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# CITY OF MILWAUKEE

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## DEPARTMENT OF PUBLIC WORKS

INFRASTRUCTURE SERVICES DIVISION

BRIDGES & BUILDINGS SECTION

STRUCTURAL PLANNING & DESIGN

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## TRAFFIC DECK RECOATING AND REPAIRS OF PARKING LEVELS 1-4

at the

## MILWAUKEE-MICHIGAN PARKING STRUCTURE

located at

## 535 NORTH MILWAUKEE STREET MILWAUKEE, WI

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JOB NUMBER : PA160150302

OFFICIAL NOTICE NUMBER: 32-1-2016

DATE : MAY 2016

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CITY OF MILWAUKEE, WISCONSIN  
DEPARTMENT OF PUBLIC WORKS  
INFRASTRUCTURE SERVICES DIVISION

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Specifications

Governing

TRAFFIC DECK RECOATING AND REPAIRS OF PARKING LEVELS 1-4

at the

MILWAUKEE-MICHIGAN PARKING STRUCTURE

535 NORTH MILWAUKEE STREET  
MILWAUKEE, WI

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Job No. PA160150302



MAY 2016



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## SECTION 00 01 15 – LIST OF DRAWING SHEETS

The following listed Drawings accompany and form a part of the project contract documents along with these specifications and generally illustrate the nature of the work.

<u>Sheet No.</u>	<u>Title</u>
1	Title Sheet
2	East Elevation & Transverse Section
3	Level 1 Plan
4	Level 2 Plan
5	Level 3 Plan
6	Level 4 Plan
7	Wall/Slab Joint & Pavement Marking Details
8	Traffic Control Plan – Phases 1&2
9	Traffic Control Plan – Phases 3-5

END OF SECTION 00 01 15



CITY OF MILWAUKEE  
GENERAL OFFICIAL NOTICE TO CONTRACTORS

Separate sealed bids for each project will be received until 10:30 a.m. of the bid opening date at which time bids will be publicly opened and read for furnishing all material and doing all work for each project in accordance with the requirements of the respective Official Notice on the bid form furnished in accordance with plans, specifications, contract documents, and proposed form of contract on file in the office of the Department of Public Works, Frank P. Zeidler Municipal Building, Room 506, Milwaukee, Wisconsin 53202.

PROSPECTIVE BIDDERS ARE TO CAREFULLY EXAMINE AND REVIEW ALL CONTRACT DOCUMENTS AND MATERIALS IN SAID OFFICE BEFORE SUBMITTING BID.

Affidavits of No Interest must accompany the bids, and the failure of prospective bidders to comply with these requirements may disqualify the bid.

The Contractor/Lessee agrees to comply with all applicable requirements of the American with Disabilities Act of 1990, 42 U.S.C. Section 12101, Et. Seq. the TDD Number for Public Works is (414) 286-2025.

As a part of the bid each bidder shall submit a full and complete list of all the proposed subcontractors and the class of work to be performed by each, which list shall not be added to nor altered without the written consent of the Commissioner of Public Works.

All Contractor(s) and subcontractor(s) are required to furnish or have on file a certificate of insurance in accordance with the insurance provisions of the General Specifications.

All Contractor(s) and subcontractor(s) are subject to the prevailing wage rates and hours of labor as prescribed by the Common Council of the City of Milwaukee consistent with provisions of Section 66.293 of the Wisconsin Statutes.

Copies of the actual work classifications and wage and fringe benefit rates enforced on this project are available in Room 506 of the Frank P. Zeidler Municipal Building.

Corporate surety will be required on performance and payment bonds for all projects listed in the following Official Notice. All applicable charter and statutory provisions and ordinances, all the provisions of this official notice, invitation to bid, general and detailed specifications, special provisions, proposal, schedule of fixed prices, addendum and plans for this project and all other contract documents set forth in the invitation to bid will be incorporated and made part of the contract as if therein set forth in full.

Tie bids, when the lowest ones, will be decided by the Commissioner of Public Works.

The Commissioner of Public Works reserves the right to reject any or all bids.

END OF SECTION 00 11 14



CITY OF MILWAUKEE  
SPECIFIC OFFICIAL NOTICE NO. 32-1-2016

Sealed bids will be opened on Thursday, May 19, 2016 at 10:30 A.M. for the TRAFFIC DECK RECOATING AND REPAIRS OF PARKING LEVELS 1-4 AT THE MILWAUKEE-MICHIGAN PARKING STRUCTURE, located at 535 North Milwaukee Street, Milwaukee, Wisconsin.

Bid Security Required: Bond (either Electronic thru Bid Express or Paper), Certified Check, Cashier's Check, or Cash to accompany bid: 10% of the Contractor's Base Bid. For those bids being submitted through BID EXPRESS and using a Paper Bond, the Contractor may fax a signed/executed copy of the bid bond to the Department of Public Works Contract Office at 414-286-8110. HOWEVER, THE FAXED COPY OF THE BOND MUST BE RECEIVED BY NO LATER THAN 10:30 A.M. ON THE SAME DATE THAT THE BIDS ARE DUE FOR THAT SPECIFIC OFFICIAL NOTICE, or the bid will be considered non responsive. The original bid bond document will then need to be submitted by the Contractor the Department of Public Works Contract Office, Rm. 506, Municipal Building, immediately upon being notified that they are the apparent low bidder.

Completion Date: September 2, 2016

Liquidated Damages, per diem: \$500.00

THE SMALL BUSINESS ENTERPRISE REQUIREMENT FOR THIS CONTRACT IS 5%.

For a complete listing of City of Milwaukee certified SBE firms, see the Office of Small Business Development's (OSBD) website at [Milwaukee.gov/osbd](http://Milwaukee.gov/osbd). If there are any questions regarding SBE certified firms, please contact OSBD office at (414) 286-5553.

THE RESIDENT PREFERENCE PROGRAM PARTICIPATION REQUIREMENT FOR THIS PROJECT IS 20%.

THE APPRENTICESHIP REQUIREMENTS FOR THIS CONTRACT ARE NONE.

**IMPORTANT NOTICE:** The Invitation to Bid, all bid documents and the Plans and Specifications for the listed project are all available electronically on the DPW website AS WELL AS on the BID EXPRESS Website. At this time, bids can be submitted using either Bid Express OR by purchasing and submitting paper bids in the usual manner. However, Bidders are strongly encouraged to utilize the electronic and/or Bid Express methods of obtaining bid documents and bid express for submitting bids, as in the near future the Department of Public Works intends to have bid documents available only electronically and through Bid Express, and to accept bid submittals only via Bid Express. Electronic documents can be obtained via <http://www.mpw.net/bids/docs/32-2016/>. The Bid Express website is located at [www.bidexpress.com](http://www.bidexpress.com). Any required addenda or response related to listed projects will be posted on both the DPW and Bid Express websites. At this time there are still a limited number of hard copies of the bid documents available at the address listed below. IF YOU ONLY PRINT THE DOCUMENTS FROM THE DPW WEBSITE PLEASE CALL 414-286-3314 TO HAVE YOUR COMPANY'S NAME AND CONTACT INFORMATION PLACED ON THE PLAN HOLDERS' LIST.

**PAYMENT MONITORING REQUIREMENTS**

All Contractors awarded a contract valued at \$25,000.00 or more are required to participate in training on the City of Milwaukee's B2GNow contract compliance software. Contractors must complete the training no later than 30 days after the date of contract award. Throughout the contract term, Contractors are required to regularly provide timely payment information in the City's contract compliance software.

*Please contact the Office of Small Business Development (OSBD) at 414-286-5553 should you have any questions or concerns regarding the training or reporting process.*

**PAYROLL MONITORING REQUIREMENTS:** *The Prime Contractor awarded this project is required to participate in training on the City of Milwaukee's LCP Tracker Labor Compliance Software after the date of contract award. Throughout the contract term, Contractors are required to regularly provide timely payroll information via LCP Tracker.*

*Please contact the DPW Contracts Office at 414-286-3314 should you have any questions or concerns regarding the training or reporting process.*

Plans and specifications will be furnished to the prospective bidders upon payment of a \$10.00 non-refundable fee in Room 506, Frank P. Zeidler Municipal Building, 841 North Broadway, Milwaukee, Wisconsin 53202.

A \$10.00 per set additional non-refundable fee is required to obtain bid documents by mail. Plans are sent via U.S. Mail unless other arrangements are made by the Contractor.

Contractor must comply with all provisions of the CITY OF MILWAUKEE GENERAL OFFICIAL NOTICE TO CONTRACTORS published above.

THE CONTRACTOR SHALL SPECIFICALLY NOTE SMALL BUSINESS ENTERPRISE, RESIDENCY AND APPRENTICESHIP FORMS FOR THIS PROJECT. IF THE FORMS ARE NOT FILLED OUT PROPERLY, IT WILL BE CAUSE FOR REJECTION OF THE BID.

THE TRAINING INCENTIVE WILL NOT APPLY TO THIS PROJECT.

Plans and project manual for this project may be viewed in the Infrastructure Services Division, Structural Design Unit, Room 907, Frank P. Zeidler Municipal Building, 841 North Broadway, Milwaukee, Wisconsin.

END OF SECTION 00 11 17

## SECTION 00 21 13 – INSTRUCTIONS TO BIDDERS

### PART 1 – GENERAL

#### 1.1 SUMMARY

- A. See also Instructions to Bidders in the “General Specifications” of the Department of Public Works, City of Milwaukee, Wisconsin, dated January 31, 1992, and all subsequent addenda.

#### 1.2 BID FORM

- A. Submit a unit price for each item of work as indicated on the drawings and specified herein, complete in every respect.
- B. Bids will not be accepted in any form except on the bid form included with these specifications.
- C. The Contractor must recognize and abide by the right of the Owner (City of Milwaukee) to accept or reject any or all bids in the best interests of the City.

#### 1.3 CONTRACT AWARD

- A. In case of discrepancy between the total Base Bid indicated in the proposal and that obtained by adding the products of the quantities of work and the unit prices, the unit prices shall govern. Any errors found in the total Base Bid indicated will be corrected, and the contract award shall be made to the lowest responsible bidder based on the corrected total Base Bid.
- B. The Commissioner of Public Works will award the contract based on the Base Bid only.

#### 1.4 CONTRACT BREAKDOWN

- A. Shortly after the award of the contract, each Contractor shall submit a list showing the cost breakdown of the items in his contract. This list will be used as a basis for estimates of work completed for partial payment.

#### 1.5 SITE VISIT

- A. All Contractors shall visit the site, consult the drawings and specifications, be familiar with the work of other Contractors and determine for himself all conditions affecting the work.
- B. Failure by a Contractor to be familiar with the project shall not release him from any obligation under this contract to complete the work in strict conformity with the plans and specifications and all City, State and Federal codes or regulations pertaining to the work.

#### 1.6 TIME FOR COMPLETION

- A. The time allowed for completion is stated in the Specific Official Notice and shall start with the date on the Notice to proceed which will be sent to the Contractor directly following the signing of the contract.

00 21 13/2

- B. The time allowed includes the time required for fabricating and procuring material and doing the work at the Milwaukee-Michigan Parking Structure.

PART 2 – PRODUCTS (Not Applicable)

PART 3 – EXECUTION (Not Applicable)

PART 4 – MEASUREMENT AND PAYMENT (Not Applicable)

END OF SECTION 00 21 13

SECTION 00 72 00 – GENERAL CONDITIONS

PART 1 – GENERAL

1.1 DEPARTMENT OF PUBLIC WORKS GENERAL SPECIFICATIONS

- A. Provisions of the Department of Public Works General Specifications dated January 31, 1992, and all subsequent addenda, shall apply to all contractors and subcontractors working on the project. Copies of the General Specifications may be obtained from the Department of Public Works General Office, Room 506, Frank P. Zeidler Municipal Building, 841 North Broadway, Milwaukee, Wisconsin.

1.2 DEFINITIONS

- A. Commissioner: Commissioner of Public Works
- B. Division: Infrastructure Services Division.
- C. City Engineer: The City Engineer of the Infrastructure Services Division.
- D. Project Inspector: The authorized representative of the Commissioner assigned to make detailed inspection of any or all portions of the work and materials thereof.
- E. Addenda: Writing or graphic instruments issued prior to the execution of the contract which modify or interpret the bidding documents, including drawings and specifications by additions, deletions, clarifications or corrections. Addenda will become part of the contract documents when the contract is executed.
- F. Contract Drawings: Drawings of the work to be done as listed hereafter in the List of Drawing Sheets.
- G. Base Bid: Amount of money stated in the Bid Form as the sum of which the bidder offers to perform the work.
- H. Additive Alternate: Additional amount of money stated in the Bid Form as the sum of which the bidder offers to perform the alternate work.

1.3 CONTROL OF WORK AND MATERIALS

- A. Detail and Shop Drawings: Shop drawings and other additional drawings which may be required for each branch of the work shall be prepared by each respective contractor unless otherwise directed by the City Engineer. Prints shall be the same size as contract documents when practical. Prints of each drawing shall be submitted to the City Engineer for approval before proceeding with the work. Changes ordered by the City Engineer shall be made and revised prints submitted as above. The City Engineer's approval of drawing shall not relieve the Contractor of responsibility for errors.

- B. Consignment and Delivery of Materials: The materials for the work shall be consigned to the Contractor and he shall be responsible for the delivery of all materials required for the completion of the contract.

#### 1.4 PROJECT COORDINATION

- A. Contractors are required, so far as possible; to arrange work and to dispose of materials so as not to interfere with the work or storage of materials of other contractors or City forces engaged upon the work.
- B. Contractor shall give full cooperation to other trades and furnish any information necessary to permit the work of all trades to be installed satisfactorily and with the least possible interference or delay.
- C. Where the work of a contractor will be installed in close proximity to the work of other trades, or where there is evidence that the work of a contractor will interfere with the work of other trades, he shall assist in working out space conditions to make satisfactory adjustments.
- D. If a contractor installs work before coordinating it with other trades or so as to cause interference with work of other trades, he shall make necessary changes in his work to correct the condition without extra charge.
- E. Contractors are required to join their work to that of others in a proper manner, and in accordance with the spirit of the plans and specifications, and to perform the work in the proper sequence in relation to that of other contractors, and as may be directed by the Project Inspector.

#### 1.5 TECHNICAL SPECIFICATIONS AND DRAWINGS

- A. All contractors shall have complete sets of plans and specifications on the job site at all times.
- B. Anything mentioned in the Technical Specifications and not shown on the Drawings or shown on the Drawings and not mentioned in the Technical Specifications shall be as if shown on or mentioned in both. In case of difference between Drawings and Technical Specifications, the Technical Specifications shall govern. In case of any discrepancy in drawings or Technical Specifications, the matter shall be immediately submitted to the City for decision. Said discrepancy shall not be adjusted by the Contractor.

#### 1.6 SAFETY REGULATIONS

- A. All work shall be done in accordance with the safety requirements set up by the Wisconsin Administrative Code Rules and the Occupational Safety and Health Administration (OSHA).

#### 1.7 CODE RULES

- A. The rulings, regulations and laws of the following shall be complied with in the completion of this project:

1. Wisconsin Administrative Code
2. Occupational Safety and Health Administration (OSHA)
3. Plumbing and Drainage Codes of the City of Milwaukee
4. City of Milwaukee Building Codes
5. Ordinances of the City of Milwaukee

## 1.8 APPROVALS

- A. Wherever the words "or equal", or "approved equal", or similar terms are used, it shall mean as approved by the Commissioner of Public Works or his agent. All drawings, bulletins, and data necessary for an approval shall be submitted in quadruplicate to the City Engineer. Such approval shall apply to design only and shall in no way relieve this contractor from his responsibility for the full performance of his contract. Evaluation of "or equal" products will be made at the time of shop drawing submission.

## 1.9 GENERAL SPECIFICATIONS

- A. When the General Specifications of the Department of Public Works are in conflict with any other specification referenced herein, the General Specifications of the Department of Public Works shall govern.

## 1.10 SAVINGS CLAUSE

- A. If any clause, item or other part of these specifications shall be deemed illegal or in conflict with code only that item or clause shall be deemed null and void within the specifications. All other items will remain in effect.

## 1.11 CONSTRUCTION PROGRESS MEETINGS

- A. The City reserves the right to schedule periodic construction progress meetings requiring the attendance of the Contractors' and subcontractors' representatives as deemed necessary by the City.

## 1.12 PLANS AND WORKING DRAWINGS

- A. The approved plans will be supplemented by such working drawings and computations as are necessary to adequately control the work. It is mutually agreed that all authorized alterations of the approved plans shall be in writing. No changes shall be made on any plan or drawing after the same has been approved by the City Engineer, except by direction of the City Engineer.
- B. Working drawings for structures shall be furnished by the Contractor and shall consist of such detailed plans and computations as may be required for the prosecution of the work and which are not included in the plans furnished by the engineer. Such working drawings shall be approved by the engineer. Plans may also be required and in such cases shall be likewise subject to approval, unless approval is waived by the City Engineer.

- C. It is expressly understood, however, that approval by the City Engineer of the Contractor's working drawings does not relieve the Contractor of any responsibility for accuracy of dimensions and details or conformity of his working drawings with the approved plans and specifications.
- D. The contract price shall include the cost of furnishing all working drawings and the Contractor will be allowed no extra compensation for such drawings.

#### 1.13 CONFORMITY WITH PLANS AND SPECIFICATIONS

- A. All work performed and all materials furnished will be in reasonably close conformity with the lines, grades, cross sections, dimensions and material requirements shown on the plans or indicated in the specifications. It shall be finished to produce quality work and appearance within limits of precision reasonably expected of good construction.
- B. Specific specification values and prescribed tolerance amounts or limits or minimum or maximum values may be specified. Whenever such tolerances or ranges are specified, the production and processing of material or performance of the work shall be so controlled that the material or work will substantially meet the specific value or fall substantially within the specified range or limits and shall only occasionally be of borderline quality or dimensions.
- C. Whenever tolerances, limits or minimum and maximum values are not specified, reasonable and accepted standards or established manufacturing or construction tolerances will be permitted.
- D. The lines, grades, typical sections, and dimensions shown on the plans are subject to adjustment by the engineer during construction, but any deviation of a character not contemplated or provided for in the plans, specifications or working drawings that may be required by the exigencies of construction or otherwise will be determined by the engineer and authorized by him in writing.
- E. In the event the engineer finds materials which are incorporated in the work, or the finished product in which the materials are used, to be not within reasonably close conformity with the plans and specifications, he will then make a determination whether or not reasonably acceptable work has been produced and can be accepted and remain in place. If the engineer determines that reasonably acceptable work has been produced and can be accepted and remain in place, he will document the basis of acceptance by contract modification or as provided elsewhere in these specifications which will provide for an appropriate adjustment in the contract price for such work or materials, either as he deems necessary to conform to his determination based on engineering judgment, or as specifically provided for elsewhere in these specifications.
- F. In the event the engineer finds that the materials, the finished product in which the materials are used, or the work performed are not in reasonably close conformity with the plans and specifications and have resulted in an inferior or unsatisfactory product, the work or materials shall be removed and replaced or otherwise corrected by and at the expense of the Contractor.

#### 1.14 PERSONAL LIABILITY OF PUBLIC OFFICIALS

- A. In carrying out any of the provisions of this contract or in exercising any power or authority granted to them thereby, there shall be no personal liability upon the Department, its agents and

employees, it being understood that in such matters they act as agents and representatives of the City. Any right of action by the Contractor against the Department, or its agents or employees, is hereby expressly waived.

**1.15 GUARANTEE**

- A. The Contractor shall guarantee to replace or repair promptly at his own expense, as directed by the Commissioner of Public Works or his agent, all workmanship or materials in which defects may develop within one (1) year from the date of final acceptance of his work. This guarantee includes all damage done by the operator due to faulty equipment, poor installation or poor construction. The City shall also receive any extended guarantees or warranties normally supplied by any vendor or manufacturer for material or equipment incorporated in the work.

**1.16 ENVIRONMENTAL PROTECTION**

- A. The contract shall establish and carry out a program for immediate removal of debris during the construction of the parking structure in order to prevent the accumulation of unsightly, deleterious and/or potentially polluting materials.

**PART 2 – PRODUCTS (Not Applicable)**

**PART 3 – EXECUTION (Not Applicable)**

**PART 4 – MEASUREMENT AND PAYMENT (Not Applicable)**

**END OF SECTION 00 72 00**



SECTION 00 73 01 – INSPECTION CHARGES

PART 1 – GENERAL

1.1 INSPECTION CHARGES

- A. The Contractor will be charged a fee for inspection for each and every day such inspection is required after the time allowed for completion has expired.
- B. The amount of the fee for inspection shall be \$450 per day.
- C. The date of completion is stated in the Specific Official Notice and shall start with the date on the Notice to Proceed which will be sent to the Contractor directly following the signing of the contract. The time allowed includes the time required for fabricating and procuring material and doing the work at the site.

PART 2 – PRODUCTS (Not Applicable)

PART 3 – EXECUTION (Not Applicable)

PART 4 – MEASUREMENT AND PAYMENT (Not Applicable)

END OF SECTION 00 73 01



00 73 43/1  
**PREVAILING WAGE RATE DETERMINATION**  
 Issued by the State of Wisconsin  
 Department of Workforce Development  
 Pursuant to s. 66.0903, Wis. Stats.  
 Issued On: 1/8/2016

**DETERMINATION NUMBER:** 201600002

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

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

**PROJECT LOCATION:** MILWAUKEE CITY, MILWAUKEE COUNTY, WI

**CONTRACTING AGENCY:** CITY OF MILWAUKEE-DEPT OF PUBLIC WORKS

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

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

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**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**

<b>Fringe Benefits Must Be Paid On <u>All</u> Hours Worked</b>		<b>HOURLY BASIC RATE OF PAY</b>	<b>HOURLY FRINGE BENEFITS</b>	<b>TOTAL</b>
<b>CODE</b>	<b>TRADE OR OCCUPATION</b>	<b>\$</b>	<b>\$</b>	<b>\$</b>
101	Acoustic Ceiling Tile Installer Future Increase(s): Add \$1.65/hr on 6/1/2016.	35.28	20.96	56.24
102	Boilermaker	30.21	21.97	52.18
103	Bricklayer, Blocklayer or Stonemason Future Increase(s): Add \$1.45 on 06/06/2016 Premium Increase(s): DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day.	36.74	19.26	56.00
104	Cabinet Installer Future Increase(s): Add \$1.65/hr on 6/1/2016.	35.28	20.96	56.24
105	Carpenter Future Increase(s): Add \$1.65/hr on 6/1/2016. Premium Increase(s): DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day.	35.28	20.96	56.24
106	Carpet Layer or Soft Floor Coverer Future Increase(s): Add \$1.65/hr on 6/1/2016.	35.28	20.96	56.24
107	Cement Finisher Future Increase(s): Add \$1.45 on 05/31/2016	32.88	19.88	52.76
108	Drywall Taper or Finisher Future Increase(s): Add \$1.00/hr eff. 06/01/2016; Add \$1.05/hr eff. 06/01/2017	30.42	21.19	51.61
109	Electrician Future Increase(s): Add \$1.60 on 6/1/16; Add \$1.70 on 6/1/17 Premium Increase(s): DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day.	35.13	23.19	58.32

<b>Fringe Benefits Must Be Paid On <u>All</u> Hours Worked</b>		<b>HOURLY BASIC RATE OF PAY</b>	<b>HOURLY FRINGE BENEFITS</b>	<b>TOTAL</b>
<b>CODE</b>	<b>TRADE OR OCCUPATION</b>	<b>\$</b>	<b>\$</b>	<b>\$</b>
110	Elevator Constructor	43.84	27.09	70.93
111	Fence Erector	24.73	19.69	44.42
112	Fire Sprinkler Fitter	39.66	21.11	60.77
113	Glazier Future Increase(s): Add \$.90/hr eff. 06/01/2016	34.45	18.99	53.44
114	Heat or Frost Insulator	33.53	27.31	60.84
115	Insulator (Batt or Blown)	23.62	11.55	35.17
116	Ironworker	30.77	23.72	54.49
117	Lather	34.13	20.61	54.74
118	Line Constructor (Electrical)	40.81	18.06	58.87
119	Marble Finisher	25.72	18.54	44.26
120	Marble Mason	35.89	18.77	54.66
121	Metal Building Erector	19.00	2.00	21.00
122	Millwright Future Increase(s): Add \$1.35/hr on 6/1/2016.	29.78	26.38	56.16
123	Overhead Door Installer	28.73	0.00	28.73
124	Painter Future Increase(s): Add \$1.00/hr on 06/01/2016; Add \$1.05/hr on 06/01/2017 Premium Increase(s): Add \$.20/hr for paperhanging; Add \$.35/hr for bridge, iron and drywall; Add \$.75/hr for spraying and sandblasting; Add \$.60/hr for EIFS work; Add \$1.00/hr for lead based paint removal.	30.07	21.19	51.26
125	Pavement Marking Operator	30.00	19.61	49.61
126	Piledriver Future Increase(s): Add \$1.60/hr on 6/1/2016. Premium Increase(s): Add \$.65/hr for Piledriver Loftsmen; Add \$.75/hr for Sheet Piling Loftsmen. 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.	30.58	27.54	58.12
127	Pipeline Fuser or Welder (Gas or Utility)	41.01	21.54	62.55
129	Plasterer	30.22	20.53	50.75

<b>Fringe Benefits Must Be Paid On <u>All</u> Hours Worked</b>		<b>HOURLY BASIC RATE OF PAY</b>	<b>HOURLY FRINGE BENEFITS</b>	<b>TOTAL</b>
<b>CODE</b>	<b>TRADE OR OCCUPATION</b>	<b>\$</b>	<b>\$</b>	<b>\$</b>
130	Plumber Future Increase(s): Add \$2/hr on 6/1/16; Add \$2/hr on 6/1/17.	39.62	20.12	59.74
132	Refrigeration Mechanic Future Increase(s): Add \$2.00 on 6/1/16; Add \$2.00 on 6/1/17	42.36	21.99	64.35
133	Roofer or Waterproofer	29.65	18.61	48.26
134	Sheet Metal Worker	37.91	21.05	58.96
135	Steamfitter Future Increase(s): Add \$2.00 on 6/1/16; Add \$2.00 on 6/1/17	42.36	21.99	64.35
137	Teledata Technician or Installer 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.	26.00	17.74	43.74
138	Temperature Control Installer	41.01	21.54	62.55
139	Terrazzo Finisher	25.72	18.54	44.26
140	Terrazzo Mechanic Future Increase(s): Add \$1.45 on 06/06/2016	31.59	19.60	51.19
141	Tile Finisher	30.00	0.00	30.00
142	Tile Setter	30.18	17.34	47.52
143	Tuckpointer, Caulker or Cleaner	34.28	18.60	52.88
144	Underwater Diver (Except on Great Lakes)	36.74	16.00	52.74
146	Well Driller or Pump Installer Future Increase(s): Add \$1/hr on 6/1/2016; Add \$1/hr on 6/1/2017.	25.32	16.40	41.72
147	Siding Installer	17.00	6.71	23.71
150	Heavy Equipment Operator - ELECTRICAL LINE CONSTRUCTION ONLY	36.73	20.41	57.14
151	Light Equipment Operator -ELECTRICAL LINE CONSTRUCTION ONLY	32.65	14.96	47.61
152	Heavy Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	28.57	13.71	42.28
153	Light Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	26.53	13.55	40.08
154	Groundman - ELECTRICAL LINE CONSTRUCTION ONLY	25.00	12.55	37.55

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**TRUCK DRIVERS**


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<b>Fringe Benefits Must Be Paid On <u>All</u> Hours Worked</b>		<b>HOURLY BASIC RATE OF PAY</b>	<b>HOURLY FRINGE BENEFITS</b>	<b>TOTAL</b>
<b>CODE</b>	<b>TRADE OR OCCUPATION</b>	<b>\$</b>	<b>\$</b>	<b>\$</b>
201	Single Axle or Two Axle	34.47	18.70	53.17
203	Three or More Axle	20.00	18.19	38.19
204	Articulated, Euclid, Dumptor, Off Road Material Hauler Future Increase(s): Add \$1.60/hr on 5/30/2016.	33.02	19.15	52.17
205	Pavement Marking Vehicle	20.00	18.19	38.19
207	Truck Mechanic	20.00	18.19	38.19

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**LABORERS**


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<b>Fringe Benefits Must Be Paid On <u>All</u> Hours Worked</b>		<b>HOURLY BASIC RATE OF PAY</b>	<b>HOURLY FRINGE BENEFITS</b>	<b>TOTAL</b>
<b>CODE</b>	<b>TRADE OR OCCUPATION</b>	<b>\$</b>	<b>\$</b>	<b>\$</b>
301	General Laborer	29.01	17.39	46.40
302	Asbestos Abatement Worker	19.00	0.00	19.00
303	Landscaper	14.00	11.63	25.63
310	Gas or Utility Pipeline Laborer (Other Than Sewer and Water)	20.83	18.39	39.22
311	Fiber Optic Laborer (Outside, Other Than Concrete Encased)	18.53	0.00	18.53
314	Railroad Track Laborer	17.00	5.43	22.43
315	Final Construction Clean-Up Worker	29.01	17.39	46.40

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

<b>Fringe Benefits Must Be Paid On <u>All</u> Hours Worked</b>				
<b>CODE</b>	<b>TRADE OR OCCUPATION</b>	<b>HOURLY BASIC RATE OF PAY</b>	<b>HOURLY FRINGE BENEFITS</b>	<b>TOTAL</b>
		\$	\$	\$
501	Air Track, Rotary or Percussion Drilling Machine &/or Hammers, Blaster; Asphalt Milling Machine; Boring Machine (Directional, Horizontal or Vertical); Backhoe (Track Type) Having a Mfgr's Rated Capacity of 130,000 Lbs. or Over; Backhoe (Track Type) Having a Mfgr's Rated Capacity of Under 130,000 Lbs., Backhoe (Mini, 15,000 Lbs. & Under); Bulldozer or Endloader (Over 40 hp); Compactor (Self-Propelled 85 Ft Total Drum Width & Over, or Tractor Mounted, Towed & Light Equipment); Concrete Batch Plant, Batch Hopper; Concrete Breaker (Large, Auto, Vibratory/Sonic, Manual or Remote); Crane, Shovel, Dragline, Clamshells; Forklift (Machinery Moving or Steel Erection, 25 Ft & Over); Gradall (Cruz-Aire Type); Grader or Motor Patrol; Master Mechanic; Mechanic or Welder; Robotic Tool Carrier (With or Without Attachments); Scraper (Self Propelled or Tractor Drawn) 5 cu yds or More Capacity; Tractor or Truck Mounted Hydraulic Backhoe; Tractor or Truck Mounted Hydraulic Crane (10 Tons or Under); Tractor (Scraper, Dozer, Pusher, Loader); Trencher (Wheel Type or Chain Type Having Over 8 Inch Bucket). Future Increase(s): Add \$1.60/hr on 5/30/2016.	35.52	19.15	54.67
502	Backfiller; Broom or Sweeper; Bulldozer or Endloader (Under 40 hp); Environmental Burner; Forestry Equipment, Timbco, Tree Shear, Tub Grinder, Processor; Jeep Digger; Screed (Milling Machine); Skid Rig; Straddle Carrier or Travel Lift; Stump Chipper; Trencher (Wheel Type or Chain Type Having 8 Inch Bucket & Under). Future Increase(s): Add \$1.60/hr on 5/30/2016.	35.52	19.15	54.67
503	Air Compressor (&/or 400 CFM or Over); Augers (Vertical & Horizontal); Compactor (Self-Propelled 84 Ft Total Drum Width & Under, or Tractor Mounted, Towed & Light Equipment); Crusher, Screening or Wash Plant; Farm or Industrial Type Tractor; Forklift; Generator (&/or 150 KW or Over); Greaser; High Pressure Utility Locating Machine (Daylighting Machine); Mulcher; Oiler; Post Hole Digger or Driver; Pump (3 Inch or Over) or Well Points; Refrigeration Plant or Freeze Machine; Rock, Stone Breaker; Skid Steer Loader (With or Without Attachments); Vibratory Hammer or Extractor, Power Pack. Future Increase(s): Add \$1.60/hr on 5/30/2016.	35.22	19.15	54.37
504	Work Performed on the Great Lakes Including Diver; Wet Tender or Hydraulic Dredge Engineer.	41.65	21.71	63.36
505	Work Performed on the Great Lakes Including Crane or Backhoe Operator; Assistant Hydraulic Dredge Engineer; Hydraulic Dredge Leverman or Diver's Tender; Mechanic or Welder; 70 Ton & Over Tug Operator. Future Increase(s): Add \$1.25/hr on 1/1/2017. Premium Increase(s): Add \$.50/hr for Friction Crane, Lattice Boom or Crane Certification (CCO).	44.05	23.24	67.29

<b>Fringe Benefits Must Be Paid On <u>All</u> Hours Worked</b>				
<b>CODE</b>	<b>TRADE OR OCCUPATION</b>	<b>HOURLY BASIC RATE OF PAY</b>	<b>HOURLY FRINGE BENEFITS</b>	<b>TOTAL</b>
		<b>\$</b>	<b>\$</b>	<b>\$</b>
506	Work Performed on the Great Lakes Including Deck Equipment Operator or Machineryman (Maintains Cranes Over 50 Tons or Backhoes 115,000 Lbs. or More); Tug, Launch or Loader, Dozer or Like Equipment When Operated on a Barge, Breakwater Wall, Slip, Dock or Scow, Deck Machinery. Future Increase(s): Add \$1.25/hr on 1/1/2017.	39.20	23.09	62.29
507	Work Performed on the Great Lakes Including Deck Equipment Operator, Machineryman or Fireman (Operates 4 Units or More or Maintains Cranes 50 Tons or Under or Backhoes 115,000 Lbs. or Under); Deck Hand, Deck Engineer or Assistant Tug Operator; Off Road Trucks - Great Lakes ONLY.	36.72	21.15	57.87

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

<b>Fringe Benefits Must Be Paid On <u>All</u> Hours Worked</b>				
<b>CODE</b>	<b>TRADE OR OCCUPATION</b>	<b>HOURLY BASIC RATE OF PAY</b>	<b>HOURLY FRINGE BENEFITS</b>	<b>TOTAL</b>
		<b>\$</b>	<b>\$</b>	<b>\$</b>
508	Boring Machine (Directional); Crane, Tower Crane, Pedestal Tower or Derrick, With or Without Attachments, With a Lifting Capacity of Over 100 Tons, Self-Erecting Tower Crane With a Lifting Capacity of Over 4,000 Lbs., Crane With Boom Dollies; Crane, Tower Crane, Pedestal Tower or Derrick, With Boom, Leads &/or Jib Lengths Measuring 176 Ft or Over; Master Mechanic. Premium Increase(s): Crane Operators with CCO certification add \$.50/hr. Cranes with boom length over 200 ft. not exceeding 300 ft. OR lifting capacity over 200 ton not exceeding 300 ton add \$.50/hr. Over 300 ton OR 300 ft. add \$.01/hr. per foot OR ton whichever is greater.	41.66	20.65	62.31
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). Premium Increase(s): Crane Operators with CCO certification add \$.50/hr.	41.16	20.65	61.81
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). Premium Increase(s): Crane Operators with CCO certification add \$.50/hr.	40.66	20.65	61.31

<b>Fringe Benefits Must Be Paid On <u>All</u> Hours Worked</b>		<b>HOURLY BASIC RATE OF PAY</b>	<b>HOURLY FRINGE BENEFITS</b>	<b>TOTAL</b>
<b>CODE</b>	<b>TRADE OR OCCUPATION</b>	<b>\$</b>	<b>\$</b>	<b>\$</b>
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).	39.97	20.65	60.62
512	Backfiller; Broom or Sweeper; Bulldozer or Endloader (Under 40 hp); Compactor (Self-Propelled 84 Ft Total Drum Width & Under, or Tractor Mounted, Towed & Light Equipment); Concrete Batch Plant, Batch Hopper; Concrete Breaker (Large, Auto, Vibratory/Sonic, Manual or Remote); Concrete Conveyor System; Concrete Finishing Machine (Road Type); Fireman (Pile Driver & Derrick NOT Performing Work on the Great Lakes); Grout Pump; Hoist (Tugger, Automatic); Industrial Locomotives; Jeep Digger; Lift Slab Machine; Mulcher; Roller (Rubber Tire, 5 Ton or Under); Screw or Gypsum Pumps; Stabilizing or Concrete Mixer (Self-Propelled or 14S or Over); Stump Chipper; Trencher (Wheel Type or Chain Type Having 8-Inch Bucket & Under); Winches & A-Frames.	38.09	20.65	58.74
513	Air Compressor (&/or 400 CFM or Over); Air, Electric or Hydraulic Jacking System; Augers (Vertical & Horizontal); Boatmen (NOT Performing Work on the Great Lakes); Boiler (Temporary Heat); Crusher, Screening or Wash Plant; Elevator; Farm or Industrial Type Tractor; Fireman (Asphalt Plant NOT Performing Work on the Great Lakes); Forklift; Generator (&/or 150 KW or Over); Greaser; Heaters (Mechanical); Loading Machine (Conveyor); Oiler; Post Hole Digger or Driver; Prestress Machine; Pump (3 Inch or Over) or Well Points; Refrigeration Plant or Freeze Machine; Robotic Tool Carrier (With or Without Attachments); Rock, Stone Breaker; Skid Steer Loader (With or Without Attachments); Vibratory Hammer or Extractor, Power Pack.	32.94	20.65	53.59
514	Gas or Utility Pipeline, Except Sewer & Water (Primary Equipment). Future Increase(s): Add \$1/hr on 5/30/2016.	37.04	22.44	59.48
515	Gas or Utility Pipeline, Except Sewer & Water (Secondary Equipment).	34.76	20.30	55.06
516	Fiber Optic Cable Equipment	21.00	0.00	21.00

<b>SEWER, WATER OR TUNNEL CONSTRUCTION</b>
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Includes those projects that primarily involve public sewer or water distribution, transmission or collection systems and related tunnel work (excluding buildings).

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**SKILLED TRADES**

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CODE	TRADE OR OCCUPATION	FRINGE BENEFITS MUST BE PAID ON <u>All</u> Hours Worked	HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
			\$	\$	\$
103	Bricklayer, Blocklayer or Stonemason		35.89	18.77	54.66
105	Carpenter		34.13	20.61	54.74
107	Cement Finisher Future Increase(s): Add \$1.75 on 6/1/16. Premium Increase(s): DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add \$1.40/hr when the Wisconsin Department of Transportation or responsible governing agency requires that work be performed at night under artificial illumination with traffic control and the work is completed after sunset and before sunrise.		31.44	22.39	53.83
109	Electrician Future Increase(s): Add \$1.60 on 6/1/16; Add \$1.70 on 6/1/17 Premium Increase(s): DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day.		35.13	23.19	58.32
111	Fence Erector		24.73	19.69	44.42
116	Ironworker		32.50	20.58	53.08
118	Line Constructor (Electrical)		40.81	18.06	58.87
125	Pavement Marking Operator		30.00	19.61	49.61
126	Piledriver		30.11	26.51	56.62
130	Plumber Future Increase(s): Add \$1.50 on 6/1/16		39.95	19.45	59.40
135	Steamfitter		41.01	21.54	62.55
137	Teledata Technician or Installer		25.63	17.25	42.88
143	Tuckpointer, Caulker or Cleaner		34.28	18.60	52.88
144	Underwater Diver (Except on Great Lakes)		31.00	20.43	51.43
146	Well Driller or Pump Installer Future Increase(s): Add \$1/hr on 6/1/2016; Add \$1/hr on 6/1/2017.		25.32	16.40	41.72

<b>Fringe Benefits Must Be Paid On <u>All</u> Hours Worked</b>		<b>HOURLY BASIC RATE OF PAY</b>	<b>HOURLY FRINGE BENEFITS</b>	<b>TOTAL</b>
<b>CODE</b>	<b>TRADE OR OCCUPATION</b>	<b>\$</b>	<b>\$</b>	<b>\$</b>
150	Heavy Equipment Operator - ELECTRICAL LINE CONSTRUCTION ONLY	36.73	15.92	52.65
151	Light Equipment Operator -ELECTRICAL LINE CONSTRUCTION ONLY	32.65	14.96	47.61
152	Heavy Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	28.57	13.71	42.28
153	Light Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	26.53	13.55	40.08
154	Groundman - ELECTRICAL LINE CONSTRUCTION ONLY	22.45	11.84	34.29

**TRUCK DRIVERS**

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

**LABORERS**

<b>Fringe Benefits Must Be Paid On <u>All</u> Hours Worked</b>		<b>HOURLY BASIC RATE OF PAY</b>	<b>HOURLY FRINGE BENEFITS</b>	<b>TOTAL</b>
<b>CODE</b>	<b>TRADE OR OCCUPATION</b>	<b>\$</b>	<b>\$</b>	<b>\$</b>
301	General Laborer Future Increase(s): Add \$1.25/hr eff. 06/06/2016 Premium Increase(s): Add \$2.29 for bottomman; Add \$2.15 for concrete manhole builder, bracer, jointman, or pipelayer; Add \$5.44 for blaster. Add \$2.00 for all tunnel work under 15 lbs. compressed air; Add \$2.00 for 0-30 lbs. compressed air; Add \$3.00 for over 30 lbs. compressed air.	29.73	18.32	48.05
303	Landscaper	41.00	0.00	41.00
304	Flagperson or Traffic Control Person	19.31	15.21	34.52
311	Fiber Optic Laborer (Outside, Other Than Concrete Encased)	18.53	0.00	18.53
314	Railroad Track Laborer	17.00	5.43	22.43

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

**Fringe Benefits Must Be Paid On All Hours Worked**

<b>CODE</b>	<b>TRADE OR OCCUPATION</b>	<b>HOURLY BASIC RATE OF PAY \$</b>	<b>HOURLY FRINGE BENEFITS \$</b>	<b>TOTAL \$</b>
521	Backhoe (Track Type) Having a Mfgr.'s Rated Capacity of 130,000 Lbs. or Over; Caisson Rig; Crane, Tower Crane, Pedestal Tower or Derrick, With Boom, Leads &/or Jib Lengths Measuring 176 Ft or Over; Crane, Tower Crane, Pedestal Tower or Derrick, With or Without Attachments, With a Lifting Capacity of Over 100 Tons, Self-Erecting Tower Crane With a Lifting Capacity Of Over 4,000 Lbs., Crane With Boom Dollies; Master Mechanic; Pile Driver. Premium Increase(s): Add \$.25/hr for operating tower crane.	38.09	20.80	58.89
522	Backhoe (Track Type) Having a Mfgr.'s Rated Capacity of Under 130,000 Lbs., Backhoe (Mini, 15,000 Lbs. & Under); Boring Machine (Directional); Concrete Bump Cutter, Grinder, Planing or Grooving Machine; Concrete Laser/Screed; Concrete Paver (Slipform); Concrete Pump (Over 46 Meter), Concrete Conveyor (Rotec or Bidwell Type); Concrete Spreader & Distributor; Crane, Tower Crane, Portable Tower, Pedestal Tower or Derrick, With Boom, Leads &/or Jib Lengths Measuring 175 Ft or Under; Crane, Tower Crane, Portable Tower, Pedestal Tower or Derrick, With or Without Attachments, With a Lifting Capacity of 100 Tons or Under, Self-Erecting Tower Crane With a Lifting Capacity of 4,000 Lbs. & Under; Dredge (NOT Performing Work on the Great Lakes); Milling Machine; Skid Rig; Telehandler; Traveling Crane (Bridge Type). Premium Increase(s): Add \$.25/hr for operating tower crane.	37.31	20.80	58.11
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). Premium Increase(s): Add \$.25/hr for operating tower crane.	36.36	20.80	57.16

<b>Fringe Benefits Must Be Paid On <u>All</u> Hours Worked</b>		<b>HOURLY BASIC RATE OF PAY</b>	<b>HOURLY FRINGE BENEFITS</b>	<b>TOTAL</b>
<b>CODE</b>	<b>TRADE OR OCCUPATION</b>	<b>\$</b>	<b>\$</b>	<b>\$</b>
524	Backfiller; Broom or Sweeper; Bulldozer or Endloader (Under 40 hp); Compactor (Self-Propelled 85 Ft Total Drum Width & Over, or Tractor Mounted, Towed & Light Equipment); Concrete Batch Plant, Batch Hopper; Concrete Breaker (Large, Auto, Vibratory/Sonic, Manual or Remote); Concrete Conveyor System; Concrete Finishing Machine (Road Type); Environmental Burner; Fireman (Pile Driver & Derrick NOT Performing Work on the Great Lakes); Forestry Equipment, Timbco, Tree Shear, Tub Grinder, Processor; Hoist (Tugger, Automatic); Grout Pump; Jeep Digger; Lift Slab Machine; Mulcher; Power Subgrader; Pump (3 Inch or Over) or Well Points; Robotic Tool Carrier (With or Without Attachments); Roller (Rubber Tire, 5 Ton or Under); Screw or Gypsum Pumps; Stabilizing or Concrete Mixer (Self-Propelled or 14S or Over); Stump Chipper; Tining or Curing Machine; Trencher (Wheel Type or Chain Type Having 8-Inch Bucket & Under); Winches & A-Frames.	33.69	21.75	55.44
525	Air Compressor (&/or 400 CFM or Over); Air, Electric or Hydraulic Jacking System; Augers (Vertical & Horizontal); Compactor (Self-Propelled 84 Ft Total Drum Width & Under, or Tractor Mounted, Towed & Light Equipment); Crusher, Screening or Wash Plant; Farm or Industrial Type Tractor; Fireman (Asphalt Plant NOT Performing Work on the Great Lakes); Generator (&/or 150 KW or Over); Heaters (Mechanical); High Pressure Utility Locating Machine (Daylighting Machine); Loading Machine (Conveyor); Post Hole Digger or Driver; Refrigeration Plant or Freeze Machine; Rock, Stone Breaker; Skid Steer Loader (With or Without Attachments); Vibratory Hammer or Extractor, Power Pack. Premium Increase(s): Add \$.25/hr for operating tower crane.	33.91	20.80	54.71
526	Boiler (Temporary Heat); Forklift; Greaser; Oiler.	31.89	20.15	52.04
527	Work Performed on the Great Lakes Including Diver; Wet Tender or Hydraulic Dredge Engineer.	41.65	21.71	63.36
528	Work Performed on the Great Lakes Including 70 Ton & Over Tug Operator; Assistant Hydraulic Dredge Engineer; Crane or Backhoe Operator; Hydraulic Dredge Leverman or Diver's Tender; Mechanic or Welder.	41.65	21.71	63.36
529	Work Performed on the Great Lakes Including Deck Equipment Operator or Machineryman (Maintains Cranes Over 50 Tons or Backhoes 115,000 Lbs. or More); Tug, Launch or Loader, Dozer or Like Equipment When Operated on a Barge, Breakwater Wall, Slip, Dock or Scow, Deck Machinery.	36.72	21.15	57.87
530	Work Performed on the Great Lakes Including Deck Equipment Operator; Machineryman or Fireman (Operates 4 Units or More or Maintains Cranes 50 Tons or Under or Backhoes 115,000 Lbs. or Under), Deck Hand, Deck Engineer or Assistant Tug Operator; Off Road Trucks - Great Lakes ONLY.	36.72	21.15	57.87

<b>AIRPORT PAVEMENT OR STATE HIGHWAY CONSTRUCTION</b>
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Includes all airport projects (excluding buildings) and all projects awarded by the Wisconsin Department of Transportation (excluding buildings).

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**SKILLED TRADES**

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CODE	TRADE OR OCCUPATION	FRINGE BENEFITS MUST BE PAID ON <u>All</u> Hours Worked	HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
			\$	\$	\$
103	Bricklayer, Blocklayer or Stonemason		31.55	18.52	50.07
105	Carpenter		34.13	20.71	54.84
107	Cement Finisher Future Increase(s): Add \$1.75 on 6/1/16. Premium Increase(s): DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add \$1.40/hr when the Wisconsin Department of Transportation or responsible governing agency requires that work be performed at night under artificial illumination with traffic control and the work is completed after sunset and before sunrise.		33.95	19.88	53.83
109	Electrician Future Increase(s): Add \$1.60 on 6/1/16; Add \$1.70 on 6/1/17 Premium Increase(s): DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day.		35.13	23.19	58.32
111	Fence Erector		35.62	0.00	35.62
116	Ironworker		30.77	23.72	54.49
118	Line Constructor (Electrical)		40.81	18.06	58.87
124	Painter		29.87	18.79	48.66
125	Pavement Marking Operator		30.27	19.83	50.10
126	Piledriver		30.11	21.09	51.20
133	Roofer or Waterproofer		30.40	2.23	32.63
137	Teledata Technician or Installer		25.63	17.25	42.88
143	Tuckpointer, Caulker or Cleaner		34.28	18.60	52.88
144	Underwater Diver (Except on Great Lakes)		36.74	16.00	52.74
150	Heavy Equipment Operator - ELECTRICAL LINE CONSTRUCTION ONLY		36.73	15.92	52.65
151	Light Equipment Operator -ELECTRICAL LINE CONSTRUCTION ONLY		32.65	15.67	48.32

<b>Fringe Benefits Must Be Paid On <u>All</u> Hours Worked</b>		<b>HOURLY BASIC RATE OF PAY</b>	<b>HOURLY FRINGE BENEFITS</b>	<b>TOTAL</b>
<b>CODE</b>	<b>TRADE OR OCCUPATION</b>	<b>\$</b>	<b>\$</b>	<b>\$</b>
152	Heavy Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	28.57	13.71	42.28
153	Light Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	26.53	13.09	39.62
154	Groundman - ELECTRICAL LINE CONSTRUCTION ONLY	22.45	11.84	34.29
<b>TRUCK DRIVERS</b>				

<b>Fringe Benefits Must Be Paid On <u>All</u> Hours Worked</b>		<b>HOURLY BASIC RATE OF PAY</b>	<b>HOURLY FRINGE BENEFITS</b>	<b>TOTAL</b>
<b>CODE</b>	<b>TRADE OR OCCUPATION</b>	<b>\$</b>	<b>\$</b>	<b>\$</b>
201	Single Axle or Two Axle	36.72	21.15	57.87
203	Three or More Axle 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.	25.78	18.96	44.74
204	Articulated, Euclid, Dumptor, Off Road Material Hauler Future Increase(s): Add \$1.30/hr on 6/1/2016; Add \$1.25/hr on 6/1/2017. Premium Increase(s): DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add \$1.50/hr night work premium. See DOT'S website for details about the applicability of this night work premium at: <a href="http://wisconsindot.gov/Pages/doing-bus/civil-rights/labornwage/prevailing-wage-compliance.aspx">http://wisconsindot.gov/Pages/doing-bus/civil-rights/labornwage/prevailing-wage-compliance.aspx</a> .	30.82	21.85	52.67
205	Pavement Marking Vehicle	23.82	17.72	41.54
206	Shadow or Pilot Vehicle	25.28	18.31	43.59
207	Truck Mechanic	25.28	18.31	43.59

## LABORERS

<b>Fringe Benefits Must Be Paid On <u>All</u> Hours Worked</b>		<b>HOURLY BASIC RATE OF PAY</b>	<b>HOURLY FRINGE BENEFITS</b>	<b>TOTAL</b>
<b>CODE</b>	<b>TRADE OR OCCUPATION</b>	<b>\$</b>	<b>\$</b>	<b>\$</b>
301	General Laborer Future Increase(s): Add \$1.00/hr eff. 06/01/2016; Add \$1.00/hr eff. 06/01/2017 Premium Increase(s): Add \$.15/hr for air tool operator, joint sawer and filler (pavement), vibrator or tamper operator (mechanical hand operated), chain saw operator and demolition burning torch laborer; Add \$.35/hr for bituminous worker (raker and luteman), formsetter (curb, sidewalk and pavement) and strike off man; Add \$.50/hr for line and grade specialist; Add \$.65/hr for blaster and powderman; Add \$2.01/hr for topman; Add \$2.46/hr for bottomman; Add \$3.23/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).	27.51	20.63	48.14
302	Asbestos Abatement Worker	19.00	0.00	19.00
303	Landscaper Future Increase(s): Add \$1.00/hr eff. 06/01/2016; Add \$1.00/hr eff. 06/01/2017 Premium Increase(s): DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add \$1.25/hr for work on projects involving temporary traffic control setup, for lane and shoulder closures, when work under artificial illumination conditions is necessary as required by the project provisions (including prep time prior to and/or cleanup after such time period).	27.51	20.63	48.14
304	Flagperson or Traffic Control Person	23.55	20.03	43.58
311	Fiber Optic Laborer (Outside, Other Than Concrete Encased)	18.53	0.00	18.53
314	Railroad Track Laborer	17.00	5.43	22.43

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

<b>Fringe Benefits Must Be Paid On <u>All</u> Hours Worked</b>		<b>HOURLY BASIC RATE OF PAY</b>	<b>HOURLY FRINGE BENEFITS</b>	<b>TOTAL</b>
<b>CODE</b>	<b>TRADE OR OCCUPATION</b>	<b>\$</b>	<b>\$</b>	<b>\$</b>
531	<p>Crane, Tower Crane, Pedestal Tower or Derrick, With Boom, Leads &amp;/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).</p> <p>Future Increase(s): Add \$1.30/hr on 6/1/2016; Add \$1.25/hr on 6/1/2017.</p> <p>Premium Increase(s): DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day &amp; Christmas Day. 2) Add \$1.50/hr night work premium. See DOT'S website for details about the applicability of this night work premium at: <a href="http://wisconsindot.gov/Pages/doing-bus/civil-rights/labornwage/prevailing-wage-compliance.aspx">http://wisconsindot.gov/Pages/doing-bus/civil-rights/labornwage/prevailing-wage-compliance.aspx</a>.</p>	38.27	21.85	60.12
532	<p>Backhoe (Track Type) Having a Mfgr.'s Rated Capacity of 130,000 Lbs. or Over; Caisson Rig; Crane, Tower Crane, Portable Tower, Pedestal Tower or Derrick, With Boom, Leads &amp;/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., &amp; Under; Dredge (NOT Performing Work on the Great Lakes); Licensed Boat Pilot (NOT Performing Work on the Great Lakes); Pile Driver.</p> <p>Future Increase(s): Add \$1.30/hr on 6/1/2016; Add \$1.25/hr on 6/1/2017.</p> <p>Premium Increase(s): DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day &amp; Christmas Day. 2) Add \$1.50/hr night work premium. See DOT'S website for details about the applicability of this night work premium at: <a href="http://wisconsindot.gov/Pages/doing-bus/civil-rights/labornwage/prevailing-wage-compliance.aspx">http://wisconsindot.gov/Pages/doing-bus/civil-rights/labornwage/prevailing-wage-compliance.aspx</a>.</p>	37.77	21.85	59.62

<b>Fringe Benefits Must Be Paid On <u>All</u> Hours Worked</b>		<b>HOURLY BASIC RATE OF PAY</b>	<b>HOURLY FRINGE BENEFITS</b>	<b>TOTAL</b>
<b>CODE</b>	<b>TRADE OR OCCUPATION</b>	<b>\$</b>	<b>\$</b>	<b>\$</b>
533	<p>Air Track, Rotary or Percussion Drilling Machine &amp;/or Hammers, Blaster; Asphalt Heater, Planer &amp; 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. &amp; Under); Bituminous (Asphalt) Plant &amp; 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 &amp; Gutter Machine; Concrete Spreader &amp; Distributor; Crane (Carry Deck, Mini) or Truck Mounted Hydraulic Crane (10 Tons or Under); Crane Wlth 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 &amp; A-Frames.</p> <p>Future Increase(s): Add \$1.30/hr on 6/1/2016; Add \$1.25/hr on 6/1/2017.</p> <p>Premium Increase(s): DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day &amp; Christmas Day. 2) Add \$1.50/hr night work premium. See DOT'S website for details about the applicability of this night work premium at: <a href="http://wisconsin.gov/Page/s/doing-bus/civil-rights/labornwage/prevailing-wage-compliance.aspx">http://wisconsin.gov/Page/s/doing-bus/civil-rights/labornwage/prevailing-wage-compliance.aspx</a>.</p>	37.27	21.85	59.12

<b>Fringe Benefits Must Be Paid On <u>All</u> Hours Worked</b>		<b>HOURLY BASIC RATE OF PAY</b>	<b>HOURLY FRINGE BENEFITS</b>	<b>TOTAL</b>
<b>CODE</b>	<b>TRADE OR OCCUPATION</b>	<b>\$</b>	<b>\$</b>	<b>\$</b>
534	<p>Belting, Burlap, Texturing Machine; Broom or Sweeper; Compactor (Self-Propelled or Tractor Mounted, Towed &amp; Light Equipment); Concrete Finishing Machine (Road Type); Environmental Burner; Farm or Industrial Type Tractor; Fireman (Asphalt Plant, Pile Driver &amp; 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 \$1.30/hr on 6/1/2016; Add \$1.25/hr on 6/1/2017.</p> <p>Premium Increase(s): DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day &amp; Christmas Day. 2) Add \$1.50/hr night work premium. See DOT'S website for details about the applicability of this night work premium at: <a href="http://wisconsindot.gov/Pages/doing-bus/civil-rights/labornwage/prevaling-wage-compliance.aspx">http://wisconsindot.gov/Pages/doing-bus/civil-rights/labornwage/prevaling-wage-compliance.aspx</a>.</p>	37.01	21.85	58.86
535	<p>Air Compressor (&amp;/or 400 CFM or Over); Air, Electric or Hydraulic Jacking System; Augers (Vertical &amp; Horizontal); Automatic Belt Conveyor &amp; Surge Bin; Boiler (Temporary Heat); Concrete Proportioning Plant; Crusher, Screening or Wash Plant; Generator (&amp;/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 \$1.30/hr on 6/1/2016; Add \$1.25/hr on 6/1/2017.</p> <p>Premium Increase(s): DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day &amp; Christmas Day. 2) Add \$1.50/hr night work premium. See DOT'S website for details about the applicability of this night work premium at: <a href="http://wisconsindot.gov/Pages/doing-bus/civil-rights/labornwage/prevaling-wage-compliance.aspx">http://wisconsindot.gov/Pages/doing-bus/civil-rights/labornwage/prevaling-wage-compliance.aspx</a>.</p>	36.72	21.85	58.57
536	Fiber Optic Cable Equipment.	21.00	0.00	21.00
537	Work Performed on the Great Lakes Including Diver; Wet Tender or Hydraulic Dredge Engineer.	41.65	21.71	63.36
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.	41.65	21.71	63.36

<b>Fringe Benefits Must Be Paid On <u>All</u> Hours Worked</b>				
<b><u>CODE</u></b>	<b><u>TRADE OR OCCUPATION</u></b>	<b><u>HOURLY BASIC RATE OF PAY</u></b>	<b><u>HOURLY FRINGE BENEFITS</u></b>	<b><u>TOTAL</u></b>
		<b>\$</b>	<b>\$</b>	<b>\$</b>
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.	36.72	21.15	57.87
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.	36.72	21.15	57.87

<b>LOCAL STREET OR MISCELLANEOUS PAVING CONSTRUCTION</b>
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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).

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**SKILLED TRADES**

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CODE	TRADE OR OCCUPATION	Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		
		HOURLY BASIC RATE OF PAY \$	HOURLY FRINGE BENEFITS \$	TOTAL \$
103	Bricklayer, Blocklayer or Stonemason	35.89	18.77	54.66
105	Carpenter Future Increase(s): Add \$1.42/hr on 6/1/2016. Premium Increase(s): DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day.	33.02	17.12	50.14
107	Cement Finisher	34.95	19.38	54.33
109	Electrician Future Increase(s): Add \$1.60 on 6/1/16; Add \$1.70 on 6/1/17 Premium Increase(s): DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day.	35.13	23.19	58.32
111	Fence Erector	24.73	19.69	44.42
116	Ironworker	30.77	23.72	54.49
118	Line Constructor (Electrical)	40.81	18.06	58.87
124	Painter	29.62	20.74	50.36
125	Pavement Marking Operator	30.00	19.61	49.61
126	Piledriver Future Increase(s): Add \$1.44/hr on 6/1/2016. Premium Increase(s): DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day.	33.56	17.12	50.68
133	Rofer or Waterproofer	29.65	18.61	48.26
137	Teledata Technician or Installer	25.63	17.25	42.88
143	Tuckpointer, Caulker or Cleaner	34.28	18.60	52.88
144	Underwater Diver (Except on Great Lakes)	36.74	16.00	52.74
150	Heavy Equipment Operator - ELECTRICAL LINE CONSTRUCTION ONLY	36.73	15.92	52.65

<b>Fringe Benefits Must Be Paid On <u>All</u> Hours Worked</b>		<b>HOURLY BASIC RATE OF PAY</b>	<b>HOURLY FRINGE BENEFITS</b>	<b>TOTAL</b>
<b>CODE</b>	<b>TRADE OR OCCUPATION</b>	<b>\$</b>	<b>\$</b>	<b>\$</b>
151	Light Equipment Operator -ELECTRICAL LINE CONSTRUCTION ONLY	32.65	14.96	47.61
152	Heavy Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	28.57	13.71	42.28
153	Light Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	26.53	13.55	40.08
154	Groundman - ELECTRICAL LINE CONSTRUCTION ONLY	22.45	11.84	34.29

**TRUCK DRIVERS**

<b>Fringe Benefits Must Be Paid On <u>All</u> Hours Worked</b>		<b>HOURLY BASIC RATE OF PAY</b>	<b>HOURLY FRINGE BENEFITS</b>	<b>TOTAL</b>
<b>CODE</b>	<b>TRADE OR OCCUPATION</b>	<b>\$</b>	<b>\$</b>	<b>\$</b>
201	Single Axle or Two Axle	19.00	0.00	19.00
203	Three or More Axle	19.00	0.00	19.00
204	Articulated, Euclid, Dumptor, Off Road Material Hauler Future Increase(s): Add \$1.60/hr on 6/3/2016.	34.69	20.38	55.07
205	Pavement Marking Vehicle	19.00	0.00	19.00
206	Shadow or Pilot Vehicle	19.00	0.00	19.00
207	Truck Mechanic	19.00	0.00	19.00

**LABORERS**

<b>Fringe Benefits Must Be Paid On <u>All</u> Hours Worked</b>		<b>HOURLY BASIC RATE OF PAY</b>	<b>HOURLY FRINGE BENEFITS</b>	<b>TOTAL</b>
<b>CODE</b>	<b>TRADE OR OCCUPATION</b>	<b>\$</b>	<b>\$</b>	<b>\$</b>
301	General Laborer	29.01	17.39	46.40
303	Landscaper Future Increase(s): Add \$1.00/hr eff. 06/01/2016; Add \$1.00/hr eff. 06/01/2017 Premium Increase(s): DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add \$1.25/hr for work on projects involving temporary traffic control setup, for lane and shoulder closures, when work under artificial illumination conditions is necessary as required by the project provisions (including prep time prior to and/or cleanup after such time period).	27.51	20.63	48.14
304	Flagperson or Traffic Control Person	19.31	15.21	34.52
311	Fiber Optic Laborer (Outside, Other Than Concrete Encased)	18.53	0.00	18.53

314	Railroad Track Laborer	17.00	5.43	22.43
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**HEAVY EQUIPMENT OPERATORS  
CONCRETE PAVEMENT OR BRIDGE WORK**

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<b>Fringe Benefits Must Be Paid On <u>All</u> Hours Worked</b>				
<b>CODE</b>	<b>TRADE OR OCCUPATION</b>	<b>HOURLY BASIC RATE OF PAY</b>	<b>HOURLY FRINGE BENEFITS</b>	<b>TOTAL</b>
		\$	\$	\$
541	Crane, Tower Crane, Pedestal Tower or Derrick, With or Without Attachments, With a Lifting Capacity of Over 100 Tons, Self-Erecting Tower Crane With a Lifting Capacity Of Over 4,000 Lbs., Crane With Boom Dollies; Crane, Tower Crane, Pedestal Tower or Derrick, With Boom, Leads &/or Jib Lengths Measuring 176 Ft or Over; Master Mechanic. Future Increase(s): Add \$1.60/hr on 6/3/2016. Premium Increase(s): Add \$.50/hr for >200 Ton; Add \$1/hr at 300 Ton; Add \$1.50/hr at 400 Ton; Add \$2/hr at 500 Ton & Over.	37.67	20.38	58.05
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 \$1.30/hr on 6/1/2016; Add \$1.25/hr on 6/1/2017. Premium Increase(s): DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add \$1.50/hr night work premium. See DOT'S website for details about the applicability of this night work premium at: <a href="http://wisconsin.gov/Pages/doing-bus/civil-rights/labornwage/prevaling-wage-compliance.aspx">http://wisconsin.gov/Pages/doing-bus/civil-rights/labornwage/prevaling-wage-compliance.aspx</a> .	37.77	21.85	59.62

<b>Fringe Benefits Must Be Paid On <u>All</u> Hours Worked</b>		<b>HOURLY BASIC RATE OF PAY</b>	<b>HOURLY FRINGE BENEFITS</b>	<b>TOTAL</b>
<b>CODE</b>	<b>TRADE OR OCCUPATION</b>	<b>\$</b>	<b>\$</b>	<b>\$</b>
543	<p>Air Track, Rotary or Percussion Drilling Machine &amp;/or Hammers, Blaster; Automatic Subgrader (Concrete); Backhoe (Track Type) Having a Mfgr.'s Rated Capacity of Under 130,000 Lbs., Backhoe (Mini, 15,000 Lbs. &amp; Under); Boring Machine (Directional, Horizontal or Vertical); Bridge (Bidwell) Paver; Bulldozer or Endloader; Concrete Batch Plant, Batch Hopper; Concrete Breaker (Large, Auto, Vibratory/Sonic, Manual or Remote); Concrete Bump Cutter, Grinder, Planing or Grooving Machine; Concrete Conveyor System; Concrete Laser/Screed; Concrete Paver (Slipform); Concrete Pump, Concrete Conveyor (Rotec or Bidwell Type); Concrete Slipform Placer Curb &amp; Gutter Machine; Concrete Spreader &amp; Distributor; Crane (Carry Deck, Mini) or Truck Mounted Hydraulic Crane (10 Tons or Under); Crane With a Lifting Capacity of 25 Tons or Under; Forestry Equipment, Timbco, Tree Shear, Tub Grinder, Processor; Gradall (Cruz-Aire Type); Grader or Motor Patrol; Grout Pump; Hydro-Blaster (10,000 PSI or Over); Loading Machine (Conveyor); Manhoist; Material or Stack Hoist; Mechanic or Welder; Milling Machine; Post Hole Digger or Driver; Scraper (Self Propelled or Tractor Drawn) 5 cu yds or More Capacity; Shoulder Widener; Sideboom; Skid Rig; Stabilizing or Concrete Mixer (Self-Propelled or 14S or Over); Straddle Carrier or Travel Lift; Tractor (Scraper, Dozer, Pusher, Loader); Tractor or Truck Mounted Hydraulic Backhoe; Trencher (Wheel Type or Chain Type); Tube Finisher; Tugger (NOT Performing Work on the Great Lakes); Winches &amp; A-Frames.</p> <p>Future Increase(s): Add \$1.30/hr on 6/1/2016; Add \$1.25/hr on 6/1/2017.</p> <p>Premium Increase(s): DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day &amp; Christmas Day. 2) Add \$1.50/hr night work premium. See DOT'S website for details about the applicability of this night work premium at: <a href="http://wisconsin.gov/Pages/doing-bus/civil-rights/labornwage/prevaling-wage-compliance.aspx">http://wisconsin.gov/Pages/doing-bus/civil-rights/labornwage/prevaling-wage-compliance.aspx</a>.</p>	37.27	21.85	59.12
544	<p>Backfiller; Belting, Burlap, Texturing Machine; Broom or Sweeper; Compactor (Self-Propelled or Tractor Mounted, Towed &amp; Light Equipment); Concrete Finishing Machine (Road Type); Environmental Burner; Farm or Industrial Type Tractor; Fireman (Pile Driver &amp; 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.</p> <p>Future Increase(s): Add \$1.30/hr on 6/1/2016; Add \$1.25/hr on 6/1/2017.</p> <p>Premium Increase(s): DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day &amp; Christmas Day. 2) Add \$1.50/hr night work premium. See DOT'S website for details about the applicability of this night work premium at: <a href="http://wisconsin.gov/Pages/doing-bus/civil-rights/labornwage/prevaling-wage-compliance.aspx">http://wisconsin.gov/Pages/doing-bus/civil-rights/labornwage/prevaling-wage-compliance.aspx</a>.</p>	37.27	21.85	59.12

<b>Fringe Benefits Must Be Paid On <u>All</u> Hours Worked</b>		<b>HOURLY BASIC RATE OF PAY</b>	<b>HOURLY FRINGE BENEFITS</b>	<b>TOTAL</b>
<b>CODE</b>	<b>TRADE OR OCCUPATION</b>	<b>\$</b>	<b>\$</b>	<b>\$</b>
545	Air Compressor (&/or 400 CFM or Over); Air, Electric or Hydraulic Jacking System; Automatic Belt Conveyor & Surge Bin; Boiler (Temporary Heat); Concrete Proportioning Plant; Crusher, Screening or Wash Plant; Generator (&/or 150 KW or Over); Heaters (Mechanical); High Pressure Utility Locating Machine (Daylighting Machine); Mudjack; Oiler; Prestress Machine; Pug Mill; Pump (3 Inch or Over) or Well Points; Rock, Stone Breaker; Screed (Milling Machine); Stump Chipper; Tank Car Heaters; Vibratory Hammer or Extractor, Power Pack.	31.62	19.78	51.40
546	Fiber Optic Cable Equipment.	21.00	0.00	21.00
547	Work Performed on the Great Lakes Including Diver; Wet Tender or Hydraulic Dredge Engineer.	41.65	21.71	63.36
548	Work Performed on the Great Lakes Including 70 Ton & Over Tug Operator; Assistant Hydraulic Dredge Engineer; Crane or Backhoe Operator; Hydraulic Dredge Leverman or Diver's Tender; Mechanic or Welder. Future Increase(s): Add \$1.25/hr on 1/1/2017. Premium Increase(s): Add \$.50/hr for Friction Crane, Lattice Boom or Crane Certification (CCO).	44.05	23.24	67.29
549	Work Performed on the Great Lakes Including Deck Equipment Operator or Machineryman (Maintains Cranes Over 50 Tons or Backhoes 115,000 Lbs. or more); Tug, Launch or Loader, Dozer or Like Equipment When Operated on a Barge, Breakwater Wall, Slip, Dock or Scow, Deck Machinery.	36.72	21.15	57.87
550	Work Performed on the Great Lakes Including Deck Equipment Operator; Machineryman or Fireman (Operates 4 Units or More or Maintains Cranes 50 Tons or Under or Backhoes 115,000 Lbs. or Under); Deck Hand, Deck Engineer or Assistant Tug Operator; Off Road Trucks - Great Lakes ONLY.	36.72	21.15	57.87

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

<b>Fringe Benefits Must Be Paid On <u>All</u> Hours Worked</b>		<b>HOURLY BASIC RATE OF PAY</b>	<b>HOURLY FRINGE BENEFITS</b>	<b>TOTAL</b>
<b>CODE</b>	<b>TRADE OR OCCUPATION</b>	<b>\$</b>	<b>\$</b>	<b>\$</b>
551	Crane, Tower Crane, Pedestal Tower or Derrick, With or Without Attachments, With a Lifting Capacity of Over 100 Tons, Self Erecting Tower Crane With a Lifting Capacity of Over 4,000 Lbs., Crane With Boom Dollies; Crane, Tower Crane, Pedestal Tower or Derrick, With Boom, Leads and/or Jib Lengths Measuring 176 Ft or Over; Master Mechanic.	36.67	19.78	56.45

<b>Fringe Benefits Must Be Paid On <u>All</u> Hours Worked</b>		<b>HOURLY BASIC RATE OF PAY</b>	<b>HOURLY FRINGE BENEFITS</b>	<b>TOTAL</b>
<b>CODE</b>	<b>TRADE OR OCCUPATION</b>	<b>\$</b>	<b>\$</b>	<b>\$</b>
552	<p>Backhoe (Track Type) Having a Mfgr.'s Rated Capacity of 130,000 Lbs. or Over; Caisson Rig; Crane, Tower Crane, Portable Tower, Pedestal Tower or Derrick, With or Without Attachments, With a Lifting Capacity of 100 Tons or Under, Self-Erecting Tower Crane With a Lifting Capacity Of 4,000 Lbs. &amp; Under; Crane, Tower Crane, Portable Tower, Pedestal Tower or Derrick, With Boom, Leads &amp;/or Jib Lengths Measuring 175 Ft or Under; Dredge (NOT Performing Work on the Great Lakes); Licensed Boat Pilot (NOT Performing Work on the Great Lakes); Pile Driver.</p> <p>Future Increase(s): Add \$1.30/hr on 6/1/2016; Add \$1.25/hr on 6/1/2017.</p> <p>Premium Increase(s): DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day &amp; Christmas Day. 2) Add \$1.50/hr night work premium. See DOT'S website for details about the applicability of this night work premium at: <a href="http://wisconsin.gov/Pages/doing-bus/civil-rights/labornwage/prevailing-wage-compliance.aspx">http://wisconsin.gov/Pages/doing-bus/civil-rights/labornwage/prevailing-wage-compliance.aspx</a>.</p>	37.77	21.85	59.62
553	<p>Air, Track, Rotary or Percussion Drilling Machine &amp;/or Hammers, Blaster; Asphalt Heater, Planer &amp; Scarifier; Asphalt Milling Machine; Asphalt Screed; Backhoe (Track Type) Having a Mfgr.'s Rated Capacity of Under 130,000 Lbs., Backhoe (Mini, 15,000 Lbs. &amp; Under); Bituminous (Asphalt) Plant &amp; 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 &amp; 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 &amp; A-Frames.</p> <p>Future Increase(s): Add \$1.30/hr on 6/1/2016; Add \$1.25/hr on 6/1/2017.</p>	36.72	21.50	58.22

<b>Fringe Benefits Must Be Paid On <u>All</u> Hours Worked</b>		<b>HOURLY BASIC RATE OF PAY</b>	<b>HOURLY FRINGE BENEFITS</b>	<b>TOTAL</b>
<b>CODE</b>	<b>TRADE OR OCCUPATION</b>	<b>\$</b>	<b>\$</b>	<b>\$</b>
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. Future Increase(s): Add \$1.30/hr on 6/1/2016; Add \$1.25/hr on 6/1/2017.	36.72	21.50	58.22
555	Air Compressor (&/or 400 CFM or Over); Air, Electric or Hydraulic Jacking System; Augers (Vertical & Horizontal); Automatic Belt Conveyor & Surge Bin; Boiler (Temporary Heat); Crusher, Screening or Wash Plant; Generator (&/or 150 KW or Over); Heaters (Mechanical); High Pressure Utility Locating Machine (Daylighting Machine); Mudjack; Oiler; Prestress Machine; Pug Mill; Pump (3 Inch or Over) or Well Points; Rock, Stone Breaker; Screed (Milling Machine); Stump Chipper; Tank Car Heaters; Vibratory Hammer or Extractor, Power Pack. Future Increase(s): Add \$1.60/hr on 6/3/2016.	32.62	20.38	53.00
556	Fiber Optic Cable Equipment.	21.00	0.00	21.00

<b>RESIDENTIAL OR AGRICULTURAL CONSTRUCTION</b>
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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.

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**SKILLED TRADES**

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<u>CODE</u>	<u>TRADE OR OCCUPATION</u>	<b>Fringe Benefits Must Be Paid On <u>All</u> Hours Worked</b>		
		<u>HOURLY BASIC RATE OF PAY</u> \$	<u>HOURLY FRINGE BENEFITS</u> \$	<u>TOTAL</u> \$
101	Acoustic Ceiling Tile Installer	34.13	20.79	54.92
102	Boilermaker	30.21	21.97	52.18
103	Bricklayer, Blocklayer or Stonemason	30.00	2.54	32.54
104	Cabinet Installer	20.00	0.46	20.46
105	Carpenter	32.80	0.00	32.80
106	Carpet Layer or Soft Floor Coverer	24.04	4.89	28.93
107	Cement Finisher	25.00	12.00	37.00
108	Drywall Taper or Finisher	20.00	0.00	20.00
109	Electrician	27.00	6.24	33.24
110	Elevator Constructor	43.84	27.09	70.93
111	Fence Erector	17.00	0.17	17.17
112	Fire Sprinkler Fitter	39.66	21.11	60.77
113	Glazier	38.27	14.42	52.69
114	Heat or Frost Insulator	17.00	0.00	17.00
115	Insulator (Batt or Blown)	17.12	6.68	23.80
116	Ironworker	24.30	14.25	38.55
117	Lather	32.80	0.00	32.80
119	Marble Finisher	25.72	18.54	44.26
120	Marble Mason	30.00	2.54	32.54
121	Metal Building Erector	13.60	6.57	20.17
123	Overhead Door Installer	26.00	5.11	31.11
124	Painter	28.84	7.83	36.67
125	Pavement Marking Operator	30.00	19.61	49.61

<b>Fringe Benefits Must Be Paid On <u>All</u> Hours Worked</b>		<b>HOURLY BASIC RATE OF PAY</b>	<b>HOURLY FRINGE BENEFITS</b>	<b>TOTAL</b>
<b>CODE</b>	<b>TRADE OR OCCUPATION</b>	<b>\$</b>	<b>\$</b>	<b>\$</b>
129	Plasterer	22.00	0.00	22.00
130	Plumber	38.37	5.96	44.33
132	Refrigeration Mechanic	28.50	2.56	31.06
133	Roofer or Waterproofer Future Increase(s): Add \$1.25/hr eff. 06/01/2016	30.45	18.60	49.05
134	Sheet Metal Worker	26.13	17.37	43.50
135	Steamfitter	15.00	2.04	17.04
137	Teledata Technician or Installer	22.50	12.74	35.24
138	Temperature Control Installer	21.42	7.84	29.26
139	Terrazzo Finisher	25.72	18.54	44.26
140	Terrazzo Mechanic	31.55	18.26	49.81
141	Tile Finisher	30.00	0.00	30.00
142	Tile Setter	31.00	0.00	31.00
143	Tuckpointer, Caulker or Cleaner	25.00	2.99	27.99
146	Well Driller or Pump Installer	29.00	0.00	29.00
147	Siding Installer	17.00	0.65	17.65

**TRUCK DRIVERS**

<b>Fringe Benefits Must Be Paid On <u>All</u> Hours Worked</b>		<b>HOURLY BASIC RATE OF PAY</b>	<b>HOURLY FRINGE BENEFITS</b>	<b>TOTAL</b>
<b>CODE</b>	<b>TRADE OR OCCUPATION</b>	<b>\$</b>	<b>\$</b>	<b>\$</b>
201	Single Axle or Two Axle	20.00	0.42	20.42
203	Three or More Axle	18.75	2.00	20.75
205	Pavement Marking Vehicle	18.75	2.00	20.75
207	Truck Mechanic	18.75	2.00	20.75

**LABORERS**

<b>Fringe Benefits Must Be Paid On <u>All</u> Hours Worked</b>		<b>HOURLY BASIC RATE OF PAY</b>	<b>HOURLY FRINGE BENEFITS</b>	<b>TOTAL</b>
<b>CODE</b>	<b>TRADE OR OCCUPATION</b>	<b>\$</b>	<b>\$</b>	<b>\$</b>
301	General Laborer	20.00	8.29	28.29
302	Asbestos Abatement Worker	18.00	5.52	23.52

**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> \$
303	Landscaper	22.61	0.00	22.61
311	Fiber Optic Laborer (Outside, Other Than Concrete Encased)	18.53	0.00	18.53
315	Final Construction Clean-Up Worker	15.00	0.00	15.00

**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.	25.00	9.78	34.78
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. Future Increase(s): Add \$1.60/hr on 5/30/2016.	34.17	19.15	53.32

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

**SECTION 00 83 00 – PARTIAL PAYMENTS FOR STORED MATERIALS**

**PART 1 – GENERAL**

1.1 As stated in the General Conditions, the Commissioner of Public Works may grant an estimate of the amount of properly stored fabricated or manufactured materials and components specified, previously paid for by the Contractor. Said payments will be made in accordance with “Procedure Rules of the Commissioner of Public Works for Progress Estimates”.

1.2 For inspection of properly stored materials located outside Milwaukee County, the City shall be reimbursed by the Contractor for all transportation costs, travel time wages, meals and lodging overtime and incidental expenses for City employees performing said inspection.

**PART 2 – PRODUCTS (Not Applicable)**

**PART 3 – EXECUTION (Not Applicable)**

**PART 4 – MEASUREMENT AND PAYMENT (Not Applicable)**

**END OF SECTION 00 83 00**



## SECTION 01 11 00 – SUMMARY OF WORK

### PART 1 – GENERAL

#### 1.1 GENERAL REQUIREMENTS

- A. The Contractor for this work shall refer to the “General Specifications” of the Department of Public Works dated January 31, 1992 and all subsequent addenda, as he shall be held responsible for all requirements listed herein. The Contractor shall visit the site, consult the drawings and specifications, be familiar with the project, and determine for himself all conditions affecting the work.
- B. Failure by a Contractor to be familiar with the project shall not release him from any obligation undertaken under the contract to complete the work in strict conformity with the plans and specifications and all City, State or Federal codes or regulations pertaining thereto.
- C. The drawings accompanying these specifications illustrate the nature and intent of the work and with the specifications form a part of the contract documents. Wherever the clauses “as shown”, “as directed” or similar expressions are used, it shall be understood that reference to drawings is made.

#### 1.2 WORK COVERED BY CONTRACT DOCUMENTS

- A. It is understood that the submittal of a proposal shall include all labor, materials, equipment and incidentals necessary for completion of the work required, including that which may not be directly shown on the drawings or in the specifications but are necessary for proper operation and approval.
- B. The contractor shall locate and be responsible for all lines, elevations and measurements of the structure and other work executed by the Contractor under the contract. The Contractor must exercise proper precaution to verify areas to be worked on the drawing before laying out work and will be held responsible for any error resulting from failure to exercise such precaution.
- C. Contractor shall verify grades, lines, levels, locations and dimensions as shown on drawings and report any errors or inconsistencies to the Engineer before commencing work or fabrication of materials. Starting of work by the Contractor shall imply acceptance of existing conditions.

#### 1.3 DEFINITIONS

- A. The word provide, when used in this specification shall mean that the provider shall furnish and install complete the referenced item or items.

#### 1.4 DESCRIPTION OF PROJECT

- A. This project involves traffic deck recoating and repairs to Levels 1-4 of the Milwaukee-Michigan Parking Structure, and additional work as detailed in the contract drawings and specifications. This work involves, but is not limited to, the following:

1. Shotblasting, cleaning, and applying heavy duty vehicular traffic coating to:
  - a. Levels 2-4 parking decks
  - b. Select locations of elevated decks as shown in the plans on Level 1

The areas listed include but are not limited to floor, curbs, column bases, and walls.

2. Application of sealant to cove and construction joints; if needed.
3. Shotblasting, cleaning, and application of epoxy vehicular traffic coating on ramps between parking decks.
4. Pavement markings including lines, arrows, and symbols.
5. Concrete surface repairs.
6. Epoxy injected crack repairs.
7. Incidental related work.

## **PART 2 – PRODUCTS (Not Applicable)**

## **PART 3 – EXECUTION**

### **3.1 HOURS OF WORK**

- A. The Contractor shall coordinate hours of work with the City of Milwaukee.

### **3.2 EXAMINATION OF SITE**

- A. All existing conditions, elevations and dimensions shall be verified at the site by the Contractor. Prior to submitting his proposal, the Contractor shall visit the site, consult the drawings and specifications and determine for himself all conditions affecting the work.
- B. Contractor shall become acquainted with the location of overhead conduits and piping, etc. which may be encountered or be affected by the Contractor's work, and shall be responsible for any damage caused by neglect to provide proper precautions or protection.
- C. Information pertaining to existing conditions that appear on the drawings are based on original construction. While such data has been collected with reasonable care, there is no expressed or implied guarantee that conditions so indicated are entirely representative of those actually existing or that unlooked for developments may not occur. They are merely provided to assist the Contractor in the investigation of conditions.
- D. Contractor shall obtain complete data at the site and inspect the area that is to receive the work before proceeding with his work.

- E. The Contractor shall notify the Engineer in case of discrepancies between existing work and drawings, and defects in such surfaces that are to receive the Contractor's work. The engineer will direct such work or surfaces to be remedied.
- F. Damage to the structure not documented prior to the work will be the Contractor's responsibility to repair.

### 3.3 SUPERVISION OF WORK

- A. The Contractor shall provide all necessary supervision, scheduling, planning and control to perform the work and coordinate the work of all trades on the project.
- B. The Contractor shall furnish the services of an experienced superintendant at all times when work is being performed.
- C. The superintendant shall be constantly in charge of the installation of the work together with all subcontractors, skilled workman, helpers, and labor required to perform the work.
- D. The Contractor shall be thoroughly acquainted with and be responsible for the various Subcontractors' work so that it is properly coordinated and supervised to the satisfaction of the Commissioner of Public Works or his representative.
- E. Upon written notice to the Contractor of the lack of such coordination and supervision, the Commissioner of Public Works may authorize such services as may be required and deduct the cost of this service at an hourly rate of \$100.00 per hour per person from the contract for the work.

### 3.4 STORAGE OF MATERIALS

- A. The Contractor shall assume full responsibility for the protection and safekeeping of products stored on the premises.
- B. The Contractor shall store materials within the confines of his work space or in other areas or locations negotiated by the Contractor.
- C. Materials are to be so stored as to assure the preservation of their quality and fitness for the work. When considered necessary, materials shall be placed on wooden platforms or other hard, clean surfaces, and not on the ground, and they shall be placed under cover. Materials stored at the site shall not damage the structure in any way. Oil, grease, or gasoline spills shall be cleaned up immediately.

### 3.5 PROTECTION AND REPAIRS

- A. The Contractor shall continuously maintain adequate protection of all his work and materials, whether worked or unworked, on or off the site of the project, and shall protect the work and materials of all other Contractors and the City of Milwaukee's property from damage arising in connection with their contracts.

- B. The Contractor shall be responsible for any damages caused by his operations to vehicles, landscaping, persons or property. The Contractor, during all operations shall take precautions necessary for the full protection of traffic, parked vehicles, property upon and in the vicinity of the structures and utilities.
- C. Whenever damage or destruction of property of any character resulting from neglect, misconduct or omission due to the manner or method of execution or non-execution of the work or caused by defective work or the use of improper materials, the Contractor shall be held responsible and not released until the work shall have been corrected, completed, and the requirements and intent of these documents complied with.
- D. All damages of each and every kind resulting from neglect or refusal of the Contractor to protect such work materials, and property during erection, construction and completion of the project shall be made good by the Contractor to the satisfaction of the City.
- E. No damaged or imperfect materials, equipment accessories, etc., will be accepted. All materials, equipment, accessories, etc. furnished or installed by this Contractor must function perfectly and as designed. If any argument should arise in regard to this requirement, the City will replace the parts and deduct the costs from the contract price.
- F. The Contractor shall repair all damages that he, any of his employees or his subcontractors may do to any other work or parts of the structure. Repairs must be done in a neat and workmanlike manner to match existing construction and must meet with the approval of the Commissioner of Public Works or his representative.
- G. If any faults are found with the Contractor's work, he shall repair or replace any of the parts he has furnished or installed as directed without any additional costs to the City of Milwaukee.
- H. The Contractor shall restore, repair, refinish or replace, as part of this contract any surfaces that are damaged or left incomplete or unsightly as a result of the removal of existing equipment.

**PART 4 – MEASUREMENT AND PAYMENT (Not Applicable)**

**END OF SECTION 01 11 00**

## SECTION 01 22 00 – UNIT PRICES

### PART 1 – GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General Conditions, Cleaning and Project Closeout, and other Division 1 Specifications Sections apply to this section.

#### 1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for unit prices.

#### 1.3 DEFINITIONS

- A. Unit price is an amount proposed by bidders, stated on the Bid Form, as a price per unit of measurement for materials or services.

#### 1.4 EXTRA WORK

- A. Extra work shall be performed in accordance with the Department of Public Works General Specifications Section 2.6.0 “Extra Work and Credits”

#### 1.5 PROCEDURES

- A. Unit prices include all necessary material, plus cost for delivery, installation, labor, insurance, overhead, profit, and applicable taxes.
- B. Measurement and Payment:
  1. All work completed under the contract will be measured by the Engineer according to United States standard measure. The method of measurement and computations to be used in determination of quantities of material furnished and of work performed under the contract will be those methods generally recognized as conforming to good engineering practice.
  2. The completed work will be measured for final payment by the engineer, as specified for the various items elsewhere in these specifications, to determine the quantities of such items of work performed, except when agreements have been made providing for compensation on the basis of plan quantities as hereinafter provided or when contract change orders have been executed providing for other methods of measurement. The Contractor will be paid for the actual amount of work performed in accordance with the contract, as shown by the final measurements or upon the basis of plan quantities.
  3. If the Contractor and the engineer agree in writing that the quantities of certain items or portions of items of work as set forth in the contract or on the plans, as originally drawn or

subsequently corrected or revised, are in substantial agreement with the actual quantities of work performed, compensation therefore will be made based on the quantities set forth in the contract or on the plans, as originally drawn or subsequently corrected or revised, without measurement thereof, and the Contractor shall accept such compensation as full payment for such items or portions of items.

4. When standard manufactured items are specified such as fences, wire, plates, rolled shapes, pipe conduit, etc., and these items are identified by gage, unit weight, section, dimensions, etc., such identification will be considered to be nominal weights or dimensions. Unless more stringently controlled by tolerances in cited specifications, manufacturing tolerances established by the industries involved will be accepted.
- C. The items listed in the bid documents shall be considered as sufficient to complete the work in accordance with the plans and specifications. Any portion of the work not listed in the bid form shall be deemed to be a part of the item which it is most closely associated with and shall be included in the cost of the unit shown on the bid form. Payment for the unit shown on the bid form shall be considered to cover the cost of all labor, material, equipment and performing all operations necessary to complete the work in place. The unit of measurement shall be the unit shown on the bid form. Payment shall be based upon the actual quantity multiplied by the unit prices. Where work is to be performed at a lump sum price, the lump sum shall include all operations and elements necessary to complete the work. No payment will be made for any material wasted, unused, rejected, or used for the convenience of the Contractor.
- D. Quantities and measurement of work completed shall be agreed to by both the Contractor and Project Inspector prior to submission of progress payment(s).
- E. The Owner reserves the right to add or remove quantities of work from the project after the project is awarded.
- F. Final payment and release of retainage will be processed following final acceptance by the Engineer. Payment will only be released once all contract requirements are fulfilled and punch-list items are marked as acceptably completed. Punch-list work is incidental to the project quantities.

PART 2 – PRODUCTS (Not Applicable)

PART 3 – EXECUTION (Not Applicable)

PART 4 – MEASUREMENT AND PAYMENT (Not Applicable)

END OF SECTION 01 22 00

## SECTION 01 26 00 – CONTRACT MODIFICATION PROCEDURES

### PART 1 – GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the contract, including General Conditions and other Division 1 specification sections, apply to this section.

#### 1.2 SUMMARY

- A. This section specifies administrative and procedural requirements for handling and processing contract modifications.

#### 1.3 MINOR CHANGES IN THE WORK

- A. The engineer will issue supplemental instructions authorizing minor changes in the work, not involving adjustment to the contract sum or contract time.

#### 1.4 CHANGE ORDERS

- A. Change orders shall be requested and processed in accordance with Department of Public Works General Specifications, Chapter 2.1.26 and as herein specified.
- B. The Contractor shall submit all change order requests to the City in a timely manner. Each request should include a description of the proposed change, the reason for the change, and a complete breakdown of the proposed cost including supporting information to substantiate the claim.
- C. The Contractor shall include with the change order request the impact, if any, the proposed change will have on the Contractor's schedule. If a time extension to the schedule is requested, then the Contractor shall include supporting information to substantiate the claim.
- D. All change order requests shall be submitted as soon as possible after the above information can be compiled. Change order requests submitted after one month of occurrence may not be granted.
- E. Change orders requested to be paid on a time and material basis shall have all work documented on a daily basis. Contractor's superintendent and the Project Inspector shall sign off on a daily basis all labor hours and materials used and charged to the change orders.

- F. Approval of the change order work and method and/or amount of payment shall be approved prior to Contractor proceeding with change order as outlined in the Department of Public Works General Specification.

PART 2 – PRODUCTS (Not Applicable)

PART 3 – EXECUTION (Not Applicable)

PART 4 – MEASUREMENT AND PAYMENT (Not Applicable)

END OF SECTION 01 26 00

## SECTION 01 31 13 – PROJECT COORDINATION

### PART 1 – GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the contract, including General Conditions and other Division 1 specification sections, apply to this section.

#### 1.2 SUMMARY

- A. The General Contractor shall assume and take responsible charge of the project and shall coordinate the work of each Subcontractor so as to complete the project in an orderly and timely manner.
- B. Each Contractor shall:
  - 1. Coordinate the work of his own employees.
  - 2. Expedite his work to assure compliance with schedules.
  - 3. Coordinate the work with that of other Contractors and City of Milwaukee.

### PART 2 – PRODUCTS (Not Applicable)

### PART 3 – EXECUTION

#### 3.1 COORDINATION PROCEDURES

- A. Cooperate with the City and other persons of all trades engaged in the work in such a manner and to such extent as will best facilitate the work of each and the prompt completion of the work.
- B. Maintain progress of the work, order materials and let subcontracts promptly, and schedule and expedite work so as to avoid delay.
- C. Notify other Contractors, trades and City of Milwaukee whose work is in any way connected to, combined with, or influenced by the Contractor's work and allow them reasonable time to complete their work.
- D. Carefully examine the drawings and specifications to ascertain the extent of the work of all trades.
- E. Coordinate access to and use of the site and storage of materials on the site with the subcontractors.
- F. Coordinate Contractor's work with adjacent work and cooperate with all other trades so as to facilitate the general progress of the project. Afford all other trades every reasonable opportunity for the installation of their work and for the storage of their material. In no case exclude from the premises or work, any other Contractor or Subcontractor or their employees; nor interfere with any Contractor or Subcontractor in the execution or installation of his work.

- G. Perform work in proper sequence in relation to that of other trades. Pay all costs caused by defective or ill-timed work.
- H. Arrange work and dispose of materials so as not to interfere with the work or storage of materials of other Contractors and join his work to that of others in accordance with the intent of the drawings and specifications.
- I. Notify the City of unforeseen conditions found in the field.

### 3.2 EXAMINATION OF DRAWINGS

- A. Examine all drawings together with the specifications applicable to the contract.
- B. After examination of the contract documents, bring to the attention of the City any questions with regard to the intent of these documents, in a timely manner, prior to commencing with the work.

### 3.3 BULLETIN BOARD

- A. Furnish and maintain a bulletin board for the posting of wage, employment data, etc.

### PART 4 – MEASUREMENT AND PAYMENT (Not Applicable)

END OF SECTION 01 31 13

## SECTION 01 31 19 – PROJECT MEETINGS

### PART 1 – GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the contract, including General Conditions and other Division 1 specification sections, apply to this section.

#### 1.2 SUMMARY

- A. This section specifies administrative and procedural requirements for project meetings, including, but not limited to, the following:
  - 1. Pre-Construction Meeting
  - 2. Progress Meetings
- B. Related Sections: The following sections contain requirements that relate to this section:
  - 1. Division 1 Section 01 31 13 – Project Coordination for procedures for coordinating project meetings with other construction activities.
  - 2. Division 1 Section 01 33 01 – Submittals and Permits for submitting the Contractor's construction schedule.

### PART 2 – PRODUCTS (Not Applicable)

### PART 3 – EXECUTION

#### 3.1 PRE-CONSTRUCTION MEETING

- A. Soon after award of contract and prior to the start of construction, the Contractor shall attend a Pre Construction meeting with representatives of the City.
- B. The Contractor shall have at the meeting responsible representatives from subcontractors who are to furnish the required materials and perform the following work:
  - 1. Shotblasting and Deck Cleaning
  - 2. Traffic Deck Coating
  - 3. Epoxy Vehicular Traffic Coating
  - 4. Pavement Markings
  - 5. Traffic Control
  - 6. Epoxy Injection
  - 7. Concrete Repairs
- C. The Contractor shall submit the construction schedule to the Engineer at this meeting. It must include all of the Contractor's work and all the work of subcontractors. The schedule shall include the following:

1. List of starting and completion dates for each major item
2. Running schedule of a week-by-week charting and allowing for charting of:
  - a. Expected progress on major items.
  - b. Actual progress on major items.
  - c. The Contractor shall submit an updated schedule at each progress meeting.
- D. Contractor shall describe in detail when each portion of the work is to be accomplished and subcontractors shall participate in the discussion. The Engineer will serve to interpret the contract documents should such questions arise.
- E. Any other questions that the Contractor/Subcontractors have about the work or its scheduling shall be raised at this meeting.
- F. Requirements for contract administration and construction operations will be defined for participants.
- G. Time, date and place of the meeting will be determined by the Engineer.

### 3.2 PROGRESS MEETINGS

- A. Weekly project meetings will be held at the project site by the City's representative for the purpose of coordinating and expediting the work progress.
- B. Attendance at project meetings by the Contractor is mandatory. These meetings shall also be attended by representatives of each subcontractor who is either working at the site or is affected by work being done at the site.
- C. The Contractor shall give written reports of progress on the project, discuss the work schedule for the coming period and present all conflicts, discrepancies, or other difficulties for resolution.
- D. The Contractor shall submit an updated construction schedule at each progress meeting with the expected progress of major items, actual progress on major items and critical path items outlined. A short narrative should be written describing the cause of any delays and intended action to remedy delays. On a monthly basis, provide an overall project schedule tracking the actual progress of major and critical path items, expected progress of remaining major and critical path items, and anticipated completions date.

### PART 4 – MEASUREMENT AND PAYMENT (Not Applicable)

END OF SECTION 01 31 19

## SECTION 01 33 01 – SUBMITTALS AND PERMITS

### PART 1 – GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the contract, including General Conditions and other Division 1 specification sections, apply to this section.

#### 1.2 SUMMARY

- A. This section includes administrative and procedural requirements for submittals and permits required for performance of the work.
- B. The Contractor shall submit five (5) copies or email a PDF to the engineer of the following submittals prior to starting work (including time for review) including but not limited to:
  - 1. Shop Drawings and Submittals:
    - a. Project schedule must be submitted prior to pre-construction meeting
    - b. Traffic deck coating and epoxy vehicular traffic coating data sheets and sample 5-year joint and several warranty
    - c. Pavement marking data sheets
    - d. Concrete repair mortars
    - e. Epoxy injection material
- C. The rulings, regulations and laws of the following shall be complied with in the completion of this project.
  - 1. United States Department of Labor – Occupational Safety and Health Administration (OSHA)
  - 2. Wisconsin Department of Workforce Development
  - 3. City of Milwaukee Building Code
  - 4. Wisconsin Administrative Code
  - 5. Ordinances of the City of Milwaukee
  - 6. National Electrical Code

### PART 2 – PRODUCTS (Not Applicable)

### PART 3 – EXECUTION

#### 3.1 SUBMITTALS AND SAMPLES

- A. Comply with the requirements of the Department of Public Works General Conditions and as follows:

1. Forward submittals not more than 30 calendar days after the Award of Contract for all materials to be used on the project. No work, indicated on any one shop drawing, hardware list, etc., shall be started until such information has been approved.
2. Include with each submittal a transmittal letter signed by the Contractor containing the following:
  - a. Name of Contractor
  - b. Name of Project
  - c. List of Submittals with Specification Section references
  - d. Name of Manufacturer or Supplier
  - e. Additional information as required for the items being provided.
3. Coordinate transmittal of different types of submittals for related elements of the work so processing will not be delayed by the need to review submittals concurrently for coordination.
  - a. The Engineer reserves the right to withhold action on a submittal requiring coordination with other submittals until all related submittals are received.
4. Processing: To avoid the need to delay installation as a result of the time required to process submittals, allow sufficient time for submittal review, including time for resubmittals.
  - a. Allow 2 weeks for initial review. Allow additional time if the Engineer must delay processing to permit coordination with subsequent submittals.
  - b. If an intermediate submittal is necessary, process the same as the initial submittal.
  - c. Allow 2 weeks for reprocessing each submittal.
  - d. No extension of Contract Time will be authorized because of failure to transmit submittals to the Engineer sufficiently in advance of the work to permit processing.
5. Approvals: Wherever the words "or equal" or "approved equal" or similar terms are used, it shall mean as approved by the Commissioner of Public Works or agent. All shop drawings, bulletins, manufacturer's cut sheets and data necessary for an approval shall be submitted with five (5) copies sent to the construction supervisor. Three (3) copies are required for the City's use, and two (2) copies will be returned to the Contractor.
6. Questions on the plans and project specifications during the contract bidding phase should be directed to:

Holly Rutenbeck  
Project Engineer  
Infrastructure Services Division  
Room 907, Frank P. Zeidler Municipal Building  
841 North Broadway  
Milwaukee, WI 53202  
(414) 286-0465  
holly.rutenbeck@milwaukee.gov

All correspondence including submittals, payment requests, change order proposals, construction time letters (delays, suspensions), and any construction related matters shall be addressed as follows:

Holly Rutenbeck  
Project Engineer  
Infrastructure Services Division  
Room 907, Frank P. Zeidler Municipal Building  
841 North Broadway  
Milwaukee, WI 53202  
(414) 286-0465  
holly.rutenbeck@milwaukee.gov

All correspondence concerning the following items; Small Business Enterprise program Reports, Residency Preference Program, Apprentice Program, Wage and Hour Reports, Insurance Certificates, Subcontractor Approval Forms, and all affidavits should be sent to:

Ms. Celeste Jantz  
Department of Public Works  
Room 506, Frank P. Zeidler Municipal Building  
841 North Broadway  
Milwaukee, WI 53202  
(414) 286-3309

- B. Approvals: Wherever the words “or equal” or “approved equal” or similar terms are used, it shall mean as approved by the Commissioner of Public Works or agent. All shop drawings, bulletins, manufacturer’s cut sheets and data necessary for an approval shall be submitted with five (5) copies sent to the City Engineer. Three (3) copies are required for the City’s use, and two (2) copies will be returned to the Contractor.

### 3.2 CODES AND PERMITS

- A. The Contractor shall obtain and pay for all permits, charges, fees and licenses, if any are necessary for the prosecution of the work.
- B. The Contractor shall comply with all laws, ordinances, rules and regulations bearing in the conduct of the work including the giving of notices.
- C. The cost of special equipment, enclosures, protective coverings, etc., as may be required to comply with codes and ordinances shall be included in the price bid for the work.
- D. If any material or work is specified contrary to such rules or omitted from the specifications or drawings but required by such rules, it shall be altered as required by the Contractor to meet these rules and regulations.

### PART 4 – MEASUREMENT AND PAYMENT (Not Applicable)

01 33 01/4

END OF SECTION 01 33 01

SECTION 01 35 13 – SPECIAL PROJECT PROCEDURES

PART 1 – GENERAL

1.1 SPECIAL REQUIREMENTS

- A. This project has special requirements regarding the coordination of the work due to the continued use of the parking structure during construction operations.
- B. To meet these special requirements, the Contractor shall submit a plan for the scheduling of work and staging coordination at the first preconstruction meeting. This plan will be reviewed and is subject to approval by the City.
- C. Related Sections:
  - 1. Section 01 11 00 – Summary of Work
  - 2. Section 01 55 30 – Traffic Control and Construction Staging

PART 2 – PRODUCTS (Not Applicable)

PART 3 – EXECUTION (Not Applicable)

PART 4 – MEASUREMENT AND PAYMENT (Not Applicable)

END OF SECTION 01 35 13



## SECTION 01 50 00 – TEMPORARY FACILITIES AND CONTROLS

### PART 1 – GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the contract, including General Conditions and other Division 1 specification sections, apply to this section.

#### 1.2 SUMMARY

- A. This section includes requirements for construction facilities and temporary controls, including temporary utilities, support facilities, and security and protection.
- B. Temporary utilities may include, but are not limited to, the following:
  - 1. Water service and distribution
  - 2. Temporary electric power and light.
  - 3. Temporary heat
  - 4. Ventilation
  - 5. Telephone service
- C. Support facilities may include, but are not limited to, the following:
  - 1. Temporary enclosures
  - 2. Hoists and scaffolding
  - 3. Temporary project identification signs and bulletin boards
  - 4. Waste disposal services
  - 5. Construction aids and miscellaneous services and facilities
- D. Security and protection facilities may include, but are not limited to, the following:
  - 1. Barricades, warning signs, and lights
  - 2. Enclosure fence for the site
  - 3. Environmental protection

### PART 2 – PRODUCTS (Not Applicable)

### PART 3 – EXECUTION

#### 3.1 TEMPORARY OR TRIAL USAGE

- A. The owner shall have the right to make temporary or trial usage of any mechanical device, machinery, apparatus, equipment, work, material, or construction supplied under contract before final completion or acceptance of the work, and the same shall not be construed as evidence of acceptance of the work by the owner.

### 3.2 TEMPORARY POWER

A. The Contractor shall provide all power required.

1. OSHA regulations require that employers use either ground fault circuit interrupters or an assured equipment grounding conductor program in addition to any other regulation or equipment ground connectors.

### PART 4–MEASUREMENT AND PAYMENT (Not Applicable)

END OF SECTION 01 50 00

## SECTION 01 55 30 – TRAFFIC CONTROL AND CONSTRUCTION STAGING

### PART 1 – GENERAL

#### 1.1 SPECIAL CONTROL

- A. The work shall consist of providing safe and adequate control for vehicular and pedestrian traffic.
- B. The contractors shall provide dust partitions, and traffic devices such as signs, barricades, lights, traffic control cones, temporary striping, and flagmen to control the orderly flow of traffic within the garage and prevent pedestrians and cars from entering areas of the Contractor's operations. Whenever possible, hoses, conduits, electrical cords, etc., shall be located overhead. Whenever such items are located in traffic paths, plywood coverings with adequate signs shall be provided. The traffic devices shall meet the requirements of the U.S. Department of Transportation Federal Highway Administration Manual on Uniform Traffic Control Devices, latest edition, along with any subsequent revisions.

#### 1.2 SUBMITTALS

- A. The Contractor shall submit any modification to the plans that will allow for the work to be completed in the spirit of the contract of his proposed work areas on drawings for each stage of construction
- B. The work area drawing shall show:
  - 1. Delineate the areas to be occupied by the Contractor
  - 2. Locations and types of barricades
  - 3. Locations and types of signs
  - 4. Locations and types of traffic control cones
  - 5. Locations and types of temporary lights
  - 6. Contractor entrance and exits from the work area
- C. Revised work area drawings must be included with the project progress reports and construction schedule.

### PART 2 – PRODUCTS (Not Applicable)

### PART 3 – EXECUTION

#### 3.1 CONTRACTOR'S RESPONSIBILITY

- A. The Contractor shall move the dust partitions and barricades as necessary as the location of this work changes and previously worked-in areas are occupied by the structure's occupants.
- B. The Contractor shall use preventative measures to ensure paint, dust and debris stay inside the Contractor's enclosed area and out of the elevators, stair wells, ventilation and occupied areas. The Contractor will need to erect temporary enclosures of dust and paint partition walls around his

area of work and any additional areas deemed necessary by the Engineer to prevent dust and paint from the Contractor's work from entering other parts of the garage or building. Special protection should be provided to prevent dust and paint from entering elevator vestibule or stair wells. Fans with filters shall be used in the enclosed areas to vent dust out of the Contractor's work area. Fans to be vented to the outside of building away from any intake vents along building.

- C. The Contractor must schedule, arrange his work, and maintain access to undisturbed parking areas. Short interruptions in traffic flow may be permitted but must be scheduled in advance and approval given by the Engineer. At no time can access to the garage be eliminated without prior consent of the engineer. Generally, the parking structure has excess space during normal operations to allow the Contractor to close off 84 parking spaces for his use. The Contractor shall not cause more than the area described above to be closed at any time without the prior written permission of the City.
- D. The Contractor shall submit modifications to the staging plans at the preconstruction meeting for approval prior to start of work.

### 3.2 VEHICULAR TRAFFIC REQUIREMENTS

- A. The entrance and exit lanes must be maintained accessible at all times during construction unless work is being performed on the area described in 3.2 B. Night and weekend hours will be required to complete work in this section.
- B. The heavy-duty vehicular traffic coating application, select pavement markings, and all incidental work on Level 1 as shown in Phases 4 and 5 on Sheet 9 of the plans must be executed on approved weekends starting on Friday at 8:00 p.m. and re-opening to traffic on Monday at 5:00 a.m. The Owner will permit access to work on any additional level during this time provided the work area will be open to traffic by Monday at 5:00 a.m. One week notice shall be given to the Parking Operations Coordinator at the weekly progress meeting to accommodate for the exit closure.
- C. Additional parking spaces may be available upon request depending upon parking needs. However, less than the above mentioned 84 parking spaces may be available for any given area depending upon the Contractor's schedule.

### 3.3 PEDESTRIAN CONTROL

- A. Due to Fire Department requirements, at no time shall the stair-elevator tower be closed. This is a required fire exit from the garage. Pedestrian access to the stair tower must be provided at all times.
- B. Passageways for pedestrian traffic shall be delineated by plywood barricades installed tight to the deck above. The Contractor shall provide temporary light in all passageways.
- C. The City of Milwaukee will turn off the elevator access to the garage levels under construction. The elevator will remain operational to all other levels. Notify the Parking Operations Coordinator of

level to close two days prior closure. Contractor is responsible for posting and removing of signs in structure notifying patrons of closure within two days before and after closure.

- D. Stage coating at elevator in such a way as to maintain pedestrian access to stairwell. At no time can access be restricted to both the elevator and stairwell simultaneously.
- E. All vehicular requirements of Subsection 3.2 – Vehicular Traffic Requirements also apply to pedestrian control.

#### PART 4 – MEASUREMENT AND PAYMENT

##### 4.1 MEASUREMENT

- A. The City will measure Traffic Control and Construction Staging, completed in accordance to the contract and accepted, as a single complete unit of work.

##### 4.2 PAYMENT

- A. The City will pay for the measured quantity at the contract unit price under the following bid item:

<u>ITEM</u>	<u>UNIT</u>
1. Traffic Control and Construction Staging	LS

- B. Payment is full compensation for constructing, assembling, painting, hauling, erecting, re-erecting, maintaining, restoring, and removing traffic signs, drums, barricades, temporary tape, and similar control devices; for providing, placing, and maintaining lights; and for providing, applying, and removing temporary pavement markings.

END OF SECTION 01 55 30



SECTION 01 60 01 – MATERIALS AND EQUIPMENT

PART 1 – GENERAL

1.1 MATERIALS

- A. Furnish materials of the type, qualities and characteristics specified. The specification of a trade name and catalog number is intended to establish quality, type, character and operating characteristics of the material required. Materials by other manufacturer's meeting the approval of the Engineer of equal specifications will be considered excepting as may be specifically stated otherwise. Samples and/or demonstrations may be requested.
- B. Materials shall be delivered adequately protected, in merchantable condition and in original unbroken packages if normally packaged. They shall be stored and handled so as to protect and maintain their merchantable condition. Packages shall have stamped on them the date of manufacture and shelf life, if applicable.
- C. The Commissioner of Public Works or his representative shall have the right to reject material not in compliance with specifications as well as damaged material and the Contractor shall remove such material from the construction site when as directed.

1.2 MATERIAL STORAGE

- A. Storage areas are available within the Contractor's occupancy limits.
- B. Refer to Section 01 11 00 – Summary of Work, 3.4 Storage of Materials.

1.3 EQUIPMENT

- A. Internal combustion engine and compressors shall be equipped with mufflers to reduce noise to a minimum, and shall not be operated in enclosed areas without adequate ventilation.
- B. All materials and work procedures used shall be in accordance with all air pollution control regulations in effect at the work site.

PART 2 – PRODUCTS (Not Applicable)

PART 3 – EXECUTION (Not Applicable)

PART 4 – MEASUREMENT AND PAYMENT (Not Applicable)

END OF SECTION 01 60 01



## SECTION 01 70 01 – CLEANING AND PROJECT CLOSEOUT

### PART 1 – GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the contract, including General Conditions and other Division 1 specification sections, apply to this section.
- B. Article 2.5.4 of the General Specifications of the City of Milwaukee Department of Public Works shall be supplemented as specified hereafter.

#### 1.2 SUMMARY

- A. This section includes administrative and procedural requirements for cleaning and project closeout including, but not limited to, the following:
  - 1. Project record document submittal
  - 2. Submittal of warranties
  - 3. Final cleaning

#### 1.3 AS-BUILT DRAWINGS

- A. At the completion of work and prior to final payment, the Contractor shall provide the Division with a marked up set of “as-built” drawings showing all changes or variations from contract drawings, including those specified on change order drawings heretofore issued. Contractors providing buried or concealed piping, conduit or similar items shall locate such items by dimensions and elevations.
- B. Marked up sets of prints will be acceptable providing they are in first class condition for record purposes. Each contractor shall be responsible for accuracy of record drawings.

#### 1.4 GUARANTEE

- A. This Contractor shall guarantee to replace or repair promptly at their own expense, as directed by the Commissioner of Public Works or his agent, all workmanship in which defects may develop within one (1) year from the date of final acceptance of his work excepting as may be hereinafter specified. This guarantee includes all damage done by the City due to faulty equipment, poor installation or poor construction. The City shall also receive any extended guarantees or warranties normally supplied by any vendor or manufacturer for material or equipment incorporated in the work.

### PART 2 – PRODUCTS (Not Applicable)

## PART 3 – EXECUTION

### 3.1 SAFETY CLEANING

- A. Safety cleaning: Each Contractor is responsible for safety cleaning, which includes but is not limited to the following:
  - 1. Work areas, passageways, ramps, stairs, must be kept free of debris and scrap.
  - 2. Form and scrap lumber shall have nails withdrawn or bent over and lumber shall be stacked or removed.
  - 3. Spills of paint, oil, grease, or other liquids shall be removed immediately.
- B. Protect automobiles and users that will be using the structure during construction. The Contractor will be liable for any and all costs incurred due to damage from construction operations.

### 3.2 PROGRESS CLEANING

- A. Prime Contractor and subcontractor shall remove his rubbish and debris from the site promptly upon its accumulation.
- B. Combustible waste shall be stored in fire resistive containers and disposed of regularly.
- C. Oily, flammable or hazardous wastes such as caustics, acids, harmful dusts, etc., shall be stored in appropriate covered containers.
- D. The Contractor is not allowed to wash debris or other harmful contaminants down drains that would be discharged into City Sewers. Filters shall be inserted in the drain where it is likely debris may accumulate.

### 3.3 DISPOSAL

- A. All demolished materials required for this work shall be carefully collected and removed from site.
- B. No burning or rubbish or debris will be allowed at site. No rubbish shall be thrown from heights without proper protection. When dust will be generated or flying debris is likely to occur, provide dust-tight chutes or other means to control dust.
- C. Containers: Contractor shall provide mobile industrial type waste containers in the number and size required, placed at adequate locations to handle debris or provide other methods of disposing of debris.

### 3.4 FINAL CLEANING

- A. Complete final cleaning immediately prior to substantial completion.

- B. The Contractor shall expedite or perform thorough cleaning, sweeping, and washing of work to remove all foreign matter from work area under his contract, so as to put all such work including finishes, in a complete and finished condition ready for acceptance and use intended.
- C. Remove debris from drain and flush clean.
- D. Employ trained experienced workmen for the final cleaning.

### 3.5 CHARGES

- A. If the Contractor does not remove rubbish or clean the project site as specified above, the City reserves the right to have work done by others at the Contractor's expense.
- B. Employees of the City who are required to clean up any rubbish or sweep any floors will record all hours involved to complete such work.
- C. The cost incurred by the City for this special cleaning and sweep-up work shall be charged against the contract price of the Contractor as determined by the City.

### PART 4 – MEASUREMENT AND PAYMENT (Not Applicable)

END OF SECTION 01 70 01



SECTION 01 71 13 – MOBILIZATION

PART 1 – GENERAL

1.1 SUMMARY

- A. Mobilization shall include the work and operations necessary to move personnel, equipment, supplies, and incidentals to the project site and to establish all of the Contractor's offices, buildings, sanitary accommodations, and other facilities necessary to work on the project. It also includes all other work and operations whose performance is required, or for costs necessarily incurred before beginning work on various items on the project site.

PART 2 – PRODUCTS (Not Applicable)

PART 3 – EXECUTION (Not Applicable)

PART 4 – MEASUREMENT AND PAYMENT

4.1 MEASUREMENT

- A. Mobilization will be measured as each individual unit acceptably completed.

4.2 PAYMENT

- A. The City will pay for the contract lump sum in accordance with the following schedule:
  - 1. When twenty-five (25) percent or more of the original contract amount is earned, fifty (50) percent of the amount bid for Mobilization will be paid.
  - 2. When seventy-five (75) percent or more of the original contract amount is earned, one hundred (100) percent of the amount bid for Mobilization will be paid.
- B. The City will pay for the measured quantity at the contract unit price under the following bid item:

<u>ITEM</u>	<u>UNIT</u>
1. Mobilization and General Conditions	LS

- C. Payment is full compensation for all operations necessary to move personnel, equipment, supplies, and incidentals to the project site and to establish all of the Contractor's offices and other facilities; and for all labor, tools, materials, equipment and incidentals necessary to complete the work.

END OF SECTION 01 71 13



## SECTION 03 01 01 – CONCRETE SURFACE REPAIR

### PART 1 – GENERAL

#### 1.1 SUMMARY

- A. Work in this section consists of furnishing all labor, materials, equipment and incidentals as necessary to complete concrete surface repair to delaminations and spalled areas located on the ceilings, columns, decks and walls.

#### 1.2 SUBMITTALS

- A. Submit Manufacturer's product data sheets including instructions for mixing, handling and placement of concrete repair mortar before starting repair work.

### PART 2 – PRODUCTS

#### 2.1 MATERIALS

- A. Concrete repair mortars are to be polymer-modified, Portland-cement, 2-component, fast-setting, trowel-grade patching mortar with corrosion inhibitor formulated for horizontal or vertical and overhead surfaces.
- B. Approved repair mortars for overhead and vertical surfaces are Duraltop Gel or SpeedCrete PM as manufactured by The Euclid Chemical Company, 19218 Redwood Rd., Cleveland, OH 44110. Sika Top 123 Plus as manufactured by Sika Corporation, 201 Polito Avenue, Lyndhurst, New Jersey 07071; MasterEmaco N 425, as manufactured by BASF Corporation Building Systems, 889 Valley Park Drive, Shakopee, MN 55379; or approved equal for overhead and vertical surfaces.
- C. Approved repair mortars for horizontal surfaces are Eucocrete as manufactured by The Euclid Chemical Company, 19218 Redwood Rd., Cleveland, OH 44110. Sika Top 122 Plus as manufactured by Sika Corporation, 201 Polito Avenue, Lyndhurst, New Jersey 07071; MasterEmaco T 1060, as manufactured by BASF Corporation Building Systems, 889 Valley Park Drive, Shakopee, MN 55379; or approved equal for horizontal surfaces.
- D. Approved bonding agent/anti-corrosion coating for bonding repair mortar to existing concrete and reinforcing steel while protecting reinforcing steel from corrosion is Duralprep A.C. as manufactured by The Euclid Chemical Company, 19218 Redwood Rd., Cleveland, OH 44110, Sika Armatec 110 EpoCem as manufactured by Sika Corporation, 201 Polito Avenue, Lyndhurst, New Jersey 07071, MasterEmaco P 124, as manufactured by BASF Corporation Building Systems, 889 Valley Park Drive, Shakopee, MN 55379; or approved equal.
- E. Other repair mortars and bonding agent/anti-corrosion coating meeting or exceeding the performance criteria and test properties of the approved repair materials may be submitted for approval.

- F. The Contractor shall have a competent, technical representative of the Manufacturer of the concrete repair products onsite at the beginning of the work to approve in writing that preparation and application of the materials is in accordance with the Manufacturer's recommendations. Work shall not begin until such approval is submitted to the Engineer.

## PART 3 – EXECUTION

### 3.1 SUMMARY

- A. Remove deteriorated, unsound and spalled concrete on ceiling, walls, decks, and columns in the Milwaukee-Michigan Parking Structure as shown in the plans and directed by the Engineer. Locate unsound concrete by chain dragging and hammer sounding while listening for hollow sound. Mark areas requiring concrete repair in presence of the Inspector. Sandblast clean any exposed reinforcing bars and prepare concrete for patching in accordance with Manufacturer's printed instructions. Apply bonding agent/anti-corrosion coating to existing concrete prior to applying the concrete repair mortar.
- B. Concrete repairs beyond 5" in depth are considered deep concrete surface repairs. See Section 03 01 02 – Deep Concrete Surface Repair for specifications for this type of repair.

### 3.2 SURFACE PREPARATION

- A. Remove all deteriorated concrete, dirt, oil, grease, and all bond inhibiting materials from the surface. Be sure the repair area is not less than 1/8-inch in depth. Preparation work should be done by scabber or other appropriate mechanical means to obtain an aggregate fractured surface with a minimum surface profile equal to CSP 6-8 in accordance with ICRI Guideline 310.2. Saw cut perimeter of repair area 1/2-inch deep maximum. "Pencil Point" chipping hammers shall not be used.
- B. Hand chip 0.75-inch minimum around and under exposed rebar if corrosion is present or if bar is exposed greater than 50% of its circumference after chipping. Either saw cut above rebar or hand chip a right angle cut 2-inch into sound concrete measured from last visible sign of rebar corrosion. Existing, exposed reinforcing bars shall be sandblasted clean and coated with Duralprep A.C., Sika Armatec 110 EpoCem, or MasterEmaco P 124.

### 3.3 APPLICATION AND FINISH

- A. Existing rebar exposed shall be sandblasted thoroughly clean and coated with Duralprep A.C., Sika Armatec 110 EpoCem, or MasterEmaco P 124 to protect from corrosion. Apply to exposed rebar with stiff bristle brush or spray 20 mils thick covering all exposed steel. Cure to tack-free 2-3 hours. Apply a second coat at 20 mils. Allow to dry again before applying repair mortar.
- B. Pre-wet repair surface to saturated surface dry (SSD). The Contractor shall continually wet the surface for 3 to 4 hours for the concrete to be considered SSD.
  - 1. Apply Duralprep A.C., Sika Armatec 110, or MasterEmaco P 124 as a bonding bridge between existing concrete and repair mortar. Apply by stiff bristle brush or spray apply with "Goldblatt"

pattern pistol or equal equipment. Place repair mortar while Sika Armatec 110 is still wet or dry up to 24 hours.

- C. Repair area should not be less than 1/8-inch in depth. At the time of application surfaces should be SSD with no standing water. Repair bonding agent must be scrubbed into the substrate, filling all pores and voids. Apply Duraltop Gel or SpeedCrete PM by The Euclid Company, Sika Top 123 Plus by Sika Corporation, or MasterEmaco N 425 by BASF Building Systems up to the maximum Manufacturer open time for overhead or vertical repairs. Apply EupoCrete, Sika Top 122 Plus, or MasterEmaco T 1060 up to the maximum Manufacturer open time for horizontal surfaces.
- D. For applications greater than 1-1/2 inch in depth, apply Duraltop Gel, SpeedCrete, Sika Top 123 Plus, or MasterEmaco N 425 in lifts with a max lift depth of 1-1/2 inches. Score the top surface of each lift to produce a roughened surface for the next lift. Allow preceding lift to reach final set.
- E. Allow mortar or concrete to set to desired stiffness then finish with wood or sponge float for a smooth surface. Where rough finish is required, use a broom or burlap drag.
- F. Cure repair area using wet burlap or non-solvent, water based curing compound which has been pre-approved by the Engineer per manufacturer's instructions. To prevent freezing, cover with insulating material.

**PART 4 – MEASUREMENT AND PAYMENT**

**4.1 MEASUREMENT**

- A. The City will measure concrete surface repair by the square foot (SF) acceptably completed, measured as the exposed surface area, following removal. Measurements will be rounded to the nearest tenth (1/10) of a square foot. The depth of the removal will be measured as the distance from the existing surface to the prepared final surface to a maximum depth of 5 inches. Concrete repairs beyond 5 inches in depth are considered 'Deep Concrete Surface Repairs'. Each will be paid for under their corresponding bid item. Measurements for depth will be taken to the nearest one half (1/2) inch. Each repair area will be measured only once for payment purposes, irrespective of the number of operations for removing concrete from that area. Quantities will be verified by the Project Inspector.

**4.2 PAYMENT**

- A. The City will pay for measured quantities at the contract unit price under the following bid items:

<u>ITEM</u>	<u>UNIT</u>
1. Concrete Surface Repair – Vertical and Overhead	SF
2. Concrete Surface Repair – Horizontal	SF

- B. Payment is full compensation for removing unsound concrete; blast cleaning and providing additional reinforcement as necessary; furnishing, placing, and curing concrete; and for furnishing all labor, scaffolding, formwork, tools, materials, equipment, and incidentals necessary to complete the work.

03 01 01/4

END OF SECTION 03 01 01

## SECTION 03 01 02 – DEEP CONCRETE SURFACE REPAIR

### PART 1 – GENERAL

#### 1.1 SUMMARY

- A. Work in this section consists of furnishing all labor, materials, equipment and incidentals as necessary to complete Deep Concrete Surface Repair to delaminations and spalled areas located on the ceilings, columns, decks, and walls. Deep Concrete Surface Repairs pertain to areas greater than a depth of 5 inches.

#### 1.2 SUBMITTALS

- A. Submit Manufacturer's product data sheets including instructions for mixing, handling and placement of concrete repair mortar before starting repair work.

### PART 2 – PRODUCTS

#### 2.1 MATERIALS

- A. Concrete repair mortars are to be polymer-modified, Portland-cement, 1 or 2-component, fast-setting, trowel-grade repair mortar with corrosion inhibitor formulated for horizontal, overhead and vertical surfaces.
- B. Approved repair mortars are Verticoat Supreme as manufactured by The Euclid Chemical Company, 19218 Redwood Road, Cleveland, OH 44110, SikaTop 122 Plus and Sika Top123 Plus as manufactured by Sika Corporation, 201 Polito Avenue, Lyndhurst, NJ 07071, or MasterEmaco S 488 CI, as manufactured by BASF Corporation Building Systems, 889 Valley Park Drive, Shakopee, MN 55379, or approved equal.
- C. Approved bonding agent/anti-corrosion coating for bonding repair mortar to existing concrete and reinforcing steel while protecting reinforcing steel from corrosion is Duralprep A.C. as manufactured by The Euclid Chemical Company, 19218 Redwood Road, Cleveland, OH 44110, Sika Armatec 110 EpoCem, as manufactured by Sika Corporation, 201 Polito Avenue, Lyndhurst, NJ 07071, MasterEmaco P 124, as manufactured by BASF Corporation Building Systems, 889 Valley Park Drive, Shakopee, MN 55379, or approved equal.
- D. Other repair mortars and bonding agent/anti-corrosion coating meeting or exceeding the performance criteria and test properties of the approved repair materials may be submitted for approval.
- E. The Contractor shall have a competent technical representative of the Manufacturer of the concrete repair products onsite at the beginning of the work to approve in writing that preparation and application of the materials is in accordance with the Manufacturer's recommendations. Work shall not begin until such approval is submitted to the Engineer.

## PART 3 – EXECUTION

### 3.1 SUMMARY

- A. Remove deteriorated, unsound and spalled concrete on ceiling, walls, decks, and columns in the Milwaukee-Michigan Parking Structure as shown on the plans and directed by the Engineer. Locate unsound concrete by chain dragging and hammer sounding while listening for hollow sound. Mark areas requiring concrete repair in presence of the Inspector. Sandblast clean any exposed reinforcing bars and prepare concrete for repair in accordance with Manufacturer's printed instructions. Apply bonding agent/anti-corrosion coating to existing concrete prior to placing the concrete repair material.
- B. Concrete repairs up to a depth of 5-inches are considered concrete surface repairs and are paid for under that bid item, see Section 03 01 01 – Concrete Surface Repair. The depth of removal for concrete surface repairs is measured as the distance from the outermost concrete surface to the innermost location of concrete repair. Repairs that extend beyond the 5-inch depth of normal concrete surface repairs are paid for under Deep Concrete Surface Repair. Measurements for Deep Concrete Surface Repair begin at a depth of 5 inches from the outermost concrete surface and continue to the innermost location of repair.

### 3.2 SURFACE PREPARATION

- A. Remove all deteriorated concrete, dirt, oil, grease, and all bond inhibiting materials from the surface. Be sure the repair area is not less than 1/8-inch in depth. Preparation work should be done by scabber or other appropriate mechanical means to obtain an aggregate fractured surface with a minimum surface profile equal to CSP 6-8 in accordance with ICRI Guideline 310.2. Saw cut perimeter of repair area 1/2 inch deep maximum. "Pencil Point" chipping hammers shall not be used.
- B. Hand chip 0.75-inch minimum around and under exposed rebar if corrosion is present or if bar is exposed greater than 50% of its circumference after chipping. Either saw cut above rebar or hand chip a right angle cut 2-inch into sound concrete measured from last visible sign of rebar corrosion. Existing, exposed reinforcing bars shall be sandblasted clean and coated with Duralprep A.C., Sika Armatec 110 EpoCem, or MasterEmaco P 124.

### 3.3 APPLICATION AND FINISH

- A. Existing rebar exposed shall be sandblasted clean and coated with Duralprep A.C., Sika Armatec 110 EpoCem, or MasterEmaco P 124 to protect from corrosion. Apply to exposed rebar with stiff bristle brush or spray 20 mils thick covering all exposed steel. Cure to tack-free 2-3 hours. Apply a second coat at 20 mils. Allow to dry again before applying repair mortar.
- B. Pre-wet repair surface to saturated surface dry (SSD). The Contractor shall continually wet the surface for 3 to 4 hours for the concrete to be considered SSD.
  - 1. Apply Duralprep A.C., Sika Armatec 110 EpoCem, or MasterEmaco P 124 as a bonding bridge between existing concrete and repair mortar. Apply by stiff bristle brush or spray apply with

“Goldblatt” pattern pistol or equal equipment. Place bonding repair agent in accordance with Manufacturer’s written recommendations.

- C. At the time of application surfaces should be SSD with no standing water. Bonding repair agent must be scrubbed into the substrate, filling all pores and voids. Follow manufacturer’s recommendations for bonding agent and apply Verticoat Supreme by The Euclid Chemical Company, SikaTop 122 Plus or SikaTop 123 Plus by Sika Corporation, or MasterEmaco S 488 CI by BASF Corporation Building Systems.
- D. Apply Verticoat Supreme, SikaTop 123 Plus, or MasterEmaco S 488 CI in lifts with a maximum lift depth of 1-1/2 inches. Score the top surface of each lift to produce a roughened surface for the next lift. Allow preceding lift to reach final set.
- E. Allow mortar or concrete to set to desired stiffness then finish with wood or sponge float for a smooth surface. Where rough finish is required, use a broom or burlap drag.
- F. Cure repair area using a wet burlap or non-solvent, water based curing compound which has been pre-approved by the Engineer per manufacturer’s instructions. To prevent freezing in cold temperatures, cover with insulating material.

#### PART 4 – MEASUREMENT AND PAYMENT

##### 4.1 MEASUREMENT

- A. The City will measure deep concrete surface repair by the cubic foot acceptably completed, measured as the exposed volume, following removal. Surface area measurements will be rounded to the nearest tenth (1/10) of a square foot. The depth of the removal will be measured as the distance from the existing surface to the prepared final surface minus 5 inches. Measurements for depth will be taken to the nearest one half (1/2) inch. This depth will be used to find the actual volume of the deep concrete surface repair. Each repair area or volume will be measured only once for payment purposes, irrespective of the number of operations for removing concrete from that area.

##### 4.2 PAYMENT

- A. The City will pay for measured quantities at the contract unit price under the following bid items:

<u>ITEM</u>	<u>UNIT</u>
1. Deep Concrete Surface Repair	CF

- B. Payment is full compensation for removing unsound concrete; blast cleaning and providing additional reinforcement as necessary; furnishing, placing, and curing concrete; and for furnishing all labor, scaffolding, formwork, tools, materials, equipment, and incidentals necessary to complete the work. Concrete repairs less than 5 inches in depth will be paid for separately.

END OF SECTION 03 01 02



## SECTION 03 01 03 – EPOXY-INJECTED CRACK REPAIR

### PART 1 – GENERAL

#### 1.1 SUMMARY

- A. Provide all labor, equipment, and materials necessary for repair of all well-defined cracks or fractures in walls, columns, decks, and beams as shown on the plans and directed by the Engineer by means of an epoxy injection system as specified herein.

#### 1.2 DESIGN REQUIREMENTS

- A. The epoxy injection system shall consist of a paste epoxy used to seal the surface cracks, and an injection epoxy used under low pressure (200 psi max.) to penetrate and fill the cracks and bond the crack surface together.

#### 1.3 APPROVALS

- A. The Project Engineer prior to the start of the concrete repair shall approve the epoxy injection system proposed for use by the Contractor.
- B. To obtain this approval, the Contractor shall furnish certification from the epoxy Manufacturer stating that the furnished materials comply in all respects to the referenced ASTM specification and its provisions.
- C. The Contractor shall also furnish a copy of comprehensive preparation, mixing and application instructions, which have been developed especially for use with the proposed epoxy injection system.
- D. Approval of the proposed system shall be based upon evaluation of instructions and certified test data, or open laboratory tests of material samples, or the evaluation of both certified test data and test samples.
- E. AASHTO T237 shall determine epoxy bond strength.
- F. Concrete compressive strength shall be reached prior to adhesive failure.
- G. Testing shall be the Contractor's responsibility.
- H. The project personnel shall also be furnished with a copy of the approved epoxy application instructions. The Project Engineer shall approve any significant changes to these instructions, which are recommended by the Manufacturer's representative for an anticipated situation.

## PART 2 – PRODUCTS

### 2.1 MATERIALS

- A. The paste and injection epoxies shall be materials produced in the United States by a company recognized as an established manufacturer of chemical products.
- B. The epoxy injection system shall be one that is described in similar application situations.
- C. The injection epoxy adhesive shall conform to ASTM C881, Type 1, Grade Class B or C, depending upon temperature.
- D. If the paste epoxy is required to be left in place, it shall be tinted to match the color of the finished concrete surface, or painted to match existing painted concrete.
- E. The epoxy materials shall be designed to bond to damp or dry surfaces; however, field applications shall be made to dry surfaces.

## PART 3 – EXECUTION

### 3.1 PREPARATION

- A. Concrete surfaces adjacent to the cracks to be sealed shall be cleaned only to the extent necessary to achieve an adequate bond with the paste epoxy, and only by procedures, which will not cause abrasive grits or concrete dust to penetrate the cracks.
- B. Substrate temperatures shall be limited to not less than 45 degrees during epoxy application.
- C. Cracks greater than 0.5 millimeter in width at the surface of the member being repaired shall have injection ports installed in them. The Manufacturer's representative may deem necessary additional injection ports, along cracks less than 0.5 millimeter in width. At the direction of the Engineer, the Contractor shall install and use such additional ports.
- D. Unless otherwise specified or directed, injection ports shall be spaced at 6 to 12 inches vertically and 6 to 18 inches horizontally.
- E. Ports shall be set in dust-free holes made either with vacuum drills or chipping hammers.
- F. After injection ports have been inserted into the holes, all surface cracks in the areas to be repaired shall be sealed with paste epoxy to ensure retention of the pressure-injected epoxy within the confines of the member.
- G. Epoxy injection shall begin at the bottom of the fractured area and progress upward using a port filling sequence, which will ensure the filling of the lowermost injection ports first.
- H. Injection procedures, depths, and spacing of holes at injection ports shall be established with due consideration of the crack widths and depths compatible with flow characteristics of the epoxy and injection pressure to ensure that no further damage will be done to the member being repaired.
- I. The injection of epoxy shall first fill the innermost portion of the cracked concrete and that the potential for creating voids within the crack or epoxy shall be minimized.

- J. After the fractured area has been filled and the epoxy has partially cured (24 hours at ambient temperature not less than 60 degrees Fahrenheit, otherwise, not less than 48 hours), the injection ports shall be removed flush with the concrete surface.
- K. The surfaces of the repaired area shall be abraded to achieve a reasonably uniform surface texture matching the texture of the existing panel.
- L. Any injection epoxy runs or spills shall be removed from concrete surfaces.

### 3.2 PROTECTION OF FINISHED WORK

- A. Protect the repaired area from damage by other trades.

## PART 4 – MEASUREMENT AND PAYMENT

### 4.1 MEASUREMENT

- A. The City will measure this item by the linear foot (LF) acceptably completed, and quantities shall be verified by the Project Inspector.

### 4.2 PAYMENT

- A. The City will pay for measured quantities at the contract unit price under the following bid items:

<u>ITEM</u>	<u>UNIT</u>
1. Epoxy Injected Crack Repair	LF

- B. Payment is full compensation for cleaning and preparing the surface, for injecting the epoxy material, for cleaning and removing excess material after the installation, and for all labor, equipment, tools, and incidentals necessary to complete the work.

END OF SECTION 03 01 03



## SECTION 03 11 13.16 – CONCRETE SHORING

### PART 1 – GENERAL

#### 1.1 SUMMARY

- A. Work in this section consists of design and shoring of areas as shown on the plans during the repair work. The necessary labor, materials, equipment and supervision to design, install, monitor and remove the shoring shall be provided. Shoring necessary to support concrete forms required for repair when the full slab depth is replaced is not included in this item, but is incidental to the work included in the appropriate repair section.
- B. The concrete surface repairs at the locations shown on Sheet 3 of the plans will require shoring to maintain the structural stability of the cantilevered slab.
- C. The need for adequate shoring will be the sole responsibility of the Contractor. If conditions requiring shoring are encountered by the Contractor, the Engineer shall be notified immediately and all work shall stop in that area until such safety precautions as are deemed adequate are taken.
- D. The existing structural reinforcing plans are available for review in Room 907 of the Frank P. Zeidler Municipal Building located at 841 N. Broadway, Milwaukee, WI.

#### 1.2 RELATED SECTIONS

- A. Section 03 01 01 – Concrete Surface Repair
- B. Section 03 01 02 – Deep Concrete Surface Repair

#### 1.3 SUBMITTALS

- A. A record copy of shoring designs which are stamped by a registered Professional Engineer shall be submitted to the Engineer at least five days prior to placement. In event that unsafe conditions require immediate action this section will be waived.

### PART 2 – PRODUCTS

#### 2.1 MATERIALS

- A. Shores shall consist of steel pipe or timbers designed to support the estimated weight and must be appropriately braced to prevent buckling.
- B. Shores shall be adjustable through positive means, such as screw jacks, to adjust for shortening of the shores under loads and allow straight forward removal.

**PART 3 – EXECUTION**

**3.1 INSTALLATION**

- A. The shores shall be plumb, tightly installed and properly connected to prevent buckling or slipping.
- B. Shores shall run to appropriate load carrying members or to grade.

**3.2 REMOVAL**

- A. Shores shall not be removed before the concrete compressive strength of the patching material reaches 75% of its specified strength.
- B. Shores shall be removed in such a way that no damage is done to the structure.
- C. The design of the shores shall indicate any special removal requirements.

**PART 4 – MEASUREMENT AND PAYMENT**

**4.1 MEASUREMENT**

- A. The City will measure Concrete Shoring as a lump sum unit until acceptably completed.

**4.2 PAYMENT**

- A. The City will pay for measured quantities at the contract unit price under the following bid items:

<u>ITEM</u>	<u>UNIT</u>
1. Concrete Shoring	LS

- B. Payment is full compensation for designing, installing, and removing shoring once the necessary concrete surface repairs have been completed.

**END OF SECTION 03 11 13.16**

## SECTION 07 18 17 – HEAVY-DUTY VEHICULAR TRAFFIC COATING

### PART 1 – GENERAL

#### 1.1 SECTION INCLUDES

- A. Applicable requirements of General Conditions of Contract, Supplementary Conditions of Contract, and Division 1 apply to work specified in this Section.
- B. The work of this Section includes, but is not limited to, the furnishing of all labor, materials, tools, and equipment to perform the surface preparation and installation of a system consisting of a fluid applied two-component, elastomeric polyurethane coating system and a chemical and abrasion resistant non-skid traffic topping incorporating selected aggregate.
- C. Areas to receive the heavy-duty vehicular traffic coating system are as follows:
  - 1. Recoating areas over traffic coating on Levels 1-4 with a two component system.
  - 2. Any bare areas worn down to concrete or new concrete repairs shall be coated with a 4-layer (primer, base coat, wear coat, and top coat) traffic deck coating to a minimum thickness of 50 dry mils including aggregate.
  - 3. Cantilever portion of Level 1W deck shall be coated with a 4-layer (primer, base coat, wear coat, and top coat) traffic deck coating to a minimum thickness of 50 dry mils including aggregate.

#### 1.2 RELATED SECTIONS

- A. Section 01 55 30 – Traffic Control and Construction Staging
- B. Section 09 92 00 – Pavement Markings

#### 1.3 REFERENCES

- A. American Society for Testing and Materials (ASTM International)
  - 1. ASTM C957 – Standard Specification for High-Solids Content, Cold Liquid-Applied Elastomeric Waterproofing Membrane with Integral Wearing Surface.
  - 2. ASTM D822 – Standard Practice for Conducting Tests on Paint and Related Coatings and Materials using Filtered Open-Flame Carbon-Arc Exposure Apparatus.
  - 3. ASTM D903 – Standard Test Method for Peel or Stripping Strength of Adhesive Bonds.
  - 4. ASTM D1004 – Standard Test Method for Tear Resistance (Graves Tear) of Plastic Film and Sheeting. ASTM D1044 – Standard Test Method for Resistance of Transparent Plastics to Surface Abrasion.
  - 5. ASTM D1360 – Standard Test Method for Fire Retardancy of Paints (Cabinet Method).
  - 6. ASTM D2240 – Standard Test Method for Rubber Property – Durometer Hardness.
  - 7. ASTM E84 – Standard Test Method for Surface Burning Characteristics of Building Materials.

8. ASTM E96 – Standard Test Methods for Water Vapor Transmission of Materials.
- B. Underwriters Laboratories, Inc. (UL)
  1. UL – Fire Resistance Directory.

#### 1.4 SYSTEM DESCRIPTION

- A. Elastomeric urethane coatings providing continuous, seamless waterproofing coating resistant to specified traffic wear exposures meeting and exceeding ASTM C957.
- B. Heavy-Duty System: Multi-coat system consisting of primer, membrane base coat, wear coat, and a finish top coat, applied to all areas indicated on the plans.

#### 1.5 SUBMITTALS

- A. Section 01 33 01 – Submittals and Permits.
- B. Submit two samples of each heavy-duty vehicular traffic coating system applied to 1/4 x 4 x 6 inch plywood or similar rigid base illustrating each layer, color, surface texture, and variations.
- C. Submit 5 copies or email a PDF of Manufacturer's product literature for all products furnished, Manufacturer's installation instructions, appropriate Material Safety Data Sheets (MSDS) and other safety requirements.
- D. Submit a current copy of the Applicator's License Certificate, issued by the Manufacturer. The certificate shall verify the applicator's qualifications to properly install the Manufacturer's system. The certificate shall commit the Manufacturer to the acceptance of the applicator under the joint and several warranty provisions required by this Section.
- E. Submit an unsigned sample of the warranty that will be used on the project.
- F. Submit a written statement from the Manufacturer describing shelf life for materials and products to be furnished and used on this project as further detailed in Subsection 1.9 G. – Delivery Storage, and Handling.

#### 1.6 CLOSEOUT SUBMITTALS

- A. Section 01 70 01 – Cleaning and Project Closeout.
- B. Operation and Maintenance Data: Upon completion of work required by this Section, submit written maintenance recommendations, identified with project name, location and date, type of membrane coating system applied, and surface to which system was applied, including sketches where necessary. Include recommendations for periodic inspections, care and maintenance. Identify common causes of damage with instructions for temporary patching until permanent repair can be made.

- C. Warranty: Submit written warranty statement as specified in Section 1.11. Ensure that the forms have been completed in Owner's name and registered with Manufacturer.

## 1.7 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing products specified in this section with minimum five years documented experience.
- B. Work specified herein shall be performed by and be the responsibility of the Installation Contractor authorized, approved, and qualified by the Manufacturer of materials used; having necessary equipment and facilities to fulfill requirements of this Section.
- C. The minimum acceptable experience of the Contractor, using methods and materials planned for use on this project, is three (3) installations totaling at least 200,000 square feet in area with similar climates and three years of installation experience. At least three (3) weeks prior to commencing work of this section, the Contractor shall submit a list of prior projects showing evidence of experience. Include for each installation referenced: facility name and location, date and square footage of installation, designation of system used, and the name and phone number of a representative of the Owner familiar with the installation and material performance.

## 1.8 TEST AREA

- A. Before start of general application, apply the heavy-duty vehicular traffic coating as specified in a representative test area. The area shall be approximately 100 square feet. The area to be covered by the coating shall include all site conditions such as corners, and projections through coating. The test area must also include both the two-component recoat system as well as the 4-layer system over a patch of bare concrete. Location of the test area shall be determined by the Engineer, and after approval, shall serve as an example for the remaining work.
- B. Contractor and Manufacturer to coordinate an adhesion test in conformance with ASTM D903 performed over the overcoat system and 4-layer system in the test area. Allow test area to cure a minimum of 7 days prior to performing test.

## 1.9 DELIVERY, STORAGE, AND HANDLING

- A. Section 01 60 01 – Materials and Equipment.
- B. Deliver material to project in sealed, original packages or containers bearing name and brand of Manufacturer and date manufactured.
- C. Upon delivery, supplies will be checked by the Engineer. Only materials brought to the area and approved may be used.
- D. Store materials in single place designated by Engineer.

- E. Every precaution shall be taken to avoid danger of fire. Store hazardous materials in accordance with local ordinances. Provide dry chemical or CO<sub>2</sub> fire extinguishers in areas. Allow no smoking or open containers of solvents. Store solvents in safety cans.
- F. Store materials at temperatures not exceeding those recommended by the Manufacturer.
- G. Manufacturer shall submit to the Engineer a written statement of materials; shelf life and proper storage conditions. Materials that have been improperly stored or that have an expired shelf life shall not be installed.
- H. Keep away from fire or open flame.
- I. At no time shall the weight of the stored materials placed on a slab area exceed 50 pounds per square foot (psf). Between the time slab repairs are accomplished and the time the concrete has reached its specified 28 day strength, the weight of the stored material placed on a repaired slab shall not exceed 25 psf.

#### 1.10 ENVIRONMENTAL REQUIREMENTS

- A. Section 01 60 01 – Materials and Equipment.
- B. Do not install materials when temperature is below 40 degrees F or above 90 degrees F without written permission from the Manufacturer and the Engineer.
- C. Maintain this temperature range, 24 hours before, during and 72 hours after application.
- D. Install when deck temperature is constant or cooling. Do not apply when deck is expected to rise in temperature.
- E. Restrict traffic from area where materials are being installed or are curing.
- F. Heavy-duty vehicular traffic coating shall not be applied if weather is too cold, raining, snowing or if any other conditions exist that will not permit proper application or curing of coating. Follow Manufacturer's written directions. Maintain humidity at recommended level during application and curing. Provide adequate ventilation for application and curing. Coating Contractor shall take adequate measures to prevent fumes from entering Owner occupied areas. Protection required for proper installation and curing shall be the responsibility of the Coating Contractor and shall be reflected in the bid.

#### 1.11 WARRANTY

- A. Section 01 70 01 – Cleaning and Project Closeout.
- B. Materials Manufacturer and Installation Contractor shall be jointly and severally responsible and shall submit an affidavit signed by both parties warranting the installation system for a period of five (5) years from date of final completion.

- C. Warranty shall cover loss of waterproofing and excessive wear and may exclude fire, structural failure, acts of God, or willful damage other than intended usage.
- D. Tears, leaks, and damaged or worn surfaces under warranty shall be repaired or replaced at no cost to the Owner within 1 month of notification by Owner.

## PART 2 – PRODUCTS

### 2.1 TRAFFIC MEMBRANE

- A. The following traffic bearing membrane coating systems manufacturers are approved:
1. Sikalastic 720/745 Traffic System as manufactured by Sika Corporation, 201 Polito Avenue, Lyndhurst, NJ 07071.
  2. Auto-Gard FC System (FC7500/FC7690/FC7510/FC7961/FC7540/FC7962) as manufactured by Neogard- a Division of Jones-Blair, 2728 Empire Central, Dallas, TX 75235.
  3. Lymtal IsoFlex 760ZV/IC/AL System as manufactured by Lymtal Corporation, 4150 South Lapeer Road, Lake Orion, MI 48359.
- B. To ensure uniformity over the top coat, the traffic membrane system must be paired with an epoxy overlay system produced by the same manufacturer. See Section 07 18 19 – Epoxy Vehicular Traffic Coating for the epoxy overlay specifications.

### 2.2 COMPONENTS

- A. Membrane: Fluid applied polyurethane waterproof compound, conforming to the following:

Property	ASTM Test	Result
Tensile Strength	D412	1500 psi minimum
Elongation	D412	500% minimum
Adhesion	D4541/D7234	250 psi minimum**
Crack Bridging	C957	System Passes

\*\*The base coat must exceed the 250 psi minimum in the ASTM D903 field test for the recoat system as well as the 4-layer system within the sample area. Tests that consistently do not meet this requirement will be cause for rejecting the product even if it is specified herein.

- B. Topping: Two component fast curing polyurethane topcoat:

Property	ASTM Test	Result
Tensile Strength	D412	2200 psi minimum
Hardness	D2240	84 minimum
Elongation	D412	80% minimum
Abrasion Resistance	D4060	60mg loss/1000 rev

- C. The color of the wear coat and final top coat shall be light gray.

## 2.3 ACCESSORIES

- A. Surface Primer: Compatible with existing and proposed heavy-duty vehicular traffic coating; as recommended by coating Manufacturer.
- B. Joint and Crack Sealant: Acceptable to Manufacturer and approved by Engineer.
- C. Detail Coat: Base coat supplied by Manufacturer applied 20-32 mils wet film thickness.
- D. Aggregate: uniformly graded, with mesh gradation as recommended by Manufacturer.

## PART 3 – EXECUTION

### 3.1 EXAMINATION

- A. Section 01 31 13 – Project Coordination.
- B. Verify substrate surfaces are free of frozen matter, dampness, loose particles, cracks, pits, shots, projections, penetrations, or foreign matter detrimental to adhesion or application of waterproofing system.
- C. Verify that substrate surfaces are smooth, free of honeycomb or pitting, and not detrimental to full contract bond of waterproofing materials.
- D. Do not begin work until concrete substrate has cured a minimum of 14 days and measured moisture content is not greater than 16 percent.
- E. Commencement of coating installation implies acceptance of slab surface as suitable for application of coating system.
- F. It is the responsibility of the Contractor to make certain that the selected product be compatible with the existing membrane.

### 3.2 PROTECTION

- A. Protect adjacent surfaces and materials with covering, masking, drop cloths, etc. as required during surface preparation and coating application. Upon completion, remove protection and clean. Surfaces soiled or damaged by surface preparation or special coating shall be cleaned or replaced at no cost to Owner.
- B. Seal all floor drains completely prior to heavy-duty vehicular traffic coating installation. Drains clogged by new coating materials will be cleaned out at the Contractor's expense. Remove seals after coating installation. Trim around drains for proper fit of drain gratings.

### 3.3 SURFACE PREPARATION

- A. Areas shall be cleaned by mechanical methods (heavy shot blast) to remove traffic lines, oil, grease, dirt, paint, etc. and shall be prepared according to Manufacturer's written directions. Prior to the heavy shot blast, the Contractor shall power wash and detergent clean all areas where oil or other contaminants are present such as in parking stalls and driving lanes. Since this is a heavily

used structure, a significant amount of grease, oil, and other surface waste should be expected. Contractor shall use a strong non-sudsing detergent and water pressure between 2100 to 2500psi. Submit materials to be used and method for cleaning for review prior to preparation. The prepared surface shall meet at a minimum the surface profile equal to CSP 3-4 in accordance with ICRI Guidelines 310.2.

- B. Sawcut/route all control and construction joints and all cracks 1/16-inch in width or greater in areas where needed. Apply primer to sides and bond breaker to bottom of sawcut. Fill with sealant approved by coating Manufacturer.
- C. Provide a 1/2-inch bead of sealant as detailed in the plans at all locations where a horizontal surface abuts a vertical surface, in areas where needed.
- D. Repair concrete/coating substrate with filler to produce level surface conducive to bond, in areas where needed.

### 3.4 INSTALLATION/APPLICATION HEAVY-DUTY VEHICULAR TRAFFIC COATING SYSTEM

- A. Materials shall be installed by a Manufacturer's approved Contractor in strict accordance with the Manufacturer's written specifications. All procedures for installation shall comply with recommendations of Manufacturer of products being used.
- B. A Manufacturer's representative shall be on site during the installation of the heavy-duty vehicular traffic coating system.
- C. Caulked joints, cold joints, and visible hairline cracks (up to 1/16-inch in width) shall be cleaned, primed and treated with a detail coat a minimum distance of 2 inches on each side of the crack or joint, in areas where needed. There is no separate bid item for this work. It is to be included with the unit price for Heavy-Duty Vehicular Traffic Coating.
- D. Large visible cracks (1/16-inch or greater in width) shall be routed and sealed with a sealant approved by the Manufacturer. Sealant shall be supplied to inside area of crack only. Sealed cracks shall be cleaned, primed, and treated with a detail coat a minimum distance of 2 inches on each side of the crack, in areas where needed. There is no separate bid item for this work. It is to be included with the unit price for Heavy-Duty Vehicular Traffic Coating.
- E. Apply primer to prepared substrate to dry film thickness of 6-8 mils, in areas where substrate is visible. A self priming coating base coat may be used in accordance with Manufacturer's printed instructions.
- F. In areas where the existing coating base coat is in sound condition, apply an intermediate coating to the wet film thickness recommended by the Manufacturer or having a minimum 12 mils wet film thickness, whichever is greater. Intermediate coating shall be squeegeed and backrolled to ensure uniform thickness.
- G. Following curing of the intermediate coating, remove the excess aggregate and apply the UV-stable top coating. The top coating shall be placed in accordance with the Manufacturer

recommendations or have a minimum of 18 mils wet film thickness using a flat squeegee, whichever is greater. Immediately backroll to evenly level top coat.

- H. If a waterproof membrane is required in any area prior to the intermediate coat either because membrane has worn through to substrate or in areas where no membrane is present, apply waterproof membrane in strict accordance with the Manufacturer's latest instructions. Waterproof membrane layer shall have a minimum of 20 mils wet film thickness.
- I. Extra heavy-duty system coating shall be non-skid, abrasion resistant, integral aggregate traffic topping capable of protecting waterproof membrane base coat.
- J. Verify mil thickness of all coats by use of wet-mil thickness gauge in presence of Project Inspector.
- K. Provide heavy-duty vehicular traffic coating at base of columns, walls, and pipes to produce a 4-inch high base.

### 3.5 PROTECTION OF INSTALLED CONSTRUCTION

- A. Section 01 70 01 – Cleaning and Project Closeout.
- B. Do not permit traffic over unprotected surfaces.

### 3.6 CLEANING

- A. Damaged, spotted or smeared parts of building and equipment shall be repaired and cleaned by the Contractor.
- B. Work or material damaged beyond repair, in opinion of Engineer shall be replaced by the Contractor.
- C. Remove all masking protection, debris, containers, equipment, materials, etc. from site and from surfaces upon project completion as outlined in Division 01.

## PART 4 – MEASUREMENT AND PAYMENT

### 4.1 MEASUREMENT

- A. The City will measure Heavy-Duty Vehicular Traffic Coating, by the square foot (SF) acceptably completed.

### 4.2 PAYMENT

- A. The City will pay for the measured quantity at the contract unit price under the following bid item:

<u>ITEM</u>	<u>UNIT</u>
1. Heavy-Duty Vehicular Traffic Coating	SF

- A. Payment is full compensation for preparing the surface, coordinating and providing through an independent laboratory an adhesion pull off test, crack repair and detailing, and installation of the heavy-duty vehicular traffic coating system on the traffic decks and vertical curb faces and walls in

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accordance with these specifications and the Manufacturer's recommendations; and for all labor, tools, materials, equipment, and incidentals necessary to complete the work.

**END OF SECTION 07 18 17**



## SECTION 07 18 19 – EPOXY VEHICULAR TRAFFIC COATING

### PART 1 – GENERAL

#### 1.1 SECTION INCLUDES

- A. Applicable requirements of General Conditions of Contract, Supplementary Conditions of Contract, and Division 1 apply to work specified in this Section.
- B. The work of this Section includes, but is not limited to, the furnishing of all labor, materials, tools, and equipment to perform the surface preparation, crack repair, and installation of a system consisting of a fluid applied urethane/epoxy and a chemical and abrasion resistant non-skid traffic topping incorporating selected aggregate.
- C. Areas to receive the epoxy vehicular traffic coating system are as follows:
  - 1. Ramps 2&3 on Level 1, all ramps on Levels 2-3, and Ramps 1&4 on Level 4 as indicated on the drawings.

#### 1.2 RELATED SECTIONS

- A. Section 01 55 30 – Traffic Control and Construction Staging
- B. Section 03 01 01 – Concrete Surface Repair
- C. Section 03 01 02 – Deep Concrete Surface Repair

#### 1.3 REFERENCES

- A. American Society for Testing and Materials (ASTM International)
  - 1. ASTM C957 – Standard Specification for High-Solids Content, Cold Liquid-Applied Elastomeric Waterproofing Membrane with Integral Wearing Surface.
  - 2. ASTM D822 – Standard Practice for Conducting Tests on Paint and Related Coatings and Materials using Filtered Open-Flame Carbon-Arc Exposure Apparatus.
  - 3. ASTM D903 – Standard Test Method for Peel or Stripping Strength of Adhesive Bonds.
  - 4. ASTM D1004 – Standard Test Method for Tear Resistance (Graves Tear) of Plastic Film and Sheeting.
  - 5. ASTM D1044 – Standard Test Method for Resistance of Transparent Plastics to Surface Abrasion.
  - 6. ASTM D1360 – Standard Test Method for Fire Retardancy of Paints (Cabinet Method).
  - 7. ASTM D2240 – Standard Test Method for Rubber Property – Durometer Hardness.
  - 8. ASTM E84 – Standard Test Method for Surface Burning Characteristics of Building Materials.
  - 9. ASTM E96 – Standard Test Methods for Water Vapor Transmission of Materials.
- B. Underwriters Laboratories, Inc. (UL)
  - 1. UL – Fire Resistance Directory.

#### 1.4 SYSTEM DESCRIPTION

- A. Elastomeric urethane/epoxy coatings providing continuous, seamless waterproofing coating resistant to specified traffic wear exposures meeting and exceeding ASTM C957.
- B. Epoxy System: Multi-coat system consisting of primer, elastomeric, crack-bridging polyurethane detail and base coat, low-modulus epoxy coat, and finish top coat, applied to ramps as indicated on the plans.

#### 1.5 SUBMITTALS

- A. Section 01 33 01 – Submittals and Permits.
- B. Submit two samples of each epoxy vehicular traffic coating system applied to 1/4 x 4 x 6 inch plywood or similar rigid base illustrating individual layers, color, surface texture, and variations.
- C. Submit 5 copies or email a PDF of Manufacturer's product literature for all products furnished, Manufacturer's installation instructions, appropriate Material Safety Data Sheets (MSDS) and other safety requirements.
- D. Submit a current copy of the Applicator's License Certificate, issued by the Manufacturer. The certificate shall verify the applicator's qualifications to properly install the Manufacturer's system. The certificate shall commit the Manufacturer to the acceptance of the applicator under the joint and several warranty provisions required by this Section.
- E. Submit an unsigned sample of the warranty that will be used on the project.
- F. Submit a written statement from the Manufacturer describing shelf life for materials and products to be furnished and used on this project as further detailed in Subsection 1.9 G. – Delivery, Storage, and Handling.

#### 1.6 CLOSEOUT SUBMITTALS

- A. Section 01 70 01 – Cleaning and Project Closeout.
- B. Operation and Maintenance Data: Upon completion of work required by this Section, submit written maintenance recommendations, identified with project name, location and date, type of epoxy coating system applied, and surface to which system was applied, including sketches where necessary. Include recommendations for periodic inspections, care and maintenance. Identify common causes of damage with instructions for temporary patching until permanent repair can be made.
- C. Warranty: Submit written warranty statement as specified in Subsection 1.11 – Warranty. Ensure that the forms have been completed in Owner's name and registered with Manufacturer.

## 1.7 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing products specified in this section with minimum five years documented experience.
- B. Work specified herein shall be performed by and be the responsibility of the Installation Contractor authorized, approved, and qualified by the Manufacturer of materials used; having necessary equipment and facilities to fulfill requirements of this Section.
- C. The minimum acceptable experience of the Contractor, using methods and materials planned for use on this project, is three (3) installations totaling at least 200,000 square feet in area with similar climates and three years of installation experience. At least three (3) weeks prior to commencing work of this section, this Contractor shall submit a list of prior projects showing evidence of experience. Include for each installation referenced: facility name and location, date and square footage of installation, designation of system used, and the name and phone number of a representative of the Owner familiar with the installation and material performance.

## 1.8 TEST AREA

- A. Before start of general application, apply the epoxy vehicular traffic coating as specified in a representative test area. The area shall be approximately 100 square feet. The area to be covered by the coating shall include all site conditions such as corners, and projections through coating. Location of the test area shall be determined by the Engineer, and after approval, shall serve as an example for the remaining work.
- B. A competent Manufacturer's representative shall be onsite for instruction on application in the test area. Due to the 15% grade on the ramps, additional formwork or lifts may be required to meet proper thicknesses for each layer.
- C. Contractor and Manufacturer to coordinate an adhesion test in conformance with ASTM D903. Allow test area to cure a minimum of 7 days prior to performing test.

## 1.9 DELIVERY, STORAGE, AND HANDLING

- A. Section 01 60 01 – Materials and Equipment.
- B. Deliver material to project in sealed, original packages or containers bearing name and brand of Manufacturer and date manufactured.
- C. Upon delivery, supplies will be checked by the Engineer. Only materials brought to the area and approved may be used.
- D. Store materials in single place designated by Engineer.
- E. Every precaution shall be taken to avoid danger of fire. Store hazardous materials in accordance with local ordinances. Provide dry chemical or CO<sub>2</sub> fire extinguishers in areas. Allow no smoking or open containers of solvents. Store solvents in safety cans.

- F. Store materials at temperatures not exceeding those recommended by the Manufacturer.
- G. Manufacturer shall submit to the Engineer a written statement of materials; shelf life and proper storage conditions. Materials that have been improperly stored or that have an expired shelf life shall not be installed.
- H. Keep away from fire or open flame.
- I. At no time shall the weight of the stored materials placed on a slab area exceed 50 pounds per square foot (psf). Between the time slab repairs are accomplished and the time the concrete has reached its specified 28 day strength, the weight of the stored material placed on a repaired slab shall not exceed 25 psf.

#### 1.10 ENVIRONMENTAL REQUIREMENTS

- A. Section 01 60 01 – Materials and Equipment.
- B. Do not install materials when temperature is below 40 degrees F or above 90 degrees F without written permission from the Manufacturer and the Engineer.
- C. Maintain this temperature range, 24 hours before, during and 72 hours after application.
- D. Install when deck temperature is constant or dropping. Do not apply when deck is expected to rise in temperature.
- E. Restrict traffic from area where materials are being installed or are curing.
- F. Epoxy vehicular traffic coating shall not be applied if weather is too cold, raining, snowing or if any other conditions exist that will not permit proper application or curing of coating. Follow Manufacturer's written directions. Maintain humidity at recommended level during application and curing. Provide adequate ventilation for application and curing. Coating Contractor shall take adequate measures to prevent fumes from entering Owner occupied areas. Protection required for proper installation and curing shall be the responsibility of the Coating Contractor and shall be reflected in the bid.

#### 1.11 WARRANTY

- A. Section 01 70 01 – Cleaning and Project Closeout.
- B. Materials Manufacturer and Installation Contractor shall be jointly and severally responsible and shall submit an affidavit signed by both parties warranting the installation system for a period of five (5) years from date of final completion.
- C. Warranty shall cover loss of waterproofing and excessive wear and may exclude fire, structural failure, acts of God, or willful damage other than intended usage.

- D. Tears, leaks, and damaged or worn surfaces under warranty shall be repaired or replaced at no cost to the Owner within 1 month of notification by Owner.

## PART 2 – PRODUCTS

### 2.1 TRAFFIC MEMBRANE

- A. The following elastomeric urethane/epoxy vehicular traffic coating systems manufacturers are approved:
1. Sikalastic 22 Lo-Mod Traffic System as manufactured by Sika Corporation, 201 Polito Avenue, Lyndhurst, NJ 07071 Phone: (248) 569-5665
  2. Auto-Gard F as manufactured by NEOGARD- a Division of Jones-Blair, 2728 Empire Central, Dallas, TX 75235 Phone: (651) 900-4975
  3. Lymtal IsoFlex 200 Epoxy Resin as manufactured by Lymtal Corporation, 4150 South Lapeer Road, Lake Orion, MI 48359
- B. To ensure uniformity over the top coat, the epoxy overlay system must be paired with a traffic membrane system produced by the same manufacturer. See Section 07 18 17 Heavy-Duty Vehicular Traffic Coating for the traffic membrane specifications.

### 2.2 COMPONENTS

- A. Base Coat: Fluid applied polyurethane waterproof compound, conforming to the following:

Property	ASTM Test	Result
Tensile Strength	D412	1,500 psi minimum
Elongation	D412	500% minimum
Adhesion	D4541/D7234	250 psi minimum**

\*\*The base coat must exceed the 250 psi minimum in the ASTM D903 field test. Tests that consistently do not meet this requirement will be cause for rejecting the product even if it is specified herein.

- B. Wear Coat: Fluid applied low-modulus flexible epoxy, conforming to the following:

Property	ASTM Test	Result
Tensile Strength	D638	2,000 psi minimum
Hardness Shore D	D2240	62 minimum
Elongation	D638	30% minimum
Abrasion Resistance	D4060	60mg loss/1000 rev

- C. Topping: Fluid applied low-modulus flexible epoxy or polyurethane, as recommended by the manufacturer, conforming to the following:

Property	ASTM Test	Result
Tensile Strength	D412	2200 psi minimum
Hardness	D2240	84 minimum
Elongation	D412	80% minimum
Abrasion Resistance	D4060	60mg loss/1000 rev

- D. The color of the final top coat shall be light gray.

## 2.4 ACCESSORIES

- A. Surface Primer: Compatible with epoxy vehicular traffic coating; as recommended by coating Manufacturer.
- B. Joint and Crack Sealant: Acceptable to Manufacturer and approved by engineer.
- C. Detail Coat: Base coat supplied by Manufacturer applied 20-32 mils wet film thickness, as recommended by the manufacturer.
- C. Aggregate: Furnish aggregates that have a proven record of performance in applications of this type. Furnish aggregates that are non-polishing, clean, fractured or angular in shape; free from surface moisture, silt, clay, asphalt, or other organic materials; and meet the following properties and gradation requirements:

### Aggregate Properties:

Property	Requirement	Test Method
Moisture Content	≤0.2%	ASTM C566
Hardness	≥7.0	Mohs Scale

### Gradation:

Sieve Size	Percent Passing by Weight
No. 8 Sieve	65-75%
No. 10 Sieve	50-60%
No. 12 Sieve	30-40%
No. 14 Sieve	15-20%
No. 16 Sieve	0-5%

## PART 3 – EXECUTION

### 3.1 EXAMINATION

- A. Section 01 31 13 – Project Coordination

- B. Verify substrate surfaces are free of frozen matter, dampness, loose particles, cracks, pits, projections, penetrations, or foreign matter detrimental to adhesion or application of waterproofing system.
- C. Verify that substrate surfaces are free of honeycomb or pitting, and not detrimental to full contact bond of waterproofing materials.
- D. Do not begin work until concrete substrate has cured a minimum of 14 days and measured moisture content is not greater than 16 percent, or as recommended by the Manufacturer.
- E. Commencement of coating installation implies acceptance of slab surface as suitable for application of coating system.
- F. It is the responsibility of the Contractor to make certain that the selected product be compatible with previously applied water repellent sealer.

### 3.2 PROTECTION

- A. Protect adjacent surfaces and materials with covering, masking, drop cloths, etc. as required during surface preparation and coating application. Upon completion, remove protection and clean. Surfaces soiled or damaged by surface preparation or special coating shall be cleaned or replaced at no cost to Owner.
- B. Seal all floor drains completely prior to epoxy vehicular traffic coating installation. Drains clogged by new coating materials will be cleaned out at the Contractor's expense. Remove seals after coating installation. Trim around drains for proper fit of drain gratings. The Contractor shall note any slow moving drains prior to beginning work in the presence of the Inspector.

### 3.3 SURFACE PREPARATION

- A. Areas shall be cleaned by mechanical methods (heavy shot blast) to remove oil, grease, dirt, paint, etc. and shall be prepared according to Manufacturer's written directions. Prior to the heavy shot blast, the Contractor shall power wash all areas where oil or other contaminants are present such as in parking stalls and driving lanes. Contractor shall use a strong non-sudsing detergent and water pressure between 2100 to 2500psi. Submit materials to be used and method for cleaning for review prior to preparation. The prepared surface shall meet at a minimum the surface profile equal to CSP 3-4 in accordance with ICRI Guidelines 310.2.
- B. Sawcut/route all control and construction joints and all cracks 1/16-inch in width or greater in areas where needed. Apply primer to sides and bond breaker to bottom of sawcut. Fill with sealant approved by coating Manufacturer.
- C. Provide a ½ inch bead of sealant as detailed in the plans at all locations where a horizontal surface abuts vertical surface, in area where needed.
- D. Repair concrete/coating substrate with filler to produce level surface conducive to bond, in areas where needed.

- E. Create a transitional area approaching construction joints using shotblasting machine or other approved method. Taper a distance of 3 feet, as necessary.

### 3.4 INSTALLATION/APPLICATION EPOXY VEHICULAR TRAFFIC COATING SYSTEM

- A. Materials shall be installed by a Manufacturer's approved Contractor in strict accordance with the Manufacturer's written specifications. All procedures for installation shall comply with recommendations of Manufacturer of products being used.
- B. A Manufacturer's representative must be on site at all times during the installation of the epoxy vehicular traffic coating system.
- C. Caulk joints, cold joints and visible hairline cracks (up to 1/16" in width) shall be cleaned, and primed. There is no separate bid item for crack repair, the cost of crack repair shall be including in the unit price of epoxy vehicular traffic coating.
- D. Large visible cracks (1/16" or greater in width) shall be routed and sealed with a sealant approved by the coating supplier. Sealant shall be supplied to inside area of crack only. Sealed cracks shall be cleaned, and primed. There is no separate bid item for crack repair, the cost of crack repair shall be included in the unit price of epoxy vehicular traffic coating.
- E. Apply primer to prepared substrate to dry film thickness of 6-8 mils. A self priming coating base coat may be used in accordance with Manufacturer's printed instructions.
- F. Apply a detail coat of 20-32 dry mils (as recommended by the manufacturer) over cracks and joints as necessary.
- G. Once the detail coat has cured, the polyurethane base coat shall be applied at the minimum application rate as recommended by the manufacturer, or a minimum of 25 wet mils, whichever is greater. The base coat shall be squeegeed and backrolled to ensure uniform thickness.
- H. The epoxy wear coat shall be installed to the minimum thickness recommended by the Manufacturer or a minimum of 32 wet mils, whichever is greater. The epoxy wear coat shall be squeegeed and backrolled to ensure uniform thickness, and immediately broadcast the approved aggregate evenly, into the wet coating to rejection. Due to the 15% grade on the ramps, additional formwork or lifts may be required to meet proper thicknesses for each layer.  
  
If necessary, the wear coat may be applied at the manufacture's maximum thickness in multiple courses to reach the required 32 wet mils. Refer to the product data sheets for the correct application procedure..
- I. Once the wear coat is dry, remove excess aggregate, and apply top coat to cover the course aggregate at an average coverage rate of 35 square feet per gallon. The top coat applied must be UV tolerant.
- J. Verify mil thickness of all coats by use of wet-mil thickness gauge in presence of Project Inspector.

- K. Provide urethane/epoxy vehicular traffic coating at base of columns, walls, curbs, and pipes to produce a 4-inch high base.

### 3.5 PROTECTION OF INSTALLED CONSTRUCTION

- A. Section 01 70 01 – Cleaning and Project Closeout.
- B. Do not permit traffic over unprotected surfaces.

### 3.6 CLEANING

- A. Damaged, spotted or smeared parts of building and equipment shall be repaired and cleaned by the Contractor.
- B. Work or material damaged beyond repair, in opinion of Engineer shall be replaced by the Contractor.
- C. Remove all masking protection, debris, containers, equipment, materials, etc. from site and from surfaces upon project completion as outlined in Division 01.

## PART 4 – MEASUREMENT AND PAYMENT

### 4.1 MEASUREMENT

- A. The City will measure Epoxy Vehicular Traffic Coating, by the square foot (SF) acceptably completed.

### 4.2 PAYMENT

- A. The City will pay for the measured quantity at the contract unit price under the following bid item:

<u>ITEM</u>	<u>UNIT</u>
1. Epoxy Vehicular Traffic Coating	SF

- B. Payment is full compensation for preparing the surface, coordinating and providing through an independent laboratory an adhesion pull off test, crack repair and detailing, and installation of the epoxy vehicular traffic coating system in accordance with these specifications and the Manufacturer's recommendations on the ramps and vertical curb faces and walls; and for all labor, tools, materials, equipment, and incidentals necessary to complete the work.

END OF SECTION 07 18 19



## SECTION 09 92 00 – PAVEMENT MARKINGS

### 1.1 SCOPE

- A. Furnish all labor, materials, equipment and services to plan the following items of the types of patterns, sizes and colors as shown on the plans and to match existing:
  - 1. Clean and prepare areas to receive pavement markings.
  - 2. Repaint all parking stripes, including handicap symbols, hash marks, arrows, and curb noses on driving ramps as shown on the plans or as directed by the Engineer.
  - 3. Contractor to provide striping layout for approval by the Engineer of all areas prior to painting.
- B. Pavement markings on the slab-on-grade portion of Level 1 are considered “Pavement Markings-Level 1” while pavement markings on Levels 2-4 and the remainder of Level 1 are considered “Pavement Markings- Levels 2-4”. The extents of the slab-on-grade portion of Level 1 are shown on Sheet 3 of the plans.

### 1.2 RELATED SECTIONS

- A. Section 07 18 17 – Heavy-Duty Vehicular Traffic Coating
- B. Section 07 18 19 – Epoxy Vehicular Traffic Coating

### 1.3 REFERENCES

- A. American Association of State Highway and Transportation Officials AASHTO M248 – Ready-Mixed White and Yellow Traffic Paints.

### 1.4 SUBMITTALS

- A. Section 01 33 01 – Submittals and Permits: Manufacturer’s technical information, application instructions and samples of materials being furnished.
- B. Submit certified report of test or analysis provided by Manufacturer indicating that actual results of test made by independent testing laboratory indicating that materials being supplied meet or exceed materials specified.
- C. Provide Hazardous Material Data Sheets for materials furnished under this Section.

### 1.5 DELIVERY, STORAGE AND HANDLING

- A. Deliver materials to site in accordance with Section 01 60 01 – Materials and Equipment.
- B. Components shall be shipped to site in unopened containers, plainly marked with Manufacturer’s name and address, color of material (colored container lids permitted), date of manufacture, batch number and component.

## 1.6 ENVIRONMENTAL REQUIREMENTS

- A. Marking materials shall not exude fumes, toxic or injurious, to persons or property during application.
- B. Material not used within 1 year of date of manufacture indicated on container shall be rejected.
- C. Application surface shall be dry, free from frost, contaminants and debris that would prevent proper bonding.
- D. Material shall be capable of curing fully under following minimum constant surface temperatures; +40 degrees Fahrenheit for slow set; +25 degrees Fahrenheit for regular set; +20 degrees Fahrenheit for rapid set.

## PART 2 – PRODUCTS

### 2.1 MARKING MATERIALS

- A. The following pavement marking system Manufacturers are approved:
  - 1. Corothane I, Aliphatic Finish Coat (B65 Series) as manufactured by Sherwin-Williams.
  - 2. Approved equal.
- B. Color of parking stripes, hash marks, arrows, and curb noses shall be “Traffic Yellow” and shall visually match color chip No. 13538 of Federal Standard 595C. Fill color of handicap symbols shall be “Handicap Blue” and shall visually match color chip No. 15080 of Federal Standard 595C. Symbol and border color of handicap symbols shall be “Federal Highway White” and shall visually match color chip No. 17886 of Federal Standard 595C.
- C. It is the responsibility of the pavement marking Contractor to coordinate with the coating Contractor and to select a pavement marking paint that will properly adhere to the traffic coating.

## PART 3 – EXECUTION

### 3.1 PREPARATION

- A. Before commencing work, make certain that work to be painted is in proper condition to receive painting materials, that surfaces are clean, dry, smooth, and at proper temperature as recommended by the paint Manufacturer.
- B. Do not paint or finish any surface which is wet or damp.
- C. Contractor shall verify that surface upon which materials are to be applied is dry, free from frost, dust, dirt, glaze, oil, grease, debris or other materials or contaminants which would prevent proper bonding.
- D. Contractor shall remove such materials prior to application.

- E. Layout striping to match existing striping and as shown on plans. Report any discrepancies, interferences, or changes in the striping due to field conditions to Engineer prior to painting. Remove any striping not applied in strict accordance with the plans.
- F. The pavement markings on the slab-on-grade of Level 1E included in the bid item "Pavement Marking- Level 1" shall include complete removal of existing pavement markings with the Contractor's preferred method(s), which may include power washing and grinding to the Engineer's satisfaction.

### 3.2 INSTALLATION – PAINTED MARKINGS

- A. Pavement markings include (but are not limited to) parking stripes, handicap symbols, hash marks, arrows, and curb noses on driving ramps.
- B. Pavement markings shall be placed at locations and to dimensions to match existing and as shown on the plans.
- C. Apply paint in a single coat. At the direction of the Engineer, markings showing light spots may receive additional coats.
- D. Applied lines shall have a uniform cross section.
- E. Lines shall have true, sharp edges and ends.
- F. Paint shall be applied in accordance with Manufacturer's recommendations but not less than 417 sq. ft/gallons of 4-inch continuous line and to a minimum wet film thickness of 6 mils.
- G. Protect lines from traffic until sufficiently dry to prevent pickup.
- H. Dimensions for pavement arrows and handicap symbols can be found on Sheet 7 of the plans.
- I. If the width of consecutive stalls is uneven between two columns, repaint the new stalls with equal widths (excluding handicap parking stalls).

### 3.3 TOLERANCES

- A. Lines shall have a uniform width with a tolerance of plus or minus 1/4 inch for 4 and 6 inch lines and plus or minus 1/2 inch for 8, 12, 18 and 24 inch lines.

### 3.4 CLEANING

- A. Damaged, spotted or smeared parts of the building and equipments shall be repaired and cleaned by the Contractor.
- B. Work or material damaged beyond repair, in opinion of Engineer shall be replaced by the Contractor.
- C. Remove all masking protection, debris, containers, equipment, materials, etc. from site and from surfaces upon project completion in accordance with Division 01.

## PART 4 – MEASUREMENT AND PAYMENT

### 4.1 MEASUREMENT

- A. The City will measure pavement markings as a single lump sum unit acceptably completed.

### 4.2 PAYMENT

A. The City will pay for measured quantities at the contract unit price for the following bid items:

<u>ITEM</u>	<u>UNIT</u>
1. Pavement Marking- Level 1	LS
2. Pavement Marking- Levels 2-4	LS

B. Payment is full compensation for surface preparation; for furnishing and applying pavement marking materials, for protecting traffic and property; for field repairs, and for all labor, materials, equipment, and incidentals.

END OF SECTION 09 92 00