

Project Manual  
TECHNICAL SPECIFICATIONS

# Mall/Concourse Maintenance Protective Flooring Replacement

120 S. Fairchild Street  
Madison, WI 53703

Exhibit B Bid Documents  
12/15/20

Madison Contract No. 9429  
Project No. 13371  
Munis No. 13371-85-140



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**SECTION 01 26 13  
REQUEST FOR INFORMATION (RFI)**

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**PART 1 – GENERAL**

**1.1. SUMMARY**

- 19 A. Contractors shall use the RFI form/process to request additional information or clarification regarding the  
20 construction documents.  
21 B. Form will be provided by CPM.  
22

**1.2. RELATED SPECIFICATIONS**

- 23 A. Section 01 26 46 Construction Bulletin (CB)  
24 B. Section 01 26 57 Change Order Request (COR)  
25 C. Section 01 26 63 Change Order (CO)  
26  
27

**1.3. PERFORMANCE REQUIREMENTS**

- 29 A. RFI issues initiated by any contractor shall be done through the General Contractor (GC).  
30 1. RFIs submitted by any Sub-contractor under the GCs control shall be returned with no response.  
31 B. Submit a new RFI for each issue. Only multiple questions that are of a similar nature may be combined into one  
32 RFI shall be allowed and responded to.  
33

**1.4. QUALITY ASSURANCE**

- 34 A. The GC shall be responsible for all of the following:  
35 1. Ensure that any request for additional information is valid and the information being requested is not  
36 addressed in the construction documents.  
37 2. Ensure that all requests are clearly stated and the RFI form is completely filled out.  
38 3. Ensure that all Work associated an RFI response is carried out as intended.  
39 B. The Project Engineer (PE) shall be responsible for the following:  
40 1. Ensure that all responses to contractor initiated RFIs are properly responded to in a timely fashion.  
41 a. The CPM, Owner, consulting staff, and other City staff shall be responsible for the initial review of  
42 the RFI. The PE shall be responsible for codifying all consultant and Owner/City staff comments  
43 into a unified RFI response.  
44  
45

**PART 2 – PRODUCTS**

**2.1. REQUEST FOR INFORMATION FORM**

- 46  
47  
48 A. Will be provided by CPM.  
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**PART 3 - EXECUTION**

**3.1. CONTRACTOR INITIATED RFI**

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53 A. Immediately on discovery of the need for additional information or interpretation of the Contract Documents  
54 any contractor may initiate an RFI for additional information or clarification through the GC.  
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**3.2. RFI RESPONSES**

- A. Responses to simple RFI issues shall use the response section of the RFI form and shall be completed within five (5) working days of the RFI form being submitted.
- B. Responses to more complex issues may require additional time or may require a Construction Bulletin to be published. The initial RFI shall be responded to within five (5) working days stating that the RFI is being reviewed and provide an estimated date for the response.
- C. The following GC generated RFIs will be returned without action:
  - 1. Requests for approval of submittals
  - 2. Requests for approval of substitutions
  - 3. Requests for approval of Contractor’s means and methods.
  - 4. Requests for coordination information already indicated in the Contract Documents.
  - 5. Requests for adjustments in the Contract Time or the Contract Sum.
  - 6. Requests for interpretation of A/E’s actions on submittals.
  - 7. Incomplete RFI or inaccurately prepared RFI.

**3.3. COMMENCEMENT OF WORK RELATED TO AN RFI**

- A. The GC shall only proceed with the Work of an RFI where, additional information is not required.
- B. The GC shall not proceed with any Work associated with an RFI while it is under review.
- C. The GC shall not proceed with any Work associated with an RFI that clearly states a CB will be issued in response to the RFI.
- D. The GC will be required to immediately remove and replace unauthorized Work and all costs required to conform to the Contract Documents shall be borne by the GC.

**END OF SECTION**

**SECTION 01 26 46  
CONSTRUCTION BULLETIN (CB)**

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**PART 1 – GENERAL**

**1.1. SUMMARY**

- 18 A. Construction Bulletins (CB) are formal published construction documents that modify the original contract bid  
19 documents after construction has commenced. CBs may be published for many reasons, including but not  
20 limited to the following:  
21 1. Clarification of existing construction documents including specifications, plans, and details  
22 2. Change in product or equipment  
23 3. A response to a Request for Information  
24 4. Change in scope of the contract as either an add or a deduct of work  
25 B. CBs provide a higher degree of detail in response to a Request for Information (RFI) through directives, revised  
26 plans/details, and specifications as necessary.  
27 C. The CB may change the original contract documents through additions or deletions to the Work.  
28 D. Where the directives of a CB are significant enough to warrant a Change Order Request (COR) the GC shall use all  
29 information provided in the CB to assemble all required back-up documentation for additions and deletions of  
30 materials, labor and other related contract costs for the COR.  
31

**1.2. RELATED SPECIFICATIONS**

- 33 A. Section 01 26 13 Request for Information (RFI)  
34 B. Section 01 26 57 Change Order Request (COR)  
35 C. Section 01 26 63 Change Order (CO)  
36

**1.3. PERFORMANCE REQUIREMENTS**

- 38 A. Project Engineer (PE): The PE shall be the only person authorized to publish a CB as needed for any reason  
39 indicated in section 1.1.A above. The PE shall consult as necessary with any of the following while drafting the  
40 CB and shall confirm final direction with the CPM prior to issuing a CB:  
41 1. City Project manager (CPM)  
42 2. Owner  
43 3. Members of the consulting staff  
44 4. Members of city staff  
45 5. The General Contractor  
46 6. Sub-contractors  
47 B. General Contractor: The GC shall be responsible for the following as needed:  
48 1. Executing the directives of the CB when he/she believes that no changes in labor, materials, equipment,  
49 or contract duration will be required for additions or deletions.  
50 2. Submit a COR when he/she believes that a change in labor, materials, equipment or contract duration  
51 will be required for additions or deletions.  
52

**1.4. QUALITY ASSURANCE**

- 54 A. The PE shall be responsible for ensuring the final CB sufficiently provides direction, details, specifications and  
55 other information as necessary for the GC to perform the intended Work.  
56 B. The PE shall be responsible for ensuring the final CB is published as expeditiously as practical based on the  
57 complexity of the CB being written. CBs that may affect the GC critical path shall be given priority.  
58

1 **PART 2 – PRODUCTS**

2

3 **2.1. CONSTRUCTION BULLETIN FORM**

4 A. Will be provided by CPM.

5

6 **PART 3 - EXECUTION**

7

8 **3.1. WRITING THE CONSTRUCTION BULLETIN**

9 A. The PE shall draft a CB as needed using the form provided by CPM.

10 1. The PE and/or consulting staff as necessary shall provide specifications, model numbers and performance  
11 data, details and other such information necessary to clearly state the intentions of the CB.

12 2. The consulting staff, CPM, Owner, and other City Staff shall review the draft and recommend changes as  
13 needed.

14 3. The PE shall amend the draft as necessary into a final CB for review

15 B. Once the final CB has been approved the PE shall submit it to the GC.

16

17 **3.2. EXECUTING THE CONSTRUCTION BULLETIN**

18 A. The GC shall acknowledge receipt of the CB.

19 B. The GC shall notify all Sub-contractors of the CB and publish the CB to all field sets of drawings and specifications  
20 as appropriate.

21 C. The GC shall execute the directives of the CB or submit COR documentation as necessary during the execution  
22 and implementation of the CB.

23 1. See Specification 01 26 57 Change Order Request (COR)

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**END OF SECTION**

**SECTION 01 26 57  
CHANGE ORDER REQUESTS (COR)**

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**PART 1 – GENERAL**

**1.1. SUMMARY**

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21  
22 A. Except in cases of emergency no changes in the Work required by the Contract Documents may be made by  
23 the General Contractor (GC) without having prior approval of the City Engineer or his representative.  
24 B. The City may at any time, without invalidating the Contract and without Notice to Sureties, order changes in  
25 the Work by written Change Order (CO). Such changes may include additions and/or deletions.  
26 C. Where the City desires to make changes in the Work through use of written Change Order Request (COR), the  
27 following procedures apply:  
28 1. If requested by the City, the GC shall prepare and submit a detailed proposal, including all cost and time  
29 adjustments to which the GC believes it will be entitled if the change proposed is incorporated into the  
30 Contract. The City shall be under no legal obligation to issue a Change Order for such proposal.  
31 2. The parties shall attempt in good faith to reach agreement on the adjustments needed to the Contract to  
32 properly incorporate the proposed change(s) into the Work. In the event that the parties agree on such  
33 adjustments, the City may issue a Change Order and incorporate such changes and agreed to  
34 adjustments, if any.  
35 3. In some instances, it may be necessary for the City to authorize Work or direct changes in Work for which  
36 no final and binding agreement has been reached and for which unit prices are not applicable. In such  
37 cases the following shall apply.  
38 a. Upon written request by the City, the GC shall perform proposed Work  
39 b. The cost of such change may be determined in accordance with this specification.  
40 c. In the event agreement cannot be accomplished as contemplated herein, the City may authorize  
41 the Work to be performed by City forces or to hire others to complete the Work. Such action on  
42 the part of the City shall not be the basis of a claim by the GC for failure to allow it to perform the  
43 changed Work.  
44 D. Where changes in the Work are made by the City through use of a force account basis, the GC shall as soon as  
45 practicable, and in no case later than ten (10) working days from the receipt of such order, unless another time  
46 period has been agreed to by both parties, give the City written Notice, stating:  
47 1. The date, circumstances and source of the extra work; and,  
48 2. The cost of performing extra work described by such Order, if any; and,  
49 3. Effect of the order on the required completion date of the Project, if any.  
50 E. The giving of each Notice by the GC as prescribed by this specification, shall be a requirement to liability of the  
51 City for payment of any additional costs incurred by the GC in implementing changes in the Work. Under this  
52 specification, no order or statement of the City shall be treated as a Change Order, or shall entitle the GC to an  
53 equitable adjustment of the terms of this Contract or damages for costs incurred by the GC on any activity for  
54 which the Notice was not given.  
55 F. In the event Work is required due to an emergency as described in this specification the GC must request an  
56 equitable adjustment as soon as practicable, and in no case later than ten (10) working days of the  
57 commencement of such emergency.

- 1 G. All GC requests for equitable adjustment shall be submitted to the CPM per the specifications below. Such  
2 requests shall set forth with specificity the amount of and reason(s) for the proposed adjustment and shall be  
3 accompanied by supporting information and documents.  
4 H. No adjustment of any kind shall be made to this Contract, if asserted by the GC for the first time, after the date  
5 of final payment.  
6 I. This specification shall be used by the GC when preparing documentation for any COR to ensure each has been  
7 properly and completely filled out as required by the City of Madison.  
8

9 **1.2. RELATED SPECIFICATION SECTIONS**

- 10 A. Section 01 26 13 Request for Information (RFI)  
11 B. Section 01 26 46 Construction Bulletins (CB)  
12 C. Section 01 26 63 Change Order (CO)  
13 D. Parts of this specification will reference articles within "The City of Madison Standard Specifications for Public  
14 Works Construction".  
15 1. Use the following link to access the Standard Specifications web page:  
16 <http://www.cityofmadison.com/business/pw/specs.cfm>  
17 a. Click on the "Part" chapter identified in the specification text. For example if the specification  
18 says "Refer to City of Madison Standard Specification 210.2" click the link for Part II, the Part II  
19 PDF will open.  
20 b. Scroll through the index of Part II for specification 210.2 and click the text link which will take you  
21 to the referenced text.  
22

23 **1.3. DEFINITIONS AND STANDARDS**

- 24 A. LABOR: The amount of time and cost associated with the performance of human effort for a defined scope of  
25 Work. Labor is further defined as follows:  
26 1. Labor rate is the total hourly rate which includes the base rate of pay, fringe benefits plus each  
27 company's cost of required insurance, also referred to as a reimbursable labor rate.  
28 2. Unit labor is the labor hours anticipated to install the corresponding unit of material.  
29 3. Labor cost is the labor hours multiplied by the hourly labor rates.  
30 B. MATERIAL: Actual material cost is the amount paid, or to be paid, by the GC for materials, supplies and  
31 equipment entering permanently into the Work, including cost of transportation and applicable taxes. The cost  
32 shall not exceed the usual and customary cost for such items available in the geographical area of the project.  
33 C. LARGE TOOLS AND MAJOR EQUIPMENT: Large tools and major equipment are those with an initial cost greater  
34 than \$1,500, whether from the GC or other sources.  
35 1. Tool and equipment use and time allowed is only for extra work associated with change orders.  
36 a. Rental Rate is the machine cost associated with operating a piece of equipment for a defined  
37 length of time (hour, day, week, or month) and shall not exceed the usual and customary amount  
38 for such items available in the geographical area of the project.  
39 b. Rental cost is the rental rate multiplied by the anticipated duration the equipment shall be  
40 required.  
41 2. The GC shall provide a breakdown of all rental rates to indicate what items and costs are associated with  
42 the rate. Examples of items to include in the breakdown would be fuel consumption, lubrication,  
43 maintenance and other similar expenses but not including profit and overhead.  
44 3. When large tools and equipment needed for Change Order work are not already at the job site, the  
45 actual cost to get the item there is also reimbursable.  
46 D. BOND COST: The cost shall be calculated at 1% of the total proposed change order.  
47 E. SUB-CONTRACTOR COSTS: Sub-contractor costs are for those labor, material, and equipment costs required by  
48 subcontracted specialties to complete the Change Order work.  
49 F. OVERHEAD AND PROFIT Markup: The allowable markup percentage to a COR by the GC and Sub-contractors for  
50 overhead and profit. All of the following are expenses associated with overhead and profit and shall not be  
51 reimbursable as individual items on any COR:  
52 1. CHANGE ORDER PREPARATION: All costs associated with the preparing and processing of the change  
53 order.  
54 2. DESIGN, ESTIMATING, AND SUPERVISION: All such efforts, unless specifically requested by Owner as  
55 additional Work to be documented as a COR or portion thereof.  
56 3. INSTALLATION LAYOUT: The layout required for the installation of material and equipment, and the  
57 installation design, is the responsibility of the GC.



- 1 4. SMALL TOOLS AND SUPPLIES: The cost of small hand tools with an initial cost of \$1,500 or less, along  
2 with consumable supplies and expendable items such as drill bits, saw blades, gasoline, lubricating or  
3 cutting oil, and similar items.  
4 5. GENERAL EXPENSE: The general expense, which is those items that are a specific job cost not associated  
5 with direct labor and material such as job trailers, foreman truck, and similar items.  
6 6. RECORD DRAWINGS: The preparation of record or as-built drawings.  
7 7. OTHER COSTS: Any miscellaneous cost not directly assessable to the execution of the Change Order  
8 including but not limited to the following:  
9 a. All association dues, assessments, and similar items.  
10 b. All education, training, and similar items.  
11 c. All drafting and/or engineering, unless specifically requested by Owner as additional Work to be  
12 documented as a Change Order proposal or portion thereof.  
13 d. All other items including but not limited to review, coordination, estimating and expediting, field  
14 and office supervision, administrative work, etc.  
15 G. Contract Extension: The necessary amount of time to be added to the contract deadlines for the completion of a  
16 change order.  
17

18 **1.4. CONTRACT EXTENSION**

- 19 A. The GC shall not assume that every COR will require a Contract Extension. If the GC feels a contract extension is  
20 warranted he/she shall provide sufficient scheduling information that shows how the COR being requested  
21 impacts the critical path of the project.  
22 B. The City of Madison strongly encourages the GC to explore alternative methods and practices prior to submitting  
23 a COR with a request for contract extension.  
24

25 **1.5. OVERHEAD AND PROFIT MARKUP**

- 26 A. Pursuant to the City of Madison Standard Specifications for Public Works Construction, Section 104.7, Extra  
27 Work, the following maximum allowable markups shall be strictly enforced on all change orders associated with  
28 the execution of this contract.  
29 1. The total maximum overhead and profit shall not exceed fifteen percent (15%) of the total costs.  
30 2. The total maximum overhead and profit shall be distributed as follows:  
31 a. For work performed and materials provided solely by the General Contractor, fifteen percent  
32 (15%) of the total costs.  
33 b. For work performed and materials provided solely by Sub-contractors and supervised by the  
34 General Contractor:  
35 i. Supervision of the GC, five percent (5%) of the total Sub-contractor cost.  
36 ii. Sub-contractors work and materials ten percent (10%) of the total Sub-contractor cost.  
37

38 **1.6. PERFORMANCE REQUIREMENTS**

- 39 A. The GC shall become thoroughly familiar with this specification as it will identify procedures and expenses that  
40 are or are not allowed under the Change Order and Change Order Request process.  
41 B. The GC shall be responsible for all of the following:  
42 1. Carefully reviewing the CB that is associated with the COR.  
43 2. Collecting required supporting documentation from all contractors that quantify the need for a COR.  
44 a. Labor hours and wage rates  
45 b. Material costs  
46 c. Equipment costs  
47 C. The following shall apply to establishing prices for labor, materials, and equipment costs:  
48 1. Where Work to be completed has previously been established by individual bid items in the contract bid  
49 proposal the GC shall use the unit bid prices previously established.  
50 2. Where Work to be completed was bid as a Lump Sum without individual bid items the GC shall provide a  
51 breakdown of all labor, materials, equipment including unit rates and quantities required.  
52 D. The completion date is determined by Owner. The schedule, however, is the responsibility of the GC. Time  
53 extensions for extra Work will be considered when a schedule analysis of the critical path shows that the Change  
54 Order Request places the Work beyond the completion date stated in the Contract.  
55

56 **1.7. QUALITY ASSURANCE**

- 57 A. The GC shall be responsible for ensuring that all COR supporting documentation meets the following  
58 requirements prior to completing the COR form:

- 1. Sufficiently indicates labor, material, and other expenses related to completing the intent of the CB.
- 2. No costs exceed the usual and customary amount for such items available in the geographical area of the project, and no costs exceed those established under the contract.
- B. The Project Engineer (PE), City Project Manager (CPM), other members of the consulting staff, and city staff shall review all COR requests to ensure that the intent of the CB will be met under the proposal of the COR or request additional information as necessary.

**PART 2 – PRODUCTS**

**2.1. CHANGE ORDER REQUEST FORM**

- A. Will be provided by CPM.

**PART 3 - EXECUTION**

**3.1. ESTABLISHING A CHANGE ORDER REQUEST**

- A. Upon receipt of a Construction Bulletin (CB) where the GC believes a significant change in contract scope warrants the submittal of a COR the GC shall do all of the following within ten (10) working days after receipt of the CB:
  - 1. Review the CB with all necessary trades and sub-contractors required by the change in scope.
    - a. Additions or deletions to the contract scope shall be as directed within the CB.
    - b. Additions or deletions of labor and materials shall be determined by the GC based on the directives of the CB.
  - 2. Assemble all required back-up documentation for additions and deletions including materials breakdown, labor breakdown and other related contract costs as previously outlined in this specification.
  - 3. Submit a COR request form.
- B. Submitting a COR does not obligate the GC to complete the work associated with the COR nor does it obligate the Owner to approve the COR as a change to the contract.

**3.2. CHANGE ORDER REQUEST REVIEW, APPROVAL, AND PROCESSING**

- A. The PE and CPM shall review all CORs submitted by the GC.
  - 1. Additional consulting staff and city staff having knowledge of the components of the COR shall review and advise the PE and CPM as to the accuracy of the items, quantities, and associated costs of the COR as directed by the CB.
  - 2. The CPM shall review the COR with the Owner.
- B. If required the PE and CPM, shall in good faith, further negotiate the COR with the GC as necessary. All amendments to any COR shall be documented.
- C. After final review of the COR the CPM and Owner may accept the COR.
- D. The CPM shall prepare the COR in the form of an official Board of Public Works Change Order for final review and approval as outlined in Section 01 26 63 Change Order (CO).
- E. The GC shall not act upon any accepted COR until it has received final approval through the Public Works process as an official CO to the Work unless instructed to do so by the CPM. Proceeding without the final approval of a fully authorized Change Order is at the GC's own risk.

**3.3. EMERGENCY CHANGE ORDER REQUEST**

- A. In the event Work is required due to an emergency as described in the Contract Documents, the GC must request an equitable adjustment as soon as practicable, and in no case later than ten (10) working days of the commencement of such emergency.
- B. The GC shall provide full documentation of all labor, materials and equipment used during the period of emergency as part of the COR submittal.

**END OF SECTION**

**SECTION 01 26 63  
CHANGE ORDER (CO)**

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**PART 1 – GENERAL**

**1.1. SUMMARY**

- 17 A. Except in cases of emergency, no changes in the Work required by the Contract Documents may be made  
18 by the General Contractor (GC) without having prior approval of the City Project Manager (CPM).  
19 B. The City may at any time, without invalidating the Contract and without Notice to Sureties, order changes in  
20 the Work by written Change Order. Such changes may include additions and/or deletions.  
21 C. The Change Order (CO) is a Board of Public Works (BPW) form that is reviewed and approved by a specific  
22 process.  
23 D. The CO form is typically made up of multiple Change Order Requests (CORs) and/or Bid Items as appropriate  
24 depending on the type of project and how the contract was bid.  
25

**1.2. RELATED SPECIFICATION SECTIONS**

- 26 A. Section 01 26 13 Request for Information (RFI)  
27 B. Section 01 26 46 Construction Bulletin (CB)  
28 C. Section 01 26 63 Change Order Request (COR)  
29  
30

**1.3. BOARD OF PUBLIC WORKS PROCEDURE**

- 31 A. The Board of Public Works has a very explicit procedure for the review and approval of all change orders  
32 associated with any Public Works Contract as follows:  
33 1. The Supervisory Chain of the CPM shall review and approve any CO under \$20,000 provided it does not  
34 include either of the following:  
35 a. The CO does not request a time extension to the contract.  
36 b. The CO does not cause the contract contingency sum to be exceeded.  
37 2. The Board of Public Works shall review and approve any CO that requires any of the following:  
38 a. Any CO over \$20,000.  
39 b. Any CO requesting a time extension to the contract regardless of the monetary value of the CO.  
40 c. Any CO that that causes the contract contingency sum to be exceeded.  
41 B. The Board of Public Works generally meets every other week and only once in August and December. The GC is  
42 cautioned that, under normal scheduling, a CO requiring a BPW review will take a minimum of two (2) weeks to  
43 achieve final approval.  
44 1. The City shall not be responsible for additional delays to the Work caused by the scheduling constraints  
45 of the Board of Public Works.  
46 C. ***SPECIAL NOTE:*** The GC is cautioned to never proceed unless told to do so by the CPM. Only in rare instances  
47 may the CPM give a written notice to proceed on a COR without an approved CO. Proceeding without the  
48 written notice of the CPM or an approved CO is at the GC's own risk.  
49  
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**PART 2 – PRODUCTS**

**2.1. CHANGE ORDER FORM**

- 51 A. Provided by CPM.  
52  
53

**PART 3 - EXECUTION**

1 **3.1. PREPARATION OF THE CHANGE ORDER**

- 2 A. The CPM shall prepare the required CO as follows:
- 3 1. Provide information for all contract information.
  - 4 2. Provide a general description of the items described within the change order.
  - 5 3. Provide detailed information for each Item on the CO form. At the option of the CPM he/she may include
  - 6 multiple Change Order Requests each as their own item.
  - 7 4. Provide required pricing breakdown and accounting information as needed for the item.
  - 8 5. Insert attachments of contractor/architect provided information that clarifies and quantifies the CO.
  - 9 Attachments may include but not be limited to material lists, estimated labor breakdown, revised details
  - 10 or specifications, and other documents that may be related to the requested change.
  - 11 6. Save the final version of the completed CO.

12  
13 **3.2. EXECUTION OF THE CHANGE ORDER**

- 14 A. The GC shall do the following:
- 15 1. Review all items on the CO form.
  - 16 2. The GC shall notify the CPM immediately of any errors or discrepancies on the form and shall not sign or
  - 17 save it.
  - 18 a. The CPM shall make any corrections as needed, re-save the form, and notify the GC.
  - 19 3. If/when the GC concurs with the CO form as drafted the GC shall digitally sign the form.
- 20 B. The CPM shall do the following:
- 21 1. Monitor the review process
  - 22 2. Ensure that proper BPW procedures are executed as needed by the CO approval process.
  - 23 a. Schedule the CO on the next available BPW agenda if required.
  - 24 i. Attend the BPW meeting to speak on the CO to board members and answer questions.
  - 25 ii. The GC and/or PE may be required to attend the BPW meeting to address specific
  - 26 information as it relates to the Work and/or materials associated with the CO.
  - 27 3. Monitor final approval and distribution of the CO.
  - 28 4. Notify the GC that the CO has been completed.
  - 29 5. Ensure that the CO is posted to the next Public Works payment schedule.
  - 30 6. Verify that the GC's next Progress Payment-Schedule of Values show the CO as part of the contract sum.
- 31 C. Upon final approval of the CO the GC may proceed with executing the Work associated with the CO.
- 32  
33  
34

35 **END OF SECTION**

36

**SECTION 01 29 76**  
**PROGRESS PAYMENT PROCEDURES**

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15

16 **PART 1 – GENERAL**

17  
18 **1.1. SUMMARY**

- 19 A. The General Contractor (GC) shall review this and all related specifications prior to submitting progress payment  
20 requests.  
21 B. Progress payment requests (Partial Payment-PP) for this contract shall be submitted digitally by the GC to the  
22 CPM.  
23 C. The Project Engineer (PE) and City Project Manager (CPM) shall review and amend or approve the PP as needed.  
24 D. After approval of the PP by the CPM, he/she shall forward the PP to the appropriate agencies for BPW  
25 contractual review and payment processing.  
26

27 **1.2. RELATED SPECIFICATIONS**

- 28 A. Section 01 26 63 Change Order (CO)  
29 B. Section 01 29 73 Schedule of Values  
30 C. Section 01 31 19 Progress Meetings  
31 D. Section 01 32 26 Construction Progress Reporting  
32 E. Section 01 33 23 Submittals  
33 F. Section 01 77 00 Closeout Procedures  
34 G. Section 01 78 23 Operation and Maintenance Data  
35 H. Section 01 78 36 Warranties  
36 I. Section 01 78 39 As-Built Drawings  
37 J. Section 01 79 00 Demonstration and Training  
38

39 **1.3. RELATED DOCUMENTS**

- 40 A. The following documents shall be used when evaluating PP requests.  
41 1. Construction progress reports filed since the last payment request.  
42 2. Contractors Schedule of Values as updated from the last payment request. See Specification 01 29 73.  
43 3. Any document that may be required to be submitted for review and approval, as noted by the  
44 specifications listed in Section 1.2 above, or the Progress Payment Milestone Schedule in Section 1.4  
45 below, to achieve a required bench mark of contract progression or contract requirement.  
46

47 **1.4. PROGRESS PAYMENT MILESTONES**

- 48 A. City Engineering-Facility Management has developed the Project Payment Milestone Schedule (Section 1.4  
49 below) to assist the GC in providing required construction specific documentation and general contractual  
50 documentation in a timely manner.  
51 B. The Progress Payment Milestone Schedule is not an all inclusive list. Multiple agencies review progress payment  
52 requests and contract closeout requests. Missing, incomplete, or incorrect documentation for any agency may  
53 be a cause for not processing progress payments. It shall be the sole responsibility of the Contractor for  
54 providing documentation as required or requested to the appropriate agencies.  
55 C. The milestone schedule is based on the contract total sum and shall be valid for most contracts. Milestone  
56 submittals will be required with whatever progress payment hits the percentage of contract total indicated in  
57 the schedule.

- 1 D. The CPM shall review the milestone schedule with each progress payment request and at his/her option may  
2 elect to hold processing the progress payment until such time as the contractor has met the requirements for  
3 providing construction specific documentation.  
4 E. It shall be the General Contractors responsibility to comply with all BPW Contract Administration requirements  
5 and related deadlines as outlined in the Award Letter, Award Checklist, and Start Work Letter.  
6

<b>Progress Payment (PP) Milestone Schedule</b>		
<b>Milestone Description</b>	<b>Due Before</b>	<b>Remarks</b>
BPW Contract Administration Documentation <ul style="list-style-type: none"> <li>• Workforce profiles</li> <li>• Best Value Contracting Documentation</li> <li>• Sub-contractors prequalification approval &amp; Affirmative Action plans</li> <li>• Other as may be required</li> </ul>	PP-1, or start work as applicable	<ul style="list-style-type: none"> <li>• For GC and Sub-contractors before PP-1 regardless of scheduling</li> <li>• Sub-contractors (if applicable), due 10 days before they may start work</li> <li>• Sub-contractors (if applicable), due 10 days before they may start work</li> </ul>
Required Construction Submittals/Administrative Documents <ul style="list-style-type: none"> <li>• Submittals Schedule</li> <li>•</li> <li>• Closeout Requirement Checklist</li> <li>• Warranty Checklist</li> </ul>	PP-1	References <ul style="list-style-type: none"> <li>• Specification 01 32 19</li> <li>•</li> <li>• Specification 01 77 00</li> <li>• Specification 01 78 36</li> </ul>
Construction Progress Milestones <ul style="list-style-type: none"> <li>• Early submittals, per submittal schedule</li> <li>• Detailed Contract Schedules</li> </ul>	PP-1	See specifications for specific requirements <ul style="list-style-type: none"> <li>• Specification 01 32 19, Examples: concrete mix, structural steel, products with long lead times</li> <li>• See Specification 01 32 16</li> </ul>
General Construction Progress Requirements are all up to date <ul style="list-style-type: none"> <li>• Progress Schedules</li> <li>• Submittals/Re-submittals (ongoing)</li> <li>• Progress Reporting</li> <li>•</li> <li>•</li> <li>• QMOs are being addressed and closed</li> <li>• Progress Cleaning</li> <li>• As-Built Drawings</li> </ul>	Each future PP	Verified with each Progress Payment Request <ul style="list-style-type: none"> <li>• Specification 01 32 16</li> <li>• Specification 01 33 23</li> <li>•</li> <li>•</li> <li>•</li> <li>• Specification 01 32 26</li> <li>•</li> <li>•</li> <li>• Specification 01 45 16</li> <li>• Specification 01 74 13</li> <li>• Specification 01 78 39</li> </ul>
<b>* All of the above are updated as required</b>		
BPW Contract Administration Documentation <ul style="list-style-type: none"> <li>• Weekly payroll reports</li> <li>• Best Value Contracting Reports</li> <li>• SBE Reports</li> </ul>	25% CT or PP 2	See 1.4.E above. <i>This progress payment will be with held by BPW for any missing contractual documentation.</i>
Construction Progress Milestones <ul style="list-style-type: none"> <li>• Construction/Contract Closeout Meeting #1</li> <li>• Submittals/Re-submittals complete</li> </ul>	70% CT	<ul style="list-style-type: none"> <li>• Specification 01 31 19</li> <li>• Specification 01 33 23</li> </ul>

<b>Progress Payment (PP) Milestone Schedule</b>		
<b>Milestone Description</b>	<b>Due Before</b>	<b>Remarks</b>
Operation and Maintenance (O & M) drafts	60% CT	Specification 01 78 23
BPW Contract Administration Documentation	80% CT	This is a recommendation to the GC and is not a requirement of this PP.
<ul style="list-style-type: none"> <li>Request Finalization Review from BPW</li> </ul>		<ul style="list-style-type: none"> <li>Specification 01 77 00</li> </ul>
Construction Progress Milestones	80% CT	
<ul style="list-style-type: none"> <li>Operation and Maintenance (O &amp; M) finals, accepted</li> <li>All major QMO issues resolved</li> <li>As-Built Drawings, Division Trades ready for GC review</li> </ul>		<ul style="list-style-type: none"> <li>Specification 01 78 23</li> <li>Specification 01 45 16; Items that could prevent occupancy</li> <li>Specification 01 78 39</li> </ul>
All of the following shall be completed for this PP:	90% CT	Contractor to determine the proper order of completion:
<ul style="list-style-type: none"> <li>Regulatory Inspections completed</li> <li>All QMO reports closed</li> <li>Demonstration and Training completed</li> <li>Attic Stock completed</li> <li>Final Cleaning</li> </ul>		<ul style="list-style-type: none"> <li>Governing ordinances and statutes</li> <li>Specification 01 45 16</li> <li>Specification 01 79 00</li> <li>Specification 01 78 43</li> <li>Specification 01 74 13</li> </ul>
Construction Closeout Procedures:	100% CT	See Specification 01 77 00
<ul style="list-style-type: none"> <li>Letter of Substantial Compliance sent to BI and DHS as needed</li> <li>Certificate of Occupancy issued</li> <li>As-Built Drawings, finals, accepted</li> <li>City Letter of Substantial Completion</li> <li>Warranty letters dated and issued</li> </ul>		<ul style="list-style-type: none"> <li>Generated/Signed by the Engineer</li> <li>Building Inspection</li> <li>Specification 01 78 39</li> <li>Signed by the City Engineer</li> <li>Specification 01 78 36</li> </ul>
<b>* Completion of this begins the one year warranty.</b>		
BPW Contract Administration Documentation Contract Closeout Procedures	Final	See Specification 01 77 00
<ul style="list-style-type: none"> <li>Construction Closeout has been completed</li> <li>Contractor requests final payment of retainage upon receiving City Letter of Substantial Completion</li> <li>All BPW contractual requirements are verified</li> </ul>		<ul style="list-style-type: none"> <li>Contractor must provide any missing BPW Contractual Documentation</li> </ul>
<b>* Completion of this closes the contract but not the warranty period/bond.</b>		
<b>NOTE: CT = Contract Total less held retainage</b>		

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**1.5. PROGRESS PAYMENT SUBMITTAL**

- A. Each progress payment submittal shall be:
1. Digital in PDF format
  2. PDF shall be in color
  3. Uploaded to the appropriate Project Management library and properly named per the tutorial instructions provided to the awarded contractor.
- B. Submit all required construction progress documentation
- C. In general the following shall apply to all PP requests:

- 1                   1.     Materials or products:  
2                   a.     On order, being shipped, etc. may not be invoiced.  
3                   b.     Received and stored on the project site may be invoiced.  
4                   c.     Being manufactured off site at any location may not be invoiced (example: cabinetry, ductwork,  
5                   etc.)  
6                   d.     Completed products stored off site locally waiting for delivery to the project site may be invoiced  
7                   with prior approval by the CPM. All of the following conditions must be met to be allowed:  
8                   i.     Items must be visually inspected by CPM to verify product is complete.  
9                   ii.    Item must be stored inside a compatible structure and the structure and contents must be  
10                  insured.  
11                  iii.   Contractor is responsible for condition until installation is completed.  
12                  2.     All labor and equipment, including rental time for the current progress period may be invoiced.  
13                  3.     Only completed installations may be invoiced to 100% based on the Schedule of Values.  
14            D.     **DO NOT** submit BPW Contract Administration Documentation for review with Progress Payment Requests,  
15                  submit them directly to the correct agency and in the correct format as instructed from information in your BPW  
16                  Contract Award Packet instructions.  
17

18     **PART 2 - PRODUCTS - THIS SECTION NOT USED**

19  
20     **PART 3 - EXECUTION**

21  
22     **3.1. GENERAL CONTRACTOR PROCEDURE**

- 23            A.     The GC shall provide an updated version of his/her schedule of values (AIA documents G702 & G 703) with each  
24                  PP request.  
25                  1.     The AIA - Application and Certificate for Payment (G702) shall be properly filled out and prepared for the  
26                  Architects review. See specification 01 29 73, Schedule of Values for more information.  
27                  2.     The AIA - Continuation sheets (G703) shall be properly filled out and indicate the dollar value of the  
28                  completed work to date for each item on the form. See specification 01 29 73, Schedule of Values for  
29                  more information.  
30                  a.     The GC shall subtotal the work completed to date for all of the original Schedule of Value items.  
31                  b.     Divide the sub total of work completed by the Original Contract Total to obtain a percentage  
32                  complete of the original Lump Sum Bid. This percentage may be taken out to five (5) decimal  
33                  places (round fifth place up or down as needed).  
34                  i.     Example: \$5,192.55 of completed work divided by \$10,000 original Contract Total =  
35                  0.519255, round this to 0.51926  
36                  c.     Write the percentage in Column 10 on the City Tabular Sheet for the original lump sum bid item in  
37                  RED ink.  
38                  3.     Ensure that any newly posted change orders from the City of Madison provided tabulation sheet have  
39                  been entered on the G703 continuation sheets. Repeat steps a thru c above for each change order on  
40                  the schedule of values and the City Tabular Sheet.  
41            B.     The GC shall fill out the City of Madison Application and Certificate of Payment cover sheet as follows:  
42                  1.     The GC shall not change any pre-printed information and shall not write in the box that indicates previous  
43                  progress payments.  
44                  2.     The GC shall sign and date the form where indicated.  
45                  3.     The GC shall provide the dates from and to for the PP being requested.  
46                  4.     The GC shall provide the list of all contractors/sub-contractors that were actively working during the  
47                  dates indicated above.  
48                  a.     All contractors/sub-contractors named must be in compliance with all City requirements (Pre-  
49                  qualified, Affirmative Action Plan on file, etc). The PP will be held and not processed by the City of  
50                  Madison until all contractors/sub-contractors are in compliance.  
51                  b.     Do not list the names of suppliers or manufacturers, doing so will slow down processing and  
52                  require a re-submittal of the paperwork.  
53            C.     The General Contractor (GC) shall scan all of the documents listed below in the order shown, save the scan as a  
54                  single PDF file for each PP request.  
55                  1.     City cover sheet – Application and Certificate for Payment  
56                  2.     City tabulation sheet(s)  
57                  3.     AIA G702 - Application and Certificate for Payment  
58                  4.     AIA G703 - Continuation Sheet(s)



5. Any miscellaneous documents that may be requested as backup documentation for the pay request.
  - a. Lien waivers are not required and shall not be submitted.
  - b. Do not provide contractual administrative documents such as pay reports with pay requests.
  - c. Do not supply progress deliverables with pay requests.

**3.2. PROJECT ENGINEER PROCEDURE**

- A. The PE shall review the AIA-continuation sheets provided by the GC to determine if the Schedule of Values accurately reflects the work completed for the inclusive dates indicated.
- B. The PE shall advise the CPM of any discrepancies in the schedule of values.
- C. The PE shall work with the GC and the CPM to resolve any issues prior to signing the AIA - Application and Certificate for Payment.
- D. When verified, the PE shall digitally sign the original PDF version of the AIA - Application and Certificate for Payment.

**3.3. CITY PROJECT MANAGER PROCEDURE**

- A. The CPM shall review all documents submitted by the GC and work with the PE to ensure the schedule of values accurately reflects the work completed to date.
- B. The CPM may elect to hold processing of any progress payment pending submittal of required progress payment milestones.
- C. When verified, the CPM shall digitally sign the City Cover Sheet and forward the required documentation to the appropriate City agencies for further processing of the payment request.

**END OF SECTION**

**SECTION 01 33 23**  
**SUBMITTALS**

1  
2  
3  
4 PART 1 – GENERAL ..... 1  
5 1.1. SUMMARY ..... 1  
6 1.2. RELATED REFERENCES ..... 1  
7 1.3. SUBMITTAL REQUIREMENTS ..... 1  
8 PART 2 – PRODUCTS – THIS SECTION NOT USED ..... 2  
9 PART 3 - EXECUTION ..... 2  
10 3.1. GENERAL CONTRACTORS PROCEDURES ..... 2  
11 3.2. SUBMITTAL REVIEW ..... 2  
12 3.3. PROJECT ENGINEERS REVIEW ..... 3

**PART 1 – GENERAL**

**1.1. SUMMARY**

- 17 A. The General Contractor (GC) shall be responsible for providing submittals for review of all contractors and sub-  
18 contractors as designated in the construction documents. Submittals shall include but not be limited to all of the  
19 following:
- 20 1. Equipment specified and pre-approved in the specification; to ensure quality, construction, and  
21 performance specifications have not changed since final design.
  - 22 2. Equipment specified by performance in the specification; to ensure that the intended quality,  
23 construction, and performance specified is met by the selected material or product.
  - 24 3. Shop, piece, erection, and other such drawings as indicated in the specifications to ensure all structural,  
25 dimensional, and assembly requirements are being met.
  - 26 4. Submittals indicating installation sequencing
  - 27 5. Submittals indicating control sequencing
  - 28 6. Contractor licensing, certification, and other such regulatory documentation when required by a  
29 specification.
  - 30 7. Other submittals as may be required by individual specifications.
- 31 B. The submittal process shall not be used to determine alternates to specified products or equipment. All  
32 considerations shall be reviewed during the bidding process and acceptable alternates shall be acknowledged by  
33 addendum prior to the closing of bidding. See bidding instructions for the information on submitting alternates  
34 for consideration.
- 35 D. In the event that a manufacturer has significantly changed a product (discontinued a model, changed dimension  
36 or performance data changed available colors, etc.) since bid opening the GC shall submit a Request for  
37 Information (RFI) to the Project Engineer requesting other approved alternates prior to uploading a digital  
38 submittal.
- 39 E. Contractors and sub-contractors shall be responsible for knowing the submittal requirements of ALL sections  
40 within their scope of work under the contract. The Owner reserves the right to request documentation on any  
41 materials, equipment, or product being installed where a submittal is not on file. If the material, equipment, or  
42 product installed is determined not to meet the intent of the specification the contractor/sub-contractor shall be  
43 required to remove and replace the items involved. The GC shall be solely responsible for all costs associated  
44 with the removal and replacement.

**1.2. RELATED REFERENCES**

- 46 A. Section 01 29 76 Progress Payment Procedures  
47 B. Section 01 32 19 Submittals Schedule  
48 C. Section 01 32 26 Construction Progress Reporting  
49 D. All Technical Specifications, contract documents, construction drawings, and any published addendums during  
50 the bidding process.  
51 E. All contract documents generated during the execution of the contract including but not limited to Requests for  
52 Information (RFI) and Construction Bulletins (CB).  
53

**1.3. SUBMITTAL REQUIREMENTS**

- 54  
55 A. A completed submittal shall meet the following requirements:  
56 1. Digital submittal shall be original PDF of manufacturer's data sheets or high quality color scan of the  
57 same.  
58

- 1                   a.       Submittals shall not include sales fliers or other similar documents that typically do not provide  
2   complete manufacturers data.
- 3                   2.       Documents within the PDF submittal shall be printable to a sized sheet no less than 8-1/2 by 11 inches  
4   and no larger than 24 by 36 inches.
- 5                   3.       At the beginning of each submittal the contractor shall identify the plan reference (WC-1, EF-3, etc.) in  
6   RED block letters that the submittal is for.
- 7                   4.       Where multiple model numbers appear in a table the contractor shall identify the specific model being  
8   submitted by using a RED square, box, or other designation to distinguish the correct model from others  
9   on the page.
- 10                B.       A complete submittal will include all information associated with the product or equipment as presented in  
11   plans, equipment tables, and specifications. Information shall include but not be limited to the following:
- 12   1.       Dimensional data
- 13   2.       Performance data
- 14   3.       Resource requirements, power, water, waste, etc
- 15   4.       Clearance and maintenance requirements
- 16   5.       Finish information, colors, textures, etc.
- 17   6.       Warranty information
- 18                C.       Where a submittal includes material samples (carpet, tile, paint draw downs, etc.) the contractor shall do the  
19   following:
- 20   1.       The Contractor shall submit the sample(s) as indicated in the specification.
- 21   2.       The Contractor shall include a quality photograph(s) of the product with the digital submittal.  
22   Photographs shall meet the following requirements:
- 23   a.       Formatted to be between 500Kb and 1.0 Mb in file size
- 24   b.       Have no glare or flash reflection on the sample
- 25   c.       Sample fills the frame of the photo and shows detail as needed. Include multiple photos from  
26   other angles as needed.
- 27   d.       Scanned copies of products or photos are not acceptable.
- 28                D.       Uploaded submittals should be relative and related to a specific written specification.
- 29   1.       Do not upload submittals under a broad category or division (I.E. HVAC 23 00 00). Always upload by the  
30   specific specification that identifies a required product or performance to be met.
- 31   2.       Group related items together if the specification is written that way. (I.E. all of the plumbing fixtures and  
32   trim relative to one specific specification should be submitted together).
- 33   3.       Submittals shall be grouped and adhere to the divisions in the submittal schedule. Submittals that do not  
34   conform to the submittal schedule and/or specification divisions will be rejected for re-submittal.
- 35

36 **PART 2 – PRODUCTS – THIS SECTION NOT USED**

37

38 **PART 3 - EXECUTION**

39

40 **3.1. GENERAL CONTRACTORS PROCEDURES**

- 41                A.       All required submittals will be submitted electronically by the GC.
- 42                B.       Uploading the submittal indicates that the GC has reviewed and approved the submittal against the contract  
43   document requirements.
- 44                C.       The GC shall discuss submittal status at all progress meetings and shall monitor submittal review/approval/re-  
45   submittal so as to not incur delays in the project schedule.
- 46                D.       The GC and sub-contractors shall provide re-submittals as required.
- 47

48 **3.2. SUBMITTAL REVIEW**

- 49                A.       The submittal shall be reviewed internally by the required Architect/Engineer and Owner Representative in a  
50   timely fashion and provide commentary on missing items, incorrect information, or incomplete shop drawings,  
51   etc as needed.
- 52                B.       When the internal review is completed the CPM will notify the Project Engineer the submittal is ready for final  
53   review.
- 54                C.       Information will be transmitted electronically.
- 55

1 **3.3. PROJECT ENGINEERS REVIEW**

- 2 A. Upon completion of the internal review the Project Engineer shall review all internal review comments, confer  
3 with the CPM as needed and determine the appropriate disposition status for the submittal (approved or  
4 resubmit).
- 5 B. The Project Engineer shall summarize final internal review comments onto the submittal cover sheet, provide a  
6 final disposition of the submittal and update the review status of the submittal to "Complete..." (with or w/o  
7 comments) or "Rejected".
- 8 C. A completed Final Review status initiates the CPM to notify the GC and appropriate sub-contractor(s) that the  
9 review of the submittal has been completed.
- 10 D. Information will be transmitted electronically.

11 **END OF SECTION**

12

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**SECTION 01 41 00  
REGULATORY REQUIREMENTS**

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4 PART 1 – GENERAL ..... 1  
5 1.1. REQUIREMENT INCLUDED..... 1  
6 1.2. PROCEDURES..... 1  
7 1.3. NOTICES ..... 1  
8 1.4 PERMITS ..... 2  
9 PART 2 – PRODUCTS - THIS SECTION NOT USED ..... 2  
10 PART 3 – EXECUTION - THIS SECTION NOT USED ..... 2  
11

**PART 1 – GENERAL**

**1.1. REQUIREMENT INCLUDED**

Unless otherwise specifically directed by Contractor each Subcontractor and each Sub-subcontractor shall comply with provisions of this Section as required for proper execution and completion of their Work or portions thereof

**1.2. PROCEDURES**

Comply with and give notices required by applicable laws, statutes, ordinances, codes, rules, and regulations, and lawful orders of public authorities having jurisdiction applicable to performance of the Work. Comply with and give notices required by Owner’s and Contractor’s insurance companies, local utilities and labor regulations relating to the performance of the Work, the protection of adjacent property, and the maintenance of passage ways, guard fences and other protective facilities.

The Contractor shall acquire all permits, licenses, and approvals necessary for the execution of this Contract and performance of the Work and provide evidence of such applicable permits, licenses, and approvals at the Pre-Construction Meeting or before commencement of the Work.

Where Contract Documents require abatement of asbestos containing materials, prior written Notice to the State of Wisconsin, Department of Natural Resources is required. The Contractor shall provide evidence of such Notice prior to commencement of the Work.

Procure all certificates of inspection, use, and occupancy, and all permits and licenses, pay all charges and fees and give all notices necessary and incidental to the due and lawful prosecution of the Work. Certificates of inspection, use and occupancy shall be delivered to the Owner upon completion of the Work in sufficient time for occupation of the Project in accordance with the approved schedule for the Work. The costs of such procurement, payment and delivery shall be included within the Base Bid.

Exercise precaution at all times for the protection of persons (including employees) and property. Observe the safety provisions of applicable laws, building and construction codes. Refer to the Manual of Accident Prevention in Construction, published by the Associated General Contractors of America.

It is not Contractor’s responsibility to ascertain that the Contract Documents are in accordance with applicable laws, statutes, ordinances, codes, and rules and regulations. However, if Contractor observes that portions of the Contract Documents are at variance therewith, Contractor shall promptly notify A/E and Owner in writing, and necessary changes shall be accomplished by appropriate Modification.

If Contractor performs Work knowing it to be contrary to applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities having jurisdiction, the Contractor shall assume full responsibility for such Work and shall bear the costs attributable to correction.

Refer to the Sections of the Work for referenced codes, standards, tests, etc., applicable to the Work.

**1.3. NOTICES**

Concealed or Unknown Conditions:

If the Contractor encounters conditions at the site are (1) subsurface or otherwise concealed physical conditions that differ materially from those indicated in the Contract Documents or (2) unknown physical conditions of an unusual

1 nature, that differ materially from those ordinarily found to exist and generally recognized as inherent in construction  
2 activities of the character provided for in the Contract Documents, the Contractor shall promptly provide notice to the  
3 Owner and the Engineer before conditions are disturbed and in no event later than 21 days after first observance of the  
4 conditions. The Engineer will promptly investigate such conditions and, if the Engineer determines that they differ  
5 materially and cause an increase or decrease in the Contractor's cost of, or time required for, performance of any of the  
6 Work, will recommend and equitable adjustment in the Contract Sum or Contract Time, or both. If the Engineer  
7 determines that the conditions at the site are not materially different from those indicated in the Contract Documents  
8 and that no change in the terms of the Contract is justified, the Engineer shall promptly notify the Owner and Contractor  
9 in writing, stating the reasons.

10  
11 If, in the course of the Work, the Contractor encounters human remains or recognizes the existence of burial markers,  
12 archaeological sites, or wetlands not indicated in the Contract Documents, the Contractor shall immediately suspend  
13 any operations that would affect them and shall notify the Owner and Engineer. Upon receipt of such notice, the Owner  
14 shall promptly take any action necessary to obtain governmental authorization required to resume operations. The  
15 Contractor shall continue to suspend operations until otherwise instructed by the Owner but shall continue with all  
16 other operations that do not affect those remains or features.

17  
18 **1.4 PERMITS**

19 Permits, Fees, Licenses, and Inspections: Unless otherwise provided in the Contract Documents, Contractor shall secure  
20 and pay for the building permit as well as for other permits, fees, licenses, inspections and approvals by government and  
21 utility agencies, necessary for proper execution and completion of the Work that are customarily secured after  
22 execution of the Contract and legally required at the time bids are received or negotiations concluded.

23  
24 Owner will obtain plan approvals and pay all fees required by the Wisconsin Department of Safety and Professional  
25 Services.

26  
27 Contractor shall obtain all permits and pay all fees required by local utilities for permanent electric and gas service.

28  
29 Contractor shall obtain copies of all required permits and certificates of inspection applicable to the work.

30  
31 Contractor shall furnish A/E and Owner with copy of all required permits and certificates.

32  
33 **PART 2 – PRODUCTS - THIS SECTION NOT USED**

34  
35 **PART 3 – EXECUTION - THIS SECTION NOT USED**

36  
37  
38 **END OF SECTION**  
39

**SECTION 01 45 16**  
**FIELD QUALITY CONTROL PROCEDURES**

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18 **PART 1 – GENERAL**

19  
20 **1.1. SUMMARY**

- 21 A. The City of Madison has developed a multi-faceted Quality Management Program that begins with contract  
22 signing and runs through contract closeout to ensure the best quality materials, workmanship, and product are  
23 delivered for the contracted Work.  
24 2. The Quality Management Observation (QMO) is an ongoing observation of the construction process as it  
25 progresses. The City of Madison does not use a “Punch List” or “Corrections List” as it is typically known  
26 throughout the construction industry. The QMO process acts as an “in progress punch list”.  
27 a. By using the QMO process the City of Madison’s goal is to have a zero item punch list prior to the  
28 90% progress payment and owner occupancy.  
29 B. All contractors shall be required to review the specifications identified in Section 1.2 below, and other related  
30 specifications identified therein to become familiar with the terminology and expectations of this City of  
31 Madison Public Works contract.  
32 C. It is the intent of this specification to outline the requirements, expectations, and responsibilities of the General  
33 Contractor (GC), Project Engineer, and other representatives of the Owner for items of Quality Assurance and  
34 Quality Control.  
35 1. This specification is not intended to conflict other specifications requiring testing and inspecting services.  
36 2. This specification does not relieve the GC from any requirements associated with regulatory inspections  
37 performed by the City of Madison Building Inspection Unit, or inspectors from other agencies as required  
38 by code.  
39 3. Any testing performed by an Owner’s Representative does not relieve the GC from performing any  
40 testing that may required by the construction documents.  
41

42 **1.2. RELATED SPECIFICATION SECTIONS**

- 43 A. Section 01 26 13 Request for Information (RFI)  
44 B. Section 01 29 76 Progress Payment Procedures  
45 C. Section 01 31 13 Project Coordination  
46 D. Section 01 77 00 Closeout Procedures  
47

48 **1.3. PERFORMANCE REQUIREMENTS**

- 49 A. All contractors shall be responsible for a proper quality assurance/quality control (QA/QC) program throughout  
50 the execution of the Work defined within the construction documents, including all recognized construction  
51 industry standards and all applicable regulatory codes.  
52 B. The GC shall be responsible for all of the following:  
53 1. Monitor the quality of all workmanship, supplies, materials, and products being installed by all  
54 contractors and installers to ensure they meet or exceed the minimum requirements set forth by the  
55 construction documents.  
56 2. Submit a Request for Information (RFI) whenever manufacturers’ instructions or referenced standards  
57 conflict with the construction documents before proceeding with the Work.

- 1                   3.     Ensure that Work requiring special certifications or licensing is being performed by is being performed  
2                   and supervised by personnel that meet the appropriate requirements.  
3                   a.     Ensure that all certificates and licenses are current throughout the execution of the project.  
4         C.     The City of Madison and its representatives shall perform quality assurance and quality control activities  
5                   throughout the execution of this project. This in no way relieves the GC of maintaining an acceptable QA/QC  
6                   program.  
7

8         **1.4.    QUALITY ASSURANCE**

- 9         A.     The GC shall be responsible for the following:  
10               1.     All materials, equipment, and products shall be new, clean, undamaged, and meet the performance  
11                   specifications defined within the construction documents including favorably reviewed submittals.  
12                   a.     Any material, equipment, or product that does not meet the requirements of the construction  
13                   documents shall be removed and replaced, including any adjacent and related work, at the GCs  
14                   expense.  
15               2.     All Work shall be performed by persons properly trained and/or qualified to produce workmanship of the  
16                   quality specified in the construction documents.  
17               3.     Providing access to updated as-builts, addenda, submittals, bulletins and other related construction  
18                   documents at the project site.  
19         B.     The City of Madison and its representatives may be responsible for any of the following:  
20               1.     Attend pre-installation meetings  
21               2.     Attend construction progress meetings  
22               3.     Review all submittals  
23               4.     Conduct field visits for QA/QC purposes, provide feedback to the GC and sub-contractors using Quality  
24                   Management Observation (QMO) reports.  
25               5.     Review delivered equipment  
26               6.     Witness equipment installations, startups, testing as specified in other specifications  
27

28         **1.5.    QUALITY MANAGEMENT OBSERVATION REPORT**

- 29         A.     The Quality Management Observation report or QMO is used as a QA/QC tool by those entities responsible for  
30                   QA/QC activities, including but not limited to, the GC, CoM, PE, Cx agent, etc.  
31         B.     QMOs are designed to be an early observation of non-conforming construction work before it becomes buried  
32                   by follow on work. As such it is most often used as an "in progress punch list".  
33         C.     QMO reports and tracking will be distributed electronically. The distribution list will be established by the GC and  
34                   CPM.  
35

36         **PART 2 – PRODUCTS - THIS SECTION NOT USED**

37  
38         **PART 3 - EXECUTION**

39  
40         **3.1.    QUALITY MANAGEMENT RESPONSIBILITIES**

- 41         A.     While making routine progress visits to the construction project the GC, CPM, and PE, and applicable others shall  
42                   observe the details of the construction and installations to ensure that the intent of the construction documents  
43                   is being followed.  
44         B.     If during the progress visit there is a determination of contract non-conformance a QMO report shall be initiated  
45                   to begin the documentation process.  
46               1.     The GC field superintendent shall be informed immediately of any issue that may cause harm, damage to  
47                   finished work, or be buried prior to properly filing a QMO report.  
48         C.     The following information will be included in a QMO report:  
49               1.     The date and time of the field visit  
50               2.     References to construction documents if any (examples; specification, drawing page, details, approved  
51                   submittals, RFI, CB, etc)  
52               3.     Short title for the observation being made  
53               4.     Detailed description of the observation being made  
54               5.     Assignment of categories (Sitework, Structure, Enclosure, Interior, etc) from the given list that may apply  
55                   to the observation being reported.  
56               6.     Assignment of responsible contractor(s) that may need to be aware of the observation.  
57               7.     Any attachments that may help provide reference to the observation.  
58



- 1 **3.2. RESPONDING TO A QMO**  
2 A. All contractors receiving email notification of a QMO Observation shall review the details of the observation.  
3 B. The GC shall be responsible for determining the course of action required to remedy the non-conforming issue  
4 and shall coordinate and direct the contractor(s) responsible for any work related to the observation.  
5 C. All contractors assigned to remedy the observation by the GC shall provide follow-up responses on the QMO  
6 report as follows:  
7 1. In the "Follow-Up Response" area enter a description of your follow-up response in the box provided.  
8 2. Add attachments (pictures) if needed to show the work has been completed.  
9
- 10 **3.3. GENERAL CONTRACTORS FOLLOW-UP**  
11 A. The GC shall inspect the work to ensure that all assigned contractors have remedied the observation to the  
12 intent of the construction documents.  
13 B. The GC shall respond with any additional comments in his/her response box.  
14
- 15 **3.4. QMO CLOSEOUT PROCEDURE**  
16 A. The person who initiated the QMO shall review the remedied work and if properly corrected shall close and date  
17 the QMO form.  
18
- 19 **3.5. CONSTRUCTION CLOSEOUT**  
20 A. The GC shall note that successful close out QMOs are required for construction closeout as follows:  
21 1. Certain progress payments as identified in Specification 01 29 76 are contingent QMO reports being properly  
22 closed out.  
23 2. Specification 01 77 00 defines all construction closeout requirements.  
24

25  
26  
27 **END OF SECTION**  
28

**SECTION 01 50 00**  
**TEMPORARY FACILITIES AND CONTROLS**

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23

**PART 1 – GENERAL**

**1.1. SUMMARY**

- A. This Section includes general procedural requirements for temporary facilities and controls including, but not limited to the following:
1. Temporary Utilities
  2. Barriers
  3. Fencing
  4. Exterior Enclosures
  5. Security
  6. Vehicular Access and Parking
  7. Waste Removal
  8. Project Identification

**1.2. RELATED SPECIFICATION SECTIONS**

- A. Section 01 31 19 Progress Meetings  
B. Section 01 74 19 Construction Waste Management and Disposal

**1.3. QUALITY ASSURANCE**

- A. Regulations: Comply with industry standards and applicable laws and regulations if authorities having jurisdiction, including but not limited to:
1. Building Code requirements
  2. Health and safety regulations
  3. Utility company regulations
  4. Police, Fire Department and Rescue Squad rules
  5. Environmental protection regulations
  6. Joint Commission - Hospital Accreditation Standards
- B. Standards: Comply with NFPA 241 "Standard for Safeguarding Construction, Alterations, and Demolition Operations," ANSI A10 Series standards for "Safety Requirements for Construction and Demolition," and NECA Electrical Design Library "Temporary Electrical Facilities".
- C. Electrical Service: Comply with NEMA, NECA, and UL standards and regulations for temporary electric service. Install service in compliance with NFPA 70 "National Electric Code".

**1.4. TEMPORARY UTILITIES**

- A. Owner will provide the following:

- 1                   1.     Electrical power and metering, consisting of existing facilities.  
2                   2.     Water supply, consisting of existing facilities.  
3            B.     General:  
4                   1.     Existing facilities may be used.  
5                   2.     New permanent facilities may be used.  
6            C.     Water Service: water is available from existing building services.  
7                   1.     Use trigger-operated nozzles for water hoses, to avoid waste of water.  
8            D.     Temporary Electric Power Service: Electrical Contractor shall extend temporary power from existing building  
9                   services.  
10  
11   **1.5.   BARRIERS**  
12            A.     Provide barriers to prevent unauthorized entry to construction areas, to prevent access to areas that could be  
13                   hazardous to workers or the public and to protect existing facilities and adjacent properties from damage from  
14                   construction operations and demolition.  
15  
16   **1.6.   FENCING**  
17            A.     Construction: Contractors option.  
18  
19   **1.7.   EXTERIOR ENCLOSURES**  
20            A.     Provide temporary weather tight closure of exterior openings to accommodate acceptable working conditions  
21                   and protection for Products, to allow for temporary heating and maintenance of required ambient temperatures  
22                   identified in individual specification sections, and to prevent entry of unauthorized persons. Provide access doors  
23                   with self-closing hardware and locks.  
24  
25   **1.8.   SECURITY**  
26            A.     Provide security and facilities to protect Work, existing facilities, and Owner's operations from unauthorized  
27                   entry, vandalism, or theft.  
28  
29   **1.9.   VEHICULAR ACCESS AND PARKING**  
30            A.     Comply with regulations relating to use of streets and sidewalks, access to emergency facilities, and access for  
31                   emergency vehicles.  
32            B.     Coordinate access and haul routes with governing authorities and Owner.  
33            C.     Provide and maintain access to fire hydrants, free of obstructions.  
34  
35   **1.10. WASTE REMOVAL**  
36            A.     See Section 01 74 19 - Waste Management, for additional requirements.  
37            B.     Provide waste removal facilities and services as required to maintain the site in clean and orderly condition.  
38            C.     Provide containers with lids. Remove trash from site periodically.  
39            D.     If materials to be recycled or re-used on the project must be stored on-site, provide suitable non-combustible  
40                   containers; locate containers holding flammable material outside the structure unless otherwise approved by the  
41                   authorities having jurisdiction.  
42            E.     Open free-fall chutes are not permitted. Terminate closed chutes into appropriate containers with lids.  
43  
44   ~~**1.11. PROJECT IDENTIFICATION**~~  
45            ~~A.     Provide project identification sign of design and construction indicated in Section 01 58 13.~~  
46            ~~B.     Erect on site at location determined by Owner.~~  
47            ~~C.     No other signs are allowed without Owner permission except those required by law.~~  
48

49   **PART 2 - PRODUCTS**

50  
51   **2.1.   TEMPORARY PARTITIONS**

- 52            A.     Provide dustproof partitions to limit dust and dirt migration and to separate occupied areas from fumes and  
53                   noise.  
54                   1.     Non-fire rated partitions, standard  
55                   a.     Wood stud framing, 6-mil polyethylene

1  
2 **2.2. EQUIPMENT**

- 3 A. Temporary Lifts and Hoists: Contractors requiring temporary lifts and hoists shall provide facilities for hoisting  
4 materials and employees.  
5 B. Electrical Outlets: Electrical Contractor shall provide properly configured NEMA polarized outlets to prevent  
6 insertion of 110-120 volt plugs into higher voltage outlets. Provide receptacle outlets equipped with ground-fault  
7 circuit interrupters, reset button and pilot light, for connection of power tools and equipment.  
8 C. Electrical Power Cords: Contractors requiring power cords shall provide grounded extension cords; use "hard-  
9 service" cords where exposed to abrasion and traffic. Provide waterproof connectors to connect separate  
10 lengths of electric cords, if single lengths will not reach areas where construction activities are in progress. Do  
11 not exceed safe length-voltage ratio.  
12 D. Lamps and Light Fixtures: Electrical Contractor shall provide general service incandescent lamps of wattage  
13 required for adequate illumination. Provide guard cages or tempered glass enclosures, where exposed to  
14 breakage. Provide exterior fixtures where exposed to moisture.  
15 E. Heating Units: General Contractor shall provide temporary heating units that have been tested and labeled by  
16 UL, FM or another recognized trade association related to the type of fuel being consumed.  
17 F. First Aid Supplies: General Contractor shall provide first aid supplies complying with governing regulations.  
18 G. Fire Extinguishers: General Contractor shall provide hand-carried, portable UL-rated, fire extinguishers of NFPA  
19 recommended classes for the exposures, extinguishing agent and size required by location and class of fire  
20 exposure.  
21

22 **PART 3 - EXECUTION**

23  
24 **3.1. TEMPORARY FIRE PROTECTION**

- 25 A. Until fire protection needs are supplied by permanent facilities, General Contractor shall install and maintain  
26 temporary fire protection facilities of the types needed to protect against reasonably predictable and  
27 controllable fire losses.  
28 B. Comply with NFPA 10 "Standard for Portable Fire Extinguishers," and NFPA 241 "Standard for Safeguarding  
29 Construction, Alterations and Demolition Operations".  
30 C. Locate fire extinguishers where convenient and effective for their intended purpose.  
31 D. Store combustible materials in containers in fire-safe locations.  
32 E. Maintain unobstructed access to fire extinguishers, fire hydrants, temporary fire protection facilities, stairways  
33 and other access routes for fighting fires.  
34 F. Prohibit smoking on the premises.  
35 G. Supervise welding operations, combustion-type temporary heating units, and similar sources of fire ignition  
36 according to requirements of authorities having jurisdiction.  
37 H. Develop and supervise an overall fire-prevention and -protection program for personnel at Project site  
38 I. Review needs with local fire department and establish procedures to be followed. Instruct personnel in methods  
39 and procedures. Post warnings and information.  
40

41 **3.2. COLLECTION AND DISPOSAL OF WASTE**

- 42 A. Collect waste from construction areas and elsewhere daily  
43 B. Comply with requirements of NFPA 241 for removal of combustible waste material and debris. Enforce  
44 requirements strictly.  
45 C. Do not hold materials more than 7 days during normal weather or 3 days when the temperature is expected to  
46 rise above 80 deg F.  
47 D. Handle hazardous, dangerous, or unsanitary waste materials separately from other waste by containerizing  
48 properly. Dispose of material in a lawful manner.  
49

50 **3.3. ENVIRONMENTAL PROTECTION**

- 51 A. Provide protection, operate temporary facilities and conduct construction in ways and by methods that comply  
52 with environmental regulations, and minimize the possibility that air, waterways and subsoil might be  
53 contaminated or polluted, or that other undesirable effects might result.  
54 B. Avoid use of tools and equipment which produce harmful noise.  
55 C. Restrict use of noise making tools and equipment to hours that will minimize complaints from persons or firms  
56 near the site.  
57

58 **END OF SECTION**

**SECTION 01 60 00  
PRODUCT REQUIREMENTS**

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18

**PART 1 – GENERAL**

**1.1. SUMMARY**

- 22 A. The purpose of this specification is to provide general guidelines and responsibilities related to the receiving,  
23 handling, and storage of all materials and products from arrival on the job site through installation.  
24 1. Immediate inspection of delivered goods means a timely replacement if damaged.  
25 2. Proper storage helps prevent damage and loss by weather, vandalism, theft, and job site accidents.  
26 3. Proper storage helps with job site performance and safety.  
27 4. Proper handling helps prevent damage and job site accidents.  
28 B. Each Contractor shall be directly responsible for the receiving, handling, and storage of all materials and  
29 products associated with the Work of their Division or Trade.  
30 C. Each Contractor responsible for Work associated with Owner provided materials or products shall be responsible  
31 for the receiving, handling and storage of the material/product as outlined in Section 3.8 below..  
32

**1.2. RELATED SPECIFICATIONS**

- 34 A. Parts of this specification will reference articles within “The City of Madison Standard Specifications for Public  
35 Works Construction”.  
36 1. Use the following link to access the Standard Specifications web page:  
37 <http://www.cityofmadison.com/business/pw/specs.cfm>  
38 a. Click on the “Part” chapter identified in the specification text. For example if the specification  
39 says “Refer to City of Madison Standard Specification 210.2” click the link for Part II, the Part II  
40 PDF will open.  
41 b. Scroll through the index of Part II for specification 210.2 and click the text link which will take you  
42 to the referenced text.  
43 c. City Standard Detail Drawings (SDD) may be located from the index in Part VIII.  
44 B. Section 01 74 13 Progress Cleaning  
45 C. Section 01 76 00 Protecting Installed Construction  
46 D. Other Divisions and Specifications that may address more specifically the requirements for the storage and  
47 handling of materials and products associated Work of other Divisions or Trades.  
48

**1.3. QUALITY ASSURANCE**

- 50 A. The GC shall be responsible for ensuring that these minimum storage and handling requirements are met by all  
51 contractors on the project site including but not limited to the following:  
52 1. Receiving deliveries of materials, products, and equipment.  
53 a. Inspect all deliveries upon arrival for damage, completeness, and compliance with the  
54 construction documents.  
55 i. Deliveries shall remain in original packaging or crates, shipping manifest shall be kept with  
56 the delivery and the packaging shall have visible identification of the items within the  
57 packaging.

- 1                   b.     Immediately report any damaged products or equipment to the GC, begin arrangements for  
2                   immediate replacement.
- 3                   c.     Materials or equipment that have been damaged, are incomplete, or do not comply with the  
4                   construction documents shall not be permitted to be installed.
- 5                   2.     All materials and products shall be stored within the designated limits of the project site. Only store the  
6                   amount of material necessary for upcoming operations so as not to interfere with other construction  
7                   activities and access to Work by the Owner and Engineer. Any offsite storage shall be at the expense of  
8                   the contractor storing the material or product. All offsite storage requirements shall comply with this  
9                   specification. All offsite storage of materials is subject to Owner Representative Quality Management  
10                   review at any time.
- 11                   3.     Large storage containers may be used but shall be weather tight, securable, placed on concrete blocks,  
12                   timbers, or jack stands and shall be level.
- 13                   4.     When lifting equipment is required the equipment rating shall be greater than the loading requirements  
14                   of the item being lifted. In addition all of the following shall apply as necessary:
- 15                   a.     Only designated and/or designed lift points shall be used.
- 16                   b.     Large items shall have tag lines and handlers at all times during lifting operations.
- 17                   c.     Lift at multiple points as needed to prevent bending.
- 18                   5.     Materials and products stored inside of the structure shall comply with all of the following:
- 19                   a.     Storage shall not be allowed to impede the flow of work in progress.
- 20                   b.     Storage shall not be allowed to hide completed work from review and inspections.
- 21                   c.     Storage shall not exceed the design loads of the structural components it is being stored upon.
- 22                   6.     All materials and products shall be stored according the manufacturers minimum recommended  
23                   requirements. All of the following shall be considered before storing any product or material:
- 24                   a.     Dust and dirt
- 25                   b.     Moisture and humidity, including rain and snow
- 26                   c.     Excessive temperatures, direct sun, etc
- 27                   d.     Product or material weight and size
- 28                   e.     Potential for breakage
- 29                   f.     Product incompatibility with other products such as corrosiveness, chemical reactions,  
30                   flammability, etc.
- 31                   g.     Product or material value and replacement cost
- 32                   7.     The Contractor shall be responsible for providing fully functional tarps or plastic wrap, to protect  
33                   materials and products from the weather. All coverings shall be free of large holes and tears, and shall be  
34                   tied, strapped, or weighted down to resist blowing.
- 35                   8.     The Contractor shall be responsible for any temporary heating, cooling, or other utility requirement that  
36                   may be associated with the storage of a material or product.
- 37                   9.     The Contractor shall be responsible for securing materials and products of value such as copper, A/V  
38                   equipment, etc. Such items shall be stored in securable shipping containers, job trailers or other such  
39                   storage devices. Container shall be kept secured when not in use.
- 40                   B.     The GC shall inspect the job site daily to ensure that all products and materials stay weather tight and are  
41                   secured against vandalism or theft as required by this specification.
- 42                   C.     The Owners Representative may at any time request improvements regarding storage of any material or product  
43                   being provided under these construction documents.
- 44

45 **PART 2 – PRODUCTS – THIS SECTION NOT USED**

46

47 **PART 3 - EXECUTION**

48

49 **3.1. GENERAL CONTRACTOR REQUIREMENTS**

- 50                   A.     Designate material storage and handling areas as needed including all of the following:
- 51                   1.     Designate specific areas of the site for delivery and storage of materials to be used during the execution  
52                   of the Work.
- 53                   2.     Designated areas shall not be located so as to interfere with the installation of any Work including Work  
54                   by others such as the installation of utilities or the maintenance of existing utilities. This shall include not  
55                   storing items in active utility easements as designated by the site plan.
- 56                   B.     Arrange for openings in the building as needed to allow delivery and installation of large items. Openings shall  
57                   be appropriately sized to include the use of booms, slings, and other such lifting devices that may be larger than  
58                   the item being installed.

- 1                   1.       When openings are required in completed Work (new or existing) the GC shall be responsible for  
2                   providing an appropriate opening and for restoring the opening to the original or better condition upon  
3                   completion. Restoration shall be weather tight and complete.
- 4           C.       Repeated moving and handling of items being stored shall not be allowed. The GC shall be responsible for any  
5           damage and replacement because of mishandling or excessive handling.
- 6
- 7   **3.2.   BULK MATERIAL**
- 8    A.       Bulk material such as sand, gravel, top soil and other types of fill shall be stored away from the construction area  
9       and shall be stock piled as follows:
- 10           1.       All bulk material shall be piled safely and efficiently in as small an area as practical. Only store the  
11           amount of material necessary for upcoming operations so as not to interfere with other construction  
12           activities and access to Work by the Owner and Engineer.
- 13           2.       All stock piles shall have silt fence/sock properly installed around the perimeter to prevent erosion and  
14           loss of material. Refer to City of Madison Standard Specification Section 210.1(f) and other related  
15           specification or details.
- 16           3.       Fine grained material shall be protected with tarps to prevent blowing. Tarps shall be weighted or staked  
17           to stay in place.
- 18    B.       Bulk material such as brick, concrete block, stone, and other palletized materials shall be stored on original  
19       shipping pallets until ready for use.
- 20
- 21   **3.3.   DRY PACKAGED MATERIAL**
- 22    A.       Dry packaged material such as cement, mortar, etc shall be stored on pallets, on slightly elevated ground or clear  
23       stone pad to keep water away from the base of the material being stored. Protect from moisture.
- 24
- 25   **3.4.   STRUCTURAL AND FRAMING MATERIAL**
- 26    A.       All structural and framing material shall be stored in an organized manner arranged by type, size and dimension.  
27       Materials shall be stored on pallets or timbers as necessary and shall not be allowed to lie directly on the ground.
- 28    B.       Long and heavy items shall be supported at several points to prevent bending and warping.
- 29
- 30   **3.5.   EQUIPMENT**
- 31    A.       Equipment delivered to the site shall be stored away from all construction activities until the item can either be  
32       moved inside or properly installed.
- 33    B.       Equipment shall be stored on slightly elevated ground or clear stone pad to keep water away from the base of  
34       the equipment.
- 35
- 36   **3.6.   FINISH PRODUCTS**
- 37    A.       Finish products such as flooring, tile, counters, lockers, toilets, partitions, lighting, and other similar items should  
38       not be delivered and stored until the structure has been enclosed, is weather tight, temperature controlled and  
39       the contractor is ready for such items to be installed.
- 40           1.       Storage of finished products outside for any length of time shall not be allowed.
- 41    B.       Products that cannot be stored inside the structure shall be stored in secured containers or job trailers until such  
42       time as they are ready to be installed.
- 43    C.       Products with a high potential for breakage such as glass, mirrors, tiles, toilet fixtures, etc. shall be stored with  
44       additional protection as necessary such as but not limited to the following:
- 45           1.       Store in original shipping containers until ready for installation.
- 46           2.       Do not store in high traffic areas.
- 47           3.       Shield with other materials such as cardboard, plywood, or similar products.
- 48
- 49   **3.7.   DUCTWORK, PIPING, AND CONDUIT**
- 50    A.       All piping and conduit shall be stored horizontally unless otherwise specified by the manufacturer or Division and  
51       Trade Specifications.
- 52           1.       Do not store directly on grade.
- 53           2.       Cover metal pipes and tubes to prevent rust and corrosion, allow ventilation to prevent condensation.
- 54           3.       Whenever possible use pipe stands for storing pipe and conduit to prevent tripping and rolling hazards.
- 55    B.       All ductwork shall be stored horizontally or vertically as necessary unless otherwise specified by the  
56       manufacturer or Division and Trade Specifications.
- 57           1.       During storage, both ends of each duct shall be protected with plastic sheathing to prevent dust and dirt  
58           from getting inside the duct. Sheathing shall be sufficiently taped to the duct.

- 2. After installation, free/open ends shall remain protected with taped plastic sheathing and or temporary filters as specified by division or Trade specifications.

**3.8. OWNER PROVIDED, CONTRACTOR INSTALLED EQUIPMENT**

- A. Section 3.8.A. shall apply to all equipment being provided to any contractor directly from the Owner for installation under the contract.
  - 1. The Owner or Owners Representative shall do the following:
    - a. Inspect all deliveries upon receipt and notify manufacturer of any issues directly.
    - b. Review the received shipment with the contractor.
      - i. Only provide products or materials to the contractor that were not damaged through shipping or handling.
      - ii. Confirm missing products or materials and anticipated delivery schedule if known.
  - 2. The Contractor responsible for the installation of Work associated with Owner provided materials or products shall “take ownership” and provide safe and secure storage and handling as previously described within this specification.
    - i. The Contractor shall be liable for the repair or replacement of any material or product damaged after taking ownership of the product from receipt through final acceptance.
- B. Section 3.8.B. shall apply to all equipment being provided by the Owner but shipped directly to any sub-contractor or the project site for installation under the contract.
  - 1. The GC and/or Contractor responsible for the Work associated with the Owner provided materials or products shall do the following:
    - a. Inspect all deliveries upon receipt and notify the Owner or Owners Representative of any issues directly.
      - i. Owner or Owners Representative shall notify manufacturer of any issues directly.
    - b. Review the received shipment with the Owner or Owners Representative
      - i. Confirm missing products or materials and anticipated delivery schedule if known.
  - 2. The Contractor shall “take ownership” and provide safe and secure storage and handling as previously described within this specification.
    - i. The Contractor shall be liable for the repair or replacement of any material or product damaged after taking ownership of the product from receipt through final acceptance.

**END OF SECTION**



**SECTION 01 73 29  
CUTTING AND PATCHING**

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**PART 1 – GENERAL**

**1.1. SUMMARY**

- A. This Section includes general procedural requirements for cutting and patching including, but not limited to the following:
1. Examination
  2. Preparation
  3. Performance
  4. Cleanup and Restoration

**1.2. RELATED SPECIFICATION SECTIONS**

- A. Divisions 02 through 32 Sections for specific requirements and limitations applicable to cutting and patching individual parts of the Work.
- B. Division 07 Section "Penetration Fire Stopping" for patching fire-rated construction.

**1.3. DEFINITIONS**

- A. Cutting: Removal of in-place construction necessary to permit installation or performance of other Work.
- B. Patching: Fitting and repair work required to restore surfaces to original conditions after installation of other Work.
- C. Level Alpha

**1.4. QUALITY ASSURANCE**

- A. Structural Elements: Do not cut and patch structural elements in a manner that could change their load-carrying capacity or load-deflection ratio.
- B. Operational Elements: Do not cut and patch operating elements and related components in a manner that results in reducing their capacity to perform as intended or that may result in increased maintenance or decreased operational life or safety.
- C. Miscellaneous Elements: Do not cut and patch miscellaneous elements or related components in a manner that could change their load-carrying capacity that results in reducing their capacity to perform as intended, or that may result in increased maintenance or decreased operational life or safety. Some miscellaneous elements include the following:
1. Water, moisture, or vapor barriers
  2. Membranes and flashings
  3. Exterior curtain-wall construction
  4. Equipment supports
  5. Piping, ductwork, vessels, and equipment
  6. Noise and vibration control elements and systems
- D. Visual Requirements: Do not cut and patch construction in a manner that results in visual evidence of cutting and patching. Do not cut and patch construction exposed on the exterior or in occupied spaces in a manner that would, in Engineer's opinion, reduce the building's aesthetic qualities. Remove and replace construction that has been cut and patched in a visually unsatisfactory manner.

1 **1.5. WARRANTY**

- 2 A. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during cutting  
3 and patching operations, by methods and with materials so as not to void existing warranties.  
4 B. All cutting and patching work performed under this contract shall be warranted like new work as defined by the  
5 Specification governing the work.  
6

7 **PART 2 - MATERIALS**

8  
9 **2.1. GENERAL**

- 10 A. Comply with requirements specified within other sections of the Specifications.  
11 B. In-Place Materials: Use materials identical to existing in-place materials. For exposed surfaces use materials that  
12 visually match in-place adjacent surfaces to the fullest extent possible.  
13 1. If identical materials are unavailable or cannot be used, use materials that, when installed, will match the  
14 visual and functional performance of in-place materials.  
15

16 **PART 3 - EXECUTION**

17  
18 **3.1. EXAMINATION**

- 19 A. Examine surfaces to be cut and patched and conditions under which cutting and patching are to be performed.  
20 1. Compatibility: Before patching, verify compatibility with and suitability of substrates, including  
21 compatibility with in-place finishes or primers.  
22 2. Proceed with installation only after unsafe or unsatisfactory conditions have been corrected.  
23

24 **3.2. PREPARATION**

- 25 A. Temporary Support: Provide temporary support of Work to be cut.  
26 B. Protection: Protect in-place construction during cutting and patching to prevent damage. Provide protection  
27 from adverse weather conditions for portions of Project that might be exposed during cutting and patching  
28 operations. If the failure to protect, or the lack of protection, of in-place construction and/or existing conditions  
29 results in damage, the contractor shall be responsible for repair to previous condition.  
30 C. Adjoining Areas: Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.  
31 D. Existing Utility Services and Mechanical/Electrical Systems: Where existing services/systems are required to be  
32 removed, relocated, or abandoned, bypass such services/systems before cutting to eliminate interruption to  
33 occupied areas.  
34

35 **3.3. PERFORMANCE**

- 36 A. General: Employ skilled workers to perform cutting and patching. Proceed with cutting and patching at the  
37 earliest feasible time, and complete without delay.  
38 1. Cut in-place construction to provide for installation of other components or performance of other  
39 construction, and subsequently patch as required to restore surfaces to their original condition.  
40 B. Cutting: Cut in-place construction by sawing, drilling, breaking, chipping, grinding, and similar operations,  
41 including excavation, using methods least likely to damage elements retained or adjoining construction. If  
42 possible, review proposed procedures with original Installer; comply with original Installer's written  
43 recommendations.  
44 1. In general, use hand or small power tools designed for sawing and grinding, not hammering and  
45 chopping. Cut holes and slots as small as possible, neatly to size required, and with minimum disturbance  
46 of adjacent surfaces. Temporarily cover openings when not in use.  
47 2. Finished Surfaces: Cut or drill from the exposed or finished side into concealed surfaces.  
48 3. Concrete or Masonry: Cut using a cutting machine, such as an abrasive saw or a diamond-core drill.  
49 4. Excavating and Backfilling: Comply with requirements in applicable Division 31 Sections where required by  
50 cutting and patching operations.  
51 5. Mechanical and Electrical Services: Cut off pipe or conduit in walls or partitions to be removed. Cap,  
52 valve, or plug and seal remaining portion of pipe or conduit to prevent entrance of moisture or other  
53 foreign matter after cutting.  
54 6. Proceed with patching after construction operations requiring cutting are complete.  
55 C. Patching: Patch construction by filling, repairing, refinishing, closing up, and similar operations following  
56 performance of other Work. Patch with durable seams that are as invisible as possible. Provide materials and  
57 comply with installation requirements specified in other Sections.

1 D. Inspection: Where feasible, test and inspect patched areas after completion to demonstrate integrity of  
2 installation.  
3

4 **3.4. CLEANUP AND RESTORATION**

- 5 A. Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a  
6 manner that will eliminate evidence of patching and refinishing.
- 7 1. Clean piping, conduit, and similar features before applying paint or other finishing materials.
  - 8 2. Restore damaged pipe covering to its original condition.
  - 9 3. Floors and Walls: Where walls or partitions that are removed extend one finished area into another,  
10 patch and repair floor and wall surfaces in the new space. Provide an even surface of uniform finish,  
11 color, texture, and appearance. Remove in-place floor and wall coverings and replace with new  
12 materials, if necessary, to achieve uniform color and appearance.
  - 13 4. Where patching occurs in a painted surface, apply primer and intermediate paint coats over the patch  
14 and apply final paint coat over entire unbroken surface containing the patch. Provide additional coats  
15 until patch blends with adjacent surfaces.
  - 16 5. Ceilings: Patch, repair, or re-hang in-place ceilings as necessary to provide an even-plane surface of  
17 uniform appearance.
  - 18 6. Exterior Building Enclosure: Patch components in a manner that restores enclosure to a weather tight  
19 condition.
  - 20 7. Cleaning: Clean areas and spaces where cutting and patching are performed. Completely remove paint,  
21 mortar, oils, putty, and similar materials.
  - 22 8. Any smoke and fire caulking that has been disturbed must be replaced by the Contractor as required by  
23 code.  
24

25 **END OF SECTION**  
26  
27

**SECTION 01 74 19**  
**CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL**

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**PART 1 – GENERAL**

**1.1. SUMMARY**

- 17 A. This specification includes administrative and procedural requirements for the recycling, re-use, salvaging, and  
18 disposal of non-hazardous construction and demolition waste.  
19 B. The General Contractor (GC) shall be fully responsible for complying with all applicable ordinances and other  
20 such regulatory requirements during the execution of this contract.  
21

**1.2. RELATED SPECIFCAITONS**

- 23 A. 01 29 76 Progress Payment Procedures  
24 B. 01 33 23 Submittals  
25 C. 01 77 00 Closeout Procedures  
26 D. Other Divisions and Specifications that may address the proper disposal of construction or demolition waste as it  
27 pertains to work being conducted under that particular specification.  
28

**1.3. CITY ORDINANCES**

- 30 A. There are two (2) Madison General Ordinances (MGO) that the City of Madison has regarding construction and  
31 demolition waste.  
32 1. MGO 10.185, Recycling and Reuse of Construction and Demolition Debris, describes the requirements  
33 associated with this ordinance including definitions, documentation requirements, and penalties.  
34 2. MGO 28.185, Approval of Demolition (Razing, Wrecking) and Removal, describes the requirements  
35 associated with applying for and receiving a demolition permit.  
36 B. All City of Madison, Board of Public Works, contracts being conducted by City Engineering, Facility Management,  
37 for construction, remodeling, or demolition shall comply with the above ordinances regardless of project type or  
38 size.  
39  
40

**PART 2 – PRODUCTS – THIS SECTION NOT USED**

**PART 3 - EXECUTION**

**3.1. GENERAL GUIDELINES FOR ALL WASTES**

- 47 A. Recycle all paper and beverage containers used by workers, sub-contractors, suppliers and visitors to the project  
48 site.  
49 B. All revenues, savings, rebates, tax credits, and other such incentives received from recycling, reusing, or  
50 salvaging waste materials shall accrue to the GC unless specified otherwise in the contract documents.  
51 C. Separate recyclable, reusable, and salvageable waste from other waste materials, trash, and debris except where  
52 Waste Management Disposal Company allows comingled waste materials, see section 1.8.D above.  
53 1. Separate by type in appropriate containers or designated areas according to the approved waste  
54 management plan away from the construction area. Do not store within the drip lines of existing trees.  
55 2. Inspect containers and bins frequently for contamination and inappropriately sorted materials. Remove  
56 contaminated materials and resort as necessary.

- 1                    3.     Stockpile bulk materials such as sand, topsoil, stone, etc., on site away from the construction area and  
2                            without intermixing with other materials. Place, grade, and shape stockpiles to drain surface water, and  
3                            cover to prevent windblown dust. Do not store within the drip lines of existing trees.  
4                    4.     Whenever possible store items off the ground and/or protect them from the weather.  
5

6     **3.2.   GUIDELINES FOR RECYCLABLE, RE-USABLE, AND SALVAGEABLE WASTE**

- 7     A.     The following guidelines is not a complete or all inclusive list and shall be adjusted as needed by the methods  
8             and procedures identified in the Waste Management Plan.  
9     B.     Asphalt Paving: Break-up into transportable pieces or grind, transport to an authorized recycling facility.  
10    C.     Carpet and Pad: Separate carpet and pad scraps, containerize and transport to an authorized recycling facility.  
11    D.     Ceiling System Components: Suspended ceiling system components shall be sorted by material type as follows:  
12             1.     Broken, cut, or damaged tiles shall be containerized, transport to an authorized recycling facility.  
13             2.     Damaged, or cut tracks, trim and other metal grid system components shall be sorted with other metals  
14             of similar types, palletize, transport to an authorized recycling facility.  
15    E.     Clean Fill: When allowed by Division 31 Specifications; concrete, masonry, stone, asphalt pavement, sand and  
16             other such materials may be used as clean fill on this project site. The GC shall verify with the Project Engineer,  
17             Structural Engineer, or Civil Engineer as necessary prior to using any materials as clean fill. Materials shall be  
18             processed, placed, and compacted as specified. If not being re-used on site, transport to an authorized recycling  
19             facility.  
20    F.     Clean Wood Materials: Including but not limited framing cutoffs, wood sheathing or paneling materials,  
21             structural or engineered wood products, and pallets or crates. Clean Wood shall be free of paints, stains, oils,  
22             preservatives and other such contaminants.  
23             1.     Useable pieces shall be sorted by type and dimension, bundled and transported off site by the GC or  
24             returned to the supplier.  
25             2.     Non-useable pieces shall be palletized or containerized, transport to an authorized recycling facility.  
26             3.     Clean, uncontaminated sawdust and wood shavings shall be bagged, transport to an authorized recycling  
27             facility.  
28    G.     Concrete: Break-up into transportable pieces, remove all reinforcing and other metals, transport to an  
29             authorized recycling facility.  
30    H.     Glass Products: Shall be sorted by types, do not include light fixture lamps and bulbs. Products broken in  
31             shipment shall be returned to the supplier. Broken or cracked items still in frames shall be taped to prevent  
32             further breakage and injury to workers. Transport to an authorized recycling facility.  
33    I.     Gypsum Board: Stack large clean pieces on wooden pallets or container, store in a dry location, transport to an  
34             authorized recycling facility.  
35    J.     Light Fixture Lamps and Bulbs: Fluorescent tubes shall be containerized, transport to an authorized recycling  
36             facility.  
37    K.     Masonry and CMU: Remove all metal reinforcing, anchors, and ties, clean undamaged pieces and neatly stack on  
38             pallets, transport damaged pieces to an authorized recycling facility.  
39    L.     Metals: Sort metals by type as follows, this does not include piping:  
40             1.     Architectural metals including but not limited to siding, soffit, and roofing panels shall be sorted by  
41             material, palletize or bundle as needed and transport to an authorized recycling facility.  
42             2.     Structural steel, sort by size and type; palletize and transport to an authorized recycling facility.  
43             3.     Miscellaneous metals such as aluminum, brass, bronze, etc shall be sorted by type, containerized or  
44             palletized as necessary, transport to an authorized recycling facility.  
45    M.     Packaging and shipping materials  
46             1.     Cardboard boxes and containers: Breakdown all cardboard boxes and containers into flat sheets. Bundle  
47             and store in a dry location until transported for recycling.  
48             2.     Pallets:  
49                 a.     Whenever possible require deliveries using pallets to remove them from the project site.  
50                 b.     Neatly stack pallets in preparation for reusing them or providing them to other companies for  
51                 salvage or re-use.  
52                 c.     Break down pallets into component wood pieces that comply with the requirements for recycling  
53                 clean wood materials. Neatly stack or palletize pieces in preparation for transportation.  
54             3.     Crates: Break down crates into component wood pieces that comply with the requirements for recycling  
55             clean wood materials. Neatly stack or palletize pieces in preparation for transportation.  
56             4.     Polystyrene Packaging: Separate and bag materials.

- 1 N. Piping and conduit: Reduce all piping and conduit to straight lengths, sort and store by size, material and type.
- 2 Remove supports, hangers, valves, boxes, sprinkler heads, and other such components, sort and store by size,
- 3 material and type. Transport to authorized recycling facilities according to material types.
- 4 O. Roofing: Roofing materials shall be sorted and containerized by type, transport to authorized recycling facilities
- 5 according to material types.
- 6 P. Site-Clearing Waste: Sort all site waste by type.
- 7 1. Only stockpile soils types and quantities required for re-use on the project site. All remaining quantities
- 8 shall be transported off site to an authorized facility that receives such materials.
- 9 2. Brush, branches, and trees with no marketable re-use shall be transported to facilities for chipping into
- 10 mulch.
- 11 3. Trees with a marketable re-use shall be salvaged and transported to facilities that specialize in processing
- 12 trees for future use as wood products.
- 13

14 **3.3. GUIDELINES FOR DISPOSAL OF WASTES**

- 15 A. The following guidelines shall be adjusted as needed by the methods and procedures identified in the Waste
- 16 Management Plan.
- 17 B. Any waste that is contaminated, organic, or cannot be recycled, re-used, or salvaged shall be legally disposed of
- 18 in an authorized landfill or incinerator. Disposal methods shall follow all applicable regulatory requirements.
- 19 C. No waste material of any kind, except those types designated as clean fill in section 3.4 above, shall be allowed
- 20 to be buried on the project site at any time.
- 21 D. No burning of any kind of waste material shall be permitted on this project site at any time.
- 22 E. Paint and Stain: Paints, stains, and their containers shall be disposed of as follows:
- 23 1. Whenever possible containers should be thoroughly cleaned immediately after emptying and sorted with
- 24 as appropriate (metal or plastic) for recycling
- 25 2. Empty containers, regardless of type or base material, may be disposed of with lids off with general
- 26 garbage.
- 27 3. Latex paint may be placed with general garbage if properly solidified as follows:
- 28 a. Small amounts (an inch or less in can): Remove lids and allow paint to dry out in the can and
- 29 harden. Protect cans from rain and freezing.
- 30 b. Large amounts (more than one inch): Mix paint with equal amounts of cat litter, stir and allow to
- 31 completely dry. Alternate method: mix with commercial paint hardener.
- 32 4. Oil-based or combustible paints and stains, regardless of liquid or solid, shall be transported to an
- 33 approved facility that takes such items such as Dane County Clean Sweep Sites.
- 34 F. Treated Wood Materials: Treated wood materials including but not limited to wood that has been painted,
- 35 stained, or chemically treated shall not be recycled or incinerated.
- 36
- 37
- 38
- 39
- 40

**END OF SECTION**

**SECTION 01 76 00**  
**PROTECTING INSTALLED CONSTRUCTION**

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**PART 1 – GENERAL**

**1.1. SUMMARY**

- 25 A. The purpose of this specification is to provide clear responsibilities, guide lines, and requirements related to  
26 providing protection to already installed construction.  
27 B. Already installed construction shall include but not be limited to the following:  
28 1. Any existing site feature such as pavement, curbs, drainage features, utilities, landscaping features (trees,  
29 shrubbery, plantings, flagpoles, etc) and other such exterior items not associated with the building  
30 whether on or adjacent to the project site.  
31 2. Any existing structure on or adjacent to the project site.  
32 3. Any existing interior work that may be adjacent to the new work including all paths of ingress/egress to  
33 areas associated with accessing the Work.  
34 4. Any existing feature of any kind within the public right-of-way that may be on the project site property,  
35 adjacent to the project site or across the street from the project site.  
36 C. All contractors shall be familiar with the specifications of their Division of Work for specific requirements on  
37 protection of the Work.  
38 D. The requirements noted within this specification do not relieve any contractor of the responsibility for  
39 compliance with any code, statute, ordinance, or other such regulatory requirement having jurisdictional  
40 authority over these contract documents.

**1.2. QUALITY ASSURANCE**

- 43 A. It shall be the responsibility of every contractor and worker assigned to the project to be diligent in protecting all  
44 existing work, and newly installed construction.  
45 B. It shall be the General Contractors' (GC) responsibility under the contract to provide all reasonable protection  
46 methods, materials, or precautionary measures required to protect new or existing construction as described in  
47 within this specification to the project as a whole.  
48 1. The GC shall be responsible to ensure any damaged new or existing construction is repaired or replaced  
49 at no additional cost to the Contract.  
50 2. The GC at his/her discretion may direct other contractors to provide and maintain protection of  
51 completed work associated with their Division of Work. I.E.: The carpet installer may be required by the  
52 GC to provide carpet protection along traveled paths, ingress/egress, etc after installation.  
53 C. It shall be the responsibility of the GC to ensure that all materials being used to protect installed construction are  
54 compatible with, and/or adjacent to, the materials being protected. This shall include but not be limited to the  
55 material used as covering, tapes used to fasten protective materials, etc.

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**1.3. RELATED SPECIFICATIONS**

- A. Parts of this specification will reference articles within “The City of Madison Standard Specifications for Public Works Construction”.
  - 1. Use the following link to access the Standard Specifications web page:  
<http://www.cityofmadison.com/business/pw/specs.cfm>
    - a. Click on the “Part” chapter identified in the specification text. For example if the specification says “Refer to City of Madison Standard Specification 210.2” click the link for Part II, the Part II PDF will open.
    - b. Scroll through the index of Part II for specification 210.2 and click the text link which will take you to the referenced text.
    - c. City Standard Detail Drawings (SDD) may be located from the index in Part VIII.
- B. Section 01 60 00 Product Requirements
- C. Section 01 74 13 Progress Cleaning

**PART 2 - PRODUCTS**

**2.1. FENCING MATERIALS AND BARRICADES**

- A. Except where noted in other areas of the construction documents the responsible contractor may provide any of the following that sufficiently provide a sturdy physical barrier and/or visual barrier as necessary for the intended application.
  - 1. Standard orange construction barrels each with a standard rubber base ring and reflective tape
    - a. Provide flashing amber lights as needed to increase night time visibility
  - 2. Steel “T” style fence posts
  - 3. 4’0” high standard orange construction fence
  - 4. Traffic barricades
  - 5. Jersey barriers
  - 6. Other types of fencing or barricades typically used in the construction industry
- B. The contractor responsible for providing the fencing materials and barricades shall also be responsible for maintaining them. This shall include but not limited to fixing damaged fencing, standing up barrels that have been knocked over, realigning barrels, and ensuring flashing lights are fully operational at all times.
- C. The following fencing and barricade designations, and their use descriptions shall be used throughout this specification to provide uniformity in describing protection requirements.
  - 1. Type A, Jersey Barriers, to be used as permanent blocking devices to deny access to alternate project site entrances or exits.
  - 2. Type B, Traffic Barricades, to be used as temporary blocking devices to deny access to alternate project site entrances or exits.
  - 3. Type C, Construction Barrels without construction fencing shall be used for lane closures, temporary blocking devices to deny access and the protection of single locations (I.E. identify the location of an access structure) that do not require fencing.
  - 4. Type D, Construction Barrels with construction fencing where it becomes necessary to surround an object with a complete visual barricade and it is impractical or unacceptable to install fence posts. The surround shall be constructed in such a manner as to provide a buffer zone around and access to the item being protected.
  - 5. Type E, Steel “T” Fence Posts with construction fencing to surround an object with a complete visual barricade and it is practical to install fence posts. The surround shall be constructed in such a manner as to provide a buffer zone around and access to the item being protected.
  - 6. Type X, Other fencing or barricade types that may be designated and detailed within the construction documents shall use additional alpha numeric designations.

**2.2. EROSION CONTROL PROTECTION**

- A. Refer to City of Madison Standard Specification 210.2 for authorized materials associated with erosion control materials.

**2.3. INTERIOR FINISH PROTECTION MATERIALS**

- A. Except where noted in other areas of the construction documents or this specification the responsible contractor:
  - 1. Shall not provide the cheapest or least effective method as an effort to meet any protection requirement.



- 1                   2.     Shall provide materials of sufficient quality, and durability to provide adequate protection based on the
- 2                                 seasonal conditions and the anticipated duration at the time the protection will be needed.
- 3                   3.     Shall provide sufficient quantity of protection material to protect the construction as needed.
- 4         B.     Prior to installing protective measures the responsible contractor shall propose to the GC, Project Engineer (PE)
- 5                   and City Project Manager (CPM) the proposed plan for protection, materials to be used and samples as
- 6                   necessary.
- 7                   1.     The PE and CPM reserve the right to disapprove any proposed method and/or material and/or make
- 8                                 alternate proposals.
- 9

10     **PART 3 - EXECUTION**

11

12     **3.1. GENERAL EXECUTION REQUIREMENTS**

- 13         A.     The GC shall be responsible for ensuring all of the following procedures and requirements are implemented as
- 14                   needed for the duration of the Work performed under this contract.
- 15         B.     The GC shall also be responsible for the following:
- 16                 1.     Reporting any incident of damage to existing property, right-of-way, or utility to the CPM immediately
- 17                                 upon rendering the incident safe, and notifying emergency response teams, and emergency utility crews
- 18                                 as needed.
- 19                 2.     Conduct a site walk through prior to leaving at the end of each day to assess:
- 20                                 a.     Protection measures are properly in place, provide correction actions as necessary.
- 21                                 b.     Note damage to existing completed work and schedule repair/replacement as needed.
- 22                 3.     Ensure all contractors and workers are being diligent in protecting existing work, and newly installed
- 23                                 construction.
- 24

25     **3.2. PROTECT ADJACENT PROPERTIES**

- 26         A.     Whenever possible through the design process the City of Madison shall have previously provided notice to
- 27                   adjacent property owners that work will be occurring on or near their property. The City of Madison shall also
- 28                   have obtained any permanent or temporary easements that may be necessary to complete any Work on
- 29                   adjacent properties.
- 30         B.     It shall be the responsibility of the GC to do the following for all Work under this contract being performed on or
- 31                   adjacent to the property line:
- 32                 1.     Contact the adjacent property owner and provide him/her with information on the work to be done,
- 33                                 equipment to be used, and estimated duration of the work. Information to be updated and
- 34                                 communicated to property owner(s) as construction progresses and site conditions change.
- 35                                 a.     If any adjacent property is a rented or leased space the GC shall also make contact and provide
- 36                                 the same information to the tenants.
- 37                                 b.     Determine from the owner and/or tenants if there are any concerns for children, pets, special
- 38                                 plantings, or other concerns.
- 39                 2.     Discuss the following with all contractors performing work on or near the property line.
- 40                                 a.     Work to be completed and timeline.
- 41                                 b.     Concerns of adjacent property owners/tenants from item 1 above.
- 42                                 c.     Which protective measures will be necessary to protect adjacent properties and address the
- 43                                 concerns of adjacent property owners/tenants.
- 44                 3.     Ensure all protective measures are placed and maintained during the execution of Work on or adjacent to
- 45                                 the property line. Interact with the adjacent property owners/tenants as needed.
- 46         C.     Any contractor doing work on or adjacent to the property line shall install and maintain any protective measure
- 47                   identified in the contract documents, this specification, or as directed by the GC.
- 48         D.     The GC shall be responsible for restoring any damage to structure and property located on or adjacent to the
- 49                   property line.
- 50                 1.     Restoration shall include but not be limited to repair or replacement using like materials and finishes to
- 51                                 its original condition or better.
- 52                 2.     Restoration of landscaping materials shall include watering of any seed, sod, or other planting of any kind
- 53                                 for a reasonable period of time to encourage germination and root development.
- 54         E.     The GC shall keep the CPM informed directly to any issues pertaining to adjacent property owners and tenants.
- 55

56     **3.3. PROTECT LANDSCAPING FEATURES**

- 57         A.     Except where specifically stated in other areas of the construction documents the following minimal protection
- 58                   requirements shall apply under this section.

- 1 1. Whenever possible do not install new landscape features until exterior building construction has been
- 2 completed, equipment such as scaffolding and lifts are no longer needed and have been removed, and
- 3 heavy equipment operation is no longer required.
- 4 2. Whenever possible remove and temporarily store all existing landscape features such as benches, waste
- 5 receptacles, signage, and other such features that will be within the area of Work that can be removed.
- 6 3. Landscape features that cannot be removed such as flag poles, light poles, light bollards, etc. shall be
- 7 protected with Type D fencing for areas on pavement or Type E fencing for areas on soil.
- 8 4. Planting beds shall be protected using Type E fencing around the exposed perimeter of the planting bed
- 9 as needed.
- 10 5. The City of Madison Standard Specification 107.13 shall apply to all tree protection in and around the
- 11 project site at all times.
- 12

13 **3.4. PROTECT UTILITIES**

- 14 A. The contractor shall be responsible for notifying all utilities to determine emergency response procedures and
- 15 protection requirements prior to installing any construction protection.
- 16 1. This includes requesting utility marking through Diggers Hotline.
- 17 a. Call 811 or 1-800-242-8511 to request a public utility locate
- 18 b. For emergency locate call (262) 432-7910 or (877) 500-9592
- 19 2. Contact the Owner and CPM for any available private utility information on the property that may be
- 20 available prior to calling a private utility locating company.
- 21 B. Except where specifically stated in other areas of the construction documents the following minimal protection
- 22 requirements shall apply under this section.
- 23 1. Hydrants, lamp posts, electrical transformers, and other utility pedestals shall be protected with Type D
- 24 fencing for areas on pavement or Type E fencing for areas on soil. Fence posts shall be located so as to
- 25 not be directly over the utility main.
- 26 2. Storm sewer structures in pavement shall have proper inlet protection according to City of Madison
- 27 Standard Specification 210.1(g) and Type C Construction Barrels when necessary.
- 28 3. Storm sewer structures in turf and other landscaped areas shall have proper inlet protection according to
- 29 City of Madison Standard Specification 210.1(g) and Type E fencing for areas on soil.
- 30 4. Stormwater management features such as greenways, retention/detention ponds, bio-filtration ponds
- 31 and other such features shall be properly protected according to the appropriate erosion control
- 32 measure specified on the Erosion Control Plan. See multiple sections of City of Madison Standard
- 33 Specification 210.1
- 34 a. For the protection of hard to see items such as structures, castings, inlets, etc. in grassy areas
- 35 provide Type E fencing for areas on soil.
- 36 c. For the protection of storm water management features having special soils and plants such as
- 37 bio-filtration ponds provide Type E fencing for areas on soil.
- 38 5. Other structures and covers including but not limited to cleanouts, wiring hand holes, valve boxes, access
- 39 structures, grease trap structures, etc shall be protected as follows:
- 40 a. Provide Type E fencing for areas on soil.
- 41 b. When paving operations are complete provide a construction barrel or cone near structures as
- 42 necessary depending on required heavy construction traffic.
- 43

44 **3.5. PROTECT PUBLIC RIGHT OF WAY**

- 45 A. Except where specifically stated in other areas of the construction documents the following minimal protection
- 46 requirements shall apply under this section.
- 47 1. All public right-of-way (area from behind the sidewalk to the centerline of the street) shall remain open
- 48 and accessible except during periods of active work. At such times the public right of way shall be
- 49 properly closed and signed as referenced in City of Madison Standard Specification 107.9.
- 50 2. Bus stops and bus stop structures shall remain accessible at all times.
- 51 3. Traffic signage and traffic signals, traffic control boxes shall be protected with Type D fencing for areas on
- 52 pavement or Type E fencing for areas on soil.
- 53 a. Protection at traffic signage/signals shall not obstruct the viewing of the sign/signal for its
- 54 intended purpose at any time.
- 55 B. When additional protection for traffic control is required, the use of barricades, guardrails, lane closures and
- 56 other such procedures will be detailed within the construction documents.
- 57 C. When additional protection for overhead sidewalk cover is required the contract documents shall indicate the
- 58 specific location and structural requirements of the protective structure.

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**3.6. PROTECT STORED MATERIALS**

- A. All contractors shall refer to Specification 01 60 00 Product Requirements for all storage and protection requirements of building materials and products delivered to the site.

**3.7. PROTECT WORK - EXTERIOR**

- A. Provide all temporary services that may be required to protect the installed material from heat, cold, humidity, etc, while materials such as concrete, mortar, sealants, paints, etc, are drying and/or curing.
- B. Open trenches, pits, and other such excavations shall be properly covered, lined, or shored as needed during periods of inclement weather to prevent the caving of soils onto existing work in progress. Refer to the appropriate specifications and/or regulatory requirements governing this type of work as necessary.
- C. Provide adequate protection at all openings with heavy duty tarps, plastic sheathing, or wood framing and sheathing as needed to protect interior work in progress from inclement weather as needed.
- D. Protect exterior finishes of all kinds with heavy duty tarps or plastic sheathing as needed while landscaping is being installed through full germination of seeded areas or installation of filter fabric and mulches to keep dust, dirt, and mud off of finished exterior surfaces.
- E. Designate specific curb mounting points and provide wood blocking where small vehicles, skid loaders and other such equipment may need access to areas being landscaped.
- F. Provide plywood turning pads for skid loaders to turn on to prevent tire marking on new pavement.
- G. Do not permit the parking of vehicles with any kind of fluid leaks to park on new pavement.
- H. The contractor shall be responsible for cleaning, repairing, or replacing any completed work or work in progress under this specification as deemed necessary by the CPM without additional cost to the contract.

**3.8. PROTECT WORK - INTERIOR**

- A. The GC shall do all of the following:
  - 1. Provide all temporary services that may be required to protect the installed material from heat, cold, humidity, etc, while materials such as concrete, mortar, sealants, paints, etc, are drying and/or curing.
  - 2. Provide adequate visual and/or physical protection as needed to protect newly completed interior work such as paint, flooring material, sealants, grouts, etc that may be drying and/or curing.
  - 3. Provide adequate space and materials for cleaning boots, tool boxes, supplies, and other items coming into the project site once finish work has begun.
  - 4. Clean dirtied areas and repair/replace damaged areas immediately.
- B. The contractors responsible for interior work shall be responsible for protecting their work and finishes from dirt, mud, snow, spills, splatters, and physical damage after installation as follows:
  - 1. Protect vinyl composite, rubber composite, painted/stained concrete, and tiled flooring as follows:
    - a. Define foot traffic areas and protect with Ramboard Temporary Floor Protection products as a minimum basis of design or other protection product(s) compatible with installed flooring product if Ramboard is not compatible. Products to be used shall be new.
      - i. Tape all edges, seams, etc with a good quality tape that does not leave sticky residue. Do not allow any debris or other material between the installed flooring and the protection material.
      - ii. Repair tears immediately, replace worn areas with like material as necessary.
  - 2. Protect carpeted areas as follows:
    - a. Define foot traffic areas and protect with a minimum of 6mil, clear, polyethylene sheeting 3 feet wide. Products to be used shall be new.
      - i. Tape all edges, seams, etc with a good quality tape that does not leave sticky residue. Do not allow any debris or other material between the installed flooring and the protection material.
      - ii. Repair tears immediately, replace worn areas with like materials as necessary.
  - 3. Protect all finished walls in high traffic areas with Ramboard Temporary Wall protection products or approved equal.
    - i. Tape all edges, seams, etc with a good quality tape that does not leave sticky residue. Do not allow any debris or other material between the installed flooring and the protection material.
    - ii. Repair tears immediately, replace worn areas with like materials as necessary.
  - 3. Protect counter tops, cabinets, and other finished surfaces with large sheets of thick cardboard or Ramboard products. Do not allow toolboxes, finish materials, parts and other such items to be placed on finished materials.

- 1 C. All protection shall stay in place until the CPM, PE, and GC mutually deem the project is ready for Final Cleaning.  
2 The contractors responsible for protecting the work shall be responsible for removing the protection and  
3 removing any adhesive residue at that time. Contractors shall only use manufacturer authorized cleaning  
4 materials for removing adhesives, etc.
- 5 D. Contractors doing work in un-protected areas of finished work shall be required to provide drop cloths and other  
6 protection as noted within this specification for the duration of their work.
- 7 1. Finished areas shall be sufficiently covered to accommodate all equipment, and materials being used to  
8 complete the work being done.
- 9 2. Finished areas shall be sufficiently covered to prevent splatters, over spray, etc when doing touch-up  
10 work.
- 11 3. Contractors who do not provide sufficient protection under this sub-section shall be responsible for any  
12 costs associated with cleaning, repairing or replacing already finished construction at no additional cost  
13 to the contract.
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**END OF SECTION**

**SECTION 01 77 00  
CLOSEOUT PROCEDURES**

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17

**PART 1 – GENERAL**

**1.1. SUMMARY**

- 21 A. The purpose of this specification is to clearly define and quantify the requirements associated with closing a City  
22 of Madison Public Works Contract for facility related work.  
23 B. All contracts have two distinct but related paths. Each path needs to be properly closed independently in order  
24 to close the contract as a whole.  
25 1. Construction closeout is related to closing out all of the Work associated with the construction  
26 documents.  
27 a. It shall be the responsibility of all contractors to be fully aware of the required Work and closeout  
28 requirements involved in their individual trades.  
29 2. Contract closeout is related to closing out all of the administrative aspects of the contract in general.  
30 a. It shall be the responsibility of all contractors to be fully aware of the administrative requirements  
31 required by the contract and to provide the supporting documentation required.  
32 3. Construction Closeout must be completed before Contract Closeout can begin.  
33 C. This specification will provide general knowledge associated with the following areas:  
34 1. Construction Closeout Requirements  
35 2. Construction Closeout Procedure  
36 3. Contract Closeout Requirements  
37 4. Contract Closeout Procedure  
38 5. Final Payment and Certificate of Completion  
39

**1.2. RELATED SPECIFICATIONS**

- 41 A. Contractors shall review all references to other specifications including specifications relating to the execution of  
42 the Work associated with their Division or Trade.  
43 B. Section 01 29 76 Progress Payment Procedures  
44 C. Section 01 32 16 Construction Progress Schedules  
45 D. Section 01 74 13 Progress Cleaning  
46 E. Section 01 45 16 Construction Waste Management and Disposal  
47 F. Section 01 76 00 Protecting Installed Construction  
48 G. Section 01 78 23 Operation and Maintenance Data  
49 H. Section 01 78 36 Warranties  
50 I. Section 01 78 39 As-Built Drawings  
51 J. Section 01 79 00 Demonstration and Training  
52 K. Other requirements as noted in the contract documents signed by the General Contractor  
53

**1.3. DEFINITIONS**

- 55 A. **Substantial Compliance:** A letter provided to the City of Madison Building Inspection and signed by the Project  
56 Engineer indicating that all Work has been completed to a level that would allow Owner Occupancy and that all  
57 construction is in compliance with the construction documents. A copy of this letter is also provided to the

- 1 State of Wisconsin Department of Health and Safety as necessary to clear plan review requirements. This letter  
2 does not represent construction closeout.
- 3 B. C. **Certificate of Substantial Completion:** A letter provided by the Department of Public Works, signed by the  
4 City Engineer indicating that Construction activities are substantially complete. This letter does represent  
5 construction closeout and the date of this letter begins the date of the Warranty Period.
- 6 D. **Construction Closeout:** The point in the contract where all contractual requirements associated the execution of  
7 the Work as described in the plans, specifications, and other documents have been successfully met and the  
8 items described in 1.3.A, .B, and .C above have been completed.
- 9 E. **Final Progress Payment:** The progress payment associated with achieving Construction closeout as described in  
10 1.3.D above. At this point the contractor may request all monies associated with the contract be paid with the  
11 exception of held retainage.
- 12 F. **Contract Closeout:** The point in the contract where all contractual requirements associated with the City of  
13 Madison, Board of Public Works contract has been successfully met.
- 14 G. **Final Payment:** The final contract payment submittal that may be approved by the City of Madison after all  
15 contractual requirements of the Public Works Contract have been met and any remaining monies (retainage)  
16 due to the contractor may be released for the Final Payment.  
17

18 **1.4. QUALITY ASSURANCE – CONSTRUCTION CLOSEOUT**

- 19 A. All contractors shall be responsible for properly executing the construction closeout requirements associated  
20 with their Work as described in the specifications governing their Work.
- 21 B. The GC shall be responsible for all of the following:
- 22 1. Ensuring that all contractors have met the construction closeout requirements associated with their  
23 Work.
- 24 2. Coordinate the collection of all construction closeout deliverables from all contractors, provide the  
25 deliverables to the Project Engineer and City Project Manager for review as necessary, and ensure all  
26 contractors correct deficiencies of deliverables and resubmit as needed for final acceptance.
- 27 3. Ensure all closeout requirements identified in the Construction Closeout Checklist below have been  
28 completed as intended by the construction documents.  
29

30 **1.5. QUALITY ASSURANCE – CONTRACT CLOSEOUT**

- 31 A. The City of Madison, Department of Civil Rights (DCR) monitors contract compliance for construction and  
32 procurement contracts to ensure that local, state and federal regulations are followed by contractors working on  
33 City of Madison Public Works (PW) projects. DCR will monitor all PW projects from contract award through the  
34 final payment at the close of the project. Contractors will be required to submit reporting paperwork  
35 throughout the PW project process.
- 36 1. Contractors are encouraged to visit the web site identified below for additional information, checklists,  
37 forms, and other information provided by DCR as it relates to Contract Compliance.  
38 <http://www.cityofmadison.com/Business/PW/contractCompliance.cfm>
- 39 2. Questions regarding the process should be directed to parties and offices as identified on the various  
40 forms, documents, and instructions or contact:  
41 City of Madison, Department of Civil Rights  
42 210 Martin Luther King Jr. Blvd., Room 523  
43 Madison, WI 53703  
44 (608) 266-4910
- 45 B. All Sub-Contractors have submitted the applicable required documents described in item 1.5.D below to the  
46 General Contractor (GC) for Contract Closeout.
- 47 C. The GC has submitted the required applicable documents described in item 1.5.D below for all contractors to the  
48 appropriate City of Madison Agency per instructions associated with each submittal.
- 49 D. The documents required for submittal to the City of Madison for Contract Closeout may include any/all of the  
50 items listed below depending on contract type. It is the sole responsibility of all contractors to know and submit  
51 the required and complete documentation in a timely fashion.
- 52 1. Weekly Payroll Reports
- 53 2. Employee Utilization Reports
- 54 3. Agent or Subcontractor Affidavit of Compliance with Prevailing Wage Rate Determination
- 55 4. Prime Contractor Affidavit of Compliance with Prevailing Wage Rate Determination
- 56 5. Documentation required for Small Business Enterprise (SBE) goals
- 57 6. Other documents as maybe required or requested through the Finalization Review Process  
58

**PART 2 – PRODUCTS – THIS SECTION NOT USED**

**PART 3 - EXECUTION**

**3.1. CONSTRUCTION CLOSEOUT CHECKLIST**

- A. All contractors shall be responsible for reviewing the drawings and specifications within their Divisions of Work to provide a complete and comprehensive list of all Construction Closeout Requirements to the GC.
  - 1. The checklist shall include all items identified within the construction documents that require any of the following (and examples) prior to moving into Contract Closeout Procedures:
    - a. Documents indicating a specified level of performance has been achieved, such as:
      - i. Test reports of all types
      - ii. Startup reports
    - b. Required documentation, such as:
      - i. As-builts and record drawings
      - ii. Operation and maintenance data
    - c. Physical items to be turned over to the owner, such as:
      - i. Attic stock
      - ii. Keys
    - d. Required maintenance completed, such as:
      - i. Ducts cleaned
      - ii. Filters replaced
    - e. Owner and Maintenance Training
- B. Each list shall indicate the title of the closeout requirement, the associated specification of the requirement, the required result or deliverable, the responsible contractor(s), and a column to verify the item has been turned in and completed.
- C. The GC shall be responsible for all of the following:
  - 1. Consolidating all the closeout lists into one master Construction Closeout Checklist.
    - a. The checklist shall be in a tabular data format similar to the sample below
  - 2. Resubmit the checklist as needed after initial reviews have been completed.
- D. The GC shall work with all contractors to amend the Construction Closeout Checklist throughout the execution of the project based on changes and modifications as necessary.

<u>Title</u>	<u>Specification</u>	<u>Description</u>	<u>Responsibility</u>	<u>Completed</u>
Quality Management Observation Reports	01 45 16	All QMO reports have been properly responded to, reviewed and closed by the CPM.	All, GC	
As-Built Drawings	01 78 39	As-Built drawings have been reviewed and accepted per the specification	All, GC	
Testing and Balancing	23 09 23	Provide final TAB reports indicating design performance has been achieved	HVAC	

**3.2. CONSTRUCTION CLOSEOUT REQUIREMENTS**

- A. The timely submittal or completion of closeout requirements shall go hand in hand with the Progress Payment Milestone Schedule that can be found in Specification 01 29 76 Progress Payments. No payments shall be made until all requirements for that payment have been met.
  - 1. The GC and all major Subcontractors, PE, and CPM, shall review all requirements for Construction/Contract Closeout during two (2) special meetings.
    - a. The first meeting shall be held at the 50% Contract Total Payment milestone. This meeting shall discuss the requirements associated with various construction/contract closeout documentation and events when they are due with respect to progress payments.
    - b. The second meeting shall be held at the 70% Contract Total Payment milestone. This meeting shall review the contractors progress regarding the closeout checklist, begin making plans for upcoming deadlines such as scheduling training, where to put attic stock, and when they are due with respect to progress payments.
  - 2. The GC, PE, and CPM, shall utilize the Construction Closeout checklist to ensure that all construction closeout requirements have been met.

1 **3.3. CONSTRUCTION CLOSEOUT PROCEDURE**

- 2 A. Upon successful completion and final acceptance of all Construction Closeout Requirements the GC may submit  
3 to the CPM and PE the request for Final Progress Payment (100% contract total, less retainage).  
4 B. The PE will confirm with the design consultants, CPM, and other City of Madison staff that all requirements of  
5 the Work have been completed and will do the following:  
6 1. Approve the final progress payment application  
7 2. Provide the required signed payment documents to the CPM  
8 3. Provide the required Letter of Substantial Compliance to the following as required:  
9 c. GC  
10 d. CPM  
11 C. The CPM shall draft the City Letter of Substantial Completion for signature by the City Engineer. This letter shall  
12 state any of the following that may still be tied to the contract and/or warranty:  
13 1. Indicate that the date of the letter shall also be the beginning of the Warranty period.  
14 2. Indicate any allowed due outs, reasons for them, and anticipated dates of finalization.  
15 D. The GC and all subcontractors shall finalize all warranty letters associated with their Work using the date noted  
16 on the City Letter of Substantial Completion, and provide the CPM with all warranties as described in  
17 Specification 01 78 36 Warranties. Upon receipt and final approval of the Warranties the CPM may initiate final  
18 processing of the Final Progress Payment (100% contract total, less retainage).  
19

20 **3.4. CONTRACT CLOSEOUT REQUIREMENTS**

- 21 A. The GC and all sub-contractors shall follow all requirements associated with documenting contract compliance  
22 and provide documentation as required or requested by DCR or PW staff. All contractors are encouraged to stay  
23 current with submissions of the following documentation:  
24 1. Weekly Payroll Reports no later than the Progress Payment equal to 50% of the contract total.  
25 2. Employee Utilization Reports  
26 3. Agent or Subcontractor Affidavit of Compliance with Prevailing Wage Rate Determination  
27 4. Prime Contractor Affidavit of Compliance with Prevailing Wage Rate Determination  
28 5. Documentation required for Small Business Enterprise (SBE) goals  
29 6. Other documents as maybe required or requested through the Finalization Review Process  
30 B. Near the Progress Payment equal to 80% of the contract total the GC shall request in writing a Finalization  
31 Review. At that time DCR or PW staff shall prepare a report of all contract documentation submitted to date. A  
32 list of missing items or outstanding issues will be emailed to the GC. No additional follow-up will be generated  
33 by DCR or PW Staff.  
34

35 **3.5. CONTRACT CLOSEOUT PROCEDURE**

- 36 A. The Contract Closeout Procedure will not begin until the Construction Closeout Procedure has been completed.  
37 B. When the GC feels he/she has successfully met all of the Contract Closeout Requirements associated with  
38 Section 3.3 above the GC may submit to the request for Final Payment to the CPM.  
39 C. The CPM shall sign and submit the Final Payment request for processing.  
40 D. DCR and PW staff shall do a complete review of all documentation associated with item 3.3.A above.  
41 E. The GC shall be notified directly by DCR or PW Staff of any documentation that may still be missing, have  
42 incomplete information, or other outstanding issues. It shall be the responsibility of the GC to continue follow-  
43 up with DCR and PW staff until all documentation has been successfully submitted and accepted.  
44 F. When all required documentation associated with Contract Closeout has been successfully submitted and  
45 accepted by DCR and PW Staff the City of Madison shall process the Final Payment of any remaining monies  
46 including retainage.  
47  
48

49 **END OF SECTION**  
50



**SECTION 01 78 36**  
**WARRANTIES**

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16

**PART 1 – GENERAL**

**1.1. SUMMARY**

- 19  
20 A. The purpose of this specification is to provide clear responsibilities and guide lines related to providing all  
21 Warranties and Guarantees related to the Work, workmanship, materials, equipment, and other such items  
22 required by the Construction Documents.  
23 B. Manufacturers’ disclaimers and limitations on product warranties do not relieve any contractor of the warranty on  
24 the Work that includes the product.  
25 C. Manufacturers’ disclaimers and limitations on product warranties do not relieve suppliers, manufacturers and  
26 any contractor required to provide special warranties under the contract documents.  
27

**1.2. RELATED SPECIFICATIONS**

- 28  
29 A. Section 01 29 76 Progress Payment Procedures  
30 B. Section 01 77 00 Closeout Procedures  
31 C. Section 01 78 23 Operation and Maintenance Data  
32 D. Other Divisions and Specifications that may address more specifically the requirements for Warranties related to  
33 the installation of all items and equipment installed under the execution of the Work.  
34

**1.3. DEFINITIONS**

- 35  
36 A. See specification 01 77 00 for the definitions of the following terms that may also be used in this specification:  
37 1. Substantial Compliance  
38 2. Certificate of Occupancy  
39 3. Certificate of Substantial Completion  
40 4. Construction Closeout  
41 5. Contract Closeout  
42 B. Emergency Repair: The Owner or Owner Representative reserves the right to make emergency repairs as  
43 required to keep equipment or materials in operation or to prevent damage to property and injury to persons  
44 without voiding the contractors warranty or bond or relieving the contractor of his/her responsibilities during  
45 the warranty period.  
46 C. Installer: The company or contractor hired to install a finished product that was manufactured and supplied  
47 specifically for the Work within this contract. The Installer may or may not be the same company that supplied  
48 the product. See the definition for supplier.  
49 D. Supplier: Any company that makes a specific finished product for the Work from information within the Contract  
50 Documents. Examples of suppliers would include custom cabinets, steel stairs and railings, etc. A supplier would  
51 not be a company that distributes items manufactured by others such as an electrical or plumbing supplier.  
52 E. Warranty: A written guarantee from the manufacturer to the owner on the integrity of a product and its  
53 installation, and the manufacturers’ responsibility to repair or replace the defective product or components  
54 within a specified time from the date of ownership. Warranty may also be used interchangeably with  
55 Guarantee. The following warranty types may be part of any specification within the Work associated with the  
56 Construction Documents:  
57 1. Expressed Warranty: A warranty that provides specific repair or replacement for covered components of  
58 a product over a specified length of time.

- 1 2. Implied Warranty: A warranty that is not stated explicitly by a seller or manufacturer that the product is
- 2 merchantable and fit for the intended purpose.
- 3 3. Standard Product Warranty: Preprinted written warranties published by individual manufacturers for
- 4 particular products and are specifically endorsed by the manufacturer to the Owner. Standard warranties
- 5 may be for any amount of time but shall not be for anything less than one (1) year from the warranty
- 6 date.
- 7 4. Special Warranty: A written warranty required by the Contract Documents either to extend the time
- 8 limit provided under a standard warranty or to provide greater rights to the Owner.
- 9 F. Warranty Date: The effective date that begins all warranty periods required for products, installations, and
- 10 work-manship associated with the execution of the Work for this contract. The Warranty Date shall be set by
- 11 the CPM.
- 12 G. Related Damages and Losses: When correcting failed or damaged Warranted Work, remove and reinstall (or
- 13 replace if necessary) the construction that has been damaged as a result of the failure or the construction that
- 14 must be removed and replaced to obtain access for the correction of Warranted Work.
- 15 H. Reinstatement of Warranty: When Work covered by a warranty has failed and been corrected reinstate the
- 16 warranty by a new written endorsement. The reinstated warranty shall be equal to the original warranty with an
- 17 equitable adjustment for depreciation unless specifically noted otherwise in a specification.
- 18 I. Replacement Cost: All costs that may be associated with Work being replaced under warranty including but not
- 19 limited to the following:
- 20 1. Related damages and losses
- 21 2. Labor, material and equipment
- 22 3. Permits and inspection fees
- 23 4. This shall be regardless of any benefit the Owner may have had from the Work through any portion of its
- 24 anticipated useful service life.
- 25 J. Replacement Work: All materials, products, required labor, and equipment necessary to replace failed or
- 26 damaged warranted to an acceptable condition that complies with the requirements of the original Construction
- 27 Documents.
- 28 K. Owners Recourse: Expressed warranties made to the Owner are in addition to implied warranties and shall not
- 29 limit the duties, obligations, rights, and remedies otherwise available under the law. Expressed warranty periods
- 30 shall not be interpreted as limitations on the time in which the Owner can enforce such other duties, obligations,
- 31 rights, and remedies.
- 32 1. Rejection of Warranties: The Owner reserves the right to reject any warranty and to limit the selection of
- 33 products with warranties not in conflict with the requirements of the contract documents.
- 34 2. Where the Contract Documents require a Special Warranty or similar commitment on the Work or
- 35 product, the Owner reserves the right to refuse acceptance of the Work until the Contractor presents
- 36 evidence the entities required to countersign such required commitments have done so.

37  
38 **1.4. GENERAL CONTRACTORS RESPONSIBILITIES**

- 39 A. The General Contractor (GC) shall be responsible to remedy, at his/her expense, any defect in the Work and any
- 40 damage to City owned or controlled real or personal property when the damage is a result of:
- 41 1. The GC's failure to conform to Contract Document requirements.
- 42 a. Any substitutions not properly approved and authorized may be considered defective.
- 43 2. Any defect in workmanship, materials, equipment, or design furnished by the GC or Sub-contractors.
- 44 B. All warranties as described in this specification and these Contract Documents shall take effect on the date
- 45 established by the CPM, as noted in Section 1.3F above.
- 46 1. All warranties shall remain in effect for one (1) year thereafter unless specifically stated otherwise in the
- 47 Contract Documents or where standard manufacturer warranties are greater.
- 48 C. The GC's warranty with respect to Work repaired or replaced, including restored or replaced Work due to
- 49 damage, will run for one (1) year from the date of Owner Acceptance of said repair or replacement.
- 50 1. This shall be regardless of any benefit the Owner may have had from the Work through any portion of its
- 51 anticipated useful service life.
- 52 D. Warranty Response
- 53 1. See Section 3.5 of this specification.

54 **PART 2 – PRODUCTS - THIS SECTION NOT USED**

55  
56 **PART 3 - EXECUTION**

**3.1. WARRANTY CHECKLIST**

- A. All contractors shall be responsible for reviewing the drawings and specifications within their Divisions of Work to provide a complete and comprehensive list of all Warranty Requirements to the GC.
- B. Each list shall indicate the title (and plan identifier when applicable) of the warranted item, the associated specification of the warranted item, the terms of the warranty (years), and a column to verify the item has been turned in and completed.
- C. The GC shall be responsible for all of the following:
  - 1. Consolidating all the warranty lists into one master Warranty Checklist and submitting electronically.
    - a. The checklist shall be in a tabular data format similar to the sample below.
    - 2. Resubmit the schedule as needed after initial reviews have been completed.
- D. The GC shall work with all contractors to amend the Warranty Checklist throughout the execution of the project based on changes and modifications as necessary.

<u>Title</u>	<u>Specification</u>	<u>Terms</u>	<u>Completed</u>
Overhead Door Operator	08 36 00	MFR 2yr	
Exterior Bench and Trash Receptacles	12 93 00	MFR 3 year warranty on finish	
Kitchen Sink (SK-1)	22 42 00	MFR 5 year	
Disposal (D-1)	22 42 00	MFR 7 year parts and in-home service	
Toilet (WC-1)	22 42 00	MFR 1 year limited	

**3.2. LETTERS OF WARRANTY**

- A. All letters of warranty shall be in a typed letter format and provide the following information:
  - 1. The letter shall be on official company stationary including company name, address, and phone number.
  - 2. Indicate project name, contract number, and contract address the warranty is for on the reference line.
  - 3. Provide a description of the warranty(ies) being provided.
    - a. Include Division, Trade, or Specification information as necessary.
    - b. Only combine warranties of related Divisional Work together. Create new letters for additional Divisions as necessary.
  - 4. Indicate the effective Warranty Date. As noted in Section 1.3.F above, the Warranty Date shall be the date the Certificate of Substantial Completion was signed by the City Engineer.
  - 5. Contractor Letters of Warranty shall only be signed by a principal officer of the company.
  - 6. After signing the letter provide the GC with a high quality color scanned image in PDF format and the original signed letter.
- B. The GC shall be responsible for the Final Warranty submittal as identified in Section 3.4 below.
- C. The GC shall obtain letters of warranty from all of the following:
  - 1. The General Contractor shall provide warranty letters for all Work that was self performed under the contract documents, identify all trades or Divisions of Work.
  - 2. All Sub-contractors shall provide warranty letters for Work performed under the contract documents; identify all trades or Divisions of Work.
  - 3. Suppliers, as required by other specifications within the Construction Documents where the manufacture of a specific product unique to the Work of this contract was required.
    - a. The terms and conditions of the Supplier Letter of Warranty shall be as defined by the specifications associated with the Work but shall not be less than the industry standard of repair, or replace defective materials and workmanship within one (1) year of the warranty date.
    - b. When the supplier is also the installer a single written letter may be submitted identifying both the warranty for the manufacture of the product and the warranty for the installation of the product.
  - 4. Installers as required by other specifications within the Construction Documents where the installation of a specific product unique to the Work of this contract was required.
    - 1. The terms and conditions of the Installer Letter of Warranty shall be as defined by the specifications associated with the Work but shall not be less than the industry standard of repair, or replace defective materials and workmanship associated with the installation of the product within one (1) year of the warranty date.
  - 5. Special Letters of Warranty shall be required from any contractor, supplier, installer or manufacturer who agrees to provide warranty services required by any Division Specification in excess of their Standard Product Warranty.

1  
2 **3.3. STANDARD PRODUCT WARRANTY**

- 3 A. All contractors shall be responsible for collecting and providing copies of all standard product warranties for  
4 commercially available products purchased and installed under this contract.  
5 B. Only one copy of the manufacturers' standard warranty needs to be submitted as representative for all  
6 quantities of the same model number used throughout the Work.  
7 C. Provide the manufacturers certificate, letter, or other standard documentation for each Standard Product  
8 Warranty submitted as follows:  
9 1. Whenever possible a PDF version of the document shall be used.  
10 a. If a PDF version is used all additional information shall be completed using simple PDF editing  
11 tools such as text boxes, highlight, etc.  
12 b. If a PDF version is not available and an original document is furnished the additional information  
13 shall be neatly hand written and highlighted on the document in such a fashion so that it does not  
14 obscure any part of the written warranty.  
15 2. Provide the following additional information on each warranty document:  
16 a. Contract warranty date.  
17 b. Provide the manufacturer name and model number of the product if not specified within the  
18 warranty.  
19 i. Where the manufacturer name and model number is specified within the warranty it shall  
20 be highlighted for visibility.  
21 c. Provide the plan identifier (LAV-1, WC-2, etc) when applicable.  
22 D. Each completed warranty shall be saved as a digital PDF. The file shall be named using the specification number  
23 and item description. I.E. 22 42 00 Toilet (WC-1).pdf  
24 a. Where an original certificate was furnished provide a high quality colored scan of the completed  
25 document with the additional information. Save the scanned image in PDF format and use the  
26 same naming convention as indicated above.  
27 E. Provide all PDF files and any original documents to the GC for final consolidation to be provided to the Owner.  
28

29 **3.4. FINAL WARRANTY SUBMITTAL**

- 30 A. The GC shall receive all required warranties (digital PDF and any original documents) from all contractors,  
31 suppliers, installers and manufacturers.  
32 B. The GC shall inventory all received warranties with the Warranty Submittal List to ensure all required warranties  
33 have been received and all warranty periods are correct according to the specifications.  
34 C. Provide with each Operation and Maintenance Manual a complete copy of any associated warranty.  
35 D. Scan all warranties into a single organized electronic PDF file as follows:  
36 1. Organize the PDF file into an orderly sequence based on the table of contents of the Specifications.  
37 2. Provide a typed Table of Contents for the entire file at the front of the document.  
38 3. Provide bookmarks and links to each individual PDF to enable quick navigation through the PDF  
39 document.  
40 E. Submit electronically, the warranty submittal for review by the PE and CPM.  
41 F. Correct any deficiencies or omissions and resubmit as necessary.  
42

43 **3.5. WARRANTY NOTIFICATION, RESPONSE, EXECUTION AND FOLLOW-UP**

- 44 A. Warranty Notification:  
45 1. The City of Madison uses an email notification system for all warranty related issues. The GC will be  
46 required to provide, and keep current during the warranty period, a minimum of two (2) email addresses  
47 and phone numbers of current employees to receive email notifications and provide response regarding  
48 Work associated with these construction documents.  
49 a. In the event a Warranty Issue is deemed by the City of Madison to be an emergency, the GC shall  
50 first receive a phone call with a follow-up email from the CPM.  
51 B. Warranty Response:  
52 1. The GC shall upon notification by the City of Madison provide warranty response as follows:  
53 a. Critical Systems or equipment: Where damage to equipment and other building components, or  
54 injury to personnel is probable provide immediate emergency shut-down information and an on-  
55 site response team as soon as possible but in no case shall on-site response exceed 24 hours.  
56 b. For non-critical responses where damage or injury is unlikely provide on-site response no later  
57 than the next business day.

- 1 c. Where Technical Assistance support is part of the written warranty provide all assistance  
2 necessary via phone, text, or internet systems as indicated by the warranty. If issues cannot be  
3 resolved provide on-site response no later than the next business day.
- 4 d. If the request cannot be supported in sufficient time as outlined above the Owner (or Owner  
5 Representative) reserves the right to contact other contractors or service companies having  
6 similar capability to expedite the repair or replacement and shall invoice all associated costs to  
7 the Owner back to the GC.
- 8 C. Warranty Execution:
- 9 1. The GC shall provide all repairs or replacements as necessary to restore broken or damaged Work to the  
10 original level of acceptance as intended by the Contract Documents.
- 11 a. Provide all materials, equipment, products, and labor necessary to complete the repair or  
12 replacement associated with the Warranty Issue.
- 13 b. Provide all cleaning services as may be required before, during, and after the repair or  
14 replacement as per Specification 01 74 13 Progress Cleaning.
- 15 c. Provide any protection necessary for existing construction as per Specification 01 76 00 Protecting  
16 Installed Construction
- 17 d. Provide new letters of warranty when required.
- 18 D. Warranty Follow-up:
- 19 1. Logged Warranty Issues:
- 20 a. The GC shall provide complete documented responses of all logged Warranty Issues. Responses  
21 shall provide a description of work completed, by who, inclusive dates, and photos of completed  
22 or repaired work.
- 23 i. Provide call back response if work is not acceptable.
- 24 b. The City Project Manager shall review the submitted response documentation and do a field  
25 inspection if necessary.
- 26 i. If work is not acceptable, contact GC to review details and expectations of the repair as  
27 needed.
- 28 ii. If work is acceptable close the Warranty Issue.
- 29 2. Warranty Reviews:
- 30 a. The GC shall be responsible for scheduling on-site review with all of the following:
- 31 i. City Project Manager, and other City staff as needed
- 32 ii. Owner and Owner Tenant Representative
- 33 iii. Plumbing, Heating, Electrical Sub-contractors
- 34 iv. Other Sub-contractors that may be responsible for open Warranty issues
- 35 b. Reviews shall be scheduled at 6 months, and 11 months after the effective date of the warranty.  
36 The review meetings shall:
- 37 i. Review the status of all open Warranty Issues, determine course of action and estimated  
38 date of completion.
- 39 ii. As appropriate, provide shut-down, start-up, testing, and training of off-season equipment  
40 as required by the contract documents.
- 41 iii. The 11th month review shall review all open Warranty Issues, final plan for resolution, and  
42 all Warranty Issues where a new letter of warranty may have been issued.
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**END OF SECTION**

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**SECTION 07 18 16**

**VEHICULAR TRAFFIC COATINGS**

**PART 1 – GENERAL**

- 1.1 [RELATED DOCUMENTS](#)
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  - 1.3 [PREINSTALLATION MEETINGS](#)
  - 1.4 [ACTION SUBMITTALS](#)
  - 1.5 [INFORMATIONAL SUBMITTALS](#)
  - 1.6 [QUALITY ASSURANCE](#)
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- PART 2 – PRODUCTS**
- 2.1 [MATERIALS, GENERAL](#)
  - 2.2 [TRAFFIC COATING](#)
  - 2.3 [ACCESSORY MATERIALS](#)
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- 3.1 [EXAMINATION](#)
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  - 3.3 [TERMINATIONS AND PENETRATIONS](#)
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  - 3.5 [TRAFFIC-COATING APPLICATION](#)
  - 3.6 [FIELD QUALITY CONTROL](#)
  - 3.7 [PROTECTING AND CLEANING](#)

**PART 1 - GENERAL**

**1.1 RELATED DOCUMENTS**

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

**1.2 SUMMARY**

- A. Section includes traffic coatings and pavement markings for the following applications:
  - 1. Vehicular traffic.

**1.3 PREINSTALLATION MEETINGS**

- A. Preinstallation Conference: Conduct conference at Project site.

**1.4 ACTION SUBMITTALS**

- A. Product Data: For each type of product, including installation instructions.
- B. Shop Drawings: For traffic coatings.
  - 1. Include details for treating substrate joints and cracks, flashings, deck penetrations, and other termination conditions.
  - 2. Include plans showing layout of pavement markings, lane separations, and defined parking spaces. Indicate, with international symbol of accessibility, spaces allocated for people with disabilities.

**1.5 INFORMATIONAL SUBMITTALS**

- A. Qualification Data: For Installer.
- B. Product Certificates: For each type of traffic coating.
- C. Sample Warranty: For special warranty.

**1.6 QUALITY ASSURANCE**

- A. Installer Qualifications: An authorized representative who is trained and approved by manufacturer.

- 1     **1.7     FIELD CONDITIONS**
- 2     A.     Environmental Limitations: Apply traffic coatings within the range of ambient and substrate temperatures
- 3     recommended in writing by manufacturer. Do not apply traffic coatings to damp or wet substrates, when
- 4     temperatures are below 40 deg F, when relative humidity exceeds 85 percent, or when temperatures are
- 5     less than 5 deg F above dew point.
- 6     1.     Do not apply traffic coatings in snow, rain, fog, or mist, or when such weather conditions are imminent
- 7     during the application and curing period. Apply only when frost-free conditions occur throughout the
- 8     depth of substrate.
- 9     B.     Do not install traffic coating until items that penetrate membrane have been installed.
- 10
- 11
- 12
- 13    **1.8     WARRANTY**
- 14    A.     Manufacturer's Warranty: Manufacturer agrees to repair or replace traffic coating that fails in materials or
- 15    workmanship within specified warranty period.
- 16    1.     Failures include, but are not limited to, the following:
- 17    a.     Adhesive or cohesive failures.
- 18    b.     Abrasion or tearing failures.
- 19    c.     Surface crazing or spalling.
- 20    d.     Intrusion of water, oils, gasoline, grease, salt, deicer chemicals, or acids into deck substrate.
- 21    2.     Warranty Period: Five years from date of Substantial Completion.

22    **PART 2 - PRODUCTS**

23    **2.1     MATERIALS, GENERAL**

- 24    A.     Material Compatibility: Provide primers; base-, intermediate-, and topcoat; and accessory materials that are
- 25    compatible with one another and with substrate under conditions of service and application, as demonstrated
- 26    by manufacturer based on testing and field experience.
- 27    B.     Source Limitations:
- 28    1.     Obtain traffic coatings from single source from single manufacturer.
- 29    2.     Obtain primary traffic-coating materials, including primers, from traffic-coating manufacturer. Obtain
- 30    accessory materials including aggregates, sheet flashings, joint sealants, and substrate repair
- 31    materials of types and from sources recommended in writing by primary material manufacturer.
- 32    3.     Obtain pavement-marking paint from single source from single manufacturer.

33    **2.2     TRAFFIC COATING**

- 34    A.     Traffic Coating: Manufacturer's standard, traffic-bearing, seamless, high-solids-content, cold liquid-applied,
- 35    elastomeric, waterproofing membrane system with integral wearing surface for vehicular traffic; according
- 36    to ASTM C 957.
- 37    1.     Traffic Coating – Car Stall:
- 38    2.     Traffic Coating – Drive Lanes:
- 39    B.     Manufacturers: Subject to compliance with requirements, provide products by one of the following:
- 40    1.     Advanced Polymer Technology Corporation.
- 41    2.     BASF Corporation; Construction Systems.
- 42    3.     Neogard; a division of Jones-Blair, Inc.
- 43    4.     Tremco Incorporated.
- 44    C.     Primer: Liquid waterborne or solvent-borne primer recommended for substrate and conditions by traffic-
- 45    coating manufacturer.
- 46    1.     Material: Epoxy.
- 47    D.     Preparatory and Base Coats: epoxy.
- 48    1.     Thicknesses: Minimum dry film thickness as recommended in writing by manufacturer for substrate
- 49    and service conditions indicated.
- 50    E.     Intermediate Coat: Polyurethane.
- 51    1.     Thicknesses: Minimum dry film thickness as recommended in writing by manufacturer for substrate
- 52    and service conditions indicated, measured excluding aggregate.
- 53    2.     Aggregate Content: As recommended in writing by traffic-coating manufacturer for substrate and
- 54    service conditions indicated.
- 55    F.     Topcoat: Polyurethane.

- 1 1. Thicknesses: Minimum dry film thickness as recommended in writing by manufacturer for substrate  
2 and service conditions indicated, measured excluding aggregate.  
3 2. Aggregate Content: As recommended in writing by traffic-coating manufacturer for substrate and  
4 service conditions indicated and as required to achieve slip-resistant finish.  
5 3. Service Condition:  
6 a. Vehicle Parking Stall.  
7 b. Vehicle Drive Lane.  
8 c. Vehicle Drive Turning Lanes.  
9 d. Vehicle Drive Ramps.  
10 4. Color: As selected by Architect from manufacturer's full range.  
11 G. Aggregate: Manufacturer's standard aggregate for each use indicated of particle sizes, shape, and minimum  
12 hardness recommended in writing by traffic-coating manufacturer.  
13 H. Concrete Sealer: Floor concrete sealer at level U4.  
14 1. Silane and siloxane product chemistry developed to penetrate concrete surfaces to repel water and  
15 liquids.  
16 2. Basis of Design: Chemstop WB Regular as manufactured by Euclid Chemical Co.
- 17 **2.3 ACCESSORY MATERIALS**  
18 A. Joint Sealants: As specified in Section 07 92 00 "Joint Sealants."  
19 B. Sheet Flashing: Nonstaining sheet material recommended in writing by traffic-coating manufacturer.  
20 1. Thickness: Minimum 50 mils.  
21 C. Adhesive: Contact adhesive recommended in writing by traffic-coating manufacturer.  
22 D. Reinforcing Strip: Fiberglass mesh recommended in writing by traffic-coating manufacturer.

23 **PART 3 - EXECUTION**

24 **3.1 EXAMINATION**

- 25 A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for  
26 surface smoothness, surface moisture, and other conditions affecting performance of traffic-coating work.  
27 B. Verify that substrates are visibly dry and free of moisture.  
28 1. Test for moisture according to ASTM D 4263.  
29 2. Test for moisture content by measuring with an electronic moisture meter.  
30 C. Prepare written report, endorsed by Installer, listing conditions detrimental to performance of traffic-coating  
31 work.  
32 D. Proceed with installation only after substrate construction and penetrating work have been completed and  
33 unsatisfactory conditions have been corrected.  
34 1. Begin coating application only after minimum concrete-curing and -drying period recommended in  
35 writing by traffic-coating manufacturer has passed and after substrates are dry.  
36 2. Application of coating indicates acceptance of surfaces and conditions.

37 **3.2 PREPARATION**

- 38 A. General: Before applying traffic coatings, clean and prepare substrates according to ASTM C 1127 and  
39 manufacturer's written instructions to produce clean, dust-free, dry substrate for traffic-coating application.  
40 Remove projections, fill voids, and seal joints if any, as recommended in writing by traffic-coating  
41 manufacturer.  
42 B. Schedule preparation work so dust and other contaminants from process do not fall on wet, newly coated  
43 surfaces.  
44 C. Mask adjoining surfaces not receiving traffic coatings to prevent overspray, spillage, leaking, and migration  
45 of coatings. Prevent traffic-coating materials from entering deck substrate penetrations and clogging weep  
46 holes and drains.  
47 D. Concrete Substrates: Mechanically abrade surface to a uniform profile acceptable to manufacturer,  
48 according to ASTM D 4259. Do not acid etch.  
49 1. Remove grease, oil, paints, and other penetrating contaminants from concrete.  
50 2. Remove concrete fins, ridges, and other projections.  
51 3. Remove laitance, glaze, efflorescence, curing compounds, concrete hardeners, form-release agents,  
52 and other incompatible materials that might affect coating adhesion.  
53 4. Remove remaining loose material to provide a sound surface, and clean surfaces according to ASTM  
54 D 4258.



- 1 **3.3 TERMINATIONS AND PENETRATIONS**  
2 A. Prepare vertical and horizontal surfaces at terminations and penetrations through traffic coatings and at  
3 expansion joints, drains, and sleeves according to ASTM C 1127 and manufacturer's written instructions.  
4 B. Provide sealant cants at penetrations and at reinforced and nonreinforced, deck-to-wall butt joints.  
5 C. Terminate edges of deck-to-deck expansion joints with preparatory base-coat strip.  
6 D. Install sheet flashings at deck-to-wall expansion and dynamic joints, and bond to deck and wall substrates  
7 according to manufacturer's written recommendations.

- 8 **3.4 JOINT AND CRACK TREATMENT**  
9 A. Prepare, treat, rout, and fill joints and cracks in substrates according to ASTM C 1127 and manufacturer's  
10 written recommendations. Before coating surfaces, remove dust and dirt from joints and cracks according  
11 to ASTM D 4258.  
12 1. Comply with recommendations in ASTM C 1193 for joint-sealant installation.  
13 B. Apply reinforcing strip in traffic-coating system where recommended in writing by traffic-coating  
14 manufacturer.

- 15 **3.5 TRAFFIC-COATING APPLICATION**  
16 A. Apply traffic coating according to ASTM C 1127 and manufacturer's written instructions.  
17 B. Start traffic-coating application in presence of manufacturer's technical representative.  
18 C. Verify that wet film thickness of each coat complies with requirements every 1000 sq. ft..  
19 D. Uniformly broadcast aggregate on coats specified to receive aggregate. Embed aggregate according to  
20 manufacturer's written instructions. After coat dries, sweep away excess aggregate.  
21 E. Apply traffic coatings to prepared wall terminations and vertical surfaces to height indicated; omit aggregate  
22 on vertical surfaces.  
23 F. Cure traffic coatings. Prevent contamination and damage during application and curing stages.  
24 G. Apply number of coats of specified compositions for each type of traffic coating at locations as indicated on  
25 Drawings.  
26 1. Traffic Coating – Equipment areas  
27 2. Traffic Coating – Drive Lanes:

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- 47 **3.7 PROTECTING AND CLEANING**  
48 A. Protect traffic coatings from damage and wear during remainder of construction period.  
49 B. Clean spillage and soiling from adjacent construction using cleaning agents and procedures recommended  
50 by manufacturer of affected construction.

51 **END OF SECTION 07 18 00**