BIDDING DOCUMENTS

SPECIFICATIONS

OLBRICH ROOF REPLACEMENTS
CONTRACT# 8882

OLBRICH COTTAGE
3267 ATWOOD AVENUE
MADISON WISCONSIN

OLBRICH PARK SHELTER
3267 ATWOOD AVENUE
MADISON WISCONSIN

JANUARY 14, 2020

CONTACTS

CITY PROJECT MANAGER:
Amy Scanlon, AIA
Engineering Division
City-County Building, Room 118
210 Martin Luther King Jr. Blvd.
Madison, WI 53703
(608) 267-0743

SECTION 00 31 46
PERMITS

PART 1 – GENERAL

1.1. SUMMARY

A. Each project has varying requirements for permits, inspections, and fees based on the scope, size, and location of the project.

B. The City of Madison (Owner) is subject to all permits, inspections and associated fees for construction, demolition, utility connection, storm water management, and other similar requirements that may be required to complete the scope of work associated with these contract documents.

C. The General Contractor (GC) shall be responsible for obtaining all permits, inspections and paying for all associated fees unless specifically identified within this specification.

1.2. REFERENCES

A. The following references are not intended to be all inclusive. It shall be the GC's responsibility to determine all requirements based on the scope of work in the contract documents.

B. City of Madison Ordinances: Review all ordinances that may require a permit or fee that may be connected with a required permit. Contact the following City Agencies to determine the exact requirements during bidding

1. Building Inspection
2. Zoning
3. Engineering
4. Water Utility
5. Traffic Engineering
6. Others as may be specified by the contract documents.

B. State Statutes

C. Other Regulatory Regulations

D. Other Agencies or companies that may have related requirements

1. Madison Metropolitan Sewerage District
2. Local gas and electric utility companies
3. Other utility companies

1.3. GENERAL CONTRACTORS REQUIREMENTS

A. The GC shall be responsible for all of the following:

1. Execute application for all required permits as may be required by the scope of work described within the contract documents.
2. Paying all fees associated with the application of any required permits.
3. Scheduling all required inspections that may be conditions of any required permits.

B. The GC shall provide high quality scanned images of all required permits and inspections to the City Project Manager (CPM).

PART 2 – PRODUCTS – THIS SECTION NOT USED

PART 3 – EXECUTION – THIS SECTION NOT USED

END OF SECTION

SECTION 01 25 13
PRODUCT SUBSTITUTION PROCEDURES

PART 1 – GENERAL

1.1. SUMMARY

A. The City of Madison uses a specific list of preferred products for various specification items to establish standards of quality, utility, and appearance required.

B. The City of Madison will not allow substitutions for specified Products except as follows:

1. The Product is no longer produced or the product manufacturer is no longer in business.
2. The manufacturer has significantly changed performance data, product dimensions, or other such design criteria for the specified Product(s).
3. Products specified by naming one or more Products or manufacturer's and "or approved equal" or "approved equivalent."

C. The City of Madison will not allow substitutions for specified Products as follows:

1. For Products specified by naming only one Product and manufacturer, no substitute product will be considered.
2. For Products specified by naming several Products or manufacturers select any one of the products or manufacturers named, which complies with the specifications. No substitute product will be considered.

D. Request for substitutions from any party other than the General Contractor (GC) will not be accepted.

1.2. RELATED SPECIFICATIONS

A. Section 01 33 23 Submittals

PART 2 – PRODUCTS

2.1. SUBSTITUTION REQUEST FORM

A. During bidding all contractors (General and Sub-contractors) and suppliers of materials or products shall provide hard copy of the Substitution Request form and all required attachments directly to the Project Engineer.

B. After bidding only the GC shall submit a request and shall use the form provided by CPM.

PART 3 - EXECUTION

3.1. REQUESTING A SUBSTITUTION DURING BIDDING

A. In the event that a substitution is requested during the bidding phase the Contractor or Supplier shall meet the substitution request deadline listed in the bidding documents. No substitution request will be considered during the bidding period after the stated substitution request deadline. In general this procedure shall be as follows:

1. Submit the Substitution Request Form including all required supporting documentation to the City Project Manager and Project Engineer by the substitution request deadline specified in Section A of the Contract Documents.
2. Submit a Substitution Request Form for each product, supported with complete data, drawings and samples as appropriate, including:
    i. Comparison of qualities of the proposed substitutions with that specified.
    ii. Changes required in other elements of the Work because of the substitution.
    iii. Effect on the construction schedule.
    iv. Cost data comparing the proposed substitution with the Product specified.
    v. Any required license fees or royalties.
    vi. Availability of maintenance service and source of replacement materials.

3. The Owner and Engineer will review the Substitution Request Form and if approved the City of Madison will publish a bidding addendum authorizing the replacement. The Owner and Engineer may reject any substitution request without providing specific reasons.

B. Substitutions submitted and approved during the bidding phase shall be announced by the City of Madison by addenda prior to the bid due date.

3.2. REQUESTING A SUBSTITUTION AFTER AWARD OF CONTRACT

A. A substitution request will only be considered after award of contract if it meets the qualifying provisions as described in 1.1.B.1 above.

B. The GC shall submit a substitution request using the form provided by CPM.

1. Consulting Staff, Owner and Owners Representatives will review the request and provide the appropriate approvals and feed back to the GC.

3.3. UNAUTHORIZED SUBSTITUTIONS

A. Any Contractor who substitutes products without proper authorization by the Owner and Engineer will be required to immediately remove and replace the product and all costs required to conform to the Contract Documents shall be borne by the General Prime Contractor.

END OF SECTION

SECTION 01 26 57
CHANGE ORDER REQUESTS (COR)

PART 1 – GENERAL

1.1. SUMMARY

A. Except in cases of emergency no changes in the Work required by the Contract Documents may be made by the General Contractor (GC) without having prior approval of the City Engineer or his representative.

B. The City may at any time, without invalidating the Contract and without Notice to Sureties, order changes in the Work by written Change Order (CO). Such changes may include additions and/or deletions.

C. Where the City desires to make changes in the Work through use of written Change Order Request (COR), the following procedures apply:

1. If requested by the City, the GC shall prepare and submit a detailed proposal, including all cost and time adjustments to which the GC believes it will be entitled if the change proposed is incorporated into the Contract. The City shall be under no legal obligation to issue a Change Order for such proposal.
2. The parties shall attempt in good faith to reach agreement on the adjustments needed to the Contract to properly incorporate the proposed change(s) into the Work. In the event that the parties agree on such adjustments, the City may issue a Change Order and incorporate such changes and agreed to adjustments, if any.
3. In some instances, it may be necessary for the City to authorize Work or direct changes in Work for which no final and binding agreement has been reached and for which unit prices are not applicable. In such cases the following shall apply.
    a. Upon written request by the City, the GC shall perform proposed Work
    b. The cost of such change may be determined in accordance with this specification.
    c. In the event agreement cannot be accomplished as contemplated herein, the City may authorize the Work to be performed by City forces or to hire others to complete the Work. Such action on the part of the City shall not be the basis of a claim by the GC for failure to allow it to perform the changed Work.

D. Where changes in the Work are made by the City through use of a force account basis, the GC shall as soon as practicable, and in no case later than ten (10) working days from the receipt of such order, unless another time period has been agreed to by both parties, give the City written Notice, stating:

1. The date, circumstances and source of the extra work; and,
2. The cost of performing extra work described by such Order, if any; and,
3. Effect of the order on the required completion date of the Project, if any.

E. The giving of each Notice by the GC as prescribed by this specification, shall be a requirement to liability of the City for payment of any additional costs incurred by the GC in implementing changes in the Work. Under this specification, no order or statement of the City shall be treated as a Change Order, or shall entitle the GC to an equitable adjustment of the terms of this Contract or damages for costs incurred by the GC on any activity for which the Notice was not given.

F. In the event Work is required due to an emergency as described in this specification 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.

G. All GC requests for equitable adjustment shall be submitted to the CPM per the specifications below. Such requests shall set forth with specificity the amount of and reason(s) for the proposed adjustment and shall be accompanied by supporting information and documents.

H. No adjustment of any kind shall be made to this Contract, if asserted by the GC for the first time, after the date of final payment.

I. This specification shall be used by the GC when preparing documentation for any COR to ensure each has been properly and completely filled out as required by the City of Madison.

1.2. RELATED SPECIFICATION SECTIONS

A. Section 01 26 63 Change Order (CO)

B. 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 **2**10.2" 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.

1.3. DEFINITIONS AND STANDARDS

A. LABOR: The amount of time and cost associated with the performance of human effort for a defined scope of Work. Labor is further defined as follows:
   1. Labor rate is the total hourly rate which includes the base rate of pay, fringe benefits plus each company's cost of required insurance, also referred to as a reimbursable labor rate.
   2. Unit labor is the labor hours anticipated to install the corresponding unit of material.
   3. Labor cost is the labor hours multiplied by the hourly labor rates.

B. MATERIAL: Actual material cost is the amount paid, or to be paid, by the GC for materials, supplies and equipment entering permanently into the Work, including cost of transportation and applicable taxes. The cost shall not exceed the usual and customary cost for such items available in the geographical area of the project.

C. LARGE TOOLS AND MAJOR EQUIPMENT: Large tools and major equipment are those with an initial cost greater than $1,500, whether from the GC or other sources.
   1. Tool and equipment use and time allowed is only for extra work associated with change orders.
      a. Rental Rate is the machine cost associated with operating a piece of equipment for a defined length of time (hour, day, week, or month) and shall not exceed the usual and customary amount for such items available in the geographical area of the project.
      b. Rental cost is the rental rate multiplied by the anticipated duration the equipment shall be required.
   2. The GC shall provide a breakdown of all rental rates to indicate what items and costs are associated with the rate. Examples of items to include in the breakdown would be fuel consumption, lubrication, maintenance and other similar expenses but not including profit and overhead.
   3. When large tools and equipment needed for Change Order work are not already at the job site, the actual cost to get the item there is also reimbursable.

D. BOND COST: The cost shall be calculated at 1% of the total proposed change order.

E. SUB-CONTRACTOR COSTS: Sub-contractor costs are for those labor, material, and equipment costs required by subcontracted specialties to complete the Change Order work including allowable markups as outlined within this specification.

F. OVERHEAD AND PROFIT Markup: The allowable markup percentage to a COR by the GC and Sub-contractors for overhead and profit. All of the following are expenses associated with overhead and profit and shall not be reimbursable as individual items on any COR:
   1. CHANGE ORDER PREPARATION: All costs associated with the preparing and processing of the change order.
   2. DESIGN, ESTIMATING, AND SUPERVISION: All such efforts, unless specifically requested by Owner as additional Work to be documented as a COR or portion thereof.
   3. INSTALLATION LAYOUT: The layout required for the installation of material and equipment, and the installation design, is the responsibility of the GC.

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

G. Contract Extension: The necessary amount of time to be added to the contract deadlines for the completion of a change order.

1.4. CONTRACT EXTENSION

A. The GC shall not assume that every COR will require a Contract Extension. If the GC feels a contract extension is warranted he/she shall provide sufficient scheduling information that shows how the COR being requested impacts the critical path of the project.

B. The City of Madison strongly encourages the GC to explore alternative methods and practices prior to submitting a COR with a request for contract extension.

1.5. OVERHEAD AND PROFIT MARKUP

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

1.6. PERFORMANCE REQUIREMENTS

A. The GC shall become thoroughly familiar with this specification as it will identify procedures and expenses that are or are not allowed under the Change Order and Change Order Request process.

B. The GC shall be responsible for all of the following:
1. Carefully reviewing the CB that is associated with the COR.
2. Collecting required supporting documentation from all contractors that quantify the need for a COR.
    a. Labor hours and wage rates
    b. Material costs
    c. Equipment costs

C. The following shall apply to establishing prices for labor, materials, and equipment costs:
1. Where Work to be completed has previously been established by individual bid items in the contract bid proposal the GC shall use the unit bid prices previously established.
2. Where Work to be completed was bid as a Lump Sum without individual bid items the GC shall provide a breakdown of all labor, materials, equipment including unit rates and quantities required.

D. The completion date is determined by Owner. The schedule, however, is the responsibility of the GC. Time extensions for extra Work will be considered when a schedule analysis of the critical path shows that the Change Order Request places the Work beyond the completion date stated in the Contract.

1.7. QUALITY ASSURANCE

A. The GC shall be responsible for ensuring that all COR supporting documentation meets the following 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 material 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 SECTIO

SECTION 01 26 63
CHANGE ORDER (CO)

PART 1 – GENERAL

1.1. SUMMARY

A. Except in cases of emergency, no changes in the Work required by the Contract Documents may be made by the General Contractor (GC) without having prior approval of the City Project Manager (CPM).

B. The City may at any time, without invalidating the Contract and without Notice to Sureties, order changes in the Work by written Change Order. Such changes may include additions and/or deletions.

C. The Change Order (CO) is a Board of Public Works (BPW) form that is reviewed and approved by a specific process.

D. The CO form is typically made up of multiple Change Order Requests (CORs) and/or Bid Items as appropriate depending on the type of project and how the contract was bid.

1.2. RELATED SPECIFICATION SECTIONS

A. Section 01 26 63 Change Order Request (COR)

1.3. BOARD OF PUBLIC WORKS PROCEDURE

A. The Board of Public Works has a very explicit procedure for the review and approval of all change orders associated with any Public Works Contract as follows:

1. The Supervisory Chain of the CPM shall review and approve any CO under $10,000 provided it does not include either of the following:
   a. The CO does not request a time extension to the contract.
   b. The CO does not cause the contract contingency sum to be exceeded.
2. The Board of Public Works shall review and approve any CO that requires any of the following:
   a. Any CO over $20,000.
   b. Any CO requesting a time extension to the contract regardless of the monetary value of the CO.
   c. Any CO that that causes the contract contingency sum to be exceeded.

B. The Board of Public Works generally meets every other week and only once in August and December. The GC is cautioned that, under normal scheduling, a CO requiring a BPW review will take a minimum of two (2) weeks to achieve final approval.

1. The City shall not be responsible for additional delays to the Work caused by the scheduling constraints of the Board of Public Works.

C. *SPECIAL NOTE:* The GC is cautioned to never proceed unless told to do so by the CPM. Only in rare instances may the CPM give a written notice to proceed on a COR without an approved CO. Proceeding without the written notice of the CPM or an approved CO is at the GC's own risk.

PART 2 – PRODUCTS

2.1. CHANGE ORDER FORM

A. Provided by CPM.

PART 3 - EXECUTION

3.1. PREPARATION OF THE CHANGE ORDER

A. The CPM shall prepare the required CO as follows:

1. Provide information for all contract information.

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

3.2. EXECUTION OF THE CHANGE ORDER

A. The GC shall do the following:
   1. Review all items on the CO form.
   2. The GC shall notify the CPM immediately of any errors or discrepancies on the form and shall not sign or save it.
      a. The CPM shall make any corrections as needed, re-save the form, and notify the GC.
   3. If/when the GC concurs with the CO form as drafted the GC shall digitally sign the form.

B. The CPM shall do the following:
   1. Monitor the review process
   2. Ensure that proper BPW procedures are executed as needed by the CO approval process.
      a. Schedule the CO on the next available BPW agenda if required.
         i. Attend the BPW meeting to speak on the CO to board members and answer questions.
         ii. The GC and/or PE may be required to attend the BPW meeting to address specific information as it relates to the Work and/or materials associated with the CO.
   3. Monitor final approval and distribution of the CO.
   4. Notify the GC that the CO has been completed.
   5. Ensure that the CO is posted to the next Public Works payment schedule.
   6. Verify that the GC's next Progress Payment-Schedule of Values show the CO as part of the contract sum.

C. Upon final approval of the CO the GC may proceed with executing the Work associated with the CO.

END OF SECTION

SECTION 01 33 23
SUBMITTALS

PART 1 – GENERAL

1.1. SUMMARY

A. The General Contractor (GC) shall be responsible for providing submittals for review of all contractors and sub-contractors as designated in the construction documents. Submittals shall include but not be limited to all of the following:
   1. Equipment specified and pre-approved in the specification; to ensure quality, construction, and performance specifications have not changed since final design.
   2. Equipment specified by performance in the specification; to ensure that the intended quality, construction, and performance specified is met by the selected material or product.
   3. Shop, piece, erection, and other such drawings as indicated in the specifications to ensure all structural, dimensional, and assembly requirements are being met.
   4. Submittals indicating installation sequencing
   5. Submittals indicating control sequencing
   6. Contractor licensing, certification, and other such regulatory documentation when required by a specification.
   7. Other submittals as may be required by individual specifications.

B. The submittal process shall not be used to determine alternates to specified products or equipment. All considerations shall be reviewed during the bidding process and acceptable alternates shall be acknowledged by addendum prior to the closing of bidding. See bidding instructions for the information on submitting alternates for consideration.

D. In the event that a manufacturer has significantly changed a product (discontinued a model, changed dimension or performance data changed available colors, etc.) since bid opening the GC shall Notify the City Project Manager requesting other approved alternates prior to uploading a digital submittal.

E. Contractors and sub-contractors shall be responsible for knowing the submittal requirements of ALL sections within their scope of work under the contract. The Owner reserves the right to request documentation on any materials, equipment, or product being installed where a submittal is not on file. If the material, equipment, or product installed is determined not to meet the intent of the specification the contractor/sub-contractor shall be required to remove and replace the items involved. The GC shall be solely responsible for all costs associated with the removal and replacement.

1.2. RELATED REFERENCES

A. All Technical Specifications, contract documents, construction drawings, and any published addendums during the bidding process.

B. All contract documents generated during the execution of the contract.

1.3. SUBMITTAL REQUIREMENTS

A. A completed submittal shall meet the following requirements:
   1. Digital submittal shall be original PDF of manufacturer's data sheets or high quality color scan of the same.
      a. Submittals shall not include sales fliers or other similar documents that typically do not provide complete manufacturers data.
   2. Documents within the PDF submittal shall be printable to a sized sheet no less than 8-1/2 by 11 inches and no larger than 24 by 36 inches.

3. At the beginning of each submittal the contractor shall identify the plan reference (WC-1, EF-3, etc.) in RED block letters that the submittal is for.
4. Where multiple model numbers appear in a table the contractor shall identify the specific model being submitted by using a RED square, box, or other designation to distinguish the correct model from others on the page.

B. A complete submittal will include all information associated with the product or equipment as presented in plans, equipment tables, and specifications. Information shall include but not be limited to the following:
1. Dimensional data
2. Performance data
3. Resource requirements, power, water, waste, etc.
4. Clearance and maintenance requirements
5. Finish information, colors, textures, etc.
6. Warranty information

C. Where a submittal includes material samples (carpet, tile, paint draw downs, etc.) the contractor shall do the following:
1. The Contractor shall submit the sample(s) as indicated in the specification.
2. The Contractor shall include a quality photograph(s) of the product with the digital submittal. Photographs shall meet the following requirements:
a. Formatted to be between 500Kb and 1.0 Mb in file size
b. Have no glare or flash reflection on the sample
c. Sample fills the frame of the photo and shows detail as needed. Include multiple photos from other angles as needed.
d. Scanned copies of products or photos are not acceptable.

D. Uploaded submittals should be relative and related to a specific written specification.
1. Do not upload submittals under a broad category or division (I.E. HVAC 23 00 00). Always upload by the specific specification that identifies a required product or performance to be met.
2. Group related items together if the specification is written that way. (I.E. all of the plumbing fixtures and trim relative to one specific specification should be submitted together).
3. Submittals shall be grouped and adhere to the divisions in the submittal schedule. Submittals that do not conform to the submittal schedule and/or specification divisions will be rejected for re-submittal.

PART 2 – PRODUCTS – THIS SECTION NOT USED

PART 3 - EXECUTION

3.1. GENERAL CONTRACTORS PROCEDURES

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

3.2. SUBMITTAL REVIEW

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

3.3. PROJECT ENGINEERS REVIEW

A. Upon completion of the internal review the Project Engineer shall review all internal review comments, confer with the CPM as needed and determine the appropriate disposition status for the submittal (approved or resubmit).
B. The Project Engineer shall summarize final internal review comments onto the submittal cover sheet, provide a final disposition of the submittal and update the review status of the submittal to “Complete…” (With or w/o comments) or “Rejected”.

C. A completed Final Review status initiates the CPM to notify the GC and appropriate sub-contractor(s) that the review of the submittal has been completed.

D. Information will be transmitted electronically.

END OF SECTION

SECTION 01 73 29
CUTTING AND PATCHING

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. Typical areas of cutting and patching for this project may include cutting and patching of metal deck and wall for enlarging scuppers.
   2. Examination
   2. Preparation
   3. Performance
   4. Cleanup and Restoration

1.2. RELATED SPECIFICATION SECTIONS-THIS SECTION NOT USED

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.

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 ina 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.

1.5. WARRANTY

A. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during cutting and patching operations, by methods and with materials so as not to void existing warranties.

B. All cutting and patching work performed under this contract shall be warranted like new work as defined by the Specification governing the work.

PART 2 - MATERIALS

2.1. GENERAL

A. Comply with requirements specified within other sections of the Specifications.

B. In-Place Materials: Use materials identical to existing in-place materials. For exposed surfaces use materials that visually match in-place adjacent surfaces to the fullest extent possible.

1. If identical materials are unavailable or cannot be used, use materials that, when installed, will match the visual and functional performance of in-place materials.

PART 3 - EXECUTION

3.1. EXAMINATION

A. Examine surfaces to be cut and patched and conditions under which cutting and patching are to be performed.

1. Compatibility: Before patching, verify compatibility with and suitability of substrates, including compatibility with in-place finishes or primers.
2. Proceed with installation only after unsafe or unsatisfactory conditions havebeen corrected.

3.2. PREPARATION

A. Temporary Support: Provide temporary support of Work to be cut.

B. Protection: Protect in-place construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of Project that might be exposed during cutting and patching operations. If the failure to protect, or the lack of protection, of in-place construction and/or existing conditions results in damage, the contractor shall be responsible for repair to previous condition.

C. Adjoining Areas: Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.

D. Existing Utility Services and Mechanical/Electrical Systems: Where existing services/systems are required to be removed, relocated, or abandoned, bypass such services/systems before cutting to eliminate interruption to occupied areas.

3.3. PERFORMANCE

A. General: Employ skilled workers to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time, and complete without delay.

1. Cut in-place construction to provide for installation of other components or performance of other construction, and subsequently patch as required to restore surfaces totheir original condition.

B. Cutting: Cut in-place construction by sawing, drilling, breaking, chipping, grinding, and similar operations, including excavation, using methods least likely to damage elements retainedor adjoining construction. If possible, review proposed procedures with original Installer; comply with original Installer's written recommendations.

1. In general, use hand or small power tools designed for sawing and grinding, not hammering and chopping. Cut holes and slots as small as possible, neatly to size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
2. Finished Surfaces: Cut or drill from the exposed or finished side into concealed surfaces.
3. Concrete or Masonry: Cut using a cutting machine, such as an abrasive saw or a diamond-core drill.
4. Excavating and Backfilling: Comply with requirements in applicable Division 3l Sections where required by cutting and patching operations.
5. Mechanical and Electrical Services: Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after cutting.
6. Proceed with patching after construction operations requiring cutting are complete.

C. Patching: Patch construction by filling, repairing, refinishing, closing up, and similar operations following performance of other Work. Patch with durable seams that are as invisible as possible. Provide materials and comply with installation requirements specified in other Sections.

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

3.4. CLEANUP AND RESTORATION

A. Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will eliminate evidence of patching and refinishing.

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

END OF SECTION

SECTION 01 74 13
PROGRESS CLEANING

PART 1 – GENERAL

1.1. SUMMARY

A. Throughout the execution of this contract all contractors shall be responsible for maintaining the project site in a standard of cleanliness as described in this specification.

B. All contractors shall also comply with the requirements for cleaning as described in other specifications.

C. Work included in this specification shall include but not be limited to:

1. Safety Cleaning
2. Project Site Cleaning
3. Progress Cleaning
4. Final Cleaning

1.2. RELATED SPECIFICAITONS

A. Section 01 60 00 Product Requirements

B. Section 01 74 19 Construction Waste Management and Disposal

C. Section 01 76 00 Protecting Installed Construction

1.3. QUALITY ASSURANCE

A. The General Contractor (GC) shall conduct daily inspections, more often if necessary, of the entire project site to ensure the requirements of cleanliness are being met as described within these specifications.

B. All contractors shall comply with other regulatory requirements as they apply to waste recycling, reuse, hauling, and disposal requirements of any governmental authority having jurisdiction.

C. The Owner reserves the right to have work done by others in the event any contractor fails to perform cleaning as described within these specifications. The cost of any Owner provided cleaning shall be charged to the contractor through a deduct change order.

PART 2 - PRODUCTS

2.1. CLEANING MATERIALS AND EQUIPMENT

A. The Contractor shall provide all required personnel, equipment, and materials necessary to maintain the required level of cleanliness as described in this specification.

B. Use only cleaning materials and equipment that are compatible with the surface being cleaned, as recommended by the manufacturer, or as approved by the A/E.

C. Use only cleaning materials, equipment, and methods as recommended in the manufacturers care and use guide of the material, finish or equipment being cleaned.

PART 3 - EXECUTION

3.1. SAFETY CLEANING

A. All Contractors shall be responsible for safety cleaning as required by OSHA and other regulatory requirements as applicable.

B. Safety Cleaning shall include but not be limited to the following:

1. All work areas, passageways, ramps, and stairs shall be kept free of debris, scrap materials, pallets, and other large items that would obstruct exiting routes. Small items such as tools, electrical cords, etc are picked up when not in use.
2. Form and scrap lumber shall have nails/screws removed or bent over. Lumber shall be neatly stacked in an area designated by the GC.
3. Spills of oil, grease, and other such liquids shall be cleaned immediately or sprinkled with sand/oil-dry first, then cleaned.
4. Oily, flammable, or hazardous items shall be stored in appropriate covered containers and storage devices unless actively being used.
5. Oily, or flammable rags, and other such waste shall only be disposed of in authorized covered containers.
6. Disposal by burning shall not be allowed at any time.

3.2. PROJECT SITE CLEANING

A. This section applies to the general cleanliness of the project site as a whole for the duration of the execution of this contract.

B. Exterior Project Site Areas

1. The GC and other Contractors as appropriate shall ensure the following levels of cleanliness are applied to the exterior project site areas.
   a. The overall appearance of the project site is neat and orderly. Defined areas for material storage, material waste, job trailers, and the project area are clean and well maintained.
   b. The construction fence is maintained, erect with no gaps, and properly posted per all regulatory requirements.
   c. All erosion control measures are properly maintained, cleaned, and repaired as necessary.
   d. All loose materials (construction or waste) are properly tied or weighted down to resist blowing.
   e. All construction materials are properly covered with fully functional tarps or plastic wrap, protected from the weather, coverings are tied, strapped, or weighted down to resist blowing.
   f. Dust control is applied as necessary or as required by any regulatory requirement.

C. Interior Project Site Areas

1. All Contractors shall ensure the following levels of cleanliness are applied to the interior project site areas.
   a. The overall appearance of the project site is neat and orderly. Defined areas for material storage, material waste, and project area are clean and well maintained.
   b. Stored materials are kept in original shipping containers whenever possible. Stored materials not in shipping containers are properly stored and protected according to other applicable specifications.
   c. All scraps and debris shall be properly disposed of as often as necessary to keep work areas, passageways, stairs, and ramps free of debris and clear for emergency exiting.
   d. Boxes, pallets, and other such shipping containers, are broken down, stored in a consolidated area or, disposed of as often as is necessary.
   e. Hand tools, supplies, materials, electrical cords not being used are picked up and sptored in gang boxes, not left as walking hazards in work areas, passageways, etc.

D. Job Trailer

1. The interior of the job trailer shall be kept clean and available as a work space at all times. The GC shall ensure that the following is provided for within the job trailer:
   a. Meeting space including tables and chairs.
   b. Sufficient space for all contractors to access the official construction documents, provide updates, etc.

3.3. PROGRESS CLEANING

A. This sub-section shall apply to all Progress Cleaning prior to the installation of finishes, fixtures, and trim (IE rough-in).

1. For the purposes of this section “clean” shall be defined as a level of cleanliness free of dust and other material capable of being removed by use of reasonable effort using a good quality janitor broom and shop-vac.
2. Daily cleanings shall be conducted by all contractors at the end of the work day as follows:
   a. Debris in excavated areas shall be removed prior to backfill and compaction.
   b. Debris in wall cavities, chase spaces, etc shall be removed prior to enclosing the spaces.
   c. Large items shall be properly stored, returned to designated areas, or disposed of as necessary.

d. Loose materials shall be properly secured.
e. Flammable or hazardous materials are properly stored or disposed of.

3. Weekly cleaning shall be conducted by all contractors as designated by the GC. Weekly cleanings shall include all the above for a daily cleaning and other necessary cleaning as designated by the GC.

B. This sub-section shall apply to Progress Cleaning in preparation for the installation of finishes, fixtures, and trim.
   a. Surfaces receiving finishes shall be thoroughly cleaned prior to contractors applying finish materials. The GC shall be responsible for inspecting the area and surfaces being cleaned for finish prior to the sub-contractor applying the finish. This shall include but not be limited to the following:
      i. Wall surfaces shall be wiped clean of dirt and oily residues, vacuumed free of dust, and shall be free of surface imperfections prior to painting or installing wall coverings.
      ii. Metal surfaces shall be wiped clean of dirt and oily residues, and be free of surface imperfections prior to painting.
      iii. Flooring shall be broom swept of large and loose items then vacuumed clean of dust and small particles, and damp mopped clean and dried prior to installing any flooring finish. Additional cleaning may be required depending on the preparation requirements recommended by the flooring material manufacturer.

C. This sub-section shall apply to Progress Cleaning after the installation of finishes, fixtures, and trim.
   1. For the purposes of this section "clean" shall be defined as a level of cleanliness free of dust and other material capable of damaging or visually disfiguring finished work, finishes, fixtures, and trim.
   2. Progress Cleaning at this point in the contract shall be conducted immediately as follows:
      a. Dust, dirt, etc shall be swept and vacuumed off of finish flooring and trim.
      b. Liquid spills shall be cleaned up according to the spill type. This shall include drips and spills caused by paint, stain, sealants, and other such items.
   3. The Contractor(s) at no additional cost to the Owner shall be responsible for replacing any finished work, finishes, fixtures, and trim damaged or disfigured because of inadequate or improper cleaning.

3.4. FINAL CLEANING

A. As noted in Specification 01 29 76 Progress Payment Procedures, Progress Payment Milestone Schedule, Final Cleaning shall not be conducted prior to requesting the 90% contract total progress payment and all of the following shall be complete:
   1. All final regulatory inspections including but not limited to Building Inspection Department and Madison Fire Department inspections have been successfully completed.
   2. All Quality Management Observation (QMO) reports have been closed out.
   3. All Demonstration and Training has been completed.
   4. All Attic Stock has been consolidated and located to its designated area
   5. All protection for installed construction shall be removed prior to final cleaning by the contractor responsible for providing the protections. This shall include the removal of any adhesive residues left behind from tapes. Contractors shall only use manufacturer authorized cleaning materials for removing adhesives, etc.

B. For the purposes of this section "clean" shall be defined as a level of cleanliness generally provided by skilled cleaners using commercial quality building maintenance equipment and materials.

C. The GC shall be responsible for ensuring that all requirements under this section are being met.

D. General Requirements
   1. Employ experienced personnel or professional cleaners for final cleaning as necessary for the areas or equipment being cleaned.
   2. Cleaning equipment used shall be commercial grade equipment commonly used by professional cleaners.
   3. Cleaning equipment and materials shall be cleaned, rinsed, or replaced to ensure a uniform level of cleanliness is being maintained during the final cleaning. This shall include but not be limited to the following:
      a. Vacuum cleaner bags and/or filters are changed and/or cleaned as often as necessary.
      b. Dust & wipe down rags are washed, rinsed, or replaced before starting each room.
      c. Mopping equipment
         i. Mop water for washing shall have cleaning solution added to the amount and temperature per manufacturer's recommendations. Mop washing water shall be replaced often to maintain the levels of the cleaning solution and temperature required.
         ii. Mop water for rinsing shall remain clean, clear, and be replaced as often as necessary.
         iii. Mop heads shall be rinsed often and replaced as necessary.

iv. Mop heads and buckets shall be thoroughly rinsed with each change of water.
v. Only new mop heads shall be used for rinsing.

E. Refer to all other specifications in this contract for specific requirements regarding final cleaning of finishes, fixtures, equipment, etc.

F. Exterior Cleaning shall include but not be limited to the following:
1. All exterior glazing surfaces have been professionally cleaned and are free of dust and streaking.
2. Metal roofs, siding, and other surfaces shall be clean of dirt and free of splashed or excess materials such as sealants, mortar, paint, etc.
3. All exterior furnishings shall be clean, waste receptacles shall be empty.
4. Paved areas shall be clean, free of dirt, oily stains and other such blemishes
5. Exterior lights and diffusers are clean and free of dust.

G. Interior Cleaning shall include but not be limited to the following:
1. Remove all labels, stickers, tags, and other such items which are not required by code as permanent labels.
2. All interior glazing surfaces, including mirrors, have been professionally cleaned and are free of dust and streaking.
3. All interior surfaces have been cleaned of excess materials such as paint, sealants, etc and have been wiped free of dust.
4. Interior metals, fixtures, and trim have been cleaned free of dust and oily residues
5. Carpet flooring has been thoroughly cleaned; vacuumed free of dust, excess glues and other stains removed per manufacturers use and care instructions.
6. Resilient flooring has been thoroughly cleaned; vacuumed free of dust, excess glues and other stains removed, mopped and buffed per manufacturers use and care instructions.
7. Interior non-occupied concrete floors shall be broom cleaned, vacuumed free of dust, excess glues and other stains removed per manufacturers use and care instructions.
8. Light fixtures, lamps, diffusers and other such items have been dusted and cleaned as necessary.

3.5. CALL BACK WORK

A. The GC shall be responsible for ensuring that any contractor returning to the project site for completion or correction work has re-cleaned and restored the area to the levels described in section 3.4 above upon completion of the work. This shall include but not be limited to the following:
1. The immediate area(s) where work was completed.
2. Adjacent areas where dust or debris may have traveled.
3. Other areas occupied during the completion of the call back work.
4. Path of entrance/exit, to/from the area(s) of work.

END OF SECTION

SECTION 01 74 19
CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

PART 1 – GENERAL

1.1. SUMMARY

A. This specification includes administrative and procedural requirements for the recycling, re-use, salvaging, and disposal of non-hazardous construction and demolition waste.

B. The General Contractor (GC) shall be fully responsible for complying with all applicable ordinances and other such regulatory requirements during the execution of this contract.

1.2. RELATED SPECIFICAITONS

A. 01 33 23 Submittals

B. Other Divisions and Specifications that may address the proper disposal of construction or demolition waste as it pertains to work being conducted under that particular specification.

1.3. CITY ORDINANCES

A. There are two (2) Madison General Ordinances (MGO) that the City of Madison has regarding construction and demolition waste.

1. MGO 10.185, Recycling and Reuse of Construction and Demolition Debris, describes the requirements associated with this ordinance including definitions, documentation requirements, and penalties.
2. MGO 28.185, Approval of Demolition (Razing, Wrecking) and Removal, describes the requirements associated with applying for and receiving a demolition permit.

B. All City of Madison, Board of Public Works, contracts being conducted by City Engineering, Facility Management, for construction, remodeling, or demolition shall comply with the above ordinances regardless of project type or size.

PART 2 – PRODUCTS – THIS SECTION NOT USED

PART 3 - EXECUTION

3.1. GENERAL GUIDELINES FOR ALL WASTES

A. Recycle all paper and beverage containers used by workers, sub-contractors, suppliers and visitors to the project site.

B. All revenues, savings, rebates, tax credits, and other such incentives received from recycling, reusing, or salvaging waste materials shall accrue to the GC unless specified otherwise in the contract documents.

C. Separate recyclable, reusable, and salvageable waste from other waste materials, trash, and debris.

1. Separate by type in appropriate containers or designated areas according to the approved waste management plan away from the construction area. Do not store within the drip lines of existing trees.
2. Inspect containers and bins frequently for contamination and inappropriately sorted materials. Remove contaminated materials and resort as necessary.
3. Stockpile bulk materials such as sand, topsoil, stone, etc., on site away from the construction area and without intermixing with other materials. Place, grade, and shape stockpiles to drain surface water, and cover to prevent windblown dust. Do not store within the drip lines of existing trees.
4. Whenever possible store items off the ground and/or protect them from the weather.

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

A. The following guidelines is not a complete or all-inclusive list and shall be adjusted as needed by the methods and procedures identified in the Waste Management Plan.

B. Asphalt Paving: Break-up into transportable pieces or grind, transport to an authorized recycling facility.

C. Carpet and Pad: Separate carpet and pad scraps, containerize and transport to an authorized recycling facility.

D. Ceiling System Components: Suspended ceiling system components shall be sorted by material type as follows:
   1. Broken, cut, or damaged tiles shall be containerized, transport to an authorized recycling facility.
   2. Damaged, or cut tracks, trim and other metal grid system components shall be sorted with other metals of similar types, palletize, transport to an authorized recycling facility.

E. Clean Fill: When allowed by Division 31 Specifications; concrete, masonry, stone, asphalt pavement, sand and other such materials may be used as clean fill on this project site. The GC shall verify with the Project Engineer, Structural Engineer, or Civil Engineer as necessary prior to using any materials as clean fill. Materials shall be processed, placed, and compacted as specified. If not being re-used on site, transport to an authorized recycling facility.

F. Clean Wood Materials: Including but not limited framing cutoffs, wood sheathing or paneling materials, structural or engineered wood products, and pallets or crates. Clean Wood shall be free of paints, stains, oils, preservatives and other such contaminates.
   1. Useable pieces shall be sorted by type and dimension, bundled and transported off site by the GC or returned to the supplier.
   2. Non-useable pieces shall be palletized or containerized, transport to an authorized recycling facility.
   3. Clean, uncontaminated sawdust and wood shavings shall be bagged, transport to an authorized recycling facility.

G. Concrete: Break-up into transportable pieces, remove all reinforcing and other metals, transport to an authorized recycling facility.

H. Glass Products: Shall be sorted by types, do not include light fixture lamps and bulbs. Products broken in shipment shall be returned to the supplier. Broken or cracked items still in frames shall be taped to prevent further breakage and injury to workers. Transport to an authorized recycling facility.

I. Gypsum Board: Stack large clean pieces on wooden pallets or container, store in a dry location, transport to an authorized recycling facility.

J. Light Fixture Lamps and Bulbs: Fluorescent tubes shall be containerized, transport to an authorized recycling facility.

K. Masonry and CMU: Remove all metal reinforcing, anchors, and ties, clean undamaged pieces and neatly stack on pallets, transport damaged pieces to an authorized recycling facility.

L. Metals: Sort metals by type as follows, this does not include piping:
   1. Architectural metals including but not limited to siding, soffit, and roofing panels shall be sorted by material, palletize or bundle as needed and transport to an authorized recycling facility.
   2. Structural steel, sort by size and type; palletize and transport to an authorized recycling facility.
   3. Miscellaneous metals such as aluminum, brass, bronze, etc. shall be sorted by type, containerized or palletized as necessary, transport to an authorized recycling facility.

M. Packaging and shipping materials
   1. Cardboard boxes and containers: Breakdown all cardboard boxes and containers into flat sheets. Bundle and store in a dry location until transported for recycling.
   2. Pallets:
      a. Whenever possible require deliveries using pallets to remove them from the project site.
      b. Neatly stack pallets in preparation for reusing them or providing them to other companies for salvage or re-use.
      c. Break down pallets into component wood pieces that comply with the requirements for recycling clean wood materials. Neatly stack or palletize pieces in preparation for transportation.
   3. Crates: Break down crates into component wood pieces that comply with the requirements for recycling clean wood materials. Neatly stack or palletize pieces in preparation for transportation.
   4. Polystyrene Packaging: Separate and bag materials.

N. Piping and conduit: Reduce all piping and conduit to straight lengths, sort and store by size, material and type. Remove supports, hangers, valves, boxes, sprinkler heads, and other such components, sort and store by size, material and type. Transport to authorized recycling facilities according to material types.

O. Roofing: Roofing materials shall be sorted and containerized by type, transport to authorized recycling facilities according to material types.

P. Site-Clearing Waste: Sort all site waste by type.

1. Only stockpile soils types and quantities required for re-use on the project site. All remaining quantities shall be transported off site to an authorized facility that receives such materials.
2. Brush, branches, and trees with no marketable re-use shall be transported to facilities for chipping into mulch.
3. Trees with a marketable re-use shall be salvaged and transported to facilities that specialize in processing trees for future use as wood products.

3.3. GUIDELINES FOR DISPOSAL OF WASTES

A. Any waste that is contaminated, organic, or cannot be recycled, re-used, or salvaged shall be legally disposed of in an authorized landfill or incinerator. Disposal methods shall follow all applicable regulatory requirements.

B. No waste material of any kind shall be allowed to be buried on the project site at any time.

C. No burning of any kind of waste material shall be permitted on this project site at any time.

D. Paint and Stain: Paints, stains, and their containers shall be disposed of as follows:
1. Whenever possible containers should be thoroughly cleaned immediately after emptying and sorted with as appropriate (metal or plastic) for recycling
2. Empty containers, regardless of type or base material, may be disposed of with lids off with general garbage.
3. Latex paint may be placed with general garbage if properly solidified as follows:
   a. Small amounts (an inch or less in can): Remove lids and allow paint to dry out in the can and harden. Protect cans from rain and freezing.
   b. Large amounts (more than one inch): Mix paint with equal amounts of cat litter, stir and allow to completely dry. Alternate method: mix with commercial paint hardener.
4. Oil-based or combustible paints and stains, regardless of liquid or solid, shall be transported to an approved facility that takes such items such as Dane County Clean Sweep Sites.

E. Treated Wood Materials: Treated wood materials including but not limited to wood that has been painted, stained, or chemically treated shall not be recycled or incinerated.

END OF SECTION

SECTION 01 76 00
PROTECTING INSTALLED CONSTRUCTION

PART 1 – GENERAL

1.1. SUMMARY

A. The purpose of this specification is to provide clear responsibilities, guide lines, and requirements related to providing protection to already installed construction.

B. Already installed construction shall include but not be limited to the following:

1. Any existing site feature such as pavement, curbs, drainage features, utilities, landscaping features (trees, shrubbery, plantings, flagpoles, etc) and other such exterior items not associated with the building whether on or adjacent to the project site.
2. Any existing structure on or adjacent to the project site.
3. Any existing interior work that may be adjacent to the new work including all paths of ingress/egress to areas associated with accessing the Work.
4. Any existing feature of any kind within the public right-of-way that may be on the project site property, adjacent to the project site or across the street from the project site.

C. All contractors shall be familiar with the specifications of their Division of Work for specific requirements on protection of the Work.

D. The requirements noted within this specification do not relieve any contractor of the responsibility for compliance with any code, statute, ordinance, or other such regulatory requirement having jurisdictional authority over these contract documents.

1.2. QUALITY ASSURANCE

A. It shall be the responsibility of every contractor and worker assigned to the project to be diligent in protecting all existing work, and newly installed construction.

B. It shall be the General Contractors' (GC) responsibility under the contract to provide all reasonable protection methods, materials, or precautionary measures required to protect new or existing construction as described in within this specification to the project as a whole.

1. The GC shall be responsible to ensure any damaged new or existing construction is repaired or replaced at no additional cost to the Contract.
2. The GC at his/her discretion may direct other contractors to provide and maintain protection of completed work associated with their Division of Work. I.E.: The carpet installer may be required by the GC to provide carpet protection along traveled paths, ingress/egress, etc after installation.

C. It shall be the responsibility of the GC to ensure that all materials being used to protect installed construction are compatible with, and/or adjacent to, the materials being protected. This shall include but not be limited to the material used as covering, tapes used to fasten protective materials, etc.

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 **2**10.2" 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.

2. Shall provide materials of sufficient quality, and durability to provide adequate protection based on the seasonal conditions and the anticipated duration at the time the protection will be needed.
3. Shall provide sufficient quantity of protection material to protect the construction as needed.

B. Prior to installing protective measures the responsible contractor shall propose to the GC, Project Engineer (PE) and City Project Manager (CPM) the proposed plan for protection, materials to be used and samples as necessary.
1. The PE and CPM reserve the right to disapprove any proposed method and/or material and/or make alternate proposals.

PART 3 - EXECUTION

3.1. GENERAL EXECUTION REQUIREMENTS

A. The GC shall be responsible for ensuring all of the following procedures and requirements are implemented as needed for the duration of the Work performed under this contract.

B. The GC shall also be responsible for the following:
1. Reporting any incident of damage to existing property, right-of-way, or utility to the CPM immediately upon rendering the incident safe, and notifying emergency response teams, and emergency utility crews as needed.
2. Conduct a site walk through prior to leaving at the end of each day to assess:
   a. Protection measures are properly in place, provide correction actions as necessary.
   b. Note damage to existing completed work and schedule repair/replacement as needed.
3. Ensure all contractors and workers are being diligent in protecting existing work, and newly installed construction.

3.2. PROTECT ADJACENT PROPERTIES

A. Whenever possible through the design process the City of Madison shall have previously provided notice to adjacent property owners that work will be occurring on or near their property. The City of Madison shall also have obtained any permanent or temporary easements that may be necessary to complete any Work on adjacent properties.

B. It shall be the responsibility of the GC to do the following for all Work under this contract being performed on or adjacent to the property line:
1. Contact the adjacent property owner and provide him/her with information on the work to be done, equipment to be used, and estimated duration of the work. Information to be updated and communicated to property owner(s) as construction progresses and site conditions change.
   a. If any adjacent property is a rented or leased space the GC shall also make contact and provide the same information to the tenants.
   b. Determine from the owner and/or tenants if there are any concerns for children, pets, special plantings, or other concerns.
2. Discuss the following with all contractors performing work on or near the property line.
   a. Work to be completed and timeline.
   b. Concerns of adjacent property owners/tenants from item 1 above.
   c. Which protective measures will be necessary to protect adjacent properties and address the concerns of adjacent property owners/tenants.
3. Ensure all protective measures are placed and maintained during the execution of Work on or adjacent to the property line. Interact with the adjacent property owners/tenants as needed.

C. Any contractor doing work on or adjacent to the property line shall install and maintain any protective measure identified in the contract documents, this specification, or as directed by the GC.

D. The GC shall be responsible for restoring any damage to structure and property located on or adjacent to the property line.
1. Restoration shall include but not be limited to repair or replacement using like materials and finishes to its original condition or better.
2. Restoration of landscaping materials shall include watering of any seed, sod, or other planting of any kind for a reasonable period of time to encourage germination and root development.

E. The GC shall keep the CPM informed directly to any issues pertaining to adjacent property owners and tenants.

3.3. PROTECT LANDSCAPING FEATURES

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

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

3.4. PROTECT UTILITIES

A. The contractor shall be responsible for notifying all utilities to determine emergency response procedures and protection requirements prior to installing any construction protection.
   1. This includes requesting utility marking through Diggers Hotline.
      a. Call 811 or 1-800-242-8511 to request a public utility locate
      b. For emergency locate call (262) 432-7910 or (877) 500-9592
   2. Contact the Owner and CPM for any available private utility information on the property that may be available prior to calling a private utility locating company.

B. Except where specifically stated in other areas of the construction documents the following minimal protection requirements shall apply under this section.
   1. Hydrants, lamp posts, electrical transformers, and other utility pedestals shall be protected with Type D fencing for areas on pavement or Type E fencing for areas on soil. Fence posts shall be located so as to not be directly over the utility main.
   2. Storm sewer structures in pavement shall have proper inlet protection according to City of Madison Standard Specification 210.1(g) and Type C Construction Barrels when necessary.
   3. Storm sewer structures in turf and other landscaped areas shall have proper inlet protection according to City of Madison Standard Specification 210.1(g) and Type E fencing for areas on soil.
   4. Stormwater management features such as greenways, retention/detention ponds, bio-filtration ponds and other such features shall be properly protected according to the appropriate erosion control measure specified on the Erosion Control Plan. See multiple sections of City of Madison Standard Specification 210.1
      a. For the protection of hard to see items such as structures, castings, inlets, etc. in grassy areas provide Type E fencing for areas on soil.
      c. For the protection of storm water management features having special soils and plants such as bio-filtration ponds provide Type E fencing for areas on soil.
   5. Other structures and covers including but not limited to cleanouts, wiring hand holes, valve boxes, access structures, grease trap structures, etc shall be protected as follows:
      a. Provide Type E fencing for areas on soil.
      b. When paving operations are complete provide a construction barrel or cone near structures as necessary depending on required heavy construction traffic.

3.5. PROTECT PUBLIC RIGHT OF WAY

A. Except where specifically stated in other areas of the construction documents the following minimal protection requirements shall apply under this section.
   1. All public right-of-way (area from behind the sidewalk to the centerline of the street) shall remain open and accessible except during periods of active work. At such times the public right of way shall be properly closed and signed as referenced in City of Madison Standard Specification 107.9.
   2. Bus stops and bus stop structures shall remain accessible at all times.
   3. Traffic signage and traffic signals, traffic control boxes shall be protected with Type D fencing for areas on pavement or Type E fencing for areas on soil.
      a. Protection at traffic signage/signals shall not obstruct the viewing of the sign/signal for its intended purpose at any time.

B. When additional protection for traffic control is required, the use of barricades, guardrails, lane closures and other such procedures will be detailed within the construction documents.

C. When additional protection for overhead sidewalk cover is required the contract documents shall indicate the specific location and structural requirements of the protective structure.

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.

C. All protection shall stay in place until the CPM, PE, and GC mutually deem the project is ready for Final Cleaning. The contractors responsible for protecting the work shall be responsible for removing the protection and removing any adhesive residue at that time. Contractors shall only use manufacturer authorized cleaning materials for removing adhesives, etc.

D. Contractors doing work in un-protected areas of finished work shall be required to provide drop cloths and other protection as noted within this specification for the duration of their work.
   1. Finished areas shall be sufficiently covered to accommodate all equipment, and materials being used to complete the work being done.
   2. Finished areas shall be sufficiently covered to prevent splatters, over spray, etc when doing touch-up work.
   3. Contractors who do not provide sufficient protection under this sub-section shall be responsible for any costs associated with cleaning, repairing or replacing already finished construction at no additional cost to the contract.

END OF SECTION

SECTION 01 77 00
CLOSEOUT PROCEDURES

PART 1 – GENERAL

1.1. SUMMARY

A. The purpose of this specification is to clearly define and quantify the requirements associated with closing a City of Madison Public Works Contract for facility related work.

B. All contracts have two distinct but related paths. Each path needs to be properly closed independently in order to close the contract as a whole.

1. Construction closeout is related to closing out all of the Work associated with the construction documents.
   a. It shall be the responsibility of all contractors to be fully aware of the required Work and closeout requirements involved in their individual trades.
2. Contract closeout is related to closing out all of the administrative aspects of the contract in general.
   a. It shall be the responsibility of all contractors to be fully aware of the administrative requirements required by the contract and to provide the supporting documentation required.
3. Construction Closeout must be completed before Contract Closeout can begin.

C. This specification will provide general knowledge associated with the following areas:

1. Construction Closeout Requirements
2. Construction Closeout Procedure
3. Contract Closeout Requirements
4. Contract Closeout Procedure
5. Final Payment and Certificate of Completion

1.2. RELATED SPECIFICATIONS

A. Contractors shall review all references to other specifications including specifications relating to the execution of the Work associated with their Division or Trade.

B. Section 01 29 76 Progress Payment Procedures
C. Section 01 32 16 Construction Progress Schedules
D. Section 01 74 13 Progress Cleaning
E. Section 01 45 16 Construction Waste Management and Disposal
F. Section 01 76 00 Protecting Installed Construction
G. Section 01 78 23 Operation and Maintenance Data
H. Section 01 78 36 Warranties
I. Section 01 78 39 As-Built Drawings
J. Section 01 79 00 Demonstration and Training
K. Other requirements as noted in the contract documents signed by the General Contractor

1.3. DEFINITIONS

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

State of Wisconsin Department of Health and Safety as necessary to clear plan review requirements. This letter does not represent construction closeout.

B. ***Certificate of Occupancy***: The Regulatory letter from the City of Madison Building Inspection Department indicating that all regulatory requirements and inspections have been completed and the building may now be occupied for its intended use. This letter does not represent construction closeout.

C. ***Certificate of Substantial Completion***: A letter provided by the Department of Public Works, signed by the City Engineer indicating that Construction activities are substantially complete. This letter does represent construction closeout and the date of this letter begins the date of the Warranty Period.

D. ***Construction Closeout***: The point in the contract where all contractual requirements associated the execution of the Work as described in the plans, specifications, and other documents have been successfully met and the items described in 1.3.A, .B, and .C above have been completed.

E. ***Final Progress Payment***: The progress payment associated with achieving Construction closeout as described in 1.3.D above. At this point the contractor may request all monies associated with the contract be paid with the exception of held retainage.

F. ***Contract Closeout***: The point in the contract where all contractual requirements associated with the City of Madison, Board of Public Works contract has been successfully met.

G. ***Final Payment***: The final contract payment submittal that may be approved by the City of Madison after all contractual requirements of the Public Works Contract have been met and any remaining monies (retainage) due to the contractor may be released for the Final Payment.

1.4. QUALITY ASSURANCE – CONSTRUCTION CLOSEOUT

A. All contractors shall be responsible for properly executing the construction closeout requirements associated with their Work as described in the specifications governing their Work.

B. The GC shall be responsible for all of the following:

1. Ensuring that all contractors have met the construction closeout requirements associated with their Work.
2. Coordinate the collection of all construction closeout deliverables from all contractors, provide the deliverables to the Project Engineer and City Project Manager for review as necessary, and ensure all contractors correct deficiencies of deliverables and resubmit as needed for final acceptance.
3. Ensure all closeout requirements identified in the Construction Closeout Checklist below have been completed as intended by the construction documents.

1.5. QUALITY ASSURANCE – CONTRACT CLOSEOUT

A. The City of Madison, Department of Civil Rights (DCR) monitors contract compliance for construction and procurement contracts to ensure that local, state and federal regulations are followed by contractors working on City of Madison Public Works (PW) projects. DCR will monitor all PW projects from contract award through the final payment at the close of the project. Contractors will be required to submit reporting paperwork throughout the PW project process.

1. Contractors are encouraged to visit the web site identified below for additional information, checklists, forms, and other information provided by DCR as it relates to Contract Compliance.
   http://www.cityofmadison.com/Business/PW/contractCompliance.cfm
2. Questions regarding the process should be directed to parties and offices as identified on the various forms, documents, and instructions or contact:
   City of Madison, Department of Civil Rights
   210 Martin Luther King Jr. Blvd., Room 523
   Madison, WI 53703
   (608) 266-4910

B. All Sub-Contractors have submitted the applicable required documents described in item 1.5.D below to the General Contractor (GC) for Contract Closeout.

C. The GC has submitted the required applicable documents described in item 1.5.D below for all contractors to the appropriate City of Madison Agency per instructions associated with each submittal.

D. The documents required for submittal to the City of Madison for Contract Closeout may include any/all of the items listed below depending on contract type. It is the sole responsibility of all contractors to know and submit the required and complete documentation in a timely fashion.

1. Weekly Payroll Reports
2. Employee Utilization Reports
3. Agent or Subcontractor Affidavit of Compliance with Prevailing Wage Rate Determination
4. Prime Contractor Affidavit of Compliance with Prevailing Wage Rate Determination

5. Documentation required for Small Business Enterprise (SBE) goals
6. Other documents as maybe required or requested through the Finalization Review Process

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.

Title	Specification	Description	Responsibility	Completed
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.

3.3. CONSTRUCTION CLOSEOUT PROCEDURE

A. Upon successful completion and final acceptance of all Construction Closeout Requirements the GC may submit to the CPM and PE the request for Final Progress Payment (100% contract total, less retainage).

B. The PE will confirm with the design consultants, CPM, and other City of Madison staff that all requirements of the Work have been completed and will do the following:
   1. Approve the final progress payment application
   2. Provide the required signed payment documents to the CPM
   3. Provide the required Letter of Substantial Compliance to the following as required:
      a. State Safety and Building Division
      b. Local Building Inspection office
      c. GC
      d. CPM

C. The CPM shall draft the City Letter of Substantial Completion for signature by the City Engineer. This letter shall state any of the following that may still be tied to the contract and/or warranty:
   1. Indicate that the date of the letter shall also be the beginning of the Warranty period.
   2. Indicate any allowed due outs, reasons for them, and anticipated dates of finalization.

D. The GC and all subcontractors shall finalize all warranty letters associated with their Work using the date noted on the City Letter of Substantial Completion, and provide the CPM with all warranties as described in Specification 01 78 36 Warranties. Upon receipt and final approval of the Warranties the CPM may initiate final processing of the Final Progress Payment (100% contract total, less retainage).

3.4. CONTRACT CLOSEOUT REQUIREMENTS

A. The GC and all sub-contractors shall follow all requirements associated with documenting contract compliance and provide documentation as required or requested by DCR or PW staff. All contractors are encouraged to stay current with submissions of the following documentation:
   1. Weekly Payroll Reports no later than the Progress Payment equal to 50% of the contract total.
   2. Employee Utilization Reports
   3. Agent or Subcontractor Affidavit of Compliance with Prevailing Wage Rate Determination
   4. Prime Contractor Affidavit of Compliance with Prevailing Wage Rate Determination
   5. Documentation required for Small Business Enterprise (SBE) goals
   6. Other documents as maybe required or requested through the Finalization Review Process

B. Near the Progress Payment equal to 80% of the contract total the GC shall request in writing a Finalization Review. At that time DCR or PW staff shall prepare a report of all contract documentation submitted to date. A list of missing items or outstanding issues will be emailed to the GC. No additional follow-up will be generated by DCR or PW Staff.

3.5. CONTRACT CLOSEOUT PROCEDURE

A. The Contract Closeout Procedure will not begin until the Construction Closeout Procedure has been completed.

B. When the GC feels he/she has successfully met all of the Contract Closeout Requirements associated with Section 3.3 above the GC may submit to the request for Final Payment to the CPM.

C. The CPM shall sign and submit the Final Payment request for processing.

D. DCR and PW staff shall do a complete review of all documentation associated with item 3.3.A above.

E. The GC shall be notified directly by DCR or PW Staff of any documentation that may still be missing, have incomplete information, or other outstanding issues. It shall be the responsibility of the GC to continue follow-up with DCR and PW staff until all documentation has been successfully submitted and accepted.

F. When all required documentation associated with Contract Closeout has been successfully submitted and accepted by DCR and PW Staff the City of Madison shall process the Final Payment of any remaining monies including retainage.

END OF SECTION

SECTION 01 78 23
OPERATION AND MAINTENANCE DATA

PART 1 – GENERAL

1.1. SUMMARY

A. The purpose of this specification is to provide clear responsibilities and guide lines related to providing well documented and complete Operation and Maintenance (O&M) Data related to general facility use, equipment, systems, finishes, and materials to City of Madison Staff (Owner, Owner Representatives, Maintenance, and Custodial Personnel) as needed.

B. For primary roofing projects Operation and Maintenance Data shall consist to both of the following categories:

1. Operation and Maintenance Data: Generally shall mean the owner manual that provides information on start-up, shut-down, operation, troubleshooting, maintenance, parts, and other such documentation as it pertains to all equipment and systems installed under the Work.
2. Use and Care instructions: Where applicable use and care instructions shall also be considered O&M for such things as flooring, tile, partitions, and other such finishes and trim related items, installed under the Work.

1.2. RELATED SPECIFICATIONS- THIS SECTION NOT USED

1.3. QUALITY ASSURANCE

A. All O&M Data shall meet the requirements identified in Section 1.4 below.

B. All contractors shall provide O&M Data for each piece of equipment, system, or finish installed during the installation of the Work. O&M Data shall be provided to the General Contractor (GC) for verification and submittal.

C. The GC shall be responsible for receiving all required O&M Data files from all contractors for verifying that all files submitted meet the requirements in Section 1.4 below.

1.4. O&M DATA REQUIREMENTS

A. O&M Data shall be provided in digital PDF format as follows:

1. PDF files shall be complete first generation consumer useable editions of PDF documents as provided by any of the following:
   a. Product manufacturer
   b. Supplier of product
   c. Product manufacturer internet site
2. Acceptable PDF files shall have the following functionality:
   a. Word searchable
   b. Key areas are bookmarked
   c. Table of Contents and/or Index linked to content is preferred whenever possible.
3. Scanned printed material, with word searchable capabilities, saved as a PDF, is not acceptable and will be rejected without further review.

B. O&M Data shall include but not be limited to the following manufacturers' published information as appropriate for the equipment, system, material, or finish:

1. Product Data Sheets for all materials used in the roofing system installation, including drains, roof hatches and other specialty products as applicable.

2. Shop drawings for insulation thickness (taper plan) with over all R-Value, all details used for the roofing system i.e. penetrations, terminations, drains, scuppers and flashing.
3. Maintenance procedures and recommended inspections
4. General use, care, and cleaning instructions
5. Special precautions and safety requirements
6. A list of certified equipment vendors, service companies, parts suppliers including company name, address, and phone number
7. Warranty information for roofing systems (Manufacturers and Installer), metal flashing warranty and other specialty equipment as applicable.

1.5. O&M DATA SUBMITTALS

A. O&M Data shall be prepared as identified in this specification.

B. O&M Data Draft submittals will be reviewed for content, procedure, and compliance only. A general critique with recommendations for improvement will be made but re-submittals will not be required.

C. O&M Data Final submittals will be reviewed for content, procedure, and compliance. Re-submittals will be required until such time as each submittal is accepted.

PART 2 – PRODUCTS – THIS SECTION NOT USED

PART 3 - EXECUTION

3.1. O&M DATA PREPARATION - GENERAL

A. All contractors shall prepare O&M Data for draft and final submission as follows:
1. Obtain digital PDF files for each piece of equipment, system, material or finish as described in Sections 1.4.A.1 and 1.4.A.2 above.
2. Verify that all information as described in Section 1.4.B above is included with the PDF file. Obtain missing information as necessary for a complete submittal.

B. Submit the Draft copy of O&M Data in a single PDF file. City Project Manager, and Owner Representatives shall review the O&M Data submittals within fifteen (15) working days. The GC shall make any noted revisions to the O&M file and resubmit within fifteen (15) working days.

C. The GC shall submit the completed digital PDF files to the City Project Manager prior to final Payment.

3.2. O&M DATA DRAFT SUBMITTAL-THIS SECTION NOT USED

3.3. O&M DATA FINAL SUBMITTAL-THIS SECTION NOT USED

3.3. CONSTRUCTION CLOSEOUT-THIS SECTION NOT USED

END OF SECTION

SECTION 01 78 36
WARRANTIES

PART 1 – GENERAL

1.1. SUMMARY

A. The purpose of this specification is to provide clear responsibilities and guide lines related to providing all Warranties and Guarantees related to the Work, workmanship, materials, equipment, and other such items required by the Construction Documents.

B. Manufacturers' disclaimers and limitations on product warranties do not relieve any contractor of the warranty on the Work that includes the product.

C. Manufacturers' disclaimers and limitations on product warranties do not relieve suppliers, manufacturers and any contractor required to provide special warranties under the contract documents.

1.2. RELATED SPECIFICATIONS

A. Section 01 78 23 Operation and Maintenance Data

B. Other Divisions and Specifications that may address more specifically the requirements for Warranties related to the installation of all items and equipment installed under the execution of the Work.

1.3. DEFINITIONS

A. Emergency Repair: The Owner or Owner Representative reserves the right to make emergency repairs as required to keep equipment or materials in operation or to prevent damage to property and injury to persons without voiding the contractors warranty or bond or relieving the contractor of his/her responsibilities during the warranty period.

B. Installer: The company or contractor hired to install a finished product that was manufactured and supplied specifically for the Work within this contract. The Installer may or may not be the same company that supplied the product. See the definition for supplier.

C. Supplier: Any company that makes a specific finished product for the Work from information within the Contract Documents. Examples of suppliers would include custom cabinets, steel stairs and railings, etc. A supplier would not be a company that distributes items manufactured by others such as an electrical or plumbing supplier.

D. Warranty: A written guarantee from the manufacturer to the owner on the integrity of a product and its installation, and the manufacturers' responsibility to repair or replace the defective product or components within a specified time from the date of ownership. Warranty may also be used interchangeably with Guarantee. The following warranty types may be part of any specification within the Work associated with the Construction Documents:

1. Expressed Warranty: A warranty that provides specific repair or replacement for covered components of a product over a specified length of time.
2. Implied Warranty: A warranty that is not stated explicitly by a seller or manufacturer that the product is merchantable and fit for the intended purpose.
3. Standard Product Warranty: Preprinted written warranties published by individual manufacturers for particular products and are specifically endorsed by the manufacturer to the Owner. Standard warranties may be for any amount of time but shall not be for anything less than one (1) year from the warranty date.
4. Special Warranty: A written warranty required by the Contract Documents either to extend the time limit provided under a standard warranty or to provide greater rights to the Owner.

F. Warranty Date: The effective date that begins all warranty periods required for products, installations, and workmanship associated with the execution of the Work for this contract. The Warranty Date shall be set by the CPM.

G. Related Damages and Losses: When correcting failed or damaged Warranted Work, remove and reinstall (or replace if necessary) the construction that has been damaged as a result of the failure or the construction that must be removed and replaced to obtain access for the correction of Warranted Work.

H. Reinstatement of Warranty: When Work covered by a warranty has failed and been corrected reinstate the warranty by a new written endorsement. The reinstated warranty shall be equal to the original warranty with an equitable adjustment for depreciation unless specifically noted otherwise in a specification.

I. Replacement Cost: All costs that may be associated with Work being replaced under warranty including but not limited to the following:
   1. Related damages and losses
   2. Labor, material and equipment
   3. Permits and inspection fees
   4. This shall be regardless of any benefit the Owner may have had from the Work through any portion of its anticipated useful service life.

J. Replacement Work: All materials, products, required labor, and equipment necessary to replace failed or damaged warranted to an acceptable condition that complies with the requirements of the original Construction Documents.

K. Owners Recourse: Expressed warranties made to the Owner are in addition to implied warranties and shall not limit the duties, obligations, rights, and remedies otherwise available under the law. Expressed warranty periods shall not be interpreted as limitations on the time in which the Owner can enforce such other duties, obligations, rights, and remedies.
   1. Rejection of Warranties: The Owner reserves the right to reject any warranty and to limit the selection of products with warranties not in conflict with the requirements of the contract documents.
   2. Where the Contract Documents require a Special Warranty or similar commitment on the Work or product, the Owner reserves the right to refuse acceptance of the Work until the Contractor presents evidence the entities required to countersign such required commitments have done so.

1.4. GENERAL CONTRACTORS RESPONSIBILITIES

A. The General Contractor (GC) shall be responsible to remedy, at his/her expense, any defect in the Work and any damage to City owned or controlled real or personal property when the damage is a result of:
   1. The GC's failure to conform to Contract Document requirements.
      a. Any substitutions not properly approved and authorized may be considered defective.
   2. Any defect in workmanship, materials, equipment, or design furnished by the GC or Sub-contractors.

B. All warranties as described in this specification and these Contract Documents shall take effect on the date established by the CPM, as noted in Section 1.3F above.
   1. All warranties shall remain in effect for one (1) year thereafter unless specifically stated otherwise in the Contract Documents or where standard manufacturer warranties are greater.

C. The GC's warranty with respect to Work repaired or replaced, including restored or replaced Work due to damage, will run for one (1) year from the date of Owner Acceptance of said repair or replacement.
   1. This shall be regardless of any benefit the Owner may have had from the Work through any portion of its anticipated useful service life.

D. Warranty Response
   1. See Section 3.5 of this specification.

PART 2 – PRODUCTS - THIS SECTION NOT USED

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.

Title	Specification	Terms	Completed
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 Section1.3.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.

3.3. STANDARD PRODUCT WARRANTY

A. All contractors shall be responsible for collecting and providing copies of all standard product warranties for commercially available products purchased and installed under this contract.

B. Only one copy of the manufacturers' standard warranty needs to be submitted as representative for all quantities of the same model number used throughout the Work.

C. Provide the manufacturers certificate, letter, or other standard documentation for each Standard Product Warranty submitted as follows:
1. Whenever possible a PDF version of the document shall be used.

a. If a PDF version is used all additional information shall be completed using simple PDF editing tools such as text boxes, highlight, etc.
b. If a PDF version is not available and an original document is furnished the additional information shall be neatly hand written and highlighted on the document in such a fashion so that it does not obscure any part of the written warranty.

2. Provide the following additional information on each warranty document:
a. Contract warranty date.
b. Provide the manufacturer name and model number of the product if not specified within the warranty.
i. Where the manufacturer name and model number is specified within the warranty it shall be highlighted for visibility.
c. Provide the plan identifier (LAV-1, WC-2, etc.) when applicable.

D. Each completed warranty shall be saved as a digital PDF. The file shall be named using the specification number and item description. I.E. 22 42 00 Toilet (WC-1).pdf
a. Where an original certificate was furnished provide a high quality colored scan of the completed document with the additional information. Save the scanned image in PDF format and use the same naming convention as indicated above.

E. Provide all PDF files and any original documents to the GC for final consolidation to be provided to the Owner.

3.4. FINAL WARRANTY SUBMITTAL

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

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

A. Not Applicable.

END OF SECTION

SECTION 07 31 00
ASPHALT SHINGLE ROOF AND RELATED WORK

PART 1 – GENERAL

1.1. CONDITIONS OF CONTRACT

A. The conditions of the Contract (General, Supplemental, and other Conditions) and the requirements of Division 1 are hereby made a part of this Section. Applicable provisions of Division 1 shall govern work under this section.

1.2. SUMMARY OF WORK

A. Unless otherwise specified in the drawings, specifications and provisions of the contract, the Contractor shall furnish all materials, tools, equipment, apparatus, transportation, labor and supervision required to remove the existing shingle roof and install a new roof system and related work at the Olbrich Cottage (Garver Office) located at 3267 Garver Green, Madison, Wisconsin and at the Olbrich Park Shelter located at 201 Garrison Street, Madison, Wisconsin.

B. The contractor shall furnish and install a new asphalt roofing system which generally consists of the following work:
   1. Remove the existing roofing system consisting of all shingles, related underlayment, and metal flashings from all roof areas.
   2. Inspect existing sheathing and replace any deteriorated areas of sheathing in kind (assume 320 square feet of replaced sheathing on each building for bidding purposes).
   3. Coordinate roof work with repointing work or any other process.
   5. Inspect existing soffits, fascia boards, crown and bed moldings, and rafter tails and repair or replace any deteriorated materials in kind.
   6. Replace existing metal roof penetration components (ventilation fan covers and vent riser transition sleeve) and provide related flashings. Remove any obsolete or unused roof apparatus.
   7. Prepare substrate, prime, and paint repaired or replaced wood trim elements in the color to match existing color scheme. Prepare substrate, prime and paint metal penetration components that extend above the roof in dark brown color to match adjacent brown flashing color.
   8. Install ridge vent.
   9. Install leak barrier and underlayment.
   10. Install a Class A fire rated asphalt roofing system.
   11. Install new sheet metal flashing at all roof edges and vertical walls, and stepped flashing and cap at chimneys.
   12. Install new half round gutters and round downspouts and install concrete splash blocks below each downspout extension.

B. Disposal of demolition debris and construction waste is the responsibility of the contractor. Perform disposal in a manner complying with all applications of federal, state, and local regulations and sections within the Project manual. Refer to Section 01 74 19 "Construction Waster Management and Disposal".

C. Commencement of work by the contractor shall constitute acknowledgement by the contractor that this specification can be satisfactorily executed, under the project conditions and with all necessary prerequisites for warranty acceptance by roofing materials and treatment manufacturer.

D. Attendance at Meetings – refer to Section 1.5 MEETINGS.

E. Provide warranty information – refer to Section 1.7 WARRANTY.

F. Provide attic stock – 3 bundles of shingles at each building.

1.3. RELATED SPECIFICATIONS, REFERENCES & REQUIREMENTS

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

B. New Roof Construction Manual, NRCA

C. Provide a roofing system achieving an Underwriters Laboratories (UL) Class A fire classification.

D. Install all roofing products in accordance with all federal, state, and local building codes.

E. All work shall be performed in a manner consistent with current OSHA guidelines.

F. Obtain all necessary building permits.

G. The contractor shall be responsible for meeting all requirements of the Madison General Ordinance, Chapter 10, Section 10.185, Recycling and Reuse of Construction and Demolition Debris, for commercial buildings.

1.4. SUBMITTALS

A. Submit manufacturer's technical data and instructions for each product and component to be used to CPM and installer with mark ups to show the specific items, type model, and exactly how all components will be installed. Where instructions allow installer options, clearly indicate which option will be used.

B. Provide submittals and samples for the following products:
   1. Shingle
   2. Contractor product installation certification
   3. Paint color sample for the following:
      - Wood trim to match existing color scheme
      - Gutters and downspouts in Grecian Green
      - Metal penetration components to match brown flashing color
   4. Metal flashing samples showing manufacturer's full range of standard colors for selection by CPM
   5. Gutter and downspout showing style and color
   6. Underlayment
   7. Leak barrier
   8. Splash block

9. Paint
10. Primer
11. Penetrations (ventilation fan covers, flue pipe and related cap, and plumbing vent transition sleeve)
13. Soffit bead board or other exterior trim
14. Ridge vent

D. Close Out Submittals:
1. Maintenance Data: For roofing system to include in maintenance manuals. Refer to Section 01 78 23 OPERATION AND MAINTENANCE DATA.
2. Executed copies of all warranties. Refer to Section 01 78 36 WARRANTIES.

1.5. MEETINGS

A. Pre-Bid Meetings: Refer to Section A of the Proposal, Contract, Bond and Specifications document for pre-bid meeting date, time and location.

B. Pre-Construction Meeting: A mandatory pre-construction meeting shall take place prior to the start of the work.
1. Attendees: The contractor and any subcontractors and the CPM are required to attend.
2. Topics: Certified contractor and manufacturer's representative shall review all pertinent requirements for the project, including but not limited to, site product storage, scheduling, weather considerations, project duration, and requirements for the specified warranty.

C. Pre-Installation Meetings: The contractor shall be responsible for notifying the CPM at each phase of the project and at critical inspection points. Each work phase shall be inspected and approved by the CPM before proceeding with the work.

D. Final Inspection Meeting: A final inspection shall take place when the contractor competes all work. The contractor shall notify the CPM at such time and arrange for a final inspection meeting. Substantial completion shall be determined once all deficiencies have been corrected from this inspection.

1.6. QUALITY ASSURANCE

A. There will be no deviation made from this specification and the drawings without prior written approval by the CPM.
1. The Contractor shall coordinate with the CPM to inspect all installed components for compliance with the intent of the design as outlined in the drawings and specifications. In addition, the Contractor shall certify that all work was completed in accordance with the drawings and specifications.

B. Manufacturer Qualifications: Provide all primary roofing products, including shingles, underlayment, self-adhering leak barrier, starter strips, ridge cap shingles and ventilation by a single manufacturer in order to obtain the specified warranty.

C. Installer Qualifications: By submitting the bid, the bidder and each subcontractor certifies as to meeting the following requirements:
1. Installer must be approved by the manufacturer at the proper level for installation of all roofing products that are to be installed under this section in order to obtain the specified warranty. For the GAF-Elk roofing system, the installer must have GAF Master Elite status. For other roofing systems, the installer must have an equivalent qualification.
2. Installer has access to all necessary equipment and has organizational capacity and technical competence necessary to do the work properly and expeditiously.
3. Maintains a permanent place of business.

D. Manufacturer Inspection: Provide for a manufacturer's factory representative to inspect the installation of the shingles and core accessory products in compliance with the manufacturer's warranty as in conformance with GAF Golden Pledge warranty or pre-approved equal.

E. Proceed with work only when existing and forecasted weather conditions will permit work to be performed in accordance with the manufacturer's recommendations. During the work day, should the weather conditions appear to be changing adversely, take preventive measures to allow the work area to be closed to a weather tight condition to avoid exposure to building, equipment, and materials.

F. Repair any work, damaged by failure to provide proper and adequate protection, to its original state to the satisfaction of the CPM or remove and replace with new work to match the appropriate historical appearance at the Contractor's expense.

1.7. DELIVERY, STORAGE AND HANDLING

A. Store all products in manufacturer's original unopened, labeled packaging and containers with labels and markings intact until they are ready for installation.

B. Store products in a covered, ventilated area, at temperature ranges required by manufacturer's recommendations.

C. Store bundles on a flat surface. Maximum stacking height shall not exceed manufacturer's recommendations. Store all rolls on end.

D. Store and dispose of all liquid and solvent-based materials in accordance with all federal, state and local regulations.

1.8. PROJECT CONDITIONS

A. Job Site

1. The job site itself is an office building with employees that enter and exit the building numerous times a day. Access to employee exit paths shall remain clear at all times.
2. Protect and maintain the job site in a safe condition for the duration of the work.
3. Remove debris daily and keep job site clean throughout the work day.

B. Protection of Work: All necessary protection shall be provided to prevent damage to existing roofs and other adjacent materials and landscaping during all aspects of this work.

C. Hazardous Materials: Contractor may encounter lead paint on existing exterior wood surfaces. The Contractor shall take necessary precautions and use best practices when working in these areas.

1.9. WARRANTY

A. Provide a shingle manufacturer's forty (40) year written warranty to the City of Madison that includes a minimum of twenty (20) years non-prorated protection, where the manufacturer is responsible for the contractor's workmanship for twenty-five (25) years and the contractor is required to be certified by the manufacturer. For the GAF roofing system, this certification would be the Master Elite status. Other pre-approved roofing systems would require an equivalent certification. This warranty shall include the cost of labor to remove, disposes and replace part or all of the defective shingled roofing system that affects performance, including replacement of any or all manufacturer products and components due to material defect or workmanship by the contractor. This coverage includes a minimum of six (6) manufacturer products that composes the complete roofing system required to achieve the specified manufacturer warranty system. This includes shingles, underlayment, self-adhering leak barrier, starter strips, ridge cap shingles and ventilation. The Contractor shall provide and install all additional products, materials not specifically mentioned as required by the manufacturer's recommendation and/or system guarantee instructions, to obtain complete guarantee coverage for the project as required by this specification. The Contractor shall acquire current proof of manufacturer certification for the products to be installed on the project and submit such dated certification status to the City along with the product submittal package. The roofing system shall be installed to obtain the maximum wind speed rating of 130 mph.

B. Provide Roofing Installer's 5 year Warranty for leaks and workmanship as stated below.

1. WHEREAS _____ of _____, herein called the "Roofing Installer," has performed roofing and associated work ("work") on the following project:
   Owner: City of Madison
   Address: 210 Martin Luther King Jr. Blvd. Madison WI 53703
   Building 1 Name/Type: Olbrich Cottage
   Address: 3267 Garver Green, Madison Wisconsin
   Area of Work: Asphalt Roofing System, Approx. 2,300 sq. ft.
   Building 2 Name/Type: Olbrich Shelter
   Address: 201 Garrison Street, Madison Wisconsin
   Area of Work: Asphalt Roofing System, Approx. 2,030 sq. ft.
   Acceptance Date:
   Warranty Period: 5 years.
   Expiration Date:
2. AND WHEREAS Roofing Installer has contracted (either directly with Owner or indirectly as a subcontractor) to warrant said work against leaks and faulty or defective materials (Note: shingles shall be warranted by the manufacturer under another warranty) and workmanship for designated Warranty Period, Defective shingles to be replaced by the manufacturer.
3. NOW THEREFORE Roofing Installer hereby warrants, subject to terms and conditions herein set forth, that during Warranty Period Roofing Installer will, at Roofing Installer's own cost and expense, make or cause to be made such repairs to or replacements of said work as are necessary to correct faulty and defective work and as are necessary to maintain said work in a watertight condition.
4. This Warranty is made subject to the following terms and conditions:

a. Specifically excluded from this Warranty are damages to work and other parts of the building, and to building contents, caused by: lightning; peak gust wind speed exceeding 55 mph; fire failure of roofing system substrate, including cracking, settlement, excessive deflection, deterioration, and decomposition; faulty construction of parapet walls, copings, chimneys, skylights, vents, equipment supports, and other edge conditions and penetrations of the work; vapor condensation on bottom of roofing; and activity on roofing by others, including construction contractors, maintenance personnel, other persons, and animals, whether authorized or unauthorized by Owner.

b. When work has been damaged by any of foregoing causes, Warranty shall be null and void until such damage has been repaired by Roofing Installer and until cost and expense thereof have been paid by Owner or by another responsible party so designated.

c. During Warranty Period, if Owner allows alteration of work by anyone other than Roofing Installer, including cutting, patching, and maintenance in connection with penetrations, attachment of other work, and positioning of anything on roof, this Warranty shall become null and void on date of said alterations, but only to the extent said alterations affect work covered by this Warranty. If Owner engages Roofing Installer to perform said alterations, Warranty shall not become null and void unless Roofing Installer, before starting said work, shall have notified Owner in writing, showing reasonable cause for claim, that said alterations would likely damage or deteriorate work, thereby reasonably justifying a limitation or termination of this Warranty.

d. During Warranty Period, if original use of roof is changed and it becomes used for, but was not originally specified for, a promenade, work deck, spray-cooled surface, flooded basin, or other use or service more severe than originally specified, this Warranty shall become null and void on date of said change, but only to the extent said change affects work covered by this Warranty.

e. Owner shall promptly notify Roofing Installer of observed, known, or suspected leaks, defects, or deterioration and shall afford reasonable opportunity for Roofing Installer to inspect work and to examine evidence of such leaks, defects, or deterioration.

f. This Warranty is recognized to be the only warranty of Roofing Installer on said work and shall not operate to restrict or cut off Owner from other remedies and resources lawfully available to Owner in cases of roofing failure. Specifically, this Warranty shall not operate to relieve Roofing Installer of responsibility for performance of original work according to requirements of the Contract Documents, regardless of whether Contract was a contract directly with Owner or a subcontract with Owner's General Contractor.

5. IN WITNESS THEREOF, this instrument has been duly executed this _____ day of

_____, _____.

Authorized Signature: _____.

Name: _____.

Title: _____.

C. Provide standard product warranties for products purchased and installed under this contract. Refer to Section 01 78 36 “Warranties”.

PART 2 - PRODUCTS

2.1. GENERAL

A. Provide products by Manufacturers specified herein which meet or exceed standards as set forth in this Section. No products specified or approved shall contain asbestos.

B. All materials shall be new.

2.2. MANUFACTURERS

A. Acceptable Manufacturer: GAF Materials Corporation, or equivalent manufacture that is able to meet or exceeds all requirements of warranty and installation materials. CertainTeed is considered a preapproved equal for the purpose of this bid provided all submittals are approved.

2.3. SHINGLES

A. Heavyweight, granule surfaced, self sealing asphalt shingle with a strong fiberglass reinforced Micro Weave® core and StainGuard® protection, which prevents pronounced discoloration from blue-green algae through

formulation/unique blends of granules. Architectural laminate styling provides a wood shake appearance with a 5 5/8" exposure. Features the classic Natural Shadow effect. UL 790 Class A rated with UL 997 Wind Resistance Label; ASTM D 7158, Class H; ASTM D 3161, Type 1; ASTM D 3018, Type 1; ASTM D 3462; CSA 123.5-98; Dade County Approved, Florida Building Code Approved, Texas Dept of Insurance Approved, ICC Report Approval. Timberline® Natural Shadow Lifetime Shingles, by GAF or pre-approved equal. High definition shingles are not acceptable.

1. Color: Barkwood (brown gray) or equal as selected by Owner from manufacturer's full range.

2.4. RIDGE SHINGLES

A. High profile self-sealing hip and ridge cap shingle matching the color of selected roof shingle. **Timbertex®** Premium Ridge Cap Shingles, by GAF or pre-approved equal.

2.5. RIDGE VENT

A. Cor-A-Vent V-600-11 Ridge Vent in black, 11 inches wide by 48 inches long by 1 inch high, by Cor-A-Vent, Inc., P.O. Box 428, Mishawaka, IN 46546-0428.

2.6. STARTER STRIP

A. Self-sealing starter shingle designed for all roof shingles. ProStart™ Starter Strip by GAF or pre-approved equal.

2.7. LEAK BARRIER

A. Self-adhering, self-sealing, bituminous leak barrier surfaced with fine, skid-resistant granules. 58 mils thick. **WeatherWatch®,** by GAF or pre-approved equal.

2.8. SHINGLE UNDERLAYMENT

A. Premium, water repellant, breather type non-asphaltic underlayment. UV stabilized polypropylene construction. Meets or exceeds ASTM D226 and D4869. Approved by Dade Country, Florida Building Code, and has a pending ICC Report Approval. Deck-Armor™ Premium Breathable Roof Deck Protection, by GAF or pre-approved equal.

2.9. ROOFING SEALANT

A. General-purpose asphalt roofing cement meeting the requirements of ASTM D 4586, Type I or II. Matrix Standard Plastic Roof Cement #203, by BMCA or pre-approved equal.

B. General-purpose asphalt roofing cement meeting the requirements of ASTM D 4586, Type I or II. Matrix Standard Wet/Dry Roof Cement #204, by BMCA or pre-approved equal.

C. Asphalt Plastic Roofing Cement meeting the requirements of ASTM D 4586, Type I or II.

2.10. FASTENERS

A. Standard round wire, zinc-coated steel or aluminum; 10 to 12 gauge, barbed or deformed shank, with heads 3/8 inch to 7/16 inch in diameter. Length must be sufficient to penetrate into solid wood at least 3/4 inch or through sheathing by at least 1/8 inch.

2.11. METAL FLASHINGS

A. All metal flashing shall be installed per manufacturer's instructions.

B. All metal flashing shall be a minimum 24 gauge galvanized sheet metal prefinished with Kynar and brake formed to provide details as shown on the plans. Furnish in 8' or 10' lengths. Color: color to be determined by CPM from manufacturer's full range of colors as indicated on the drawings, and may be field or shop fabricated.

C. Sheet metal cap for chimney shall be a minimum of 24 gauge galvanized prefinished with Kynar and formed to fit the chimney and flue pipe penetration. Color: color to be determined by CPM from manufacturer's full range of colors to be dark brown as indicated on the drawings, and may be field or shop fabricated.

2.12. METAL GUTTER AND DOWNSPOUTS AND SPLASHBLOCKS

A. Gutter and Downspout design based on pre-manufactured half round aluminum gutter and downspout components available through Gutter Supply (https://www.guttersupply.com/p-halfround.gstml).

1. 6" reverse half round single bead rain gutter, 0.032" aluminum, Grecian Green or custom painted to match existing green paint color.
2. 6" half round C style end caps, 0.032" aluminum, Grecian Green or custom painted to match existing green paint color.
3. 6" half round outside decorative stamped fascia gutter hanger, 0.027" aluminum, Grecian Green or custom painted to match existing green paint color.

4. 4" half round B style outlet, mill finish aluminum.
5. 4" plain round elbow, 0.019 aluminum, Grecian Green or custom painted to match existing green paint color.
6. 4" plain round downspout, 0,019 aluminum, Grecian Green or custom painted to match existing green paint color.
7. Downspout fastener, style similar to Gutter Supply #ECDSBSCRC4X, in material that can be custom painted to match green paint color of downspout. Do not fasten to face of brick. Only fasten into mortar joint.

B. Splash blocks tapered smooth concrete, 30" length.

2.13. ROOF PENETRATIONS

A. Ventilation fan covers, flue pipe and related cap, and plumbing vent transition sleeve shall be replaced if deteriorated with components of similar style and size and material in brown finish to match adjacent flashing color as selected by Owner. Brown color may be achieved by painting.

2.14. CHIMNEY MASONRY

A. All mortar shall be treated in accordance with the Department of the Interior National Park Service Cultural Resources Preservation Briefs #2, "Repointing Mortar Joints in historic Masonry Buildings" (revised Edition October 1998), and in compliance with the guidelines set forth by the Secretary of the Interior's Standards.

B. The approved mortar for this project shall be BMI 910 Type O Mortar in color P3510. Repointing mortar shall be pre-blended (not including water) in single containers in a factory-controlled environment. Mixing of individual mortar ingredients at the construction site is prohibited.

C. The specified mortar shall match the mortar used at the adjacent Garver Feed Mill building and should match the original mortar of the Olbrich Cottage (Garver Office) in color, grain size and texture.

D. It is the intent of this work to use a repointing mortar with a compressive strength that is equal or less than the compressive strength of the original mortar and surrounding brick. The replacement mortar shall contain approximately the same ingredient proportions of the original mortar and shall have a water vapor transmission rate greater than all adjacent masonry. If the Contractor believes that the specified mortar has a compressive strength that is higher than the original mortar and surrounding brick, the CPM shall be notified immediately.

E. Accelerating ingredients are not permitted.

F. Repair the false chimney of the Cottage as needed and provide a tight and sound masonry veneer using the existing masonry veneer material. If the Contractor believes that the existing veneer material or false chimney structure is too deteriorated to remain, the CPM shall be notified immediately.

2.14. PAINT

A. Primer: PrimeRx Interior/Exterior Acrylic Peel bonding Primer B51T00600.
Manufacturer: Sherwin Williams, www.sherwin-williams.com

B. Finish Coat: Resilience Exterior Latex Satin K43 Series.
Color: color match existing green paint color to be confirmed by Owner.
Manufacturer: Sherwin Williams, www.sherwin-williams.com

C. Alternates: The contractor has the option to provide an alternate manufacturer as long as it is equivalent in all properties. The submittal must include a letter from the manufacturer stating the coatings are equivalent to the above specified products.

D. Contractor shall test existing paint for confirmation of lead and abatement of lead containing materials as required by state law. Please see following link for Wisconsin state law addressing "Certification for the Identification, Removal and Reduction of Lead-Based Paint Hazards."

2.14. SOFFIT, FASCIA AND MOLDINGS

A. All soffit and fascia boards and crown and bed moldings shall be assessed for condition. Replace any deteriorated material in kind using appropriate board lengths and offsetting butt joints at least 24 inches from adjacent butt joint in beaded board soffit material.

PART 3 - EXECUTION

3.1. GENERAL CONDITIONS

A. The contractor shall have the sole responsibility for the accuracy of all measurements and for the estimate of material quantities required and necessary to satisfy the requirements of the drawings and specifications.

B. All necessary protection shall be provided to prevent damage to existing roofs and other adjacent materials and landscaping during all aspects of this work.

C. Perform only as much work as can be restored to a weather tight condition each day or before adverse weather commences.

D. All other work required for a complete and proper installation per the drawings and these specifications that constitute a complete and proper installation shall be completed each day.

3.2. EXAMINATION

A. Remove all existing roofing down to the roof deck including eave edge and all metal flashing.

B. Examine substrates, areas, and conditions, with City Project Manager (CPM) present, for compliance with requirements and other conditions affecting performance of the Work.

C. Remove and replace all existing roof penetration components (ventilation fan covers, vent riser transition sleeves, etc.).

3.3. PREPARATION

A. Clean substrate of dust, debris, moisture, and other substances detrimental to roofing system installation according to roofing system manufacturer's written instructions. Remove sharp projections.

B. Verify that the deck is dry, sound, clean and smooth. It shall be free of any depressions, waves, and projections. Cover with sheet metal, all holes over 1 inch in diameter, cracks over 1/2 inch in width, loose knots and excessively resinous areas.

C. Clean deck surfaces thoroughly prior to installation of eave protection membrane and underlayment.

D. Do not begin new roof installation until the roof deck has been properly prepared. If roof deck preparation is the responsibility of another installer, notify the City Project Manager of unsatisfactory preparation before proceeding.

3.4. INSTALLATION OF FLASHING

A. Existing flashing shall be removed and replaced with new flashing. All metal flashings shall be .040 aluminum sheet with baked enamel finish in the color noted unless otherwise indicated.

B. Step flashing shall be used where vertical surfaces occur in connection with slopes. Each step shall be formed of separate pieces. Flashing shall extend horizontally not less than 3" and up the vertical wall so that they shall be lapped by the counter flashing not less than 4". It shall be installed in step fashion and each piece shall lap not less than 3" (one flashing installed on each course concealed under the covering course).

3.5. FASTENERS

A. Placement, number, and type of nails varies based on the type of shingle specified. Consult the application instructions by the roofing material manufacturer for the specified shingle for details.

B. Various underlayments have been utilized with various material thicknesses. Perform a test sample for each detail to ensure the nails are of proper length. Follow fastener recommendations of roofing material manufacturer.

C. Fasteners shall be long enough to penetrate into the solid wood sheathing at least 3/4”. Nails must be driven flush with the shingle surface. Do not overdrive or underdrive the nails.

3.6. INSTALLATION OF UNDERLAYMENTS

A. General:

1. Install using methods recommended by manufacturer, in accordance with local building codes. When local codes and application instructions are in conflict, the more stringent requirements shall take precedence.

B. Eaves, Rakes and Ridge:

1. Install eaves and rake edge metal flashing tight with fascia boards; lap joints 2 inches and seal with plastic cement; nail at the top of the flange.
2. Manufacturer’s workmanship coverage shall require eaves protection membrane (Leak Barrier) up the slope from eaves edge at least a full 69 inches or to at least 24 inches beyond the interior “warm wall”, whichever is greater. Lap ends 6 inches and bond. Install full 36” width leak barrier along rake edge. Install full 36” leak barrier up to ridge vent slot.

C. Roof Deck Underlayment Application:

1. Install one layer of roof deck underlayment over the entire area not protected by eaves or valley membrane. Install sheets horizontally so water sheds and nail in place.
2. On roofs sloped at more than 4:12, lap horizontal edges at least 3” and at least 6” on end laps and offset from adjacent end laps by 3’. Along eave edges completely cover leak barrier protection and install on to the non-corrosive metal edge.

D. Shingle Underlayment Application:
1. Shingle underlayment shall be installed over a clean, dry deck.
2. Install leak barrier at eaves, valleys, rakes, skylights, dormers and other vulnerable leak areas.
3. Lay shingle underlayment over deck and overlap 3" at side laps and 6" at end laps.
4. For exposure to rain or snow, overlap 12" at end laps.
5. For side and end laps: fasten shingle underlayment 12" o.c. (6" o.c. for high wind areas). Fasten Deck Armor or equivalent underlayment with plastic cap nails or staples with plastic caps in accordance with appropriate installation instructions.
6. For middle of the roll: fasten shingle underlayment 24" o.c. (12" o.c. for high wind areas).
7. For exposure to rain or snow, completely cover all side laps, end laps and fasteners with tape.
8. For long-term exposure, see complete shingle underlayment installation instructions for side lap detail.
9. If roof may be exposed to high winds, apply tape over all fasteners at the center of the roll to prevent rain or snow from entering at the fasteners.

E. Penetrations and Vertical Walls:
1. Vent pipes: Install a 24 inch square piece of leak barrier protection membrane lapping over roof deck underlayment; seal tightly to pipe.
2. Chimneys: Install eaves protection membrane around entire chimney extending at least 6 inches up the wall and 12 inches on to the roof surface. Lap the membrane over the roof deck underlayment.
3. Rake Edges: Install metal edge flashing over eaves protection membrane and roof deck underlayment; set tight to rake boards; lap joints at least 2 inches and seal with plastic cement; secure with nails. Provide maximum wind resistance as required elsewhere by installing manufacturer's starter with factory adhesive run vertically up the full length of the rake edge. Position the starter so that it overlaps the eave edge starter at least 3". Nail vertically along a line 1 ½" to 3" in from the rake edge.
4. Vertical Walls: Install leak barrier protection membrane extending at least 6 inches up the wall and 12 inches on to the roof surface. Lap the membrane over the roof deck underlayment.

3.7. INSTALLATION OF SHINGLES

A. General:
1. Install roofing system in accordance with manufacturer's instructions and local building codes. When local codes and application instructions are in conflict, the more stringent requirements shall take precedence.
2. Minimize breakage of shingles by avoiding dropping bundles on edge, by separating shingles carefully (not by "breaking" over ridge or bundles), and by taking extra precautions in temperatures below 40 degrees F (4 degrees C).
3. Handle carefully in hot weather to avoid scuffing the surface or damaging the shingle edges.

B. Placement and Nailing:
1. Secure with required number and type of nails per shingle per manufacturer's instructions or local codes to meet manufacturer's requirements for 130 mph wind warranty. Also see manufacturer's requirement to run starter strip with factory adhesive entire vertical length of rake edge.
2. Placement, number, and type of nails varies based on the type of shingle specified. Consult the application instructions for the specified shingle for details.
3. Nails must be driven flush with the shingle surface. Do not overdrive or underdrive the nails.
4. Shingle offset varies based on the type of shingle specified. Consult the application instructions for the specified shingle for details.

C. Penetrations:
1. All penetrations shall be flashed according to manufacturer's, ARMA, and NRCA application instructions and construction details. See section 3.5 E. above.

D. Ridge:
1. Intersecting roof surface at ridges should be capped to ensure a weather-tight joint. Factory-assembled ridge units shall be used and must have alternate overlap and concealed nailing.
2. When ridge cap and field products are the same length and grade, the weather exposure of the ridge cap should be the same as the field product of the roof.
3. All shingle ridges shall be of alternate overlap type applied at the same exposure as field of roof and with nails long enough to penetrate into sheathing at least 3/4", position fasteners approximately 2"above exposure line. Install a strip of felt, eave protection material or metal over hip or ridge under the ridge or hip cap. If longer or shorter ridge cap is used, adjust exposure accordingly.

3.8. INSTALLATION OF RIDGE VENT

A. Follow manufacturer's instructions for installing ridge cap ventilation.

B. Steep pitch roofing system installation:

1. Install ridge vents along entire length of roof ridges. Do not leave the sections at the ends of the ridge unvented.
2. Fit end cap onto one end of the first and last piece of ridge vent.
3. Lay a bead of calking on the underside of the end cap, press the piece and cap into position, and nail through the end cap, the ridge vent, and into the roof sheathing.
4. Use 316 stainless steel roofing nails that are long enough to penetrate ridge vent and through roof sheathing.
5. Drive the nails down flush so that the vent and end cap are held down firmly.
6. Do not indent by over driving.
7. Butt each successive piece up snugly, checking for straight alignment.
8. Use 2 nails in each end and 1 at each side at center, pulling up slightly when nailing second side to ensure that the vent is nailed at the same pitch as the roof.
9. Prior to installing the ridge vent, a bead of sealant shall be applied on top of the shingles to provide weather seal between the shingles and vent. See drawings.

C. Cap Shingle Installation:

1. Place the first cap shingle with approximately 1/2-inch overhang over the end cap and at each side of the ridge vent.
2. Nail down through the shingle, the ridge vent, and through the roof sheathing.
3. Nails must be long enough to penetrate the roof sheathing.
4. Do not fasten ridge vents with staples.
5 Apply cap shingles per specifications and according to the Cedar Shake & Shingle Bureau's New Roof Construction Manual Cedar Shake.
6. Drive nails flush; do not indent.
7. Refer to section 3.6 INSTALLATION OF SHINGLES.

D. Steep Pitch and Wide Ridge Beam Applications:

1. Cut ridge vents into 2 half pieces lengthwise.
2. Nail half pieces over shingles on either side of the ridge slot.
3. Fasten metal flashing over ridge vent. Apply sealant between the sheet metal and the vent cap.

3.9. INSTALLATION OF GUTTERS AND DOWNSPOUTS AND SPLASH BLOCKS

A. Install per manufacturer's instruction to provide a watertight seal at all connections. Incorporate the guidelines below:

1. Locate gutters, downspouts, and splash blocks as shown on plans.
2. Install gutter hanger at a maximum of 24" on center.
3. Use lap joint to connect gutter sections. Provide a minimum of a 2" lap joint. Cut top section of bead and back folded seam to allow one gutter to slip within the next one. Embed appropriate seam sealer in lap joint. Secure with three rivets. Cut gutter length so that the exposed edge of the lap joint seam is at an interval that it is concealed with a gutter hanger. This is intended to provide a seamless looking gutter system.
4. Install fasteners at top, middle, and lower section of each downspout so that anchors occur at mortar joints. Do not fasten into face of brick.
5. Slope gutters evenly at ½" for every 10 feet of run to downspouts.
6. Apply joint sealant at all gutter joints per manufacturer's installation instructions and best gutter installation practices. Use recommended seam sealer.

3.10. APPLICATION OF PRIMER AND PAINT

A. Primer: Apply per manufacturer's instructions, noting the following:

1. Remove old paint by sanding, scraping or other means.
2. PrimerR_x Peel Bonding Primer is not designed to penetrate through old paint and reattach loose or peeling paint. It will not repair any substrate. Any deteriorated or damaged wood must be repaired first.
3. Remove all surface contamination by washing with an appropriate cleaner, rinse thoroughly and allow to dry. Existing loose, peeled or checked paint must be scraped and sanded to a sound surface. Feather rough edges from peeling paint to improve the final appearance.
4. Apply at temperatures above 35˚F.
5. Clean spills, spatters immediately with soap and warm water.

6. Gaps between areas can be filled with the appropriate caulk (refer to manufacturers recommendations) after priming the surface.

B. Finish Coat: Apply per manufacturer's instructions, noting the following:
1. For exterior exposure, primer must be top coated within 14 days of application.
2. When the air temperature is at 35°F, substrates may be colder; prior to painting, check to be sure the air, surface, and material temperature are above 35°F and at least 5°F above the dew point. Avoid using if rain or snow is expected within 1-1½ hours. Do not apply at air or surface temperatures below 35°F or when air or surface temperatures may drop below 35°F within 48 hours.
3. Clean the surface thoroughly then sand any exposed wood to a fresh surface. Patch all holes and imperfections with a wood filler or putty and sand smooth. All patched areas must be primed. Knots and some woods, such as redwood and cedar, contain a high mount of tannin, a colored wood extract. If applied to these bare woods, it may show some staining. If staining persists, spot prime severe areas with 1 coat of Exterior Oil-Based Wood Primer prior to using.
4. When the air temperature is at 35°F, substrates may be colder; prior to painting, check to be sure the air, surface, and material temperature are above 35°F and at least 5°F above the dew point. Avoid using if rain or snow is expected within 1-1½ hours. Do not apply at air or surface temperatures below 35°F or when air or surface temperatures may drop below 35°F within 48 hours.
5. Apply a minimum of two finish coats of Resilience®.
6. Clean spills, spatters immediately with soap and warm water.

3.11. REPOINTING OF CHIMNEY

A. All chimney mortar joints shall be removed with hand tools that will not damage adjacent masonry or widen existing joints. Remove material to a minimum depth of ½".
B. All equipment for mixing, transporting and applying mortar shall be clean and free from hardened mortar, dirt, ice or other foreign matter.
C. Follow printed manufacturer's instructions for mixing pre-blended mortar.
D. Clean and lightly wet exposed surface of existing masonry.
E. Tool joint when "thumb-print" hard with a very slightly concave tool.
F. Complete by gently brushing the surface of the masonry to remove mortar haze on adjacent brick surfaces.

3.12. PROTECTION AND CLEANING

A. Protect building, landscaping and roofing system from damage during construction period. Immediately report any damage to the City Project Manager.
B. Any roof areas that are not completed by the end of the workday are to be protected from moisture and contaminants.
C. Correct deficiencies in or remove areas that do not comply with requirements and reinstall to a condition free of damage and deterioration at time of Substantial Completion and according to warranty requirements.
D. Clean dirt and debris from adjacent construction from site using cleaning agents and procedures recommended by the manufacturer.

3.13. ATTIC STOCK

A. Provide a minimum of two bundles of shingles and place in the lower level storage area on a palette.

3.14. WARRANTY

A. Refer to section 1.8 of this document for warranty requirements.

END OF SECTION

END OF PROJECT MANUAL
OLBRICH ROOF REPLACEMENTS
CONTRACT # 8882