.
 - 27 iv. That all repair and replacement materials will match historic construction in all physical
28 and visual aspects, including material, form, color, texture, and workmanship.
 - 29 v. That all work will be done using the gentlest methods available.
 - 30 vi. That sound historical materials will not be put at risk due to the work of this Section.

31 Work includes, but is not limited to, the following:

- 32 i. Removal of all cement-based mortar smears from the stone surfaces.
- 33 ii. Removal of all previous cement-based repairs and mismatching substitute stone repair
34 materials as determined by Architect.
- 35 iii. Replacement or repair – chipped, cracked, spalled and broken - stone masonry.
- 36 iv. Removal of existing sealant debris and oils from stone surfaces (if present).
- 37 v. Careful harvesting of existing historic stone masonry by deconstruction with clear written
38 and digital documentation of original wall location.
- 39 vi. Stone rehabilitation treatment by means of redressing face; removal of stone from the wall
40 redress and returning to the same zone adhering closely to the original historic masonry
41 design concept; dispersed lime injection.
- 42 vii. Cleaning of all masonry surfaces upon completion of the repair work.

43
44 1.4. QUALITY ASSURANCE

- 45
46 a. Pre-Construction Conference: Prior to beginning the work of this Section, the General Contractor
47 and all Masonry Sub-contractors shall convene a meeting with the Architect and Owner's
48 Representative(s) to review the requirements of the Quality Assurance Plan, Project Training
49 Program, installation procedures, location of required test areas, and all job conditions and
50 processes.
51 b. Quality Assurance Plan: Prior to beginning Work, submit a written Quality Assurance Plan to
52 Architect and Owner for approval. Allow 2 weeks for review and approval process. Do not proceed
53 without written approval of plan. The Owner's Quality Control Representative and the Architect
54 shall review work on a regular basis for conformance with the approved Quality Assurance Plan.
55 Quality Assurance Plan shall, at a minimum, include the following items:
- 56 i. Describe on-site project training program. Include certificate issuer name and
57 qualifications with the specific requisites established to meet the stone treatment
58 requirements (STR) identified in the project documents.
 - 59 ii. Describe the method of mobilization and access to work areas.
 - 60 iii. Describe methods of dust containment during the work of this section.
 - 61 iv. Describe the methods of protecting surrounding stone and landscape. Submit drawings of
62 protection when requested by Architect.
 - 63 v. Describe the Work procedures, materials, and tools the contractor proposes to use for

- 64 each stone treatment requirement (STR) specified.
65 vi. Describe the sequence of stone treatment requirements (STR).
66 vii. Describe how the sequence of stone treatment requirements (STR) and the construction
67 schedule changes as it relates to climate fluctuations and protection of completed work.
68 viii. Describe the methods for surveying original layout and collecting datum points and plumb
69 lines for rebuilding stone masonry.
70 ix. Describe the methods for shoring and providing a safe working environment.
71 x. Describe the methods for deconstruction of individual stone and tools for cleaning the
72 stone for reuse.
73 xi. Describe the method and approach to cleaning cement-based mortar smears and old
74 patching materials from the stone face.
75 xii. Describe, in detail, the matching procedures relating to techniques and tools proposed for
76 stone redressing.
77 xiii. Describe the complete stone removal and redressing procedures; include equipment,
78 approach and where (on-site or in shop) the stone will be redressed.
79 xiv. Describe the procedure for matching of different colors on different elevations.
80 xv. Describe the procedure for mixing and matching of substitute stone materials.
81 xvi. Describe the methods and system by which the use of reclaimed stone can be utilized.
82 xvii. Describe the methods for setting stone back into wall for rebuilding the wall and
83 maintaining the original bonding and course layout concept.
84 xviii. Describe the methods of transition points where rehabilitation work will meet the original
85 historic work.
86 xix. The City of Madison reserves the right to remove any craftsman from the project site who
87 does not meet the standards and performance criteria as described in this section.
- 88 c. Stone Rehabilitation Firm Qualifications:
89 i. Engage an experienced masonry rehabilitation firm to perform work in this section. The
90 firm shall have completed work similar in material, design, and extent to that indicated for
91 this Project and shall demonstrate a record of successful in-service performance. Proven
92 implementation of the Secretary of the Interior's Standards for Rehabilitation: Preservation
93 Briefs #1 and #2 and compliance with TMS 402-08/ACI 530-08/ASCE 5-08 are required.
- 94 d. Field Supervision:
95 i. Rehabilitation specialist firms shall maintain an experienced full-time supervisor on the
96 Project site at all times when stone masonry rehabilitation is in progress. A single
97 individual shall be responsible for supervising the stone masonry rehabilitation work
98 throughout the duration of the Project.
- 99 e. Rehabilitation Worker Qualifications:
100 i. Rehabilitation specialist firms must employ craftspersons who are experienced with and
101 specialize in rehabilitation work of the types they will be performing.
102 ii. All rehabilitation treatments must be performed by a craftsperson who is familiar with
103 historic stone construction. The Contractor shall provide proof of such knowledge to the
104 Architect by submitting a project training certificate for each worker for each rehabilitation
105 treatment to be assigned.
106 iii. Only skilled journeyman masons who are familiar with and experienced with the materials
107 and methods specified, and who have successfully obtained a Project Training Certificate
108 as defined herein and are familiar with the design requirements shall be used for the
109 scope of this Section.
- 110 f. Source Limitations:
111 i. Each type of material for stone rehabilitation shall be obtained from a single source with
112 resources sufficient to provide materials of consistent quality in color, texture, detailing,
113 appearance and physical properties.
- 114 g. Stone Analysis and Testing:
115 i. Applicable ASTM Testing and analysis shall be performed on both the existing historic
116 stone and any new stone or reclaimed stone proposed for replacement. All testing shall
117 meet industry standards and be carried out by an independent laboratory with experience
118 in historic masonry materials. The Contractor shall be responsible for providing the
119 Architect with technical test data documenting, at a minimum, the compressive strength
120 ASTM Test C170 and rate of absorption ASTM Test C97 in comparison to the original
121 historic stone.
- 122 h. Stone Treatment Mock-ups:
123 i. All submittals as noted herein shall be submitted and approved prior to the creation of
124 mock-ups. Consult the Architect for placement, size, and location of mock-ups. Mock-ups
125 shall demonstrate to the Architect and Owner the methods and quality of workmanship to
126 be performed in all stone treatments.

- ii. Prepare mock-ups directly adjacent to the existing historic wall and on City of Madison property under the same weather conditions expected during the remainder of the work.
- iii. Throughout rehabilitation, retain approved mock-up panels in undisturbed condition, suitably marked, as a standard for judging completed work.
- iv. Mock-ups shall include separate treatments, as called out on the drawings and related specification Sections. These are as follows:
 - 1. Substitute Stone Repair - Substitute stone material repair on at least 2 stones. Include one stone on which to demonstrate proficiency in removing previous patching material and repairing with new substitute stone material.
 - 2. Crack Repair – Repair one crack, two feet in length, using mortar. Repair one crack, two feet in length, using dispersed hydrated lime injection technique with spachal surface treatment.
 - 3. Repointing Mortar Installation - Repoint mortar joints, twelve feet in length – 2/3 horizontal joints and 1/3 vertical joints.

1.5. SUBMITTALS

- a. Submit the following items in time to prevent delay of the work and to allow adequate time for review. Do not order materials or start work before receiving written approval.
- b. Submit samples of all specified materials and Material Safety Data Sheets (MSDS) as appropriate.
- c. Submit test results from all ASTM testing analyses as described in Quality Assurance.
 - i. Preferred Vendor: Flood Testing Laboratories, Inc., Chicago, Illinois.
- d. Quality Assurance Plan
 - i. Submit written plan as outlined in the Quality Assurance Section for the work of this Section.
- e. Stone Samples for Verification
 - i. Before erecting mockup, submit samples of the following:
 - 1. Stone Replacement – Full New Stones – Full new stones shall meet specification requirements for color texture, density, technical performance, and stone type.
 - 2. Stone Replacement – Cut Stones – Create each profile for review and approval.
- f. Substitute Stone Repair Material – Provide at least two samples for patching material that will match the existing stone. Patching shall match existing stone; therefore, multiple submittals are expected. Substitute stone repair material will not be permitted to be applied in missing areas of more than 2 inches.
- g. Dispersed Hydrated Lime – Submit dispenser manufacturer’s written instructions for maintaining the equipment and the ratio accuracy.
- h. Qualification Data for Stone Rehabilitation Firm – The firm must submit written documentation of at least 10 individual projects completed in the last 15 years for which they have been the primary masonry specialist. Work must be performed by a contractor with 15 years’ documented successful experience in comparable historic stone masonry rehabilitation projects in size, age and material and who employs personnel skilled in the rehabilitation treatments and rehabilitation process and operations indicated.
 - i. The written submission must include the following:
 - 1. Name and address of project
 - 2. Name, address and phone numbers of Client
 - 3. Date of project completion
 - 4. Age of structure and whether it was listed on the National Register of Historic Places or is designated as a Historic Landmark
 - 5. How the work scope was specifically delivered to comply with the Secretary of the Interior’s Standards for Rehabilitation
 - 6. Size of the project, in terms of square feet of stone masonry restored
 - 7. List of materials (including names and manufacturers) used on project
- i. Qualification Data for Field Supervisor –The firm must submit written documentation of at least 10 projects that the Field Supervisor has supervised. The projects may include those that were completed under the employment of a different firm. The list must include projects that are similar in size, age and material to the current project. All stone treatments must be performed and supervised by craftspersons who are familiar with historic stone masonry construction.
 - i. The written submission must include the following:
 - 1. Name and address of project
 - 2. Name, address and phone numbers of Client
 - 3. Date of project completion
 - 4. Size of the project, in terms of square feet of stone masonry required
 - 5. List of materials (including names and manufacturers) used on project

- 190 6. Name(s) of firm(s) the work was performed under, if different from submitting firm
191 7. Proof of expertise in historic stone masonry, as indicated by a rehabilitation
192 treatment certificate from the training program defined in this specification
193 j. Qualification Data for Workers – The firm must submit the name of each craftsperson who will be
194 assigned to this project. Only skilled journeyman masons, trained and certified by the historic
195 masonry consultant, shall be used for masonry rehabilitation. All stone treatments must be
196 performed and supervised by craftspersons who are familiar with historic stone masonry
197 construction.
198 i. Include the following:
199 1. Name of craftsperson
200 2. Position craftsperson will hold on this project
201 3. Number of years working as a masonry rehabilitation specialist
202 4. Proof of expertise in historic stone masonry, as indicated by a project certificate
203 from the training program defined in this specification
204 5. Submit digital photographic documentation proposed procedures
205

206 1.6. SUBSTITUTIONS

- 207
208 a. If alternatives to the methods and materials indicated are proposed for any phase of rehabilitation
209 work, the Contractor shall provide written descriptions and programs of testing and install all test
210 panel samples and mock-ups to demonstrate the effectiveness of the alternatives for use on this
211 project.
212 b. The Contractor must provide documentation showing compliance with the requirements for
213 substitutions and the following information:
214 i. Coordination information, including a list of changes to other work that will be necessary to
215 accommodate the substitution
216 ii. A comparison of the substituted products and materials with the specified products and
217 methods, including performance, weight, size, durability, and visual effect.
218 iii. Certification that the substitution conforms to the contract documents and is appropriate
219 for the applications indicated. Material substitution requests must be accompanied by
220 independent laboratory test reports from a lab designated by the Architect to establish
221 equivalent performance levels and specification compliance. The Architect shall designate
222 the testing lab, and the party requesting the substitution shall pay for testing.
223

224 1.7. PRODUCT DELIVERY, STORAGE AND HANDLING

- 225
226 a. Deliver and store materials in manufacturer's original unopened containers bearing labels indicating
227 the grade, batch, production data, type, and names of products and manufacturers.
228 b. During storage and construction, protect rehabilitation materials from wetting by rain, snow or
229 ground water, and from staining or intermixture with earth or other types of materials.
230 c. Protect stone and other materials from deterioration by moisture and temperature. Store stone in a
231 dry location or in waterproof containers. Keep stone on pallets. Do not shrink wrap stone on pallets.
232 d. Comply with product manufacturer's recommendations for minimum and maximum temperature
233 requirements for storage.
234 e. Comply with the manufacturer's written specifications and recommendations for application and
235 installation.
236 f. Store all materials in a location that will not impede the progress of the work.
237

238 1.8. PROJECT CONDITIONS

- 239
240 a. Do not perform any masonry work unless air temperatures are between 40 degrees Fahrenheit (10
241 degrees Celsius) and 95 degrees Fahrenheit (32 degrees Celsius) and will remain so for at least
242 120 hours after completion of the work. To prevent premature evaporation of the mortar, phase
243 masonry work during hot weather by completing the process on the shady side of the wall or by
244 scheduling installation of materials during cooler evening hours.
245 b. Do not use frozen materials or materials mixed or coated with ice or frost. Do not lower the freezing
246 point of mortar by the use of admixtures or anti-freeze agents, and do not use chlorides in the
247 mortar.
248 c. Prevent mortar from staining the face of the masonry or other surfaces to be left exposed.
249 Immediately remove all mortar that comes in contact with any surface.
250 d. Cover partially completed work when work is not in progress.
251 e. Protect projections from droppings.
252 f. Damage occurring to the structure as a result of the Contractor's failure to protect against such

- 253 damage shall be the Contractor's responsibility. The contractor shall restore damaged areas to the
254 complete satisfaction of the Architect at no expense to the Owner.
255 g. Cold-Weather Requirement for masonry repair and mortar:
256 i. Follow ACSI 530 and manufacturers written installation requirements.
257 h. Hot-Weather Requirements:
258 i. Protect masonry repair and mortar-joint pointing when temperature and humidity
259 conditions produce excessive evaporation of water. Provide artificial shade and wind
260 breaks and use cooled materials as required. Do not apply mortar to substrates with
261 temperatures of 90 degrees Fahrenheit and above.
262

1.9. ATTIC STOCK

- 263
264 a. Provide the following products and amounts for Owner attic stock:
265 i. Rehabilitation Mortars - At least 2 gallons of unopened containers of each type of mortar
266 used.
267 ii. Substitute Stone Repair Materials - At least 1 gallon of unopened containers for each type
268 of patching material used.
269
270

PART 2 – PRODUCTS

2.1. MANUFACTURERS

- 271
272
273 a. In other Part 2 articles where titles below introduce lists, the following requirements apply for
274 product selection:
275 i. Products: Subject to compliance with requirements, provide one of the products specified.
276 ii. Manufacturers: Subject to compliance with requirements, provide products by the
277 manufacturers specified.
278
279
280

2.2. SUBSTITUTE STONE REPAIR MATERIALS

- 281
282 a. Substitute Stone Repair Material: Must use only mineral-based, single component products that
283 contain natural binders; no synthetic polymers or additives are permitted. Substitute stone material
284 must be pre-mixed in a quality controlled factory, with only the addition of water required at the site
285 prior to installation.
286 b. Acceptable material:
287 i. HS15 Heritage Sandstone Repair Mortar manufactured and distributed by U.S. Heritage
288 Group, Inc., Chicago, Illinois
289 ii. Jahn Sandstone Repair Mortar, Cathedral Stone Products, Jessup, Maryland
290 c. Substitute Stone Repair Material shall be custom colored to match the existing stone and produced
291 in a quality controlled factory environment.
292 d. No field mixing of color pigments into the repair materials is permitted on-site.
293 e. No color staining of existing stone or newly applied repair materials is permitted.
294 f. Apply substitute stone materials to areas no more than 2 inches in depth and 3 inches wide.
295
296

2.3. STONE REPLACEMENT MATERIAL

- 297
298 a. The Contractor shall use replacement stone that is compatible to the existing stone in appearance,
299 color and texture, as well as in compressive strength (as specified in ASTM C170), density (ASTM
300 C97), and absorption (ASTM C97). The Contractor shall verify compliance with the specifications,
301 and must transport the stone from its location to the building site at his expense. If the reclaimed
302 stone is not deemed acceptable, then the following manufacturers may be contacted for samples:
303 i. Quarra Stone Company, LLC, Madison, Wisconsin
304 ii. Old World Stone Limited, Princeton Jct., New Jersey
305 iii. Approved equal
306 b. The replacement stone for removed sandstone is Wisconsin Dolomitic Limestone, Glacier Buff.
307 c. Mortar for laying replacement stone: Mortar shall be the same as the repointing mortar, as defined
308 in this Section.
309
310

2.4. CRACK INJECTION MATERIAL

- 311
312 a. Crack Injection Material:
313 i. Dispersed Hydrated Lime DHL-IM Injection Mortar distributed by U.S. Heritage Group,
314 Inc., Chicago, Illinois
315

316 ii. Approved equal.
317

318 2.5. ALL MORTAR MATERIALS
319

- 320 a. Repointing mortar shall be prepared and placed in accordance with the Department of the Interior
321 National Park Service Cultural Resources Preservation Briefs 2, "Repointing Mortar Joints in
322 Historic Masonry Buildings",
323 b. Revised edition October 1998, and in compliance with the guidelines set forth by the Secretary of
324 the Interior's Standards for Rehabilitation.
325 c. The repointing mortar shall match the original in color, grain size and texture. The compressive
326 strength of the repointing mortar shall be equal or less than the compressive strength of the original
327 mortar and surrounding stone. The replacement mortar shall contain approximately the same
328 ingredient proportions of the original mortar.
329 d. All replacement mortar ingredients and mortar formulations have been established from test data
330 gathered from the original materials sampled from site.
331 e. Mixing of individual mortar ingredients at the construction site will not be permitted.
332 f. Repointing mortars shall be preblended (including water) in single containers in a factory-controlled
333 environment.
334 g. All ingredients will be converted from volume measurements to weight measurements to ensure
335 quality production of the mortar.
336 h. All containers shall be marked including manufacturing date and batch number. Manufacture is
337 required to maintain production-sampling procedures for each batch for quality control purposes.
338 Manufacturer to provide samples of proposed materials for mock up panels at the site. All
339 preblended products are to meet applicable ASTM standards and project specification
340 requirements.
341 i. Preblended Mortar Materials Contact: U.S. Heritage Group, Inc., Chicago, IL
342 ii. Approved equal.
343 i. The use of admixtures of any kind in the pre-blended mortar is strictly forbidden.
344

345 2.6. OTHER MATERIALS
346

- 347 a. Replacement limestone shall match existing in size, profile, grade, color, and finish.
348 b. Shims: 2 inch by 4 inch by 1/16 inch, 1/8 inch, and 1/4 inch, plastic shims as manufactured by
349 Racknow Polymers and distributed by Lance Construction Supplies, Inc., Chicago, Illinois, or
350 approved equal.
351 c. Strap Anchors: "No. 141 U-Type Stone Anchor," 8 inches long by 1-1/4 inch wide with a 7/8 inch
352 bend (Interior dimension). 16 gauge or 0.625 inch (1/16 inch) thickness, stainless steel conforming
353 to ASTM A 167, AISI Type 304, as manufactured by Heckmann Building Products, Inc., Melrose
354 Park, Illinois.
355 d. Dowels (Pins): 3/8 inch diameter by 4 inch long, smooth finish, stainless steel, conforming to
356 ASTM 267, AISI Type 304 or 316.
357 e. Mortar:
358 f. Portland Cement (as required): Type "I" Conforming to ASTM C150 standard.
359 g. Lime (as required): Pressure hydrated, non-air entraining, Type "N" conforming to ASTM C207
360 standard.
361 h. Sand (as required): Clean, sharp, free from loam, silt, vegetable matter, salts, and other injurious
362 substances, conforming to ASTM C144 standard.
363 i. Water: Potable, fresh, clean, clear and free from injurious amounts of sewage, oil, acid, alkali, salts,
364 organic matter or other detrimental substances.
365 j. Limestone Rehabilitation Mortar: "Mimic" trowel applied, color matched, single component
366 limestone repair mortar as manufactured by Conproco Corporation, or approved equal.
367 k. Other Items: All other materials not specifically described but required for a complete and proper
368 installation of the Work in this Section, shall be selected by the Contractor subject to approval by
369 the Architect.
370

371 PART 3 – EXECUTION
372

373 3.1. EXAMINATION
374

- 375 a. The Contractor shall have the sole responsibility for the accuracy of all measurements and for the
376 estimate of material quantities required and necessary to satisfy the requirements of these
377 Specifications. It is the intent of this project to salvage, preserve and reuse existing stone to the
378 greatest extent possible.

- b. Should replacement stone be required due to irreparable damage; match all physical properties including color, texture and size of existing stone.
- c. Verify that installation conditions are satisfactory to receive work of this Section.
- d. Do not proceed until unsatisfactory conditions have been corrected.
- e. Beginning work constitutes the Contractor's acceptance of conditions as satisfactory.
- f. During deconstruction, as well as rehabilitation operations, restore all areas to a weathertight condition each day and/or before inclement weather commences.

3.2. SUBSTITUTE STONE REPAIRS

- a. Substitute stone repairs require a moldable, plastic filled material applied directly to the loss area and set into place by its own adhesion to the stone substrate. Such stone repair mortars and putties are typically offered by manufacturing companies that do not sell stone.
- b. Substitute stone material may not be installed in thicknesses exceeding 2 inches. Stone repairs in excess of 2 inches thick will require reconfiguring the stone in lieu of performing other repairs.
- c. Remove all loose mortar and masonry prior to installation of the substitute stone material. "Sound" the masonry with a hammer to verify its integrity. If necessary, cut away an additional 1/2" of the stone substrate to ensure the surface to be repaired is solid and stable. Remove any sealant residue.
- d. Cut out all cramp anchors, threaded rod anchors and/or dowels within the damaged masonry area. Any anchors that are free of rust, solidly embedded, and do not project beyond the solid masonry surface may remain. All others should be removed.
- e. Using clean water and a scrub brush, clean all dust from surface and pores of the substrate.
- f. For very dry or porous surfaces, pre-wet the substrate ahead of time to prevent the substrate from drawing moisture out of the repair too quickly. Re-wet the surface immediately before applying the repair material.
- g. Use methods established in project training program to deliver the substitute stone repair work as demonstrated and approved by the Architect and Owner.
- h. Only rehabilitation technicians that hold a Project Training "Substitute Stone Certificate" will be permitted to work on the scope of this stone repair treatment as defined.
- i. Curing methods vary in different parts of the country and at different times of the year, calling for different amounts of water to be used in the first 36 hours after application. Adjustments also have to take into account how much time is remaining before freezing weather occurs.
- j. Follow all manufacturers' instructions pertaining to the placement of materials. If the manufacturer requires that installers of a specified product be trained, provide this documentation to the Architect and supporting documentation. Training certificates previously issued by product companies for the application of specified products may not be substituted for the Project Training "Substitute Stone Certificate" on this project. Applicators previously trained by product companies are encouraged to work on this specific scope, but it is not a mandatory requirement of this specification, only that of the product company to ensure the proper placement of the materials.

3.3. FERROUS ANCHOR BOLT REMOVAL

- a. Remove masonry anchors, brackets, wood nailers, and other extraneous items no longer in use unless identified as historically significant or indicated to remain.
- b. Remove items carefully to avoid spalling or cracking masonry.
- c. If item cannot be removed without damaging surrounding masonry, cut off item flush with surface and core drill surrounding masonry and item as close around item as practical.

3.4. STONE PLUG REPAIR

- a. At locations where ferrous anchor bolts and the like are removed prepare a replacement plug by core-drilling replacement stone. Use a drill sized to produce a core that will fit into hole drilled in damaged stone with tolerances of no more than +/- 1/16 inch.
- b. Adhere the repair piece with lime putty or lime putty mortar and clamp so the seam may cure. Prior to adhering with lime putty, the new piece of stone shall be carved and refined to match the surface of the adjacent original stone in both profile and finish. This step is necessary to allow a virtually invisible replacement repair.
- c. Use methods established in project training program to deliver acceptable repair work as demonstrated and approved by the Architect and Owner.

3.5. REMOVE, REDRESS AND RETURN

- 442 a. Before removing any deteriorated masonry units establish bonding patterns, levels and coursings.
443 Label each unit, numbered on drawings, for this treatment to correspond. Intent of label is to
444 ensure return of stone to same location and bond pattern.
445 b. Carefully remove units in gentlest means necessary for reinstallation at the same location.
446 c. Scale off all loose pieces of original stone from masonry intended to be removed, redressed and
447 returned, including surface material in powder or granular form and detachments of planer
448 elements, spalls and chips. Contractor shall sound all stone on building by using the "ring test
449 method" in order to distinguish fully intact stone from those in which delamination may be hidden or
450 pieces of unstable material may not be immediately visible.
451 d. Remove mortar, loose particles, and soil from stone by cleaning with hand chisels, needle scalers,
452 brushes, and water.
453 e. Remove sealants by cutting close to stone with utility knife and cleaning with solvents.
454 f. Use methods established in project training program to redress the stone surface to match the
455 original surface textures and profiles as approved by the Architect and Owner and as required.
456 g. It is the intention of this treatment to avoid introducing products to the face of the stone merely to
457 enhance the look and color of the surface.
458 h. Reset unit plane or plumb with the surrounding stone masonry surfaces. The maximum open space
459 behind the returned stone unit is equal half of the stone's depth. Notify Architect for alternate stone
460 treatment repair if open space exceeds permissible depth. No infill will be permitted behind stone.
461 i. Butter vertical joints for full width before setting and set units in full bed of mortar, unless otherwise
462 indicated.
463 j. Rake out mortar used for laying stone before mortar sets and point new mortar joints in repaired
464 area to comply with requirements for repointing existing stone, and at same time as repointing of
465 surrounding area.
466 k. Only rehabilitation technicians that hold a Project Training "Remove, Redress and Return
467 Certificate" will be permitted to work on the scope of this stone repair treatment as defined.
468

469 3.6. STONE REMOVAL AND REPLACEMENT

- 470
471 a. When directed, remove stone that has deteriorated or is damaged beyond repair. Carefully
472 demolish or remove entire units from joint to joint, without damaging surrounding stone, in a
473 manner that permits replacement with full size units.
474 b. Sort stone by size and zone for future use.
475 c. Support and protect remaining stonework that surrounds removal area and adjoining construction
476 in an undamaged condition.
477 d. Remove in an undamaged condition as many whole stone units as possible.
478 e. Remove mortar, loose particles, and soil from stone by cleaning with hand chisels, needle scalers,
479 brushes, and water.
480 f. Remove sealants by cutting close to stone with utility knife and cleaning with solvents.
481 g. Reuse salvaged stone to the fullest extent possible. Integrate new replacement stone in concealed
482 areas or shielded from public view.
483 h. Deliver cleaned stone not required for reuse to Owner.
484 i. Clean stone surrounding removal areas by removing mortar, dust, and loose particles in
485 preparation for replacement.
486 j. Only rehabilitation technicians that hold a Project Training "Stone Removal and Replacement
487 Certificate" will be permitted to work on the scope of this stone repair treatment as defined.
488 k. Replace removed stone with other removed stone, where possible, or with new stone matching
489 existing stone, including size. Butter vertical joints for full width before setting and set units in full
490 bed of mortar, unless otherwise indicated.
491 l. Rake out mortar used for laying stone before mortar sets and point new mortar joints in repaired
492 area to comply with requirements for repointing existing stone, and at same time as repointing of
493 surrounding area.
494

495 3.7. CRACK INJECTION

496
497 General: Comply with the Dispersed Hydrated Lime manufacturer's written instructions.

- 498
499 a. Those cracks designated on drawings, where stone is soundly bonded but cracked, shall be
500 injected. Unless otherwise noted, the intent of this specification is for the designated cracks to be
501 injected their full lengths, not just locally where markings are noted on drawings.
502 b. The contractor shall diligently carry out the manufacturer's installation requirements and advise the
503 Architect and Owner as to when and where the installation will occur, so that their representatives
504 can observe them. At such time, the contractor shall provide resin samples from the dispenser

- 505 during the course of the injection. Samples shall not exceed three fluid ounces.
506 c. Drill 1/4-inch- (6-mm-) diameter, downward-sloping injection holes as follows:
507 i. Transverse Cracks Less Than 3/8 inch (10 mm) Wide: Drill holes through center of crack
508 at 12 to 18 inches (300 to 500 mm) o.c.
509 ii. Transverse Cracks More Than 3/8 inch (10 mm) Wide: Drill holes through center of crack
510 at 18 to 36 inches (500 to 1000 mm) o.c.
511 iii. Drill holes 2 inches (50 mm) deep. Where possible, drill holes in mortar joints.
512 d. Clean out drill holes and cracks with compressed air and water. Remove dirt and organic matter,
513 loose material, sealants, and failed crack repair materials.
514 e. Place plastic injection ports in drilled holes and seal face of cracks between injection ports with clay
515 or other non-staining, removable plugging material. Leave openings at upper ends of cracks for air
516 release.
517 f. Only rehabilitation technicians that hold a Project Training "Crack Repair Certificate" will be
518 permitted to work on the scope of this stone repair treatment as defined.
519 g. Inject Dispersed Hydrated Lime through ports sequentially, beginning at one end of area and
520 working to opposite end; where possible begin at lower end of injection area and work upward.
521 h. Inject Dispersed Hydrated Lime until it extrudes from adjacent ports. After port has been injected,
522 plug with clay or other suitable material and begin injecting filler at adjacent port, repeating process
523 until all ports have been injected.
524 i. Clean Dispersed Hydrated Lime from face of stone before it sets by scrubbing with water.
525 j. After Dispersed Hydrated Lime has set, remove injection ports, plugging material, and excess filler.
526 k. Patch injection holes and surface of cracks as specified in "Substitute Stone Repairs" Article.
527

528 3.8. POINTING OF MORTAR JOINTS IN STONE

- 529
530 a. Walls should be presoaked with water 10 minutes prior to pointing or as weather conditions dictate.
531 Walls should be misted with water for duration of at least 3 minutes at the end of the day after initial
532 installation. Keep newly pointed wall moist for a minimum of 3-days after installation, including
533 weekends and holidays. 3 times per day minimum – morning, noon and night.
534 b. Rinse stone joint with water to remove dust and mortar particles. Time the rinsing application so
535 that at the time of pointing excess water has evaporated or run off. Joint surfaces should be damp
536 but free from standing water.
537 c. Mortar shall be pre-mixed by approved manufacturer. The mortar material shall resemble the
538 consistency of brown sugar during installation. This drier consistency enables the material to be
539 tightly packed into the joint and allows for cleaner work and prevents shrinkage cracks as the
540 mortar cures.
541 d. Joints should be pointed in layers or "lifts" where the joints are deeper than 1-1/4 inch. Apply in
542 layers not greater than 1/2 the depth but not more than 1-1/4 inch or until a uniform depth is
543 formed. Compact each layer thoroughly and allow it to become thumbprint hard before applying the
544 next layer.
545 e. Lift examples:
546 i. 3/16" joint depth (1/16" joint existing) point in one lift
547 ii. 5/16" joint depth (1/8" joint existing) point in one lift
548 iii. 5/8" joint depth (1/4" joint existing) point in one lift
549 iv. 5/16" joint depth (3/8" joint existing) point in one lift
550 v. 1-1/4" joint depth (1/2" joint existing) point in one lift
551 vi. 1-7/8" joint depth (3/4" joint existing) point in two lifts approx.-1" (each)
552 vii. 2-1/2" joint depth (1" joint existing) point in three lifts approx. +3/4" (ea.) over 2-3/4 joint
553 depth- point in lifts of no more than 1-1/4" (each)
554 f. Point all mortar joints to a flat double trowel cut/stipple finish profile.
555 g. When mortar is thumbprint hard the joints shall be finished to match the original historic joint profile.
556 h. Keep mortar from drying out too quickly. Protection from direct sun, high winds for the first 72 hours
557 after installation. Thoroughly soak the wall a minimum of three times per day for the first 3 days.
558 Protect freshly pointed areas with plastic sheeting for the first 24 hours after installation.
559 i. Where pointing work precedes overall cleaning of existing masonry, allow mortar to harden at least
560 30 days before beginning cleaning work.
561

562 3.9. FINISHING TECHNIQUES

- 563
564 a. Acceptable finishing techniques for redressing, substitute stone and crack repair will be defined
565 during the demonstration and test panel work which is part of the training program as approved by
566 the Architect and Owner.
567 b. Do not create vibrations in the wall to dislodge or separate bond from previously completed work.

- 568
569 3.10. CLEANING
570
571 a. After mortar has fully hardened, thoroughly clean exposed masonry surfaces of excess mortar and
572 foreign matter; use wood scrapers, stiff-nylon or fiber brushes, and clean water, spray applied at
573 low pressure.
574 b. Do not use metal scrapers or brushes.
575 c. Do not use acidic or alkaline cleaners.
576 d. Wash adjacent non-masonry surfaces, if applicable. Use detergent and soft brushes or cloths.
577 e. Sweep and rake adjacent pavement and grounds to remove masonry debris. Where necessary,
578 pressure wash surfaces to remove mortar, dust, dirt, and stains.
579
580

END OF SECTION 04 01 40

SECTION E: PROPOSAL

**FOREST HILL CEMETERY RECEIVING VAULT - PRESERVATION OF THE NORTH WALL
CONTRACT NO. 6829**

Bidder must state a Unit Price and Total Bid for each item. The Total Bid for each item must be the product of quantity, by Unit Price. The Grand Total must be the sum of the Total Bids for the various items. In case of multiplication errors or addition errors, the Grand Total with corrected multiplication and/or addition shall determine the Grand Total bid for each contract. The Unit Price and Total Bid must be entered numerically in the spaces provided. All words and numbers shall be written in ink.

1. The undersigned having familiarized himself/herself with the Contract documents, including Advertisement for Bids, Instructions to Bidders, Form of Proposal, City of Madison Standard Specifications for Public Works Construction - 2012 Edition thereto, Form of Agreement, Form of Bond, and Addenda issued and attached to the plans and specifications on file in the office of the City Engineer, hereby proposes to provide and furnish all the labor, materials, tools, and expendable equipment necessary to perform and complete in a workmanlike manner the specified construction on this project for the City of Madison; all in accordance with the plans and specifications as prepared by the City Engineer, including Addenda to the Contract Nos. _____ through _____ issued thereto, at the prices for said work as contained in this proposal.
2. If awarded the Contract, we will initiate action within seven (7) days after notification or in accordance with the date specified in the contract to begin work and will proceed with diligence to bring the project to full completion within the number of work days allowed in the Contract or by the calendar date stated in the Contract.
3. The undersigned Bidder or Contractor certifies that he/she is not a party to any contract, combination in form of trust or otherwise, or conspiracy in restraint of trade or commerce or any other violation of the anti-trust laws of the State of Wisconsin or of the United States, with respect to this bid or contract or otherwise.
4. Accompanying this Proposal is Bid Bond or Certified Check in the amount of _____ Dollars (\$ _____) or a Certificate of Biennial Bid Bond as required by the Advertisement for Bids.
(IF BID BOND IS USED, IT SHALL BE SUBMITTED ON THE FORMS PROVIDED BY THE CITY. FAILURE TO DO SO MAY RESULT IN REJECTION OF THE BID).
5. I hereby certify that all statements herein are made on behalf of _____
(name of corporation, partnership, or person submitting bid)
a corporation organized and existing under the laws of the State of _____ a
partnership consisting of _____; an individual trading as _____; of
the City of _____; State of _____; that I have examined and carefully prepared this
Proposal, from the plans and specifications and have checked the same in detail before submitting
this Proposal; that I have fully authority to make such statements and submit this Proposal in (its,
their) behalf; and that the said statements are true and correct.

SIGNATURE

TITLE, IF ANY

Sworn and subscribed to before me this
_____ day of _____, 20_____

(Notary Public or other officer authorized to administer oaths)

My Commission Expires _____

Bidders shall not add any conditions or qualifying statements to this Proposal.

FOREST HILL CEMETERY RECEIVING VAULT - PRESERVATION OF THE NORTH WALL CONTRACT NO. 6829

State of Wisconsin
Department of Workforce Development
Equal Rights Division
Labor Standards Bureau

Disclosure of Ownership

Notice required under Section 15.04(1)(m), Wisconsin Statutes. The statutory authority for the use of this form is prescribed in Sections 66.0903(12)(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.

- (1) On the date a contractor submits a bid to or completes negotiations with a state agency or local governmental unit, on a project subject to Section 66.0903 or 103.49, Wisconsin Statutes, the contractor shall disclose to such state agency or local governmental unit 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), 103.49(2) and 103.50(2), Wisconsin Statutes.
- (3) This form must **ONLY** be filed, with the state agency or local governmental unit 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.
 - (2) Or 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

Name of Business

Street Address or P O Box

City

State

Zip Code

Name of Business

Street Address or P O Box

City

State

Zip Code

Name of Business

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

Signature of Authorized Officer

Date Signed

Name of Corporation, Partnership or Sole Proprietorship

Street Address or P O Box

City

State

Zip Code

If you have any questions call (608) 266-0028

ERD-7777-E (R. 09/2003)

**FOREST HILL CEMETERY RECEIVING VAULT - PRESERVATION OF THE NORTH
WALL
CONTRACT NO. 6829**

Best Value Contracting

1. The Contractor shall indicate the non-apprenticeable trades used on this contract.

2. Some Contractors are exempt due to the size of the work force. Apprenticeable trades are those trades considered apprenticeable by the State of Wisconsin.

Check Here if the Contractor has a total skilled work force of four or less individuals in all apprenticeable trades combined. This contractor is exempt from Best Value Contracting.

3. The Contractor shall indicate on page E-4 which apprenticeable trades are to be used on this Contract and shall indicate by checking the appropriate box for the trades used, how the contractor will comply with Madison General Ordinance 33.07(7).

Legend

Number of Journeyworkers	The Contractor shall indicated for trades to be used on this Contract only, the number of journeyworkers that the Contractor has employed company wide.
W-ATT	The Contractor is an active trade trainer in the State of Wisconsin for the trade indicated.
US-ATT	The Contractor is an active trade trainer in an apprenticeship program approved by the U.S. Department of Labor or another state apprenticeship agency in the trade indicated.
SB-ATT	The Contractor shall become an active trade trainer prior to beginning work on the Contract in the trade indicated.

The Contractor has reviewed the list on page E-4 and shall not use any apprenticeable trades on this project.

The Contractor has reviewed this list on E-4 and has checked the appropriate box by each apprenticeable trade to be used on the project.

**FOREST HILL CEMETERY RECEIVING VAULT - PRESERVATION OF THE NORTH
WALL
CONTRACT NO. 6829**

Apprenticeable Trades

Check the box in the column "Trade Used on This Project" for each apprenticeable trades used on this project. For those trades used on the project indicated the number of journeyworkers that are employed company wide and check a box to the right of the trade as to how the Contractor will comply MGO 33.07(7). Refer to the legend on page E-3 for the meaning associated with each heading. The Contractor must check one of the boxes on the right for each apprenticeable trade used and checked on the left.

Trade Used on Contract	Apprenticeable Trades	Number of Journeyworkers	W-ATT	US-ATT	SB-ATT
<input type="checkbox"/>	Bricklayer		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Carpenter		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Cement Mason / Concrete Finisher		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Cement Mason (Heavy Highway)		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Construction Craft Laborer		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Data Communication Installer		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Electrician		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Environmental Systems Technician / HVAC Service Tech/HVAC Install / Service		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Glazier		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Heavy Equipment Operator / Operating Engineer		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Insulation Worker (Heat & Frost)		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Iron Worker		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Iron Worker (Assembler, Metal Bldgs)		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Painter & Decorator		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Plasterer		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Plumber		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Residential Electrician		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Roofer & Waterproofer		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Sheet Metal Worker		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Sprinklerfitter		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Steamfitter		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Steamfitter (Refrigeration)		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Steamfitter (Service)		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Taper & Finisher		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Telecommunications (Voice, Data & Video) Installer-Technician		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Tile Setter		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

PROPOSAL

NAME OF BIDDER

FOREST HILL CEMETERY RECEIVING VAULT-PRESERVATION OF THE NORTH WALL

CONTRACT NO. 6829

ACCOUNT

NUMBER: CB53-58401-810714-00-53W1370

		TOTAL BID
	LUMP SUM BID	

SECTION F: BID BOND

KNOW ALL MEN BY THESE PRESENT, THAT _____
(a corporation of the State of _____) (individual), (partnership), hereinafter referred to as the "Principal") and _____, a corporation of the State of _____ (hereinafter referred to as the "Surety") and licensed to do business in the State of Wisconsin, are held and firmly bound unto the City of Madison, (hereinafter referred to as the "Obligee"), in the sum of five per cent (5%) of the amount of the total bid or bids of the Principal herein accepted by the Obligee, for the payment of which the Principal and the Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

The conditions of this obligation are such that, whereas the Principal has submitted, to the City of Madison a certain bid, including the related alternate, and substitute bids attached hereto and hereby made a part hereof, to enter into a contract in writing for the construction of:

FOREST HILL CEMETERY RECEIVING VAULT - PRESERVATION OF THE NORTH WALL CONTRACT NO. 6829

1. If said bid is rejected by the Obligee, then this obligation shall be void.
2. If said bid is accepted by the Obligee and the Principal shall execute and deliver a contract in the form specified by the Obligee (properly completed in accordance with said bid) and shall furnish a bond for his/her faithful performance of said contract, and for the payment of all persons performing labor or furnishing materials in connection therewith, and shall in all other respects perform the agreement created by the acceptance of said bid, then this obligation shall be void.

If said bid is accepted by the Obligee and the Principal shall fail to execute and deliver the contract and the performance and payment bond noted in 2. above executed by this Surety, or other Surety approved by the City of Madison, all within the time specified or any extension thereof, the Principal and Surety agree jointly and severally to forfeit to the Obligee as liquidated damages the sum mentioned above, it being understood that the liability of the Surety for any and all claims hereunder shall in no event exceed the sum of this obligation as stated, and it is further understood that the Principal and Surety reserve the right to recover from the Obligee that portion of the forfeited sum which exceed the actual liquidated damages incurred by the Obligee.

The Surety, for value received, hereby stipulates and agrees that the obligations of said Surety and its bond shall be in no way impaired or affected by an extension of the time within which the Obligee may accept such bid, and said Surety does hereby waive notice of any such extension.

IN WITNESS WHEREOF, the Principal and the Surety have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, on the day and year set forth below.

Seal

Principal

Date

By:

Name of Surety

By:

Date

This certifies that I have been duly licensed as an agent for the above company in Wisconsin under License No. _____ for the year _____, and appointed as attorney in fact with authority to execute this bid bond and the payment and performance bond referred to above, which power of attorney has not been revoked.

Date

Agent

Address

City, State and Zip Code

Telephone Number

NOTE TO SURETY & PRINCIPAL

The bid submitted which this bond guarantees may be rejected if the following instrument is not attached to this bond:

Power of Attorney showing that the agent of Surety is currently authorized to execute bonds on behalf of the Surety, and in the amounts referenced above.

Certificate of Biennial Bid Bond

TIME PERIOD - VALID (FROM/TO)
NAME OF SURETY
NAME OF CONTRACTOR
CERTIFICATE HOLDER <p style="text-align: center;">City of Madison, Wisconsin</p>

This is to certify that a biennial bid bond issued by the above-named Surety is currently on file with the City of Madison.

This certificate is issued as a matter of information and conveys no rights upon the certificate holder and does not amend, extend or alter the coverage of the biennial bid bond.

Cancellation: Should the above policy be cancelled before the expiration date, the issuing Surety will give thirty (30) days written notice to the certificate holder indicated above.

Signature of Authorized Contractor Representative

Date

SECTION G: AGREEMENT

THIS AGREEMENT made this _____ day of _____ in the year Two Thousand and Twelve between _____ hereinafter called the Contractor, and the City of Madison, Wisconsin, hereinafter called the City.

WHEREAS, the Common Council of the said City of Madison under the provisions of a resolution adopted _____, _____, and by virtue of authority vested in the said Council, has awarded to the Contractor the work of performing certain construction.

NOW, THEREFORE, the Contractor and the City, for the consideration hereinafter named, agree as follows:

1. **Scope of Work.** The Contractor shall, perform the construction, execution and completion of the following listed complete work or improvement in full compliance with the Plans, Specifications, Standard Specifications, Supplemental Specifications, Special Provisions and contract; perform all items of work covered or stipulated in the proposal; perform all altered or extra work; and shall furnish, unless otherwise provided in the contract, all materials, implements, machinery, equipment, tools, supplies, transportation, and labor necessary to the prosecution and completion of the work or improvements:

FOREST HILL CEMETERY RECEIVING VAULT - PRESERVATION OF THE NORTH WALL CONTRACT NO. 6829

2. **Completion Date/Contract Time.** Construction work must begin within seven (7) calendar days after the date appearing on mailed written notice to do so shall have been sent to the Contractor and shall be carried on at a rate so as to secure full completion SEE SPECIAL PROVISIONS, the rate of progress and the time of completion being essential conditions of this Agreement.
3. **Contract Price.** The City shall pay to the Contractor at the times, in the manner and on the conditions set forth in said specifications, the sum of _____ (\$_____) Dollars being the amount bid by such Contractor and which was awarded to him/her as provided by law.
4. **Wage Rates for Employees of Public Works Contractors**

General and Authorization. The Contractor shall compensate its employees at the prevailing wage rate in accordance with section 66.0903, Wis. Stats., DWD 290 of the Wisconsin Administrative Code and as hereinafter provided.

“Public Works” shall include building or work involving the erection, construction, remodeling, repairing or demolition of buildings, parking lots, highways, streets, bridges, sidewalks, street lighting, traffic signals, sanitary sewers, water mains and appurtenances, storm sewers, and the grading and landscaping of public lands.

“Building or work” includes construction activity as distinguished from manufacturing, furnishing of materials, or servicing and maintenance work, except for the delivery of mineral aggregate such as sand, gravel, bituminous asphaltic concrete or stone which is incorporated into the work under contract with the City by depositing the material directly in final place from transporting vehicle.

“Erection, construction, remodeling, repairing” means all types of work done on a particular building or work at the site thereof in the construction or development of the project, including without limitation, erecting, construction, remodeling, repairing, altering, painting, and decorating, the transporting of materials and supplies to or from the building or work done by the employees of the Contractor, Subcontractor, or Agent thereof, and the manufacturing or furnishing of materials, articles, supplies or equipment on the site of the building or work, by persons employed by the Contractor, Subcontractor, or Agent thereof.

“Employees working on the project” means laborers, workers, and mechanics employed directly upon the site of work.

“Laborers, Workers, and Mechanics” include preapprentices, helpers, trainees, learners and properly registered and indentured apprentices but exclude clerical, supervisory, and other personnel not performing manual labor.

Establishment of Wage Rates. The Department of Public Works shall periodically obtain a current schedule of prevailing wage rates from DWD. The schedule shall be used to establish the City of Madison Prevailing Wage Rate Schedule for Public Works Construction (prevailing wage rate). The Department of Public Works may include known increases to the prevailing wage rate which can be documented and are to occur on a future specific date. The prevailing wage rate shall be included in public works contracts subsequently negotiated or solicited by the City. Except for known increases contained within the schedule, the prevailing wage rate shall not change during the contract. The approved wage rate is attached hereto.

Workforce Profile. The Contractor shall, at the time of signature of the contract, notify the City Engineer in writing of the names and classifications of all the employees of the Contractor, Subcontractors, and Agents proposed for the work. In the alternative, the Contractor shall submit in writing the classifications of all the employees of the Contractor, Subcontractors and Agents and the total number of hours estimated in each classification for the work. This workforce profile(s) shall be reviewed by the City Engineer who may, within ten (10) days, object to the workforce profile(s) as not being reflective of that which would be required for the work. The Contractor may request that the workforce profile, or a portion of the workforce profile, be submitted after the signature of the contract but at least ten (10) days prior to the work commencing. Any costs or time loss resulting from modifications to the workforce profile as a result of the City Engineer’s objections shall be the responsibility of the Contractor.

Payrolls and Records. The Contractor shall keep weekly payroll records setting forth the name, address, telephone number, classification, wage rate and fringe benefit package of all the employees who work on the contract, including the employees of the Contractor’s subcontractors and agents. Such weekly payroll records must include the required information for all City contracts and all other contracts on which the employee worked during the week in which the employee worked on the contract. The Contractor shall also keep records of the individual time each employee worked on the project and for each day of the project. Such records shall also set forth the total number of hours of overtime credited to each such employee for each day and week and the amount of overtime pay received in that week. The records shall set forth the full weekly wages earned by each employee and the actual hourly wage paid to the employee.

The Contractor shall submit the weekly payroll records, including the records of the Contractor’s subcontractors and agents, to the City Engineer for every week that work is being done on the contract. The submittal shall be within twenty-one (21) calendar days of the end of the Contractor’s weekly pay period.

Employees shall receive the full amounts accrued at the time of the payment, computed at rates not less than those stated in the prevailing wage rate and each employee's rate shall be determined by the work that is done within the trade or occupation classification which should be properly assigned to the employee.

An employee's classification shall not be changed to a classification of a lesser rate during the contract. If, during the term of the contract, an employee works in a higher pay classification than the one which was previously properly assigned to the employee, then that employee shall be considered to be in the higher pay classification for the balance of the contract, receive the appropriate higher rate of pay, and she/he shall not receive a lesser rate during the balance of the contract. For purposes of clarification, it is noted that there is a distinct difference between working in a different classification with higher pay and doing work within a classification that has varying rates of pay which are determined by the type of work that is done within the classification. For example, the classification "Operating Engineer" provides for different rates of pay for various classes of work and the Employer shall compensate an employee classified as an "Operating Engineer" based on the highest class of work that is done in one day. Therefore, an "Operating Engineer's" rate may vary on a day to day basis depending on the type of work that is done, but it will never be less than the base rate of an "Operating Engineer". Also, as a matter of clarification, it is recognized that an employee may work in a higher paying classification merely by chance and without prior intention, calculation or design. If such is the case and the performance of the work is truly incidental and the occurrence is infrequent, inconsequential and does not serve to undermine the single classification principle herein, then it may not be required that the employee be considered to be in the higher pay classification and receive the higher rate of pay for the duration of the contract. However, the Contractor is not precluded or prevented from paying the higher rate for the limited time that an employee performs work that is outside of the employee's proper classification.

Questions regarding an employee's classification, rate of pay or rate of pay within a classification, shall be resolved by reference to the established practice that predominates in the industry and on which the trade or occupation rate/classification is based. Rate of pay and classification disputes shall be resolved by relying upon practices established by collective bargaining agreements and guidelines used in such determination by appropriate recognized trade unions operating within the City of Madison.

The Contractor, its Subcontractors and Agents shall submit to interrogation regarding compliance with the provisions of this ordinance.

Mulcting of the employees by the Contractor, Subcontractor, and Agents on Public Works contracts, such as by kickbacks or other devices, is prohibited. The normal rate of wage of the employees of the Contractor, Subcontractor, and Agents shall not be reduced or otherwise diminished as a result of payment of the prevailing wage rate on a public works contract.

Hourly contributions. Hourly contributions shall be determined in accordance with the prevailing wage rate and with DWD. 290.01(10), Wis. Admin. Code.

Apprentices and Subjourneypersons. Apprentices and subjourneypersons performing work on the project shall be compensated in accordance with the prevailing wage rate and with DWD 290.02, and 290.025, respectively, Wis. Admin. Code.

Straight Time Wages. The Contractor may pay straight time wages as determined by the prevailing wage rate and DWD 290.04, Wis. Admin. Code.

Overtime Wages. The Contractor shall pay overtime wages as required by the prevailing wage rate and DWD 290.05, Wis. Admin. Code.

Posting of Wage Rates and Hours. A clearly legible copy of the prevailing wage rate, together with the provisions of Sec. 66.0903(10)(a) and (11)(a), Wis. Stats., shall be kept posted in at least one conspicuous and easily accessible place at the project site by the Contractor and such notice shall remain posted during the full time any laborers, workers or mechanics are employed on the contract.

Evidence of Compliance by Contractor. Upon completion of the contract, the Contractor shall file with the Department of Public Works an affidavit stating:

- a. That the Contractor has complied fully with the provisions and requirements of Sec. 66.0903(3), Wis. Stats., and Chapter DWD 290, Wis. Admin. Code; the Contractor has received evidence of compliance from each of the agents and subcontractors; and the names and addresses of all of the subcontractors and agents who worked on the contract.
- b. That full and accurate records have been kept, which clearly indicate the name and trade or occupation of every laborer, worker or mechanic employed by the Contractor in connection with work on the project. The records shall show the number of hours worked by each employee and the actual wages paid therefor; where these records will be kept and the name, address and telephone number of the person who will be responsible for keeping them. The records shall be retained and made available for a period of at least three (3) years following the completion of the project of public works and shall not be removed without prior notification to the municipality.

Evidence of Compliance by Agent and Subcontractor. Each agent and subcontractor shall file with the Contractor, upon completion of their portion of the work on the contract an affidavit stating that all the provisions of Sec. 66.0903(3), Wis. Stats., have been fully complied with and that full and accurate records have been kept, which clearly indicate the name and trade or occupation of every laborer, worker or mechanic employed by the Contractor in connection with work on the project. The records shall show the number of hours worked by each employee and the actual wages paid therefor; where these records shall be kept and the name, address and telephone number of the person who shall be responsible for keeping them. The records shall be retained and made available for a period of at least three (3) years following the completion of the project of public works and shall not be removed without prior notification to the municipality.

Failure to Comply with the Prevailing Wage Rate. If the Contractor fails to comply with the prevailing wage rate, she/he shall be in default on the contract.

5. **Affirmative Action.** In the performance of the services under this Agreement the Contractor agrees not to discriminate against any employee or applicant because of race, religion, marital status, age, color, sex, disability, national origin or ancestry, income level or source of income, arrest record or conviction record, less than honorable discharge, physical appearance, sexual orientation, political beliefs, or student status. The Contractor further agrees not to discriminate against any subcontractor or person who offers to subcontract on this contract because of race, religion, color, age, disability, sex or national origin.

The Contractor agrees that within thirty (30) days after the effective date of this agreement, the Contractor will provide to the City Affirmative Action Division certain workforce utilization statistics, using a form to be furnished by the City.

If the contract is still in effect, or if the City enters into a new agreement with the Contractor, within one year after the date on which the form was required to be provided, the Contractor will provide updated workforce information using a second form, also to be furnished by the City. The second form will be submitted to the City Affirmative Action Division no later than one year after the date on which the first form was required to be provided.

The Contractor further agrees that, for at least twelve (12) months after the effective date of this contract, it will notify the City Affirmative Action Division of each of its job openings at facilities in Dane County for which applicants not already employees of the Contractor are to be considered. The notice will include a job description, classification, qualifications and application procedures and deadlines. The Contractor agrees to interview and consider candidates referred by the Affirmative Action Division if the candidate meets the minimum qualification standards established by the Contractor, and if the referral is timely. A referral is timely if it is received by the Contractor on or before the date started in the notice.

Articles of Agreement Article I

The Contractor shall take affirmative action in accordance with the provisions of this contract to insure that applicants are employed, and that employees are treated during employment without regard to race, religion, color, age, marital status, disability, sex or national origin and that the employer shall provide harassment free work environment for the realization of the potential of each employee. Such action shall include, but not be limited to, the following: employment, upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination, rates of pay or other forms of compensation and selection for training including apprenticeship insofar as it is within the control of the Contractor. The Contractor agrees to post in conspicuous places available to employees and applicants notices to be provided by the City setting out the provisions of the nondiscrimination clauses in this contract.

Article II

The Contractor shall in all solicitations or advertisements for employees placed by or on behalf of the Contractor state that all qualified or qualifiable applicants will be employed without regard to race, religion, color, age, marital status, disability, sex or national origin.

Article III

The Contractor shall send to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding a notice to be provided by the City advising the labor union or worker's representative of the Contractor's equal employment opportunity and affirmative action commitments. Such notices shall be posted in conspicuous places available to employees and applicants for employment.

Article V

The Contractor agrees that it will comply with all provisions of the Affirmative Action Ordinance of the City of Madison, including the contract compliance requirements. The Contractor agrees to submit the model affirmative action plan for public works contractors in a form approved by the Director of Affirmative Action.

Article VI

The Contractor will maintain records as required by Section 39.02(9)(f) of the Madison General Ordinances and will provide the City Affirmative Action Division with access to such records and to persons who have relevant and necessary information, as provided in Section 39.02(9)(f). The City agrees to keep all such records confidential, except to the extent that public inspection is required by law.

Article VII

In the event of the Contractor's or subcontractor's failure to comply with the Equal Employment Opportunity and Affirmative Action Provisions of this contract or Section 39.03 and 39.02 of the Madison General Ordinances, it is agreed that the City at its option may do any or all of the following:

1. Cancel, terminate or suspend this Contract in whole or in part.
2. Declare the Contractor ineligible for further City contracts until the Affirmative Action requirements are met.
3. Recover on behalf of the City from the prime Contractor 0.5 percent of the contract award price for each week that such party fails or refuses to comply, in the nature of liquidated damages, but not to exceed a total of five percent (5%) of the contract price, or five thousand dollars (\$5,000), whichever is less. Under public works contracts, if a subcontractor is in noncompliance, the City may recover liquidated damages from the prime Contractor in the manner described above. The preceding sentence shall not be construed to prohibit a prime Contractor from recovering the amount of such damage from the non-complying subcontractor.

Article VIII

The Contractor shall include the above provisions of this contract in every subcontract so that such provisions will be binding upon each subcontractor. The Contractor shall take such action with respect to any subcontractor as necessary to enforce such provisions, including sanctions provided for noncompliance.

Article IX

The Contractor shall allow the maximum feasible opportunity to small business enterprises to compete for any subcontracts entered into pursuant to this contract.

**FOREST HILL CEMETERY RECEIVING VAULT - PRESERVATION OF THE NORTH
WALL
CONTRACT NO. 6829**

IN WITNESS WHEREOF, the Contractor has hereunto set his/her hand and seal and the City has caused these presents to be sealed with its corporate seal and to be subscribed by its Mayor and City Clerk the day and year first above written.

Countersigned:

Company Name

Witness Date

President Date

Witness Date

Secretary Date

CITY OF MADISON, WISCONSIN

Provisions have been made to pay the liability that will accrue under this contract.

Approved as to form:

Finance Director

City Attorney

Signed this _____ day of _____, 20_____

Witness

Mayor Date

Witness

City Clerk Date

SECTION H: PAYMENT AND PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS, that we _____
as principal, and _____
Company of _____ as surety, are held and firmly bound unto the City of
Madison, Wisconsin, in the sum of _____ (\$ _____) Dollars, lawful money of the
United States, for the payment of which sum to the City of Madison, we hereby bind ourselves and our
respective executors and administrators firmly by these presents.

The condition of this Bond is such that if the above bounden shall on his/her part fully and faithfully
perform all of the terms of the Contract entered into between him/herself and the City of Madison for the
construction of:

**FOREST HILL CEMETERY RECEIVING VAULT - PRESERVATION OF THE NORTH
WALL
CONTRACT NO. 6829**

in Madison, Wisconsin, and shall pay all claims for labor performed and material furnished in the
prosecution of said work, and save the City harmless from all claims for damages because of negligence
in the prosecution of said work, and shall save harmless the said City from all claims for compensation
(under Chapter 102, Wisconsin Statutes) of employees and employees of subcontractor, then this Bond is
to be void, otherwise of full force, virtue and effect.

Signed and sealed this _____ day of _____,

Countersigned:

Company Name (Principal)

Witness

President Seal

Secretary

Approved as to form:

Surety Seal

Salary Employee Commission

City Attorney

By _____

Attorney-in-Fact

This certifies that I have been duly licensed as an agent for the above company in Wisconsin under
License No. _____ for the year 20_____, and appointed as attorney-in-fact with
authority to execute this payment and performance bond which power of attorney has not been revoked.

Date

Agent

MINIMUM WAGE SCALE

FOR

PUBLIC WORKS IMPROVEMENTS

APPROVED BY: BOARD OF PUBLIC WORKS

MADISON, WISCONSIN

February 7, 2012

The attached "Prevailing Wage Rate Determination: (Pages 1 through 30), issued February 7, 2012, is hereby approved as the Minimum Wage Scale of the City of Madison.

State of Wisconsin Department of Workforce Development Equal Rights Division	DEPARTMENTAL ORDER
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ISSUE DATE: 1/13/2012

PROJECT:
 ALL PUBLIC WORKS PROJECTS UNDER SEC 66.0903, STATS.-CITY OF MADISON
 MADISON CITY, DANE COUNTY, WI
 Determination No. 201200105

PROJECT OWNER:	REQUESTER:
ROBERT F. PHILLIPS, CITY ENGINEER CITY OF MADISON-ENGINEERING 210 MARTIN L KING JR BLVD, RM 115 MADISON, WI 53703	ROBERT F. PHILLIPS, CITY ENGINEER CITY OF MADISON-ENGINEERING 210 MARTIN L KING JR BLVD, RM 115 MADISON, WI 53703

ADDITIONAL CONTACT:	
NORMAN DAVIS, CONTRACT COMPLIANCE CITY OF MADISON-DEPT OF CIVIL RTS-AA DIV 210 MARTIN L KING JR BLVD, RM 523 MADISON, WI 537033342	

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.

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), s. 66.0904(4)(e), or s. 103.49(3)(c), Stats., for a complete explanation of the administrative review process.

Enclosures

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 **FINAL ORDER** of the department unless a timely request for an administrative review is filed with the department.

ISSUED BY:

Equal Rights Division
 Labor Standards Bureau
 Construction Wage Standards Section
 PO Box 8928 Madison, WI 53708-8928
 (608)266-6861

Web Site: <http://dwd.wisconsin.gov/er/>

PREVAILING WAGE RATE DETERMINATION

Issued by the State of Wisconsin
Department of Workforce Development
Pursuant to s. 66.0903, Wis. Stats.
Issued On: 1/13/2012

DETERMINATION NUMBER: 201200105

EXPIRATION DATE: Prime Contracts MUST Be Awarded or Negotiated On Or Before 12/31/2012. If NOT, You MUST Reapply.

PROJECT NAME: ALL PUBLIC WORKS PROJECTS UNDER SEC 66.0903, STATS.-CITY OF MADISON

PROJECT LOCATION: MADISON CITY, DANE COUNTY, WI

CONTRACTING AGENCY: CITY OF MADISON-ENGINEERING

CLASSIFICATION:	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: dwd.wisconsin.gov/er/prevailing_wage_rate/Dictionary/dictionary_main.htm .
OVERTIME:	Time and one-half must be paid for all hours worked: <ul style="list-style-type: none">- over 10 hours per day on prevailing wage projects- over 40 hours per calendar week- Saturday and Sunday- 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;- The day before if January 1, July 4 or December 25 falls on a Saturday;- The day following if January 1, July 4 or December 25 falls on a Sunday. 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.
FUTURE INCREASE:	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.
PREMIUM PAY:	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.
DOT PREMIUM:	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.
APPRENTICES:	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.
SUBJOURNEY:	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.

BUILDING OR HEAVY CONSTRUCTION

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

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
CODE	TRADE OR OCCUPATION	\$	\$	\$
101	Acoustic Ceiling Tile Installer	29.06	15.16	44.22
102	Boilermaker	31.09	23.75	54.84
103	Bricklayer, Blocklayer or Stonemason Future Increase(s): Add \$.50/hr on 6/1/2012; Add \$.80 on 6/1/2013 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.	32.26	16.60	48.86
104	Cabinet Installer	29.06	15.16	44.22
105	Carpenter	29.06	15.16	44.22
106	Carpet Layer or Soft Floor Coverer	29.06	15.16	44.22
107	Cement Finisher	32.03	15.13	47.16
108	Drywall Taper or Finisher	26.10	13.65	39.75
109	Electrician Future Increase(s): Add \$.50/hr on 6/1/2012. 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.	32.55	18.68	51.23
110	Elevator Constructor	43.79	25.48	69.27
111	Fence Erector	25.50	0.26	25.76
112	Fire Sprinkler Fitter	36.39	16.75	53.14
113	Glazier	36.23	11.22	47.45
114	Heat or Frost Insulator	33.28	22.51	55.79
115	Insulator (Batt or Blown)	23.62	11.55	35.17
116	Ironworker	30.90	19.11	50.01
117	Lather	29.06	15.16	44.22

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
CODE	TRADE OR OCCUPATION	\$	\$	\$
118	Line Constructor (Electrical)	35.97	18.08	54.05
119	Marble Finisher	31.16	16.27	47.43
120	Marble Mason	32.66	16.20	48.86
121	Metal Building Erector	22.00	4.11	26.11
122	Millwright	30.66	15.21	45.87
123	Overhead Door Installer	18.00	4.86	22.86
124	Painter	25.65	14.11	39.76
125	Pavement Marking Operator	26.00	0.00	26.00
126	Piledriver	29.56	15.16	44.72
127	Pipeline Fuser or Welder (Gas or Utility)	29.54	18.84	48.38
129	Plasterer	29.03	15.16	44.19
130	Plumber	36.20	15.02	51.22
132	Refrigeration Mechanic Future Increase(s); Add \$.85/hr on 12/1/11; Add \$.90/hr on 6/1/12; Add \$.85/hr on 12/1/12.	40.35	16.21	56.56
133	Rofer or Waterproofer	28.06	0.00	28.06
134	Sheet Metal Worker	34.23	20.19	54.42
135	Steamfitter Future Increase(s); Add \$.85/hr on 12/1/11; Add \$.90/hr on 6/1/12; Add \$.85/hr on 12/1/12.	40.35	16.21	56.56
137	Teledata Technician or Installer	21.26	6.99	28.25
138	Temperature Control Installer	32.55	18.68	51.23
139	Terrazzo Finisher	18.00	5.35	23.35
140	Terrazzo Mechanic	31.16	16.27	47.43
141	Tile Finisher Future Increase(s); Add \$.50/hr on 6/1/2012; Add \$.80/hr on 6/1/2013.	23.77	16.00	39.77
142	Tile Setter Future Increase(s); Add \$.50/hr on 6/1/2012; Add \$.80/hr on 6/1/2013.	29.71	16.00	45.71
143	Tuckpointer, Caulker or Cleaner	22.00	9.75	31.75
144	Underwater Diver (Except on Great Lakes)	36.20	18.81	55.01
146	Well Driller or Pump Installer	25.32	15.30	40.62

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
CODE	TRADE OR OCCUPATION	\$	\$	\$
147	Siding Installer	16.74	2.58	19.32
150	Heavy Equipment Operator - ELECTRICAL LINE CONSTRUCTION ONLY	32.37	16.48	48.85
151	Light Equipment Operator -ELECTRICAL LINE CONSTRUCTION ONLY	28.78	15.16	43.94
152	Heavy Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	17.80	9.00	26.80
153	Light Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	23.38	12.48	35.86
154	Groundman - ELECTRICAL LINE CONSTRUCTION ONLY	21.30	10.97	32.27

TRUCK DRIVERS

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
CODE	TRADE OR OCCUPATION	\$	\$	\$
201	Single Axle or Two Axle	18.00	6.98	24.98
203	Three or More Axle Future Increase(s): Add \$1.57/hr on 6/1/2012.	18.00	13.83	31.83
204	Articulated, Euclid, Dumptor, Off Road Material Hauler Future Increase(s): Add \$1/hr on 6/3/2012; Add \$1/hr on 6/2/2013.	31.89	17.98	49.87
205	Pavement Marking Vehicle	19.25	10.84	30.09
207	Truck Mechanic	18.00	13.68	31.68

LABORERS

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
CODE	TRADE OR OCCUPATION	\$	\$	\$
301	General Laborer Future Increase(s): Add \$.50/hr. on 06/04/2012; Add \$.75/hr. on 06/03/2013 Premium Increase(s): Add \$1.00/hr for certified welder; Add \$.25/hr for mason tender	24.14	13.45	37.59
302	Asbestos Abatement Worker	23.96	12.88	36.84
303	Landscaper	17.00	6.36	23.36
310	Gas or Utility Pipeline Laborer (Other Than Sewer and Water)	20.39	12.20	32.59
311	Fiber Optic Laborer (Outside, Other Than Concrete Encased)	16.51	0.00	16.51
314	Railroad Track Laborer	14.00	4.77	18.77

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

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
<u>CODE</u>	<u>TRADE OR OCCUPATION</u>	\$	\$	\$
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/hr on 6/3/2012; Add \$1/hr on 6/2/2013.	32.42	17.98	50.40
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).	31.89	14.44	46.33
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/hr on 6/3/2012; Add \$1/hr on 6/2/2013.	31.89	17.98	49.87
504	Work Performed on the Great Lakes Including Diver; Wet Tender or Hydraulic Dredge Engineer.	36.20	18.81	55.01
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. Premium Increase(s): Add \$.50/hr for friction crane, lattice boom or crane certification (CCO).	37.45	19.45	56.90

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked				
CODE	TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
		\$	\$	\$
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.	26.80	18.52	45.32
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.	27.75	19.15	46.90

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

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked				
CODE	TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
		\$	\$	\$
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/hr on 6/3/2012; Add \$1/hr on 6/2/2013. Premium Increase(s): Add \$.50/hr at 200 ton; Add \$1.00/hr. at 300 ton; Add \$1.50/hr at 400 ton; Add \$2.00/hr at 500 ton.	34.62	17.98	52.60
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/hr on 6/3/2012; Add \$1/hr on 6/2/2013. Premium Increase(s): Add \$.25/hr for cranes with lifting capacity of 45 ton or over.	33.62	17.98	51.60
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/hr on 6/3/2012; Add \$1/hr on 6/2/2013.	32.42	17.98	50.40

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
CODE	TRADE OR OCCUPATION	\$	\$	\$
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/hr on 6/3/2012; Add \$1/hr on 6/2/2013.	31.89	17.98	49.87
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; 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; Trencher (Wheel Type or Chain Type Having 8-Inch Bucket & Under); Winches & A-Frames.	35.59	19.10	54.69
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; Rock, Stone Breaker; Skid Steer Loader (With or Without Attachments); Vibratory Hammer or Extractor, Power Pack. Future Increase(s): Add \$1/hr on 6/3/2012; Add \$1/hr on 6/2/2013.	29.19	17.98	47.17
514	Gas or Utility Pipeline, Except Sewer & Water (Primary Equipment). Future Increase(s): Add \$2/hr. on 1/1/2013.	34.89	19.68	54.57
515	Gas or Utility Pipeline, Except Sewer & Water (Secondary Equipment).	30.32	17.40	47.72
516	Fiber Optic Cable Equipment	22.00	7.27	29.27

SEWER, WATER OR TUNNEL CONSTRUCTION

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

SKILLED TRADES

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
CODE	TRADE OR OCCUPATION	\$	\$	\$
103	Bricklayer, Blocklayer or Stonemason	32.66	16.20	48.86
105	Carpenter 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.	33.43	19.31	52.74
107	Cement Finisher Future Increase(s): Add \$1.86 on 6/1/12; Add \$1.87 on 6/1/13; Add \$1.87 on 6/1/14; Add \$1.87 on 6/1/15; 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.	30.68	15.68	46.36
109	Electrician Future Increase(s): Add \$1.40/hr on 6/1/2012. Add \$1.60/hr on 6/1/2013. 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.	31.54	20.95	52.49
111	Fence Erector	25.50	0.26	25.76
116	Ironworker 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.	31.31	22.22	53.53
118	Line Constructor (Electrical)	35.97	18.08	54.05
125	Pavement Marking Operator	26.00	0.00	26.00
126	Piledriver	29.56	15.16	44.72
130	Plumber	36.20	15.02	51.22
135	Steamfitter	39.90	15.76	55.66
137	Teledata Technician or Installer	21.26	6.99	28.25

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked				
<u>CODE</u>	<u>TRADE OR OCCUPATION</u>	<u>HOURLY BASIC RATE OF PAY</u>	<u>HOURLY FRINGE BENEFITS</u>	<u>TOTAL</u>
		\$	\$	\$
143	Tuckpointer, Caulker or Cleaner	22.00	9.75	31.75
144	Underwater Diver (Except on Great Lakes)	36.20	18.81	55.01
146	Well Driller or Pump Installer	24.22	14.80	39.02
150	Heavy Equipment Operator - ELECTRICAL LINE CONSTRUCTION ONLY	32.37	16.48	48.85
151	Light Equipment Operator -ELECTRICAL LINE CONSTRUCTION ONLY	28.78	15.16	43.94
152	Heavy Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	17.80	9.00	26.80
153	Light Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	23.38	12.48	35.86
154	Groundman - ELECTRICAL LINE CONSTRUCTION ONLY	21.30	10.97	32.27

TRUCK DRIVERS

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked				
<u>CODE</u>	<u>TRADE OR OCCUPATION</u>	<u>HOURLY BASIC RATE OF PAY</u>	<u>HOURLY FRINGE BENEFITS</u>	<u>TOTAL</u>
		\$	\$	\$
201	Single Axle or Two Axle	23.00	8.64	31.64
203	Three or More Axle	21.17	9.51	30.68
204	Articulated, Euclid, Dumptor, Off Road Material Hauler Future Increase(s): Add \$1.75/hr on 6/1/2012; Add \$1.85/hr on 6/1/2013. 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.	22.50	16.19	38.69
205	Pavement Marking Vehicle	19.25	10.84	30.09
207	Truck Mechanic	21.17	9.51	30.68

LABORERS

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked				
<u>CODE</u>	<u>TRADE OR OCCUPATION</u>	<u>HOURLY BASIC RATE OF PAY</u>	<u>HOURLY FRINGE BENEFITS</u>	<u>TOTAL</u>
		\$	\$	\$
301	General Laborer Future Increase(s): Add \$.70/hr. on 06/04/2012; Add \$.80/hr. on 06/03/2013 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.	25.28	13.44	38.72

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
CODE	TRADE OR OCCUPATION	\$	\$	\$
303	Landscaper	17.00	6.36	23.36
304	Flagperson or Traffic Control Person	12.00	17.89	29.89
311	Fiber Optic Laborer (Outside, Other Than Concrete Encased)	16.51	0.00	16.51
314	Railroad Track Laborer	14.00	4.77	18.77

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

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
CODE	TRADE OR OCCUPATION	\$	\$	\$
521	Backhoe (Track Type) Having a Mfgr.'s Rated Capacity of 130,000 Lbs. or Over; Calsson 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. Future Increase(s): Add \$1/hr on 6/3/2012; Add \$1/hr on 6/2/2013. Premium Increase(s): Add \$.25/hr for cranes with lifting capacity of 45 ton or over.	33.62	17.98	51.60
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/hr on 6/3/2012; Add \$1/hr on 6/2/2013.	32.42	17.98	50.40

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
CODE	TRADE OR OCCUPATION	\$	\$	\$
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/hr on 6/3/2012; Add \$1/hr on 6/2/2013.	31.89	17.98	49.87
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.	30.89	17.16	48.05
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/hr on 6/3/2012; Add \$1/hr on 6/2/2013.	29.19	17.98	47.17
526	Boiler (Temporary Heat); Forklift; Greaser; Oiler.	29.19	17.96	47.15
527	Work Performed on the Great Lakes Including Diver; Wet Tender or Hydraulic Dredge Engineer.	36.20	18.81	55.01
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.	36.20	18.81	55.01

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked				
<u>CODE</u>	<u>TRADE OR OCCUPATION</u>	<u>HOURLY BASIC RATE OF PAY</u>	<u>HOURLY FRINGE BENEFITS</u>	<u>TOTAL</u>
		\$	\$	\$
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.	26.80	18.52	45.32
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.	26.80	18.52	45.32

AIRPORT PAVEMENT OR STATE HIGHWAY CONSTRUCTION

Includes all airport projects (excluding buildings) and all projects awarded by the Wisconsin Department of Transportation (excluding buildings).

SKILLED TRADES

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
<u>CODE</u>	<u>TRADE OR OCCUPATION</u>	\$	\$	\$
103	Bricklayer, Blocklayer or Stonemason	32.66	15.92	48.58
105	Carpenter	30.23	15.16	45.39
107	Cement Finisher Future Increase(s): Add \$1.86 on 6/1/12; Add \$1.87 on 6/1/13; Add \$1.87 on 6/1/14; Add \$1.87 on 6/1/15; 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.	30.68	15.68	46.36
109	Electrician	37.25	14.68	51.93
111	Fence Erector	35.62	0.00	35.62
116	Ironworker	30.90	19.11	50.01
118	Line Constructor (Electrical)	35.97	18.08	54.05
124	Painter	28.00	11.15	39.15
125	Pavement Marking Operator	26.65	14.92	41.57
126	Piledriver	29.56	15.16	44.72
133	Rofer or Waterproofer	28.06	0.00	28.06
137	Teledata Technician or Installer	21.26	6.99	28.25
143	Tuckpointer, Caulker or Cleaner	22.00	9.75	31.75
144	Underwater Diver (Except on Great Lakes)	36.20	18.81	55.01
150	Heavy Equipment Operator - ELECTRICAL LINE CONSTRUCTION ONLY	35.42	12.90	48.32
151	Light Equipment Operator -ELECTRICAL LINE CONSTRUCTION ONLY	35.50	14.27	49.77
152	Heavy Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	25.18	14.07	39.25
153	Light Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	23.38	12.48	35.86

154	Groundman - ELECTRICAL LINE CONSTRUCTION ONLY	21.30	10.97	32.27
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TRUCK DRIVERS

Fringe Benefits Must Be Paid On All Hours Worked

<u>CODE</u>	<u>TRADE OR OCCUPATION</u>	<u>HOURLY BASIC RATE OF PAY</u> \$	<u>HOURLY FRINGE BENEFITS</u> \$	<u>TOTAL</u> \$
201	Single Axle or Two Axle Future Increase(s): Add \$1.75/hr on 6/1/2012; Add \$1.85/hr on 6/1/2013. 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.	22.35	16.19	38.54
203	Three or More Axle Future Increase(s): Add \$1.75/hr on 6/1/2012; Add \$1.85/hr on 6/1/2013. 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.	22.50	16.19	38.69
204	Articulated, Euclid, Dumptor, Off Road Material Hauler	24.91	15.63	40.54
205	Pavement Marking Vehicle	23.84	14.76	38.60
206	Shadow or Pilot Vehicle	24.76	15.35	40.11
207	Truck Mechanic	24.91	15.35	40.26

LABORERS

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked				
CODE	TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY \$	HOURLY FRINGE BENEFITS \$	TOTAL \$
301	General Laborer Future Increase(s): Add \$1.60/hr on 6/1/2012; Add \$1.70/hr on 6/1/2013; Add \$1.60/hr on 6/1/2014. Premium Increase(s): Add \$.10/hr for topman, air tool operator, vibrator or tamper operator (mechanical hand operated), chain saw operator and demolition burning torch laborer; Add \$.15/hr for bituminous worker (raker and luteman), formsetter (curb, sidewalk and pavement) and strike off man; Add \$.20/hr for blaster and powderman; Add \$.25/hr for bottomman; Add \$.35/hr for line and grade specialist; Add \$.45/hr for pipelayer. / 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).	27.20	13.45	40.65
302	Asbestos Abatement Worker	23.96	12.88	36.84
303	Landscaper Future Increase(s): Add \$1.60/hr on 6/1/12; Add \$1.70/hr on 6/1/13; Add \$1.60/hr on 6/1/14. 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).	27.20	13.45	40.65
304	Flagperson or Traffic Control Person Future Increase(s): Add \$1.60/hr on 6/1/2012; Add \$1.70/hr on 6/1/2013; Add \$1.60/hr on 6/1/2014. 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 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.	23.55	13.45	37.00

Fringe Benefits Must Be Paid On All Hours Worked

<u>CODE</u>	<u>TRADE OR OCCUPATION</u>	<u>HOURLY BASIC RATE OF PAY</u> \$	<u>HOURLY FRINGE BENEFITS</u> \$	<u>TOTAL</u> \$
311	Fiber Optic Laborer (Outside, Other Than Concrete Encased)	16.51	0.00	16.51
314	Railroad Track Laborer	14.00	4.77	18.77

**HEAVY EQUIPMENT OPERATORS
AIRPORT PAVEMENT OR STATE HIGHWAY CONSTRUCTION**

Fringe Benefits Must Be Paid On All Hours Worked

<u>CODE</u>	<u>TRADE OR OCCUPATION</u>	<u>HOURLY BASIC RATE OF PAY</u> \$	<u>HOURLY FRINGE BENEFITS</u> \$	<u>TOTAL</u> \$
531	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; Traveling Crane (Bridge Type). Future Increase(s): Add \$2/hr on 6/1/12; Add \$2/hr on 6/1/13; Add \$1.75/hr on 6/1/14. 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).	34.22	18.90	53.12
532	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 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); Licensed Boat Pilot (NOT Performing Work on the Great Lakes); Pile Driver. Future Increase(s): Add \$2/hr on 6/1/12; Add \$2/hr on 6/1/13; Add \$1.75/hr on 6/1/14. 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).	33.72	18.90	52.62

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
CODE	TRADE OR OCCUPATION	\$	\$	\$
533	<p>Air Track, Rotary or Percussion Drilling Machine &/or Hammers, Blaster; Asphalt Heater, Planer & Scarifier; Asphalt Milling Machine; Asphalt Screed; Automatic Subgrader (Concrete); 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; Boatmen (NOT Performing Work on the Great Lakes); 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 & Gutter Machine; Concrete Spreader & 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); Material or Stack Hoist; Mechanic or Welder; Milling Machine; Post Hole Digger or Driver; 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); 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 & A-Frames.</p> <p>Future Increase(s): Add \$2/hr on 6/1/12; Add \$2/hr on 6/1/13; Add \$1.75/hr on 6/1/14.</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 & 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).</p>	33.22	18.90	52.12

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
CODE	TRADE OR OCCUPATION	\$	\$	\$
534	<p>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 (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; Tining or Curing Machine.</p> <p>Future Increase(s): Add \$2/hr on 6/1/12; Add \$2/hr on 6/1/13; Add \$1.75/hr on 6/1/14.</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 & 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).</p>	32.96	18.90	51.86
535	<p>Air Compressor (&/or 400 CFM or Over); Air, Electric or Hydraulic Jacking System; Augers (Vertical & Horizontal); 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.</p> <p>Future Increase(s): Add \$2/hr on 6/1/12; Add \$2/hr on 6/1/13; Add \$1.75/hr on 6/1/14.</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 & 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).</p>	32.67	18.90	51.57
536	Fiber Optic Cable Equipment.	22.00	7.27	29.27
537	Work Performed on the Great Lakes Including Diver; Wet Tender or Hydraulic Dredge Engineer.	36.20	18.81	55.01

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked				
<u>CODE</u>	<u>TRADE OR OCCUPATION</u>	<u>HOURLY BASIC RATE OF PAY</u> \$	<u>HOURLY FRINGE BENEFITS</u> \$	<u>TOTAL</u> \$
538	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.	36.20	18.81	55.01
539	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.	26.80	18.52	45.32
540	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.	26.80	18.52	45.32

LOCAL STREET OR MISCELLANEOUS PAVING CONSTRUCTION

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

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
CODE	TRADE OR OCCUPATION	\$	\$	\$
103	Bricklayer, Blocklayer or Stonemason	32.66	16.20	48.86
105	Carpenter	29.06	15.16	44.22
107	Cement Finisher Future Increase(s): Add \$1.86 on 6/1/12; Add \$1.87 on 6/1/13; Add \$1.87 on 6/1/14; Add \$1.87 on 6/1/15; 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.	30.68	15.68	46.36
109	Electrician Future Increase(s): Add \$.50/hr. effective 06/04/2012. 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.	28.74	17.86	46.60
111	Fence Erector	25.50	0.26	25.76
116	Ironworker	30.90	19.11	50.01
118	Line Constructor (Electrical)	35.97	18.08	54.05
124	Painter	25.65	14.11	39.76
125	Pavement Marking Operator	26.00	0.00	26.00
126	Piledriver	29.56	15.16	44.72
133	Rofer or Waterproofer	28.06	0.00	28.06
137	Teledata Technician or Installer	21.26	6.99	28.25
143	Tuckpointer, Caulker or Cleaner	22.00	9.75	31.75
144	Underwater Diver (Except on Great Lakes)	36.20	18.81	55.01
150	Heavy Equipment Operator - ELECTRICAL LINE CONSTRUCTION ONLY	35.42	12.90	48.32

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
<u>CODE</u>	<u>TRADE OR OCCUPATION</u>	\$	\$	\$
151	Light Equipment Operator -ELECTRICAL LINE CONSTRUCTION ONLY 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.	29.64	14.64	44.28
152	Heavy Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	25.18	13.07	38.25
153	Light Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	23.38	12.48	35.86
154	Groundman - ELECTRICAL LINE CONSTRUCTION ONLY	21.30	10.97	32.27

TRUCK DRIVERS

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
<u>CODE</u>	<u>TRADE OR OCCUPATION</u>	\$	\$	\$
201	Single Axle or Two Axle	15.00	0.00	15.00
203	Three or More Axle	19.50	4.97	24.47
204	Articulated, Euclid, Dumptor, Off Road Material Hauler Future Increase(s): Add \$1/hr on 6/3/2012; Add \$1/hr on 6/2/2013.	31.89	17.98	49.87
205	Pavement Marking Vehicle	19.25	10.84	30.09
206	Shadow or Pilot Vehicle	15.00	0.00	15.00
207	Truck Mechanic	19.50	4.97	24.47

LABORERS

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
<u>CODE</u>	<u>TRADE OR OCCUPATION</u>	\$	\$	\$
301	General Laborer	26.15	12.29	38.44
303	Landscaper	23.71	15.07	38.78
304	Flagperson or Traffic Control Person	12.00	17.89	29.89
311	Fiber Optic Laborer (Outside, Other Than Concrete Encased)	16.51	0.00	16.51
314	Railroad Track Laborer	14.00	4.77	18.77

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

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked				
<u>CODE</u>	<u>TRADE OR OCCUPATION</u>	<u>HOURLY BASIC RATE OF PAY</u> \$	<u>HOURLY FRINGE BENEFITS</u> \$	<u>TOTAL</u> \$
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 \$2/hr on 6/1/12; Add \$2/hr on 6/1/13; Add \$1.75/hr on 6/1/14. 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).	34.22	18.90	53.12
542	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 \$2/hr on 6/1/12; Add \$2/hr on 6/1/13; Add \$1.75/hr on 6/1/14. 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).	33.72	18.90	52.62

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
CODE	TRADE OR OCCUPATION	\$	\$	\$
543	<p>Air Track, Rotary or Percussion Drilling Machine &/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. & 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 & Gutter Machine; Concrete Spreader & 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 & A-Frames.</p> <p>Future Increase(s): Add \$2/hr on 6/1/12; Add \$2/hr on 6/1/13; Add \$1.75/hr on 6/1/14.</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 & 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).</p>	33.22	18.90	52.12

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked				
<u>CODE</u>	<u>TRADE OR OCCUPATION</u>	<u>HOURLY BASIC RATE OF PAY</u> \$	<u>HOURLY FRINGE BENEFITS</u> \$	<u>TOTAL</u> \$
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 \$2/hr on 6/1/12; Add \$2/hr on 6/1/13; Add \$1.75/hr on 6/1/14. 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).	33.22	18.90	52.12
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.	30.42	17.58	48.00
546	Fiber Optic Cable Equipment.	22.00	7.27	29.27
547	Work Performed on the Great Lakes Including Diver; Wet Tender or Hydraulic Dredge Engineer.	36.20	18.81	55.01
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.	36.20	18.81	55.01
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.	26.80	18.52	45.32
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.	26.80	18.52	45.32

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

Fringe Benefits Must Be Paid On All Hours Worked

<u>CODE</u>	<u>TRADE OR OCCUPATION</u>	<u>HOURLY BASIC RATE OF PAY</u> \$	<u>HOURLY FRINGE BENEFITS</u> \$	<u>TOTAL</u> \$
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.	34.62	17.96	52.58
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 \$2/hr on 6/1/12; Add \$2/hr on 6/1/13; Add \$1.75/hr on 6/1/14. 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).	33.72	18.90	52.62

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
CODE	TRADE OR OCCUPATION	\$	\$	\$
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 Mfr.'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 \$2/hr on 6/1/12; Add \$2/hr on 6/1/13; Add \$1.75/hr on 6/1/14.	32.67	18.55	51.22
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.	31.52	17.89	49.41
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 \$2/hr on 6/1/12; Add \$2/hr on 6/1/13; Add \$1.75/hr on 6/1/14.	32.67	18.55	51.22
556	Fiber Optic Cable Equipment.	22.00	7.27	29.27

RESIDENTIAL OR AGRICULTURAL CONSTRUCTION

Includes single family houses or apartment buildings of no more than four (4) stories in height and all buildings, structures or facilities that are primarily used for agricultural or farming purposes, excluding commercial buildings. For classification purposes, the exterior height of a residential building, in terms of stories, is the primary consideration. All incidental items such as site work, driveways, parking lots, private sidewalks, private septic systems or sewer and water laterals connected to a public system and swimming pools are included within this definition. Residential buildings of five (5) stories and above are NOT included within this definition.

SKILLED TRADES

<u>CODE</u>	<u>TRADE OR OCCUPATION</u>	<u>HOURLY BASIC RATE OF PAY</u> \$	<u>HOURLY FRINGE BENEFITS</u> \$	<u>TOTAL</u> \$
101	Acoustic Ceiling Tile Installer	27.00	2.47	29.47
102	Bollermaker	31.09	23.75	54.84
103	Bricklayer, Blocklayer or Stonemason	32.00	3.00	35.00
104	Cabinet Installer	22.00	2.74	24.74
105	Carpenter	27.00	3.46	30.46
106	Carpet Layer or Soft Floor Coverer	23.95	2.78	26.73
107	Cement Finisher	21.33	4.25	25.58
108	Drywall Taper or Finisher	23.80	1.55	25.35
109	Electrician	22.00	9.18	31.18
110	Elevator Constructor	43.79	25.48	69.27
111	Fence Erector	17.64	4.33	21.97
112	Fire Sprinkler Fitter	36.39	16.97	53.36
113	Glazier	36.23	11.22	47.45
114	Heat or Frost Insulator	29.04	19.73	48.77
115	Insulator (Batt or Blown)	18.95	1.70	20.65
116	Ironworker	30.90	19.11	50.01
117	Lather	28.15	15.14	43.29
119	Marble Finisher	31.16	16.27	47.43
120	Marble Mason	32.66	16.20	48.86
121	Metal Building Erector	17.50	2.80	20.30
123	Overhead Door Installer	17.00	0.00	17.00
124	Painter	25.65	6.33	31.98
125	Pavement Marking Operator	26.00	0.00	26.00

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
<u>CODE</u>	<u>TRADE OR OCCUPATION</u>	\$	\$	\$
129	Plasterer	19.00	0.29	19.29
130	Plumber	30.00	10.34	40.34
132	Refrigeration Mechanic	30.96	0.00	30.96
133	Rofer or Waterproofofer	29.85	1.55	31.40
134	Sheet Metal Worker	21.03	3.40	24.43
135	Steamfitter	32.59	11.05	43.64
137	Teledata Technician or Installer	19.23	5.32	24.55
138	Temperature Control Installer	22.45	4.11	26.56
139	Terrazzo Finisher	18.00	5.35	23.35
140	Terrazzo Mechanic	31.16	16.27	47.43
141	Tile Finisher	23.96	13.36	37.32
142	Tile Setter	21.00	0.00	21.00
143	Tuckpointer, Caulker or Cleaner	23.96	12.88	36.84
146	Well Driller or Pump Installer	15.10	12.38	27.48
147	Siding Installer	18.80	1.42	20.22

TRUCK DRIVERS

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
<u>CODE</u>	<u>TRADE OR OCCUPATION</u>	\$	\$	\$
201	Single Axle or Two Axle	19.86	2.54	22.40
203	Three or More Axle	19.50	14.27	33.77
205	Pavement Marking Vehicle	19.25	10.84	30.09
207	Truck Mechanic	19.00	1.75	20.75

LABORERS

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
<u>CODE</u>	<u>TRADE OR OCCUPATION</u>	\$	\$	\$
301	General Laborer	16.09	7.18	23.27
302	Asbestos Abatement Worker	17.00	2.21	19.21
303	Landscaper	25.00	0.54	25.54

311	Fiber Optic Laborer (Outside, Other Than Concrete Encased)	16.51	0.00	16.51
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**HEAVY EQUIPMENT OPERATORS
RESIDENTIAL OR AGRICULTURAL CONSTRUCTION**

Fringe Benefits Must Be Paid On All Hours Worked

<u>CODE</u>	<u>TRADE OR OCCUPATION</u>	<u>HOURLY BASIC RATE OF PAY</u> \$	<u>HOURLY FRINGE BENEFITS</u> \$	<u>TOTAL</u> \$
557	Asphalt Heater, Planer & Scarifier; Asphalt Milling Machine; Asphalt Screed; Backhoe (Track Type); 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 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 & Gutter Machine; Concrete Spreader & Distributor; Crane (Carry Deck, Mini) or Truck Mounted Hydraulic Crane (10 Tons or Under); Crane With a Lifting Capacity of 25 Tons or Under; Crane, Shovel, Dragline, Clamshells; Forestry Equipment, Timbco, Tree Shear, Tub Grinder, Processor; 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; Roller (Over 5 Ton); Scraper (Self Propelled or Tractor Drawn) 5 cu yds or More Capacity; Shoulder Widener; Skid Rig; Stabilizing or Concrete Mixer (Self-Propelled or 14S or Over); 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); Winches & A-Frames.	29.45	15.37	44.82
558	Air Compressor (&/or 400 CFM or Over); Air, Electric or Hydraulic Jacking System; Backfiller; Belting, Burlap, Texturing Machine; Boiler (Temporary Heat); Broom or Sweeper; Compactor (Self-Propelled or Tractor Mounted, Towed & Light Equipment); Concrete Finishing Machine (Road Type); Farm or Industrial Type Tractor; Forklift; Generator (&/or 150 KW or Over); Heaters (Mechanical); High Pressure Utility Locating Machine (Daylighting Machine); Jeep Digger; Lift Slab Machine; Mulcher; Oiler; Post Hole Digger or Driver; Power Subgrader; Pump (3 Inch or Over) or Well Points; Robotic Tool Carrier (With or Without Attachments); Rock, Stone Breaker; Roller (Rubber Tire, 5 Tons or Under); Screed (Milling Machine); Self Propelled Chip Spreader; Shouldering Machine; Skid Steer Loader (With or Without Attachments); Stump Chipper; Telehandler; Vibratory Hammer or Extractor, Power Pack.	26.45	14.35	40.80

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