Contract Routing Form

ROUTING: Routine printed on: 12/12/2017

Contract between: Bachmann Construction Company, Inc.
and Dept. or Division: Engineering Division
Name/Phone Number:

Project: Fire Station 10 Storefront Replacement

Contract No.: 8061 File No.: 49323
Enactment No.: RES-17-00932 Enactment Date: 12/11/2017
Dollar Amount: 81,469.00

(Please DATE before routing)

Signatures Required	Date Received	Date Signed
City Clerk	12-12-17	12-12-17
Director of Civil Rights	12.12.17	12.15.17 FNS
Risk Manager	12.18.17	12/18/17 MN
Finance Director	12.18.17	12/18/17 MR
City Attorney 1591	12-18-2017	12-19-17
Mayor	12.19.17	12.19.17

Please return signed Contracts to the City Clerk's Office
Room 103, City-County Building for filing.

Original + 2 Copies

12/12/2017 09:44:51 enjls - Kay Schindel 266-4668

Dis Rights: OK / N/A / Problem - Hold
Prev Wage: AA / Agency / No
Contract Value: 81,469.00
AA Plan: Approved
Amendment / Addendum # _____
Type: POS / Dvlp / Sbdv / Gov't / Grant / PW / Goal / Loan / Agrmt

File #:	49323 Version: 1	Name:	Awarding Public Works Contract No. 8061, Fire Station 10 Storefront Replacement.
Type:	Resolution	Status:	Passed
File created:	10/24/2017	In control:	BOARD OF PUBLIC WORKS
On agenda:	12/5/2017	Final action:	12/5/2017
Enactment date:	12/11/2017	Enactment #:	RES-17-00932
Title:	Awarding Public Works Contract No. 8061, Fire Station 10 Storefront Replacement.		
Sponsors:	BOARD OF PUBLIC WORKS		
Attachments:	1. Contract 8061.pdf		

Fiscal Note
The proposed resolution approves plan documents for bids on the Fire Station 10 Storefront Replacement project. The project is planned within the Engineering Facilities Managment adopted 2017 capital budget via the Fire Building Improvements program (MUNIS 10560). This program funds miscellaneous improvements to the City's thirteen fire stations. Funding for the project will be provided by GO borrowing and the anticipated cost is $87,990.

Title
Awarding Public Works Contract No. 8061, Fire Station 10 Storefront Replacement.
Body
BE IT RESOLVED, that the following low bids for miscellaneous improvements be accepted and that the Mayor and City Clerk be and are hereby authorized and directed to enter into a contract with the low bidders contained herein, subject to the Contractor's compliance with Section 39.02 of the Madison General Ordinances concerning compliance with the Affirmative Action provisions **and subject to the Contractor's compliance with Section 33.07 of the Madison General Ordinances regarding Best Value Contracting:**

BE IT FURTHER RESOLVED, that the funds be encumbered to cover the cost of the projects contained herein.

See attached document (Contract No. 8061) for itemization of bids.

PROJECT	CONTRACTOR	AMOUNT OF BID

CONTRACT NO. 8061
FIRE STATION 10 STOREFRONT REPLACEMENT

BACHMANN CONSTRUCTION COMPANY, INC. $81,469.00

Acct. No. 11591-401-200:54210(91065)	$81,469.00
Contingency 8%±	6,521.00
GRAND TOTAL	$87,990.00

Jurisdiction: Wisconsin

Demographics

Company Name: Old Republic Surety Company
Short Name:
SBS Company Number: 54220076
NAIC CoCode: 40444
FEIN: 39-1395491
Domicile Type: Domestic
State of Domicile: Wisconsin
Country of Domicile: United States
NAIC Group Number: 150 - OLD REPUBLIC GRP
Organization Type: Stock
Date of Incorporation: 12/28/1981
Merger Flag: No

Address

Business Address
Not Available
Not Available, UN 99999
United States
Mailing Address
PO BOX 1635
MILWAUKEE, WI 53201
United States
Statutory Home Office Address
445 S Moorland Rd Ste 200
Brookfield, WI 53005
United States
Main Administrative Office Address
445 S Moorland Rd Ste 200
Brookfield, WI 53005
United States

Phone, E-mail, Website

Phone

Type	Number
Mailing Primary Phone	(262) 797-2640
Mailing Fax Phone	(262) 797-9495
Mailing Toll Free Phone	(800) 217-1792
Statutory Home Office Primary Phone	(262) 797-2640
Statutory Home Office Toll Free Phone	(800) 217-1792
Main Admin Office Primary Phone	(262) 797-2640
Main Admin Office Toll Free Phone	(800) 217-1792

Email

Company Type

Company Type: Property and Casualty
Status: Active
Status Reason:
Status Date: 12/28/1981
Effective Date: 12/28/1981
Legacy State ID: 112142
Issue Date: 12/28/1981
Approval Date:
File Date:
Articles of Incorporation Received: No
Article No:
COA Number:

Appointments

patrick

Licensee Name	License Number	NPN	License Type	Line of Authority	Appointment Date	Effective Date	Expiration Date
PATRICK MCCLONE	129855	129855	Intermediary (Agent) Individual	Casualty	05/07/1993	03/01/2017	02/28/2018
PATRICK MILLER	6501620	6501620	Intermediary (Agent) Individual	Casualty	06/16/2010	03/01/2017	02/28/2018
PATRICK MCKENNA	650765	650765	Intermediary (Agent) Individual	Casualty	08/07/2007	03/01/2017	02/28/2018
PATRICK MCCLONE	129855	129855	Intermediary (Agent) Individual	Property	05/07/1993	03/01/2017	02/28/2018

First Previous 1 Next Last

Line Of Business

Filter

Line of Business	Citation Type	Effective Date
Fidelity Insurance	Fidelity Insurance	12/28/1981
Surety Insurance	Surety Insurance	12/28/1981
Miscellaneous	Miscellaneous	12/28/1981
Liability and Incidental Medical Expense Insurance (other than automobile)	Liability and Incidental Medical Expense Insurance (other than automobile)	12/28/1981

First Previous 1 Next Last

Contact

Filter

Contact Type	Preferred Name	Name	E-mail	Phone	Address
Registered Agent for Service of Process		ALAN PAVLIC			**Other** OLD REPUBLIC SURETY COMPANY 445 S MOORLAND RD STE 301 BROOKFIELD, WI 53005 United States

First Previous 1 Next Last

Company Merger

No results found.

Name Change History

Filter

Previous Name	New Name	Effective Date
	Old Republic Surety Company	

First | Previous | 1 | Next | Last

$81,469.00
FILE

BID OF **BACHMANN CONSTRUCTION COMPANY, INC.**

2017

PROPOSAL, CONTRACT, BOND AND SPECIFICATIONS

FOR

FIRE STATION 10 STOREFRONT REPLACEMENT

CONTRACT NO. 8061

MUNIS NO. 11591

IN

MADISON, DANE COUNTY, WISCONSIN

AWARDED BY THE COMMON COUNCIL
MADISON, WISCONSIN ON **DECEMBER 5, 2017**

CITY ENGINEERING DIVISION
1600 EMIL STREET
MADISON, WISCONSIN 53713

https://bidexpress.com/login

FIRE STATION 10 STOREFRONT REPLACEMENT
CONTRACT NO. 8061

INDEX

This Proposal, and Agreement have
been prepared by:

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

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

RFP: jh

SECTION A: ADVERTISEMENT FOR BIDS AND INSTRUCTIONS TO BIDDERS

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

A BEST VALUE CONTRACTING MUNICIPALITY

PROJECT NAME:	FIRE STATION 10 STOREFRONT REPLACEMENT
CONTRACT NO.:	8061
BID BOND	5%
PRE BID WALK THROUGH (11:00 A.M.)	OCTOBER 9, 2017
PREQUALIFICATION APPLICATION DUE (1:00 P.M)	OCTOBER 27, 2017
BID SUBMISSION (1:00 P.M.)	NOVEMBER 3, 2017
BID OPEN (1:30 P.M.)	NOVEMBER 3, 2017
PUBLISHED IN WSJ	SEPTEMBER 29, OCTOBER 6, 13, 20 & 27, 2017

PRE-BID WALK THROUGH:
One pre-bid conferences will be conducted for the purposes of a pre-bid walk through and all bidding contractors are encouraged to attend.

The meetings will be held on Monday October 9th at 11:00 AM in Fire Station 10 on 1517 Troy Drive in Madison, WI. This will be the only opportunity for bidding contractors to walk through the site. An alternate date may be selected in the event of inclement weather as determined solely at the discretion of the City Project Manager.

City Staff will be on hand to conduct the building walk through, discuss the plans, specifications and expectations of the contract.

QUESTIONS, CLARIFICATIONS, AND REQUESTS FOR SUBSTITUTIONS:
Submit any questions, requests for clarifications or substitutions per email to the City Project Manager at kschindel@cityofmadison.com
Requests for substitutions require sufficient information to judge suitability. Refer to section 01 25 13 for detail.
The City Project Manager will further distribute questions to the appropriate consultant or City Staff as needed.
All responses will be published by the City of Madison in the form of a bidding addendum.
Inquiries received after 1 week before bid due date may not be answered.

PREQUALIFICATION APPLICATION: Forms are available at the same location or on our website, www.cityofmadison.com/business/pw/forms.cfm. If not currently prequalified in the categories listed in Section A, an amendment to your Prequalification will need to be submitted prior to the same due date. Postmark is not applicable.

BIDS TO BE SUBMITTED by hand to 1600 EMIL ST., MADISON, WI 53713 or online at www.bidexpress.com.

THE BID OPENING is at 1600 EMIL ST., MADISON, WI 53713.

STANDARD SPECIFICATIONS

The City of Madison's Standard Specifications for Public Works Construction - 2017 Edition, as supplemented and amended from time to time, forms a part of these contract documents as if attached hereto.

These standard specifications are available on the City of Madison Public Works website, www.cityofmadison.com/Business/PW/specs.cfm.

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

SECTION 102.1: PRE-QUALIFICATION OF BIDDERS

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

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

In accordance with Section 39.02(9)(a)I. of the General Ordinances, all bidders shall submit in writing to the Affirmative Action Division Manager of the City of Madison, a Certificate of Compliance or an Affirmative Action Plan at the same time or prior to the submission of the proof of responsibility forms.

The bidder shall be disqualified if the bidder fails to or refuses to, prior to opening of the bid, submit a Certificate of compliance, Affirmative Action Plan or Affirmative Action Data Update, as applicable, as defined by Section 39.02 of the General Ordinances (entitled Affirmative Action) and as required by Section 102.11 of the Standard Specifications.

SECTION 102.4 PROPOSAL

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

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

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

A proposal submitted by an individual shall be signed by the bidder or by a duly authorized agent. A proposal submitted by a partnership shall be signed by a member/partner or by a duly authorized agent thereof. A proposal submitted by a corporation shall be signed by an authorized officer or duly authorized registered agent of such corporation, and the proposal shall show the name of the State under the laws of which such corporation was chartered. The required signatures shall in all cases appear in the space provided thereof on the proposal.

Each proposal shall be placed, together with the proposal guaranty, in a sealed envelope, so marked as to indicate name of project, the contract number or option to which it applies, and the name and address of the Contractor or submitted electronically through Bid Express (www.bidexpress.com). Proposals will be accepted at the location, the time and the date designated in the advertisement. Proposals received after the time and date designated will be returned to the bidder unopened.

SECTION 102.5: BID DEPOSIT (PROPOSAL GUARANTY)

All bids, sealed or electronic, must be accompanied with a Bid Bond equal to at least 5% of the bid or a Certificate of Annual/Biennial Bid Bond or certified check, payable to the City Treasurer. Bid deposit of the successful bidders shall be returned within forty-eight (48) hours following execution of the contract and bond as required.

MINOR DISCREPENCIES

Bidder is responsible for submitting all forms necessary for the City to determine compliance with State and City bidding requirements. Nothwithstanding any language to the contrary contained herein, the City may exercise its discretion to allow bidders to correct or supplement submissions after bid opening, if the minor discrepancy, bid irregularity or omission is insignificant and not one related to price, quality, quantity, time of completion or performance of the contract.

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

Building Demolition

101 ☐ Asbestos Removal
120 ☐ House Mover
110 ☐ Building Demolition

Street, Utility and Site Construction

201 ☐ Asphalt Paving
205 ☐ Blasting
210 ☐ Boring/Pipe Jacking
215 ☐ Concrete Paving
220 ☐ Con. Sidewalk/Curb & Gutter/Misc. Flat Work
221 ☐ Concrete Bases and Other Concrete Work
222 ☐ Concrete Removal
225 ☐ Dredging
230 ☐ Fencing
235 ☐ Fiber Optic Cable/Conduit Installation
240 ☐ Grading and Earthwork
241 ☐ Horizontal Saw Cutting of Sidewalk
242 ☐ Infrared Seamless Patching
245 ☐ Landscaping, Maintenance
246 ☐ Ecological Restoration
250 ☐ Landscaping, Site and Street
251 ☐ Parking Ramp Maintenance
252 ☐ Pavement Marking
255 ☐ Pavement Sealcoating and Crack Sealing
260 ☐ Petroleum Above/Below Ground Storage Tank Removal/Installation
262 ☐ Playground Installer
265 ☐ Retaining Walls, Precast Modular Units
270 ☐ Retaining Walls, Reinforced Concrete
275 ☐ Sanitary, Storm Sewer and Water Main Construction
276 ☐ Sawcutting
280 ☐ Sewer Lateral Drain Cleaning/Internal TV Insp.
285 ☐ Sewer Lining
290 ☐ Sewer Pipe Bursting
295 ☐ Soil Borings
300 ☐ Soil Nailing
305 ☐ Storm & Sanitary Sewer Laterals & Water Svc.
310 ☐ Street Construction
315 ☐ Street Lighting
318 ☐ Tennis Court Resurfacing
320 ☐ Traffic Signals
325 ☐ Traffic Signing & Marking
332 ☐ Tree pruning/removal
333 ☐ Tree, pesticide treatment of
335 ☐ Trucking
340 ☐ Utility Transmission Lines including Natural Gas, Electrical & Communications
399 ☐ Other_____

Bridge Construction

501 ☐ Bridge Construction and/or Repair

Building Construction

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

State of Wisconsin Certifications

1 ☐ Class 5 Blaster - Blasting Operations and Activities 2500 feet and closer to inhabited buildings for quarries, open pits and road cuts.
2 ☐ Class 6 Blaster - Blasting Operations and Activities 2500 feet and closer to inhabited buildings for trenches, site excavations, basements, underwater demolition, underground excavations, or structures 15 feet or less in height.
3 ☐ Class 7 Blaster - Blasting Operations and Activities for structures greater than 15 ' in height, bridges, towers, and any of the objects or purposes listed as "Class 5 Blaster or Class 6 Blaster".
4 ☐ Petroleum Above/Below Ground Storage Tank Removal and Installation (Attach copies of State Certifications.)
5 ☐ Hazardous Material Removal (Contractor to be certified for asbestos and lead abatement per the Wisconsin Department of Health Services, Asbestos and Lead Section (A&LS).) See the following link for application: www.dhs.wisconsin.gov/Asbestos/Cert. State of Wisconsin Performance of Asbestos Abatement Certificate must be attached.
6 ☐ Certification number as a Certified Arborist or Certified Tree Worker as administered by the International Society of Arboriculture
7 ☐ Pesticide application (Certification for Commercial Applicator For Hire with the certification in the category of turf and landscape (3.0) and possess a current license issued by the DATCP)
8 ☐ State of Wisconsin Master Plumbers License.

SECTION B: PROPOSAL

Please refer to the Bid Express Website at https://bidexpress.com look up contract number and go to Section B: Proposal Page

You can access all City of Madison bid solicitations for FREE at www.bidexpress.com

Click on the "Register for Free" button and follow the instructions to register your company and yourself. You will be asked for a payment subscription preference, since you may wish to bid online someday. Simply choose the method to pay on a 'per bid' basis. This requires no payment until / unless you actually bid online. You can also choose the monthly subscription plan at this time. You will, however, be asked to provide payment information. Remember, you can change your preference at anytime. You will then be able to complete your free registration and have full access to the site. Your free access does not require completion of the 'Digital ID' process, so you will have instant access for viewing and downloading. To be prepared in case you ever do wish to bid online, you may wish to establish your digital ID also, since you cannot bid without a Digital ID.

If you have any problems with the free registration process, you can call the bidexpress help team, toll free at 1-888-352-2439 (option 1, option1).

SECTION C: SMALL BUSINESS ENTERPRISE

Instructions to Bidders
City of Madison
SBE Program Information

SBE NOT APPLICABLE

SECTION D: SPECIAL PROVISIONS

FIRE STATION 10 STOREFRONT REPLACEMENT
CONTRACT NO. 8061

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

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

SECTION 102.9 BIDDER'S UNDERSTANDING

Tax Exempt Status. Effective with all contracts executed after January 1, 2016, the sales price from the sale, storage, use or other consumption of tangible personal property that is used in conjunction with a public works improvement for a tax exempt entity (including the City of Madison), is exempt from State sales tax. Said property must become a component of the project owned by the tax exempt entity and includes: any building; shelter; parking lot; parking garage; athletic field; storm sewer; water supply system; or sewerage and waste water treatment facility, but does not include a highway, street or road. The contractor shall ensure that the exemption for sales and use tax available under Wis. Stat. Sec. 77.54(9m) applies where available. The contractor shall provide all necessary documentation as required by the State of Wisconsin and the City of Madison to comply with this exemption.

See link to Wisconsin Department of Revenue Tax Bulletin, January 2016, Number 192 and 2015 Wis. Act 126 for additional information.

SECTION 102.12 BEST VALUE CONTRACTING

This Contract shall be considered a Best Value Contract if the Contractor's bid is equal to or greater than $59,000 for a single trade contract; or equal to or greater than $288,000 for a multi-trade contract pursuant to MGO 33.07(7).

ARTICLE 104 SCOPE OF WORK

This contract is for the replacement of storefront window system in fire station #10. Contractor shall provide all labor and material for demolition and new installation.

SECTION 105.9 SURVEYS, POINTS, AND INSTRUCTIONS

The Contractor is responsible for providing all survey, benchmarks, points, and elevations required for this project.

SECTION 109.7 TIME OF COMPLETION

Work shall only begin after the contract is completely executed and the start work letter is received.

The Contractor shall have reached a level of Contract Closeout NO LATER THAN June 29, 2018.

SECTION 110.2 PARTIAL PAYMENTS

The City reserves the right to pay the Contractor with checks that are made payable to the Contractor and one or more subcontractors. In addition, pursuant to the requirements of Wis. Stat. Sec. 779.15, the City may also directly pay a subcontractor to satisfy a valid public improvement lien.

SPECIFICATION INDEX

SECTION 00 31 46
PERMITS

PART 1 – GENERAL

1.1. SCOPE

A. Each project has varying requirements for permits, inspections, and fees based on the scope, size, and location of the project. Contractor shall be knowledgeable of all applicable requirements.

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.

1.2. REFERENCES

A. The following references are not intended to be all inclusive. It shall be the contractor'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. Utilities
   7. Others as may be specified by the contract documents.

C. State Statutes

D. Other Regulatory Regulations

E. 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. Contractor 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 and pay for all required inspections that may be conditions of any required permits.
   4. Obtain all permits and pay all fees required by local utilities for permanent electric and gas service.
   5. Contractor shall obtain copies of all required permits and certificates of inspection applicable to the work. Provide high quality scanned images of all required permits and inspections and upload them to the Contract Documents-Regulatory Documents Library on the Project Management Web Site.

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

END OF SECTION

SECTION 01 25 13
PRODUCT SUBSTITUTION PROCEDURES

PART 1 – GENERAL

1.1. SCOPE

A. A specific list of preferred products is used to establish standards of quality, utility, and appearance required. For Products specified by naming only one Product and manufacturer, no substitute product will be considered.

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. Whenever a particular manufacturer's product is named, it is intended to establish a level of quality and performance requirements unless more explicit restrictions are stated to apply.

1.2. REFERENCES

A. Work under this section depends on applicable provisions from other sections and the plan set in this contract. Examples of related sections include, but are not limited to:
   1. Section 01 26 13 - Request for Information (RFI)
   2. Section 01 31 23 - Project Management Web Site
   3. Section 01 33 23 - Submittals

PART 2 – EXECUTION

2.1. 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 including all required supporting documentation to the City Project Manager by the substitution request deadline specified in Section A of the Contract Documents. Utilize the Substitution Request Form found at the end of this Section.
   2. Submit a Substitution Request for each product, supported with complete data, drawings and samples including:
      a. Comparison of qualities of the proposed substitutions with that specified.
      b. Changes required in other elements of the Work because of the substitution.
      c. Effect on the construction schedule.
      d. Cost data comparing the proposed substitution with the Product specified.
      e. Any required license fees or royalties.
      f. Availability of maintenance service and source of replacement materials.
   3. The Owner will review the Substitution Request Form and if approved the City of Madison will publish a bidding addendum authorizing the replacement. The Owner may reject any substitution request without providing specific reasons.

2.2. REQUESTING A SUBSTITUTION AFTER AWARD OF CONTRACT

A. A substitution request will only be considered if it meets the qualifying provisions as described above.

B. The GC shall submit a substitution request using the digital form on the Project Management Web Site located in the Construction Administration-Substitution Request library.

2.3. UNAUTHORIZED SUBSTITUTIONS

A. Any Contractor who substitutes products without proper authorization by the Owner and City Project Manager 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 13
REQUEST FOR INFORMATION (RFI)

PART 1 – GENERAL

1.1. SCOPE

A. Contractors shall use the RFI process to request additional information or clarification regarding the construction.

PART 2 – EXECUTION

2.1. CONTRACTOR INITIATED RFI

A. Immediately on discovery of the need for additional information or interpretation of the Contract Documents any contractor may initiate an RFI for additional information or clarification through the GC.
B. Submit a new RFI for each issue. Multiple questions that are of a similar nature may be combined into one RFI shall be allowed and responded to.
C. Thoroughly explain the issue at hand, provide backup information (photographs, sketches, drawings, data, etc) as necessary, and clearly state the question or problem that requires a resolution.

2.2. RFI RESPONSES

A. Responses to simple RFI issues shall use the response section of the RFI form.
B. Responses to more complex issues may require additional time or may require a Construction Bulletin to be published. The following GC generated RFIs will be returned without action:
   1. Requests for approval of submittals
   2. Requests for approval of substitutions
   3. Requests for approval of Contractor's means and methods.
   4. Requests for coordination information already indicated in the Contract Documents.
   5. Requests for adjustments in the Contract Time or the Contract Sum.
   6. Requests for interpretation of A/E's actions on submittals.
   7. Incomplete RFI or inaccurately prepared RFI.

2.3. COMMENCEMENT OF WORK RELATED TO AN RFI

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

END OF SECTION

SECTION 01 26 46
CONSTRUCTION BULLETIN (CB)

PART 1 – GENERAL

1.1. SCOPE

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

1.2. RESPONSIBILITES

A. PROJECT CITY PROJECT MANAGER (CPM): The CPM shall be the only person authorized to publish a CB.
B. GENERAL CONTRACTOR: The GC shall be responsible for the following as needed:
   1. Acknowledge receipt of the CB on the Project Management Web Site.
   2. Notify all Sub-contractors of the CB and publish the CB to all field sets of drawings and specifications as appropriate.
   3. The GC shall execute the directives of the CB or submit COR documentation as necessary during the execution and implementation of the CB.

END OF SECTION

SECTION 01 26 57
CHANGE ORDER REQUESTS (COR)

PART 1 – GENERAL

1.1. SCOPE

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 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 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.

1.2. 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 rate which includes the base rate, taxes, insurance and fringe benefits required by agreement or custom.
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 $1,000, 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 $1,000 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.

1.3. CONTRACT EXTENSION

A. 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.

1.4. 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. The total maximum overhead and profit shall not exceed fifteen percent (15%) of the total costs.
B. The total maximum overhead and profit shall be distributed as follows:
   1. For work performed and materials provided solely by the General Contractor, fifteen percent (15%) of the total costs.
   2. For work performed and materials provided solely by Sub-contractors and supervised by the General Contractor:
      a. Supervision of the GC, five percent (5%) of the total Sub-contractor cost.
      b. Sub-contractors work and materials ten percent (10%) of the total Sub-contractor cost.

1.5. 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. Collect 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.

E. The GC shall be responsible for ensuring that all COR supporting documentation meets the following requirements prior to completing the COR form on the Project Management Web Site:
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.

PART 2 – EXECUTION

2.1. 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 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 of materials, labor and other related contract costs as previously outlined in this specification.
3. Submit a COR request form on the Project Management Web Site.

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.

2.2. CHANGE ORDER REQUEST REVIEW, APPROVAL, AND PROCESSING

A. If required the GC and CPM, shall in good faith, further negotiate the COR with the GC as necessary. All amendments to any COR shall be documented within the Project Management Web Site software.

B. After final review of the COR the CPM and Owner may accept the COR.

C. 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.

2.3. EMERGENCY CHANGE ORDER REQUEST

A. In the event Work is required due to an emergency as described in the Contract Documents, the GC must request an equitable adjustment as soon as practicable, and in no case later than ten (10) working days of the commencement of such emergency.

B. The GC shall provide full documentation of all labor, materials and equipment used during the period of emergency as part of the COR submittal.

END OF SECTION

SECTION 01 26 63
CHANGE ORDER (CO)

PART 1 – GENERAL

1.1. SCOPE

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. BOARD OF PUBLIC WORKS PROCEDURE

A. The 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:
   2. The CO does not request a time extension to the contract.
   3. The CO does not cause 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 2 weeks to achieve final approval. The City shall not be responsible for additional delays to the Work caused by the scheduling constraints of the Board of Public Works.
C. 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.
D. The GC and/or CPM 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.

PART 2 – EXECUTION

2.1. EXECUTION OF THE CHANGE ORDER

A. Upon by the Project Management Web Site, the GC shall do the following:
   1. Open the appropriate CO form in the Construction Administration-Change Order Library and review all items on the form.
   2. The GC shall notify the CPM immediately of any errors or discrepancies on the form and shall not sign or save it.
   3. If/when the GC concurs with the CO form as drafted the GC shall digitally sign the form and click SAVE.
B. After the GC digitally signs/saves the CO it shall be routed through the Project Management Web Site for additional review and/or approvals.
C. Upon final approval of the CO the GC may proceed with executing the Work associated with the CO.

END OF SECTION

SECTION 01 29 73
SCHEDULE OF VALUES

PART 1 – GENERAL

1.1. SCOPE

A. The Schedule of Values (SOV) is a Contractor provided statement that allocates portions of the total contract sum to various portions of the contracted work and shall be the basis for reviewing the Contractors Progress Payment Requests.

B. AIA Document G702 – Application and Certificate for Payment and AIA Document G703 Continuation Sheet shall be filled out in sufficient detail to be used as a guideline in determining work completed and materials stored on site when verifying Progress Payment Requests.

C. The General Contractor shall be responsible for filling out, updating, and providing these work sheets with each Progress Payment Request.

1.2. REFERENCES

A. Work under this section depends on applicable provisions from other sections and the plan set in this contract. Examples of related sections include, but are not limited to:
   1. Section 01 26 63 - Change Order (CO)
   2. Section 01 29 76 - Progress Payment Procedures
   3. Section 01 31 23 - Project Management Web Site
   4. Section 01 32 26 - Construction Progress Reporting
   5. Section 01 33 23 - Submittals
   6. Parts of this specification will reference articles within "The City of Madison Standard Specifications for Public Works Construction". Use the following link to access the Standard Specifications web page http://www.cityofmadison.com/business/pw/specs.cfm

B. The following documents shall be used as the basis for initiating and maintaining the SOV worksheets throughout the execution of this contract.
   1. Drawing documents and specifications (including general provisions) as provided with the bid set documents and any published addendums.
   2. Documents associated with revisions or clarifications after awarding of the contract, including but not limited to:
      a. Construction Bulletins
      b. Request for Information
      c. Approved Change Orders
   3. The latest daily/weekly Construction Progress Report

PART 2 – EXECUTION

2.1. AIA DOCUMENT G702 – APPLICATION AND CERTIFICATE FOR PAYMENT

A. The Contractor shall use AIA Document G-702 Application and Certificate for Payment with each Progress Payment Request.

B. Completely fill out the Project Information section as follows:
   1. TO OWNER; provide all owner related information as provided in the contract documents.
   2. PROJECT; provide all contract information including contract number, title and address.
   3. FROM CONTRACTOR; provide all contractor related information.
   4. VIA ARCHITECT; provide all the architect's related information including the architect's project reference number if different from the owners.
   5. Indicate the current APPLICATION NO., PERIOD TO date, and CONTRACT DATE.

C. Completely fill out the Contractors Application for Payment section.
   1. Fill out lines 1 through 9 to reflect the current status of the contract through the payment date being requested.
   2. The City of Madison calculates retainage on Public Works Contracts as follows:
      a. In general, across the duration of the contract, 2.5% of the total contract sum, including change orders, is withheld for retainage as referenced from the City of Madison Standard Specification 110.2:
         i. Beginning with Progress Payment 1, 5% retainage will be withheld until such time that 50% of the total contract sum has been paid out.
         ii. No additional retainage will be withheld after 50% of the total contract sum has been paid, unless additional change orders have been approved after the 50% milestone has been reached. Per City of Madison Standard

Specification 110.2, additional retainage up to 10%, may be held in the event there are holds placed by Affirmative Action or liquidated damages by BPW.

iii. Retainage for additional change orders after the 50% milestone will be withheld at the rate of 2.5% of the total cost of the change order.

iv. Retainage is based on the change orders posted to the City's contract worksheet at the time the progress payment is processed.

D. Completely fill out the Change Order Summary section. Only change orders that have been finalized and posted to the City of Madison's Application for Partial Payment worksheet may be itemized into the SOV documents.

E. The Contractor shall sign and date the application and it shall be properly notarized.

F. The Contractor shall not fill in any information in the Architects Certificate for Payment section.

2.2. AIA DOCUMENT G703 – CONTINUATION SHEET

A. The Contractor shall use AIA Document G-703 Continuation Sheet to itemize his/her SOV for this contract. Provide additional sheets as necessary.

B. Provide information in Column A (Item No.), Column B (Description of Work), and Column C (Scheduled Value) by any method that allocates portions of the total contract sum to various portions of the contracted work. Possible methods include combinations of the following:

1. By division of work
2. By contractor, sub-contractor, sub sub-contractor
3. By specialty item or group
4. Other methods of breakdown as may be requested by the City Project Manager or City Construction Manager at the pre-construction meeting.

C. Provide total cost of the item/description of work including proportionate shares of profit and overhead related to the item.

2.3. INITIAL SCHEDULE OF VALUES SUBMITTAL

A. The Contractor shall upload his/her initial SOV to the Project Management Web Site, Submittals Library, no later than five (5) working days after the Pre-construction Meeting.

1. The initial SOV shall provide information in Column A (Item No.), Column B (Description of Work), and Column C (Scheduled Value) only.
2. The level of detail shall be as described above.

B. The Project City Project Manager (CPM) shall review the SOV as any other submittal and may require modifications to reflect additional detail as necessary.

C. The Contractor shall resubmit the SOV as necessary until such time as the PPA and CPM have sufficient detail for assessing and approving future Progress Payment Applications.

D. Progress Payment Application 1 will not be processed until such time as the Contractor has met this requirement regardless of the amount of work completed per the application.

2.4. SOV FOR PROGRESS PAYMENT REQUESTS

A. The Contractor shall update the initial SOV with each Progress Payment Application as follows:

1. Initial items and values listed above will not be adjusted once the original Schedule of Values submittal has been approved.
2. Change orders shall be added as additional items and values at the bottom of the SOV as they become approved and posted to the City's contract worksheet. The value for each change order shall be the value indicated on the SOV and shall stand alone. Values shall not be split out or combined with other existing items with similar work descriptions on the original SOV.
3. Fill out Columns D, E, F and G to properly reflect the work completed and materials received since the last Progress Payment Application.
4. Only materials delivered and stored on the project site may be reflected on SOV progress updates.

B. Provide updated G702 and G703 sheets with each Progress Payment application.

END OF SECTION

SECTION 01 29 76
PROGRESS PAYMENT PROCEDURES

PART 1 – GENERAL

1.1. SCOPE

A. The General Contractor (GC) shall review this and all related specifications prior to submitting progress payment requests.
B. Progress payment requests (Partial Payment-PP) for this contract shall be uploaded digitally by the GC to the Project Management Web Site

1.2. REFERENCES

A. Work under this section depends on applicable provisions from other sections and the plan set in this contract.
B. The following documents shall be used when evaluating PP requests.
   1. Daily and weekly construction progress reports filed since the last payment request.
   2. Contractors Schedule of Values as updated from the last payment request.
   3. Any document that may be required to be submitted for review and approval, or the Progress Payment Milestone Schedule in Section to achieve a required bench mark of contract progression or contract requirement.

1.3. PROGRESS PAYMENT MILESTONES

A. The Progress Payment Milestone Schedule is not an all-inclusive list. Multiple agencies review progress payment requests and contract closeout requests. Missing, incomplete, or incorrect documentation for any agency may be a cause for not processing progress payments. It shall be the sole responsibility of the Contractor for providing documentation as required or requested to the appropriate agencies.
B. The milestone schedule is based on the contract total sum and shall be valid for most contracts. Milestone submittals will be required with whatever progress payment hits the percentage of contract total indicated in the schedule.
C. The CPM shall review the milestone schedule with each progress payment request and at his/her option may elect to hold processing the progress payment until such time as the contractor has met the requirements for providing construction specific documentation.
D. It shall be the General Contractors responsibility to comply with all BPW Contract Administration requirements and related deadlines as outlined in the Award Letter, Award Checklist, and Start Work Letter.

Progress Payment (PP) Milestone Schedule		
Milestone Description	***Due Before***	***Remarks***
Workforce profiles Best Value Contracting Documentation Sub-contractors prequalification approval & Affirmative Action plans as may be required	PP-1, or start work as applicable	For GC and Sub-contractors before PP-1 regardless of scheduling Sub-contractors (if applicable), due 10 days before they may start work Sub-contractors (if applicable), due 10 days before they may start work
Contractors Project Directory Schedule of Values Submittals Schedule Waste Management Plan Closeout Requirement Checklist Warranty Checklist Early submittals, per submittal schedule Detailed Contract Schedules	PP-1	
Progress Schedules Submittals/Re-submittals (ongoing) Schedule of Values Progress Reporting LEED Documentation Waste Management documentation QMOs are being addressed and closed Progress Cleaning As-Built Drawings	Each future PP	
*** All of the above are being updated on the Project Management Web Site as required**		

Progress Payment (PP) Milestone Schedule		
Milestone Description	*Due Before*	*Remarks*
Weekly payroll reports Best Value Contracting Reports SBE Reports	25% CT or PP 2	
Construction/Contract Closeout Meeting #1 Submittals/Re-submittals complete	50% CT	
Operation and Maintenance (O & M) drafts	60% CT	
Construction/Contract Closeout Meeting #2 Construction closeout checklist	70% CT	
BPW Contract Administration Documentation Request Finalization Review from BPW Construction Progress Milestones Operation and Maintenance (O & M) finals, accepted All major QMO issues resolved As-Built Drawings, Division Trades ready for GC review	80% CT	This is a recommendation to the GC and is not a requirement of this PP.
All of the following shall be completed for this PP: Regulatory Inspections completed All QMO reports closed Demonstration and Training completed Attic Stock completed Final Cleaning	90% CT	Contractor to determine the proper order of completion:
Construction Closeout Procedures: Letter of Substantial Compliance sent to BI and DHS as needed Certificate of Occupancy issued As-Built Drawings, finals, accepted City Letter of Substantial Completion Warranty letters dated and issued	100% CT Completion of this begins the one year warranty.	Generated/Signed by the Architect Building Inspection Signed by the City Engineer
BPW Contract Administration Documentation Contract Closeout Procedures Construction Closeout has been completed Contractor requests final payment of retainage All BPW contractual requirements are verified	Final	Contractor must provide any missing BPW Contractual Documentation
***NOTE:* CT = Contract Total less held retainage**		

1.4. PROGRESS PAYMENT SUBMITTAL

A. Each progress payment submittal shall be Digital in colored PDF format

B. In general the following shall apply to all PP requests:
   1. Materials or products:
      a. On order, being shipped, etc. may not be invoiced.
      b. Received and stored on the project site may be invoiced.
      c. Being manufactured off site at any location may not be invoiced (example: cabinetry, ductwork, etc.)
   2. Only completed installations may be invoiced to 100% based on the Schedule of Values.

C. DO NOT submit BPW Contract Administration Documentation for review with Progress Payment Requests, submit them directly to the correct agency and in the correct format as instructed from information in your BPW Contract Award Packet instructions.

D. The General Contractor (GC) shall scan all of the documents listed below in the order shown, save the scan as a single PDF file for each PP request.
   1. City cover sheet – Application and Certificate for Payment
   2. City tabulation sheet(s)
   3. AIA G702 - Application and Certificate for Payment
   4. AIA G703 - Continuation Sheet(s)
   5. Any miscellaneous documents that may be requested as backup documentation for the pay request.
      a. Lien waivers are not required and shall not be submitted.
      b. Do not provide contractual administrative documents such as pay reports with pay requests.
      c. Do not supply progress deliverables with pay requests.

E. Upload the pay request PDF to the Contract Documents-GC Partial Pay Apps library on the Project Management Web Site.

END OF SECTION

SECTION 01 31 00
PROJECT MANAGEMENT AND COORDINATION

PART 1 – GENERAL

1.1. SCOPE

A. This specification provides general information regarding project coordination for the General Contractor and all Sub-contractors and meetings.
B. This specification is not intended to be inclusive of all meeting types or a complete list of required meetings.
C. This specification is not intended to cover planning and execution meetings between the General Contractor (GC) and sub-contractors.
D. Representatives of Contractors, Subcontractors, and suppliers attending meetings shall be qualified and authorized to act on behalf of the entity each represents.

1.2. CONTRACTOR REQUIREMENTS

A. Coordinate all work by Owner, equipment provided by owner, or contractor hired by the Owner. Adjust project schedule.
B. Be familiar with all of the contract documents as they pertain to specific and adjacent work and the overall project.
C. CLEARANCE COORDINATION: Each device requiring clearance shall have a label attached outlining clearance requirements. This shall include but not be limited to manufacturer's clearance drawings, indication of distances and other information helpful for other trades to not interfere with the clearance requirements. Label shall be clearly visible and durable for construction site conditions.
D. Coordinate work with all adjacent work and existing conditions.
   1. Perform work in proper sequence according to the GC's project schedule and in relation to the work of other trades.
   2. Notify other sub-contractors and trades whose work may be connected to, combined with, or influenced by your work and allow them reasonable time and access to complete their work.
   3. Join your work to the work of others in accordance with the intent of the Contract Documents.
E. Cooperate with all other trades to facilitate the general progress of the work. This shall include providing every reasonable opportunity for the installation of work by others and the storage of their materials and equipment.
F. Arrange work, equipment, and materials and dispose of construction waste so as to not interfere with the work or storage of materials of others.
G. Coordinate all work as indicated during pre-installation meetings with Owner, the GC and other trades. Any work improperly coordinated shall be relocated as designated by the Owner Representative at no additional cost to the City.

1.3. COORDINATION DRAWING

A. Prior construction, GC shall schedule a meeting with the Subcontractors. The meeting shall introduce the coordination program and determine its implementation in relation to the project schedule.
B. Using the Construction Documents as a reference, contractors shall draw, to scale, the proposed installation showing duct sizes, equipment layouts, piping, conduit runs, and other equipment and installations. In congested areas, the contractor will, in addition, prepare drawings in section and 3D view. Provide detail on sloped installations.
C. The major components to be indicated include (but are not limited to):
   1. Roof drain leaders
   2. Waste piping
   3. Sprinkler mains
   4. Heating mains
   5. Cooling mains
   6. Lighting
   7. Conveying systems
   8. Significant conduit runs
   9. Duct mains and branches
D. The General Contractor will distribute the electronic version of the drawings to the participating Trade Subcontractors for their use in drawing thereon the major components for their proposed installations using the general scheme shown on the Construction Documents as a guide.
E. Within a period not to exceed 1 week after distribution of the drawings, The General Contractor shall schedule a meeting with the participating Trade Subcontractors at which time, the drawing will be overlaid to identify areas of conflict. All

parties shall cooperate in resolving any identified conflicts. The above drawing, review and coordination process will be repeated until all areas on the project have been coordinated as determined by the General Contractor.

F. If a Change Order request is issued, the affected Trade Subcontractors shall review the coordination drawings and bring to the attention of the General Contractor any revisions necessary to the work of others not directly affected by the Change Order.

PART 2 – EXECUTION

2.1. PRECONSTRUCTION MEETING

A. After execution of the Contract the City Project Manager (CPM) shall schedule and conduct the pre-construction meeting at the Owner's facilities. The CPM shall be responsible for the final agenda and meeting minutes.

B. Attendance shall be required by all of the following:
   1. General Contractor and applicable subcontractors and suppliers
   2. City Quality Management Staff
   3. Others, as may be invited for particular agenda items.

C. Topics of the Preconstruction Meeting shall include but not be limited to the following:
   1. Staff and contractor introductions
   2. Completion Date
   3. BPW Administrative requirements and due outs
      a. Small Business Enterprise (SBE) (if applicable)
      b. Certified payroll forms
      c. Workforce profiles
      d. Best Value Contracting (BVC)
   4. Construction Schedule

2.2. CONSTRUCTION PROGRESS MEETINGS

A. The General Contractor Project Manager (GCPM) shall:
   1. Schedule and conduct all construction progress meetings biweekly or more frequently as required.
   2. Prepare agenda for meetings including, but not limited to the following:
      a. Safety
      b. Current Schedule, including review of the critical path and 6-week look ahead schedule
      c. Status of project related documentation (Submittals, RFIs, CBs, etc.)
      d. Quality Observation Log and status of correction of deficient items
      e. Project questions and issues from meeting attendees
      f. BPW Administration Check
      g. Other as needed
      h. Status of CORs and COs to be reviewed outside the standard progress meeting time.
   3. Make physical arrangements for meetings.
   4. Preside at meetings.
   5. Route a meeting attendance roster for attendees to sign-in on.
   6. GCPM to record the minutes of the meeting; include significant proceedings and decisions. Post meeting minutes to the PMWS no more than two (2) working days after the completed meeting. Meeting minutes shall include a scanned copy of the attendance sign-in sheet. Notify all required meeting attendees, applicable parties to the contract, and others affected by decisions made at the meetings.
   7. The above requirements do not apply to GC/sub-contractor meetings.

2.3. PRE-INSTALLATION MEETINGS

A. The GCPM shall schedule and conduct all pre-installation meetings before each construction activity.

B. Required attendance shall be personnel having a stake in the outcome of the installation or knowledge of the system being installed. Owner and designers shall always be invited.

C. In the event the Contractor installs equipment or materials without a pre-installation meeting the Contractor shall be solely responsible for removing, replacing, repositioning materials and equipment as instructed by owner at no additional cost to the City.

2.4 OTHER SPECIAL MEETINGS

A. The Contractor shall schedule special meetings per the requirements of the specification, the Project Quality Management Plan, the Commissioning Plan and as indicated by other specifications.

B. Special meetings include but are not limited to the following:
   1. Waste Management Conference
   2. Equipment start up meetings
   3. Testing and balancing meetings
   4. Commissioning meetings
   5. Other meetings as necessitated by the contract documents

END OF SECTION

SECTION 01 32 00
CONSTRUCTION PROGRESS DOCUMENTATION

PART 1 – GENERAL

1.1. SCOPE

A. Specification of scheduling, progress reporting and other documentation. This specification is not intended to include internal schedules generated by the contractors during their planning.

PART 2 – EXECUTION

2.1. PROJECT SCHEDULES (OPS)

A. Schedules shall be updated and uploaded to the PMWS before each construction meeting.
B. The GC shall prepare an Overall Project Schedule (OPS) that covers the duration of the contract from the pre-construction meeting through the end of construction to final contract closeout. Indicate critical path and start and end dates of each task associated with the project.
C. The GC shall prepare a 6-week Look Out Schedule (LOS) to include detail of daily tasks for the first 6 weeks of construction in depth for the Pre-construction meeting. The LOS shall be compatible and complimentary to the OPS. The LOS shall also include identifying and scheduling such events as:
   1. Pre-installation meetings and mock-up review meetings.
   2. Quality management reviews of installations before they are covered.
   3. Owner provided equipment as designated by the contract documents.
   4. Work by others as designated by the contract documents.
   5. Critical submittal dates.

2.2. DAILY PROGRESS JOURNAL

A. GC shall maintain a daily progress journal of daily Work activities for each day on which Work is performed by any employee or entity for which the GC is responsible. Such reports shall include all relevant data concerning the progress of Work activities the GC and Subcontractors are responsible for and the effect of that activity on the time of performance of the Contract.
B. Journal entries shall be made on the Daily Work Report Form located in the Construction Progress-Daily Journal Library on the Project Management Web Site. Information required includes but is not limited to
   1. Weather; include temperature, humidity, precipitation, wind and other related information such as significant storm events, times, and details.
   2. Work completed by trade
   3. Delays encountered
   4. Deliveries received or delayed.
   5. Hot issues that need to be addressed
   6. Safety issues
   7. Photograph progress and upload to the Photo Library on the Project Management Web Site.
   8. Other including inspections, testing, etc.
   9. Space for attaching documents

2.3. PHOTOGRAPHIC DOCUMENTATION

A. GC shall take weekly digital photographs of construction progress.
B. Owner may direct contractors to take additional pictures to document work progress and verify proper installation.
C. All digital photographs shall be taken with a good quality device and be properly zoomed in/out to capture a specific level of detail as necessary.
D. All digital photographs shall be saved in a JPEG (.jpg) format and uploaded directly to the PMWS.
E. The GC shall take exterior photographs from at least 2 different angles.
   1. This requirement shall end when the exterior work has been substantially completed.
   2. This requirement may be suspended due to weather conditions or substantial delays in exterior progress.
F. The GC shall take interior photographs of interior construction, equipment installation, rough-ins and other such progress that helps document weekly progress reporting. Interior photographs should focus on specific significant installations as well as general progress throughout the progress of the contract.

END OF SECTION

SECTION 01 33 23
SUBMITTALS

PART 1 – GENERAL

1.1. SCOPE

A. 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.

C. 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 submit a Request for Information (RFI) requesting other approved alternates prior to uploading a digital submittal.

D. 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.

E. Contractor is responsible for meeting contract requirements. Reviewed submittals don't relieve contractor from responsibility to meet all requirements. It is not the responsibility of the owner or designer to verify submitted items meet the contract requirements.

1.2. REFERENCES

A. Work under this section depends on applicable provisions from other sections and the plan set in this contract.

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

C. All contract documents generated during the execution of the contract including but not limited to Requests for Information (RFI) and Construction Bulletins (CB).

1.3. SUBMITTAL REQUIREMENTS

A. Digital submittal shall be original PDF of manufacturer's data sheets or high quality color scan if no original available.

B. Submittals shall not include sales fliers or other similar documents that typically do not provide technical data.

C. Identify the plan reference (WC-1, EF-3, etc.) in RED block letters that the submittal is for. Where multiple model numbers appear in a table identify the specific model being submitted by using a RED square, box, or other designation.

D. 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. Installation Documentation
   7. Warranty information

E. 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) meeting photographic documentation requirements of the product

F. Provide one Submittal per specification section.

G. Delete any blank pages, foreign language documents and any other irrelevant pages.

H. Mark what option is part of the project.

I. Highlight any changes to original requirements and explain advantages and disadvantages of the deviation.

J. If a pre-approved, but not basis-of-design, product or product from a pre-approved manufacturer is submitted, highlight how this product meets all design intent.

1.4. ADMINISTRATIVE SUBMITTAL

A. The GC shall upload the following submittals within 15 working days of receipt of the City of Madison Start Work Letter. All Administrative Submittals shall be approved prior to requesting Progress Payment Number 1.
   1. Contractors Project Directory, see specification 01 31 23, discuss requirements with CPM
   2. Schedule of Values, see Specification 01 29 73
   3. Submittals Schedule, see Specification 01 32 19
   4. Waste Management Plan, see Specification 01 74 19
   5. Closeout Requirement Checklist, see Specification 01 77 00

1.5. GENERAL PROCEDURES

A. All required submittals will be uploaded to the Construction Administration-Submittal Drawings Library on the Project Management Web Site (PMWS) by the GC. Uploading the submittal indicates that the GC has reviewed and approved the submittal against the contract document requirements.
   1. The GC shall prepare a new Submittal Form for each required submittal from the Submittals schedule.
   2. Fill in required information on the form that will be used for routing the review and comments.

B. The GC and sub-contractors shall provide re-submittals as required.

C. Contractors shall be aware that the goals for submittal review by the City Project Manager staff and City staff will be as follows:
   1. For items on the Critical Path as identified by the GC, five (5) working days
   2. For most other submittals ten (10) working days
   3. Additional time may be needed for complex submittals or if re-submittals are required.

D. If submittals are not correct, one of the following will happen:
   1. Revise and Re-submit: a new complete and corrected submittal is required.
   2. Reviewed with Comment: no new submittal is required the comments shall be implemented. Any direction of change or modification shall have the same effect as a construction bulletin.

END OF SECTION

SECTION 01 35 29
HEALTH, SAFETY, AND EMERGENCY RESPONSE PROCEDURES

PART 1 – GENERAL

1.1. SCOPE

A. This section includes information common to health, safety and emergency responses and applies to the entire contract.
B. Contractor shall provide all labor, materials, PPE, equipment, services and supervision required to maintain work sites that meet the safety and health (S&H) requirements and protect the safety and health of all visitors and staff on site and the general public. Owner can request additional safety protection measures at any time.
C. Contractor shall provide a qualified onsite S&H Representative with the authority to enforce all of the safety requirements and implement the contractor's Injury and Illness Prevention Program. The representative shall conduct safety inspections of the project operations, materials, and equipment frequently throughout the day to ensure that all safety deficiencies are identified and corrected.
D. Hazardous Abatement will be done under separate contract. Contractor is required to coordinate as needed.

1.2. REFERENCES

A. Work under this section depends on applicable provisions from other sections and the plan set in this contract.
B. OSHA – Occupational Safety and Health Administration
C. All applicable municipal, state and federal guidelines
D. All industry-specific guidelines

1.3. SUBMITTALS

A. REPORTING: regardless of perceived severity, all unsafe acts, conditions, damage, spills, leaks, accidents, injuries and near-misses must be immediately reported to the owner. For OSHA recordable injuries, furnish a copy of the OSHA Form 301.
B. Safety, Health and Emergency Response Plan that includes but is not limited to all the below items:
   1. All applicable aspects that are part of this specification
   2. Construction contractor responsibilities.
   3. Contractor's disciplinary procedures.
   4. Confined Space Entry
   5. Hazard Communication Program.
   6. Site specific Emergency Response, First Aid, & Medical Services. Identify employees with CPR/First Aid certification.
   7. Fire Protection and Prevention
   8. Inspection, Maintenance, and Certification of Heavy Equipment, Cranes, and Motor Vehicles
   9. Construction Safety Training
   10. Refer to the Manual of Accident Prevention in Construction, published by the Associated General Contractors of America.

A. Activity Hazard Analysis and Hazard Abatement Plan including but not be limited to:
   1. Description of work phase or activity
   2. Identification of potential hazards associated with the activity
   3. A list of the contractor's planned controls to mitigate the identified hazards
   4. Designate meeting/rally points for evacuation and designate severe weather shelters.
   5. Roofing
   6. Hoisting and handling of materials
   7. Excavations
   8. Trenching and drilling
   9. Concrete placement and false work
   10. Welding
   11. Steel erection
   12. Work performed six feet or higher above ground
   13. Electrical work
   14. Demolition
   15. Work in confined spaces
   16. Work that causes the release of silica (i.e. demolition or drilling of concrete or work with materials that contain silica)
   17. Work with epoxy coatings
   18. Work with or around hazardous materials
   19. Work on hilly terrain
   20. Use and handling of flammable materials

B. Fire Protection and Prevention Program including but not be limited to:

1. Smoking is prohibited everywhere on the job site – no exceptions. Signs shall be posted. In visible locations.
2. Combustible waste shall be removed immediately or stored in fire resistive containers until disposed.
3. Contractor shall provide during the entire construction period, a minimum of 3 fire extinguishers on each floor level, including basement of the building, and 1 in temporary office. Extinguishers shall be nonfreezing type such as A-B-C rated dry chemical, of not less than 10-pound capacity each. Any enclosed shed shall have similar fire extinguisher.
4. Fire watch personnel in sufficient number shall monitor all locations where fire is used. The fire watch personnel shall remain on the job at least thirty minutes after such operations are completed. Fire safety personnel may be installers.
5. Noncombustible shields or covers shall be provided to protect building structures, equipment and personnel from sparks and fragments of hot metal. Also take these precautions for grinding, drilling or sawing operations.
6. Fire fighting and other emergency procedures shall include local warning and evacuation systems.

1.4. GENERAL PROCEDURES

C. WORK SITE ORIENTATION: Each employee shall receive initial orientation prior entering site. Contractor shall maintain on the work site a detailed outline of the orientation and a roster of all employees who have completed the project EHS indoctrination. The orientation for visitors shall, at a minimum, cover the following points:
   1. First aid and medical facilities.
   2. Site and project specific hazards.
   3. Hazard recognition and procedures for reporting or correcting unsafe conditions or practices.
   4. Procedures for reporting accidents and incidents.

D. ALCOHOL AND DRUG ABUSE POLICY: No person on construction site shall be under the influence of any alcohol or drugs. Persons in violation will be banned from construction site for the duration of the project.

E. The plans and programs shall be updated to reflect new knowledge and uncovered deficiencies.

F. DUST CONTROL: Provide all necessary control measures at the work site to keep worker exposure to crystalline silica dust within the OSHA Established Permissible Exposure Limits (PEL's). Dust control measures may require spraying of water or engineering controls at the dust generating points. It also may include the use of respirators, industrial grade HEPA vacuums, and HEPA filtered locally exhausted tools. Operations causing the release of silica dusts include, but are not limited to:
   1. Chipping, sawing, grinding, hammering, and drilling of concrete, rock, or brick.
   2. Work with cementitious materials such as grout, mortar, stucco, gunnite, etc.
   3. Dry sweeping of dust originating from concrete or rock

G. ELECTRICAL WORK:
   1. Energized electrical work within panels and equipment is not allowed.
   2. Workers shall be qualified to perform electrical tasks in accordance with OSHA 29 CFR 1910 and 1926 requirements.
   3. Work practices must be compliant with NFPA 70E, newest edition – Standard for Electrical Safety in the Workplace.
   4. Lock Out/Tag Out (LOTO)

H. INDOOR AIR QUALITY (IAQ):
   1. During construction the recommended control measures of the Sheet Metal and Air Conditioning Contractors National Association (SMACNA) IAQ guidelines for occupied buildings under construction must be met or exceeded.
   2. In case permanent air handlers are used, filtration media with a Minimum Efficiency Reporting Value (MERV) of 13 shall be used at each return air grille. Contractor shall replace all filtration media immediately prior occupancy.
   3. All to be installed ductwork, air handlers and other equipment later connected to the indoor air path are to be protected from dirt and debris.

I. FALL PROTECTION:
   1. Fall Protection needs to be used for any work 6' or higher above ground:
   2. Lifts: full body harness must be worn 100% of time
   3. Extension ladders must extend 3 feet past the landing point. Step Ladders must be used in open position. The two top steps of any ladder shall not be used to stand or sit at any time.
   4. Scaffolding systems need to be inspected and documented before use. No riding or surfing on rolling scaffolds is allowed.

J. PERSONAL PROTECTIVE EQUIPMENT (PPE)
   1. PPE shall be provided in sufficient number to site visitors (owner staff, shippers, etc.) near the main entrances to the jobsite. This shall include but not be limited to hard hats, eye protection and reflective vests
   2. High visibility vests or other clothing shall be worn 100% of the time.
   3. Hard hats must be worm 100% of time. Employee hard hats shall display name in front.
   4. Eye protection must be worn 100% of time. Dark glasses are not allowed indoors.
   5. Face Protection shall be worn during all cutting or grinding operations.
   6. Hearing protection must be worn when sound levels are at or above 85 dB(A)
   7. Long pants and sturdy footwear shall be worn at all times.
   8. Respirators shall be used when dry-cutting or other dusty activities occur. This is in addition to all other dust-control measures.

END OF SECTION

SECTION 01 40 00
QUALITY REQUIREMENTS

PART 1 – GENERAL

1.1. SCOPE

A. This Section includes administrative and procedural requirements for quality assurance and quality control.
B. This specification does not relieve the GC from any requirements associated with regulatory inspections performed by JHA.
C. Any testing performed by an Owner's Representative does not relieve the GC from performing any testing that may be required by the construction documents. These services do not relieve Contractor of responsibility for testing and compliance with the Contract Document requirements.
D. This section establishes minimum qualification levels required. Individual Specification Sections specify additional requirements.
E. If a conflict exists within the Specifications or within the Drawings, the Contractor shall furnish the item,.system, or workmanship, which is the highest quality, largest, largest quantity or most closely fits the owner's intent. Refer uncertainties to City Project Manager for a decision before proceeding.

1.2 DEFINITIONS

A. QUALITY-ASSURANCE SERVICES: Activities, actions, and procedures performed before and during execution of the Work to guard against defects and deficiencies and substantiate that proposed construction will comply with requirements.
B. QUALITY-CONTROL SERVICES: Tests, inspections, procedures, and related actions during and after execution of the Work to evaluate that actual products incorporated into the Work and completed construction comply with requirements.
C. PRECONSTRUCTION TESTING: Tests and inspections that are performed specifically for the Project before products and materials are incorporated into the Work to verify performance or compliance with specified criteria.
D. SOURCE QUALITY-CONTROL TESTING: Tests and inspections that are performed at the source, i.e., mill, factory, or shop.
E. FIELD QUALITY-CONTROL TESTING: Tests and inspections that are performed on-site.
A. TESTING AGENCY: Entity engaged in specific tests, inspections, or both. Testing laboratory shall mean the same. Cooperate with City Project Manager and Contractor in performance of duties. Provide qualified personnel to perform required tests and inspections. Determine the location from which test samples will be taken and in which in-situ tests are conducted. Conduct and interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from requirements.
F. EXPERIENCED: When used with an entity, "experienced" means having successfully completed a minimum of five previous projects similar in size and scope to this Project; being familiar with special requirements indicated; and having complied with requirements of authorities having jurisdiction.

1.3 SUBMITTALS

A. TESTING AGENCY QUALIFICATION DATA: Submit proof of qualifications in the form of a recent report on the inspection of the testing agency by a recognized authority.
B. For all tests and quality verifications prepare and submit certified written reports that include the following:
1. Date of issue.
2. Project title and number.
3. Name, address, and telephone number of testing agency.
4. Dates and locations of samples and tests or inspections.
5. Names of individuals making tests and inspections.
6. Description of the Work and test and inspection method.
7. Identification of product and Specification Section.
8. Complete test or inspection data.
9. Test and inspection results and an interpretation of test results.
10. Record of temperature and weather conditions at time of sample taking and testing and inspecting.
11. Comments or professional opinion on whether tested or inspected Work complies with the Contract Document requirements.
12. Name and signature of laboratory inspector.
13. Recommendations on re-testing and re-inspecting.

C. DUST- AND HVAC-CONTROL PLAN: Submit coordination drawing and narrative that indicates the dust- and HVAC-control measures proposed for use, proposed locations, and proposed time frame for their operation. Identify further options if proposed measures are later determined to be inadequate. Include the following:
   1. Locations of dust-control partitions at each phase of work.
   2. HVAC system isolation schematic drawing.
   3. Location of proposed air-filtration system discharge.
   4. Waste handling procedures.
   5. Other dust-control measures.

1.4. QUALITY ASSURANCE

B. BIDDER QUALIFICATIONS: By submitting the bid, the bidder and each subcontractor certify meeting the following requirements:
   1. Has completed one projects of at least 50% of the size or value of the division of work being bid and the type of work completed is similar to that being bid. Additional requirements will be described in the appropriate technical section of these specifications.
   2. 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.
   4. Bidder shall check all bid documents for possible interferences, inadequacies, errors, conflicts and omissions and bring such to owner's attention by the time substitution requests are due. Failure to do so will not relieve the successful Bidder of responsibility. Signing of the contract will be considered as implicitly denoting that the Contractor has thorough understanding of the scope of work, existing conditions, and comprehension of the contract documents. Owner is not responsible for verbal instructions.
   5. During bidding owner will allow contractors to visit the site to familiarize themselves with the existing conditions and to ask questions for clarification. Failure to attend the scheduled walkthrough implies that the contractor accepts all existing conditions and includes all work to handle existing conditions in this contract.
   6. Prior bidding, bidder must obtain information on payment conditions, discounts, shipping charges, and other cost from vendors or manufacturers of the products specified. Any changes to prices or unknown cost are bidder's responsibility.

C. INSTALLER QUALIFICATIONS: A firm or individual experienced in installing, erecting, or assembling work similar in material, design, and extent to that indicated for this Project with a record of successful in-service performance.

D. MANUFACTURER OR FABRICATOR QUALIFICATIONS: A firm experienced in manufacturing products or systems similar to those indicated for this project and with a record of successful in-service performance, as well as sufficient capacity.

A. FACTORY-AUTHORIZED SERVICE REPRESENTATIVE QUALIFICATIONS: An authorized representative of manufacturer who is trained and approved by manufacturer to inspect installation of manufacturer's products indicated for this Project. Where indicated, engage a factory-authorized service representative to startup, inspect field-assembled components and equipment installation, including service connections. Report results in submittal.

B. LAND SURVEYOR QUALIFICATIONS: A professional land surveyor who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing land-surveying services of the kind indicated.

E. TESTING AGENCY QUALIFICATIONS: An NRTL (nationally recognized testing laboratory according to 29 CFR 1910.7.), an NVLAP (testing agency accredited according to NIST's National Voluntary Laboratory Accreditation Program), or an independent agency with the experience and capability to conduct testing and inspecting indicated according to ASTM E 548. Must be acceptable to JHA.

F. All contractors shall be responsible for a proper quality assurance/quality control (QA/QC) program throughout the execution of the Work defined within the construction documents, including all recognized construction industry standards and all applicable regulatory codes.

G. The GC shall be responsible for all of the following:
   1. Monitor the quality of all workmanship, supplies, materials, and products being installed by all contractors and installers to ensure they meet or exceed the minimum requirements set forth by the construction documents.
   2. Submit a Request for Information (RFI) whenever manufacturers' instructions or referenced standards conflict with the construction documents before proceeding with the Work.
   3. Ensure that work requiring special, training, qualification, certifications or licensing is being and supervised by personnel that meet the appropriate requirements. Ensure that all certificates and licenses are current throughout the execution of the project.
   4. All materials, equipment, and products shall be new, clean, undamaged, and meet the performance specifications defined within the construction documents including favorably reviewed submittals. Any material, equipment, or product that does not meet the requirements of the construction documents shall be removed and replaced, including any adjacent and related work, at the GCs expense.
   5. Include owner's QM team and invite to pre-installation meetings, allow delivery review, and invite to startups, testing and installation.

H. Tests and inspections not explicitly assigned to owner are contractor's responsibility. Unless otherwise indicated, provide quality-control services specified and those required by authorities having jurisdiction.
   1. Engage a qualified testing agency to perform these quality-control services.
   2. Notify testing agencies at least 48 hours in advance of time when Work requiring testing or inspecting will be performed.

3. Notify City Project Manager and Contractor promptly of irregularities or deficiencies observed in the work.

I. RETESTING/REINSPECTING: Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and re-inspecting, for construction that replaced Work that failed to comply with the Contract Documents.

J. ASSOCIATED SERVICES: Cooperate with agencies performing required tests, inspections, and similar quality-control services, and provide reasonable auxiliary services as requested. Notify agency sufficiently in advance of operations to permit assignment of personnel. Provide the following:

1. Access to the Work.
2. Incidental labor and facilities necessary to facilitate tests and inspections.
3. Adequate quantities of representative samples of materials that require testing and inspecting. Assist agency in obtaining samples.
4. Facilities for storage and field curing of test samples.
5. Delivery of samples to testing agencies.
6. Preliminary design mix proposed for use for material mixes that require control by testing agency.
7. Security and protection for samples and for testing and inspecting equipment at Project site.

K. COORDINATION: Coordinate sequence of activities to accommodate required quality-assurance and -control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspecting. Schedule times for tests, inspections, obtaining samples, and similar activities.

L. If a conflict exists within the Specifications or within the Drawings, the Contractor shall furnish the item, system, or workmanship, which is the highest quality, largest, largest quantity or most closely fits the owner's intent.

1.5. DRAWINGS, SPECIFICATIONS AND OTHER DESIGN DOCUMENTS

A. All specifications and drawings are intended to include everything necessary to perform the entire work properly. Every item required may not be specifically mentioned, shown, or detailed.

B. Unless expressly stated, all systems and equipment shall be complete and operable. All devices and installation methods necessary for a functioning system are considered included in this contract even if a detail is missing or unclear. Contractor shall furnish all labor, material, equipment and software not specifically referred to herein or on the plans, that is required to meet the functional intent of this specification.

C. Details and drawings are diagrammatic and may not be all inclusive. In case of a discrepancy within and between the drawings that would cause and awkward or improper installation the owner has to be notified for clarification prior to installation.

D. If items are too large to fit into existing space Contractor shall provide smaller model of same type upon approval by owner at no cost to owner.

E. Items are shown approximately to scale and attempt to show how these items should be integrated with building construction. All dimensions have to be field-verified by contractor. Before locating items, confer with the owner as to desired location in the various areas. Items shall not be located by scaling drawings. Contractor must relocate items and bear cost of redoing work or other trades' work necessitated by failure to comply with this requirement.

F. Information pertaining to existing conditions that are described in this contract is based on available records. There is no expressed or implied guarantee that conditions indicated are entirely representative of actual condition. Starting of work by the Contractor shall imply acceptance of existing conditions.

G. Where site observation or documents indicate existing underground or covered utilities/services in close proximity (within 4' horizontally and/or vertically) to necessary new construction work, the Contractor shall be responsible to test, probe or otherwise determine exact locations so as to prevent damage to such utilities/services. Verify all existing conditions, dimensions, sizes and locations, of structural, equipment, mechanical and utility components.

H. If the Contractor encounters conditions at the site that differ materially from those indicated in the Contract Documents or unknown physical conditions of an unusual nature, that differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, the Contractor shall provide notice to the Owner before conditions are disturbed and in no event later than 5 days after first observance. Annotate any inconsistencies, errors, omissions on the GC As-Built record drawings immediately for future reference.

I. Electronic design files may be provided by the owner at its digression as they are needed for the contractor to perform the work. Contractor shall use electronic design files on their own risk and assume all liability. Electronic documents are not contract documents and significant discrepancies may exist between these electronic files and contract documents and actual site conditions. Signing of a liability waiver may be required.

J. Using datum, the lot lines and present levels have been established as shown on the drawings. Other grades, lines, levels and benchmarks, shall be established and maintained by the Contractor, who shall be responsible for them. The Contractor shall make provision to preserve property line stakes, benchmarks, or datum point. Information delineated will be distance from column center lines, pipe/equipment size and distance from finished floor to bottom of pipe/equipment.

K. No Contractor shall take any advantage of any apparent error or omission in the construction documents. Owner shall be permitted to make corrections and interpretations as may be deemed necessary for the fulfillment of the intent of the construction documents. Contractor shall report any inconsistencies, errors, omissions, or code violations in writing to the owner immediately. Failure to report inconsistencies prior to beginning work shall indicate that the GC accepted all existing conditions. If a conflict exists within the contract documents the contractor shall furnish the item, system, or workmanship of the highest quality, largest, largest quantity, or most closely fits the intent of the contract documents.

L. Report any inconsistencies, errors, omissions, or code violations in writing to the City Project Manager immediately. Failure to report inconsistencies prior to beginning work shall indicate that the GC accepted all existing conditions.
M. Manufacturers recommended installation details shall be verified and used prior to installation of products and equipment.

1.6. CONTRACTOR'S RESPONSIBILITES

A. Notify owner of expected delivery of material to allow for inspection before installation.
B. Notify owner of installation time to allow discussion prior installation.
C. Notify owner of any tests (required by authorities or not) and allow owner to witness complete test. Arrange with owner to have tests done at reasonable times and during adequate conditions.
D. Perform quality checks and control in addition to any owner verification. Ensure that all equipment and installations are correct before owner verifies. This is especially necessary for scheduled tests.
E. At minimum perform all tests and inspection listed in specification section. Owner tests and inspections don't relief contractor from quality control.
F. Discuss with owner any failed tests and verifications.
G. Provide installer with appropriate checklists, plans, specifications and submittals.
H. Use Diggers Hotline and private utility locating companies to accurately locate all public and private utilities on the property as needed. The GC is responsible for any repair or replacement to any public or private utility damaged during the execution of the Work
I. EXISTING CONDITIONS:
   1. Verify all existing conditions noted in the contract documents with actual field locations. Verify dimensions, sizes and locations, of structural, equipment, mechanical and utility components.
   2. Report any inconsistencies, errors, omissions, or code violations in writing to owner immediately and annotate on as-built record drawings.
   3. If the Contractor encounters conditions at the site subsurface or otherwise concealed physical conditions that differ materially from those indicated in the Contract Documents or unknown physical conditions of an unusual nature, that differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, the Contractor shall promptly provide notice to the City Project Manager before conditions are disturbed. The City will promptly investigate such conditions and recommend possible adjustment in contract time and sum.
J. DESIGN BY CONTRACTOR:
   1. Contractor shall provide design of elements to meet performance requirements. This includes, but is not limited to, Structural design of structural steel elements, pre-cast concrete elements, rebar, and attachment systems.
   2. Contractor shall be responsible for meeting code, permit, and other approval required. Design shall be certified by Person legally authorized to practice in the jurisdiction where the project is located and who is experienced in providing design services similar to the kind required.
   3. Contractor alone shall be responsible for all errors of detailing, fabrication, and for the correct fitting.
K. On completion of testing, inspecting, sample taking, and similar services, repair damaged construction and restore substrates and finishes. Provide materials and comply with installation requirements specified in other Specification Sections. Restore patched areas and extend restoration into adjoining areas with durable seams that are as invisible as possible. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control.

1.7. REGULATORY REQUIREMENTS

A. Comply with and give notices required by applicable laws, statutes, ordinances, codes, rules, and regulations, and lawful orders of public authorities having jurisdiction. Comply with and give notices required by Owner's insurance companies, local utilities and labor regulations relating to the performance of the Work, the protection of adjacent property, and the maintenance of passage ways, guard fences and other protective facilities.
B. Contractor shall acquire all permits, licenses, certificates of inspection, and occupancy, and approvals necessary for the execution of this Contract and performance of the Work and provide evidence of such before start of the Work. Where Contract Documents require abatement of asbestos containing materials, prior written Notice to the State of Wisconsin, Department of Natural Resources is required. If necessary, file and maintain Notification of Demolition and/or Renovation and Application for Permit Exemption with DNR. All costs shall be included within the Base Bid.
C. It is not Contractor's responsibility to ascertain that the Contract Documents are in accordance with applicable laws, statutes, ordinances, codes, and rules and regulations. However, if Contractor observes that portions of the Contract Documents are at variance therewith, Contractor shall promptly notify Owner in writing, and necessary changes shall be accomplished by appropriate modification.
D. Applicable provisions of Public Law, Laws and Statutes of the State of Wisconsin, municipal ordinances and the codes and regulations of governmental departments are hereby referred to and made a part of this contract. This includes requirements by all Jurisdictions Having Authority (JHA). Contractor is expected to know or to ascertain, in general and in detail, the requirements of all codes and ordinances, and all rulings and interpretations of code requirements being made by all authorities having jurisdiction over the work performed by them.
E. The Contractor must maintain all licenses required for the work performed and required by authorities. The Contractor must submit proof of holding the license or certificate upon request. If a Contractor loses a license for whatever reason he must inform the owner immediately and provide properly licensed substitute (i.e. new sub-contractor).

F. Where ADA equipment is indicated, install equipment to meet applicable sections of IBC and ICC A117.1. Specifications and plans may indicate how accessibility is achieved, but contractor is responsible for meeting JHA's requirements and interpretations of the code. Consult with JHA before installation.
G. If contractor encounters human remains or recognizes the existence of burial markers, archaeological sites, or wetlands not indicated in the Contract Documents, contractor shall immediately suspend any operations that would affect them and shall notify the Owner and authorities. Contractor shall suspend operations until otherwise instructed by the Owner or authorities. Continue with all other operations that do not affect those remains or features.

1.8. QUALITY MANAGEMENT OBESERVATIONS (QMO)

A. The Quality Management Observation (QMO) is an ongoing observation of the construction process as it progresses. The QMO process acts as an "in progress punch list".
B. If a contract non-conformance appears, a QMO report is initiated to begin the documentation process. The observer will attempt to discuss the issue with the applicable trade and the superintendent.
C. The GC shall be responsible for determining the course of action required to remedy the non-conforming issue and shall coordinate and direct the contractor(s) responsible for any work related to the observation. Discuss remedy with owner.
D. All contractors assigned to remedy the observation by the GC shall provide follow-up responses on the QMO report as the problem is remedied. Contractors shall acknowledge the issue, provide solution, timeline and update.
E. The GC shall inspect the work to ensure that all assigned contractors have remedied the observation to the intent of the construction documents. CPM will close item once satisfactory resolution is confirmed.

1.9. MOCKUPS

A. DEFINITION: Mockups are field samples constructed, applied, or assembled at the project site for review by the Owners Representative. Mockups are three dimensional, true scale models that illustrate materials and methods, equipment, workmanship, or location; based on plans and specifications and any contract amendments (RFI, CB, CO, submittals etc.).
B. Approved mockups establish the standard of quality by which the final work will be judged.
C. All Contractors shall be responsible for providing and constructing mockups per the respective specifications. Owner may request additional mockups at any time.
D. Mockups shall be of sufficient size to show various material adjacencies, connectivity, patterns, and other features.
E. GC shall be responsible for coordinating mockups, designating the location, coordinating the work of all contractors and materials required, and ensuring that the mockup meets the intent of the construction documents.
F. Mockups shall be done and completed in a timely fashion for review and approval so as to not impact the project schedule.
G. All materials associated with a particular detail, construction method, manufacturer's installation instructions shall be properly represented and visible in the mockup. This includes but is not limited to finished mortar joints, sealants, backer rods, tie bars, rebar, etc.
H. Mockups shall be constructed in a layered fashion so that all products being used can be seen and evaluated.
I. Mockups that will not be built in place or will not remain will be constructed in a space on the project site protected from weather, construction traffic, and other such disturbances until such time as the associated work has been completed.
J. The General Contractor and all associated Sub-contractors shall meet with the Owner, City Project Manager and Design Team as necessary to review the mock-up. Contractors shall be prepared to answer questions on materials and methods as necessary. Improvements or adjustments shall be discussed as needed. If the mockup is incomplete or does not show sufficient detail, GCs shall resubmit a new mockup. Contractor is responsible for cost or re-submittal.
K. The field approved mockup shall be submitted by the General Contractor as any other submittal for project documentation purposes. The mockup submittal shall consist of the following:
    1. As many detailed photos as necessary to capture the complexity of the mockup.
    2. Provide a written summary of the approved mockup. Include all recommended adjustments, level of expected workmanship, and other such detail as discussed during the mockup review.

END OF SECTION

SECTION 01 42 00
REFERENCES

PART 1 – GENERAL

1.1. SCOPE

A. This section includes information common to abbreviations, acronyms, definitions and reference standards and applies to the entire contract.

B. Portions of these specifications are of the abbreviated, simplified type and may include incomplete sentences. Omitted words or phrases shall be supplied by inference in the same manner, as they are when a note occurs on the drawings.

C. Work in all sections depends on applicable provisions from other sections and the plan set. Any trade, contractor and sub-contractor shall know the entire specification and plan set and meet all applicable requirements. Some specifications cross-reference other sections and standards. This is for convenience only and not considered all inclusive.

1.2. REFERENCE STANDARDS

A. Applicability of Standards: Unless the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents. Such standards are made a part of the Contract Documents by reference.

B. The newest version of a code or standard shall apply even unless an older version is adopted by the Jurisdiction Having Authority.

C. Standard References incorporated in the requirements by reference shall be those of the latest edition at time of receiving bids, unless otherwise specified. The contractors, manufacturers, producers and their agents shall have such specifications available for reference and shall be fully familiar with their requirements as they pertain to their product or material.

D. Applicable standards include, but are not limited to:

1. AA - Aluminum Association
2. AABC - Associated Air Balance Council -www.aabc.com
3. AATCC - American Association of Textile Chemists and Colorists
4. AAMA – American Architectural Manufacturers Association
5. AASHTO - American Association of State Highway and Transportation Officials www.transportation.org.
6. ABMA - American Bearing Manufacturers Association - www.americanbearings.org
7. ABMA - American Boiler Manufacturers Association - www.abma.com
8. ACPA - American Concrete Pipe Association www.concrete-pipe.org
9. ACI – American Concrete Institute
10. ADC - Air Diffusion Council
11. AGA – American Gas Association - www.aga.org
12. AHAM - Association of Home Appliance Manufacturers - www.aham.org
13. AHRI – Air Conditioning, Heating and Refrigeration Institute - www.ahrinet.org
14. AISC - American Institute of Steel Construction - www.aisc.org
15. AISI – American Iron and Steel Institute - www.steel.org
16. AITC - American Institute of Timber Construction - www.aitc-glulam.org
17. ALSC – American Lumber Standard Committee
18. ABMA – American Bearing Manufacturer Association
19. AMCA - Air Movement and Control Association
20. AMMA - American Architectural Manufacturers Association
21. ANSI – American National Standards Institute - www.ansi.org
22. APA – American Plywood Association
23. APA - Architectural Precast Association - www.archprecast.org
24. API - American Petroleum Institute - www.api.org
25. ARI - Air Conditioning and Refrigeration Institute
26. ARMA - Asphalt Roofing Manufacturers Association - www.asphaltroofing.org
27. ASCE - American Society of Civil Engineers - www.asce.org
28. ASME – American Society of Mechanical Engineers
29. ASPE - American society of Plumbing Engineers
30. ASHRAE – American Society of Heating, Refrigeration and Air Conditioning Engineers - www.ashrae.org
31. ASSE – American Society of Safety Engineers - www.asse.org
32. ASSE - American Society of Sanitary Engineering - www.asse-plumbing.org
33. ASTM - American Society for Testing and Materials - www.astm.org
34. ATIS - Alliance for Telecommunications Industry Solutions - www.atis.org
35. AWI - Architectural Woodwork Institute - www.awinet.org

36. AWPA - American Wood Protection Association - www.awpa.com
37. AWS – American Welding Society - www.aws.org
38. AWWA - American Water Works Association - www.awwa.org
39. BHMA - Builders Hardware Manufacturers Association - www.buildershardware.com
40. BIA - Brick Industry Association - www.gobrick.com
41. CDA - Copper Development Association - www.copper.org
42. CEA - Consumer Electronics Association - www.ce.org
43. CFSEI - Cold-Formed Steel Engineers Institute - www.cfsei.org
44. CGA - Compressed Gas Association - www.cganet.com
45. CICCA - Ceiling and Interior Systems Construction Association
46. CIMA - Cellulose Insulation Manufacturers Association - www.cellulose.org
47. CISCA - Ceilings & Interior Systems Construction Association -www.cisca.org
48. CISPI - Cast Iron Soil Pipe Institute - www.cispi.org
49. CLFMI - Chain Link Fence Manufacturers Institute - www.chainlinkinfo.org
50. CMAA – Crane Manufacturers Association of America
51. CPA - Composite Panel Association; www.pbmdf.com.
52. CRI - Carpet and Rug Institute - www.carpet-rug.org.
53. CRRC - Cool Roof Rating Council - www.coolroofs.org.
54. CRSI – Steel Reinforced Concrete Institute - www.crsi.org
55. CS - Commercial Standards, Products Standards Sections
56. CSSB - Cedar Shake & Shingle Bureau - www.cedarbureau.org
57. CTI - Cooling Tower Institute - www.cti.org
58. DASMA - Door and Access Systems Manufacturers Association - www.dasma.com
59. DHI – Door and Hardware Institute - www.dhi.org
60. ECIA - Electronic Components Industry Association - www.eciaonline.org.
61. EIMA - EIFS Industry Members Association - www.eima.com.
62. EJMA - Expansion Joint Manufacturers Association, Inc. - www.ejma.org
63. EN – European Norm
64. EPA - Environmental Protection Agency
65. ESD - Electrostatic Discharge Association - www.esda.org
66. ETL - Electrical Testing Laboratories, Inc.
67. FCI - Fluid Controls Institute - www.fluidcontrolsinstitute.org
68. FGMA - Flat Glass Manufacturers Association
69. FM – Factory Mutual
70. FM Approvals - FM Approvals LLC - www.fmglobal.com
71. FS – Federal Specifications
72. FSA - Fluid Sealing Association - www.fluidsealing.com
73. GA – Gypsum Association - www.gypsum.org
74. GANA - Glass Association Of North America - www.glasswebsite.com
75. HI - Hydraulic Institute - www.pumps.org.
76. HPVA - Hardwood Plywood & Veneer Association - www.hpva.org.
77. IAPMO - International Association of Plumbing & Mechanical Officials - www.iapmo.org
78. IBC – International Building Code
79. ICC - International Code Council - www.iccsafe.org
80. ICC-ES – International Code Council Evaluation Services - www.icc-es.org
81. ICEA - Insulated Cable Engineers Association, Inc.; www.icea.net.
82. ICPA - International Cast Polymer Alliance - www.icpa-hq.org.
83. ICRI - International Concrete Repair Institute, Inc. - www.icri.org.
84. IEC - International Electrotechnical Commission - www.iec.c
85. ICS – International Classification of Standards
86. IEEE - Institute of Electrical and Electronics Engineers - www.ieee.org
87. IES - Illuminating Engineering Society - www.ies.org
88. IEST - Institute of Environmental Sciences and Technology; www.iest.org
89. IGMA - Insulating Glass Manufacturers Alliance - www.igmaonline.org
90. IGSHPA - International Ground Source Heat Pump Association - www.igshpa.okstate.edu
91. ILI - Indiana Limestone Institute of America, Inc. - www.iliai.com
92. IFC - International Fire Code
93. IGMA - Insulating Glass Manufacturers Alliance
94. ISA - International Society of Automation - www.isa.org
95. ISFA - International Surface Fabricators Association - www.isfanow.org
96. ISO – International Organization for Standardization - www.iso.org
97. JCI – Japanese Concrete Institute
98. JHA – Jurisdiction Having Authority
99. KCMA - Kitchen Cabinet Manufacturers Association - www.kcma.org

100. LGSEA - Light Gauge Steel Engineers Association
101. LPI - Lightning Protection Institute - www.lightning.org
102. LSGA - Laminators Safety Glass Association
103. MBMA - Metal Building Manufacturers Association - www.mbma.com
104. MFMA - Maple Flooring Manufacturers Association, Inc. - www.maplefloor.org.
105. MFMA - Metal Framing Manufacturers Association, Inc. - www.metalframingmfg.org
106. MCA - Mechanical Contractors Association - www.metalconstruction.org
107. MHIA - Material Handling Industry of America - www.mhia.org
108. MIA - Marble Institute of America - www.mhia.org
109. MICA - Midwest Insulation Contractors Association
110. MMPA - Moulding & Millwork Producers Association - www.wmmpa.com.
111. MPI - Master Painters Institute - www.paintinfo.com.
112. MSS - Manufacturer's Standardization Society of the Valve & Fitting Industry, Inc. - www.mss-hq.org
113. NAAMM - National Association Of Architectural Metal Manufacturers - www.naamm.org
114. NACE - National Association of Corrosion Engineers International - www.nace.org
115. NADCA Mechanical Cleaning of Non-Porous Air Conveyance System Components National Air Duct Cleaners Association - www.nadca.com
116. NAIMA – North American Insulation Manufacturers Association - www.naima.org
117. NARA - National Archives And Records Administration
118. NBGQA - National Building Granite Quarries Association, Inc. - www.nbgqa.com.
119. NBI - New Buildings Institute - www.newbuildings.org.
120. NBS - National Bureau of Standards
121. NCAA - National Collegiate Athletic Association - www.ncaa.org.
122. NCMA - National Concrete Masonry Association - www.ncma.org
123. NEBB - National Environmental Balancing Bureau - www.nebb.org
124. NEC - National Electric Code
125. NECA - National Electrical Contractors Association - www.necanet.org
126. NEIS - National Electrical Installation Standards
127. NEMA - National Electrical Manufacturers Association - www.nema.org
128. NESC - National Electrical Safety Code
129. NETA - InterNational Electrical Testing Association - www.netaworld.org
130. NFPA - National Fire Protection Association - www.nfpa.org
131. NFRC – National Fenestration Rating Council - www.nfrc.org
132. NHLA - National Hardwood Lumber Association - www.nhla.com.
133. NLGA - National Lumber Grades Authority - www.nlga.org
134. NOMMA - National Ornamental & Miscellaneous Metals Association - www.nomma.org
135. NRCA – National Roofing Contractor Association - www.nrca.net
136. NRMCA - National Ready Mixed Concrete Association - www.nrmca.org.
137. NSF - NSF International - www.nsf.org.
138. NSPE - National Society of Professional Engineers - www.nspe.org.
139. NSSGA - National Stone, Sand & Gravel Association - www.nssga.org.
140. NTMA - National Terrazzo & Mosaic Association, Inc. - www.ntma.com.
141. NWFA - National Wood Flooring Association - www.nwfa.org
142. OSHA – Occupational Safety and Health Administration
143. PCI - Precast/Prestressed Concrete Institute - www.pci.org.
144. PDI - Plumbing & Drainage Institute - www.pdionline.org.
145. PLASA – PLASA - www.plasa.org
146. RCSC - Research Council on Structural Connections
147. RFCI - Resilient Floor Covering Institute - www.rfci.com.
148. RIS - Redwood Inspection Service - www.redwoodinspection.com
149. SAE - SAE International - www.sae.org.
150. SCTE - Society of Cable Telecommunications Engineers - www.scte.org
151. SDI – Steel Deck Institute - www.sdi.org
152. SDI – Steel Door Institute - www.steeldoor.org
153. SEFA - Scientific Equipment and Furniture Association - www.sefalabs.com
154. SFBC – South Florida Building Code
155. SFIA - Steel Framing Industry Association
156. SIA - Security Industry Association - www.siaonline.org
157. SJI - Steel Joist Institute - www.steeljoist.org
158. STI - Steel Tank Institute
159. SMA - Screen Manufacturers Association - www.smainfo.org
160. SMACNA - Sheet Metal and Air Conditioning Contractors National Association - www.smacna.org
161. SPC - Society of Protective Coatings (Formerly Steel Structures Painting Council)

162. SPFA - Spray Polyurethane Foam Alliance - www.sprayfoam.org.
163. SPIB - Southern Pine Inspection Bureau - www.spib.org
164. SPRI - Single Ply Roofing Institute - www.spri.org
165. SPS - State of Wisconsin Dept. of Safety and Professional Services
166. SRCC - Solar Rating & Certification Corporation - www.solar-rating.org
167. SSINA - Specialty Steel Industry of North America - www.ssina.com.
168. SSPC - SSPC: The Society for Protective Coatings - www.sspc.org
169. SSMA - Steel Stud Manufacturer's Association
170. SSPC - Steel Structures Painting Council
171. STI - Steel Tank Institute - www.steeltank.com.
172. SWI - Steel Window Institute - www.steelwindows.com.
173. SWPA - Submersible Wastewater Pump Association - www.swpa.org
174. TABB – Testing Adjusting and Balancing Bureau
175. TCA - Tilt-Up Concrete Association - www.tilt-up.org
176. TCNA – Tile Council of North America - www.tileusa.com
177. TEMA - Tubular Exchanger Manufacturers Association, Inc. - www.tema.org.
178. TIA - Telecommunications Industry Association - www.tiaonline.org.
179. TMS- The Masonry Society - www.masonrysociety.org
180. TPI - Truss Plate Institute; www.tpinst.org.
181. TPI - Turfgrass Producers International - www.turfgrasssod.org.
182. TRI - Tile Roofing Institute - www.tileroofing.org
183. UL – Underwriters Laboratory - www.ul.com
184. UNI - Uni-Bell PVC Pipe Association - www.uni-bell.org
185. WASTEC - Waste Equipment Technology Association - www.wastec.org
186. WCMA - Window Covering Manufacturers Association - www.wcmanet.org
187. WDMA Window and Door Manufacturers Association - www.wdma.com
188. WH- Warnock Hersey
189. WI - Woodwork Institute - www.wicnet.org

1.3. DEFINITIONS

A. FURNISH / INSTALL / AS REQUIRED / PROVIDE: shall mean the same in a sense that the Contractor shall provide and install all the necessary materials, apparatus, and devices to complete the equipment and systems installation. This also includes that the contractor demolishes and disposes an existing item if demolition is required to install the new item, even if demolition drawings or specification don't mention demolition of the specific item. If an item is either called for in the specifications or shown on the plans, it shall be considered sufficient for the inclusion of said item in this contract.

B. CITY / OWNER / CITY / CITY OF MADISON / CITY ENGINEER / PROJECT MANAGER / CITY ENGINEER: shall mean the same in a sense that different individuals may be granted authority to make decisions.

C. CONTRACTOR / SUBCONTRACTOR / GENERAL CONTRACTOR / INSTALLER / APPLICATOR / ERECTOR: shall mean the same in a sense that the owner has a contract with the general contractor (GC) only. GC ultimately will be held responsible for any items listed as to be done. All directions given in this contract shall mean "by contractor" unless noted otherwise.

D. APPROVED / REVIEWED / EQUAL / AS DIRECTED / AS PERMITTED / ACCEPTABLE / SATISFACTORY: shall mean the same as it is implied the owner (or its designee) will decide.

E. PROJECT SITE / SITE: Space available for performing construction activities. The extent of Project site is shown on Drawings and may or may not be identical with the description of the land on which Project is to be built.

1.4. STANDARD SPECIFICATIONS

A. The City of Madison Standard Specification for Public Works Construction (Edition at publication date of this bid) forms a part of these contract documents as if attached hereto. These Standard Specifications are available from the City Engineer, City Engineering Division, Room 115, City County Building, 210 Martin Luther King Jr. Blvd., Madison, WI 53710 or electronically from the City Website http://www.cityofmadison.com/business/pw/specs.cfm. The Contractor shall review these standard specifications prior to preparation of proposal for the work to be done under this contract. Failure to do so does not relive the Contractor from meeting all requirements. All provisions, including provisions indicating they would apply to Public Right Away only, apply to this contract unless superseded by provisions giving owner an advantage.

END OF SECTION

SECTION 01 66 00
PRODUCT STORAGE AND HANDLING REQUIREMENTS

PART 1 – GENERAL

1.1. SCOPE

A. The purpose of this specification is to provide general guidelines and responsibilities related to the receiving, handling, and storage of all materials and products from arrival on the job site through installation.
   1. Immediate inspection of delivered goods means a timely replacement if damaged.
   2. Proper storage helps prevent damage and loss by weather, vandalism, theft, and job site accidents.
   3. Proper storage helps with job site performance and safety.
   4. Proper handling helps prevent damage and job site accidents.

B. Each Contractor shall be directly responsible for the receiving, handling, and storage of all materials and products associated with their work.

C. Owners may at any time request improvements regarding handling and storage of any material or product.

1.2. GENERAL CONTRACTOR REQUIREMENTS

A. Designate specific areas of the site for delivery and storage of materials. Designated areas shall not be located so as to interfere with the installation of any work including installation of utilities or the maintenance of existing utilities. This shall include not storing items in active utility easements as designated by the site plan.

B. Arrange for openings in the building as needed to allow delivery and installation of large items. Openings shall be appropriately sized to include the use of booms, slings, and other such lifting devices that may be larger than the item being installed. When openings are required in completed Work (new or existing) the GC shall be responsible for providing an appropriate opening and for restoring the opening to the original or better condition upon completion.

C. The GC shall be responsible for ensuring that these minimum storage and handling requirements are met by all contractors on the project site. GC shall be responsible for any damage and replacement because of mishandling or excessive handling.

D. Receiving deliveries of materials, products, and equipment.
   1. Inspect all deliveries upon arrival for damage, completeness, and compliance with the construction documents. Deliveries shall remain in original packaging or crates, shipping manifest shall be kept with the delivery and the packaging shall have visible identification of the items within the packaging.
   2. Immediately report any damaged products or equipment to owner, begin arrangements for immediate replacement.
   3. Materials or equipment that have been damaged, are incomplete, or do not comply with the construction documents shall not be permitted to be installed.

E. Only store the amount of material necessary for upcoming operations so as not to interfere with other construction activities and access to Work by the Owner.

F. Any offsite storage shall be at the expense of the contractor storing the material or product. All offsite storage requirements shall comply with this specification.

G. LIFTING: Equipment rating shall be greater than the loading requirements of the item being lifted. Comply with:
   1. Only designated and/or designed lift points shall be used.
   2. Large items shall have tag lines and handlers at all times during lifting operations.
   3. Lift at multiple points as needed to prevent bending.

H. Materials and products stored inside of the structure shall comply with all of the following:
   1. Storage shall not be allowed to impede the flow of work in progress.
   2. Storage shall not be allowed to hide completed work from review and inspections.
   3. Storage shall not exceed the design loads of the structural components it is being stored upon.

I. All materials and products shall be stored according the manufacturers minimum recommended requirements. At minimum protect from dust and dirt, moisture and humidity, including rain and snow, excessive temperatures, direct sun, and product incompatibility with other products such as corrosiveness, chemical reactions, flammability, etc.

J. Provide fully functional tarps or plastic wrap, to protect materials and products from the weather. All coverings shall be free of large holes and tears, and shall be tied, strapped, or weighted down to resist blowing.

K. Contractor shall provide any temporary heating, cooling, or other utility requirement that may be associated with the storage of a material or product.

L. The Contractor shall be responsible for securing materials and products of value such as copper, A/V equipment, etc. Such items shall be stored in securable shipping containers, job trailers or other such storage devices.

M. The GC shall inspect the job site daily to ensure that all products and materials stay weather tight and are secured against vandalism or theft as required by this specification.

1.3. BULK MATERIAL

A. BULK MATERIAL: such as sand, gravel, top soil and other types of fill shall be stock piled as follows:

1. All bulk material shall be piled safely and efficiently in as small an area as practical.
2. All stock piles shall have silt fence/sock properly installed around the perimeter to prevent erosion and loss of material.
3. Fine grained material shall be protected with tarps to prevent blowing. Tarps shall be weighted or staked to stay in place.
4. Brick, concrete block, stone, and other palletized materials shall be stored on original shipping pallets until use.

B. DRY PACKAGED MATERIAL: such as cement, mortar, etc shall be stored on pallets, on slightly elevated ground or clear stone pad to keep water away from the base of the material being stored. Protect from moisture.

C. STRUCTURAL MATERIAL:
1. All structural and framing material shall be stored in an organized manner arranged by type, size and dimension. Materials shall be stored on pallets or timbers as necessary and shall not be allowed to lie directly on the ground.
2. Long and heavy items shall be supported at several points to prevent bending and warping.

D. Equipment: Store on slightly elevated ground or clear stone pad to keep water away from the base of the equipment.

E. FINISH PRODUCT:
1. Finish products such as flooring, tile, counters, lockers, toilets, partitions, lighting, and other similar items should not be delivered and stored until the structure has been enclosed, is weather tight, temperature controlled and the contractor is ready for such items to be installed. Storage of finished products outside for any length of time shall not be allowed.
2. Products that cannot be stored inside the structure shall be stored in secured containers or job trailers until such time as they are ready to be installed.
3. Products with a high potential for breakage such as glass, mirrors, tiles, toilet fixtures, etc. shall be stored with additional protection as necessary. Store in original shipping containers until ready for installation. Do not store in high traffic areas. Shield with other materials such as cardboard, plywood, or similar products.

F. All piping and conduit shall be stored horizontally unless otherwise specified elsewhere.
1. Do not store directly on grade.
2. Cover metal pipes and tubes to prevent rust and corrosion, allow ventilation to prevent condensation.
3. Whenever possible use pipe stands for storing pipe and conduit to prevent tripping and rolling hazards.

G. All ductwork shall be stored horizontally or vertically as necessary unless otherwise specified elsewhere.
1. During storage, both ends of each duct shall be protected with plastic sheathing to prevent dust and dirt from getting inside the duct. Sheathing shall be sufficiently taped to the duct.
2. After installation, free/open ends shall remain protected with taped plastic sheathing and or temporary filters as specified by division or Trade specifications.

1.4. OWNER PROVIDED, CONTRACTOR INSTALLED EQUIPMENT

A. The Owners Representative shall do the following:
1. Inspect all deliveries upon receipt and notify manufacturer of any issues directly.
2. Review the received shipment with the contractor.
3. Only provide products or materials to the contractor that were not damaged through shipping or handling.
4. Confirm missing products or materials and anticipated delivery schedule if known.

B. The Contractor responsible for the installation of Work associated with Owner provided materials or products shall "take ownership" and provide safe and secure storage and handling as previously described within this specification. The Contractor shall be liable for the repair or replacement of any material or product damaged after taking ownership of the product from receipt through final acceptance.

C. Equipment being provided by the Owner but shipped directly to any sub-contractor or the project site for installation under the contract:
1. The GC and/or Contractor responsible for the Work associated with the Owner provided materials or products shall do the following:
   a. Inspect all deliveries upon receipt and notify the Owner or Owners Representative of any issues directly.
   b. Review the received shipment with the Owner or Owners Representative
2. The Contractor shall "take ownership" and provide safe and secure storage and handling as previously described within this specification. The Contractor shall be liable for the repair or replacement of any material or product damaged after taking ownership of the product from receipt through final acceptance.

END OF SECTION

SECTION 01 73 00
EXECUTION

PART 1 – GENERAL

1.1. SCOPE

A. This Section includes general procedural requirements governing execution of the Work including, but not limited to, the following:
   1. Construction layout.
   2. Field Engineering
   3. General installation of products.
   4. Progress cleaning.
   5. Starting and adjusting.
   6. Protection of installed construction.
   7. Correction of the Work.

B. The Contractor shall provide and pay for field engineering services required for the Project:
   1. Land surveying services required to execute the Work, to include building addition location and layout, and location and layout of pavements and all proposed site improvements.
   2. Verification of existing building dimensions, elevations, and relationship to proposed additions.
   3. Professional Engineering services to execute Contractor's construction methods.
   4. Registered Professional Engineer in the State of Wisconsin to determine the load capacity of the existing structure for use of Contractors temporary facilities, equipment, lifts, machinery, material storage, etc.

1.2. EXAMINATION

A. FIELD MEASUREMENTS: Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.

B. Examine substrates, areas, and conditions, with Installer or Applicator present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance. Record observations.
   1. Verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.
   2. Examine roughing-in for systems to verify actual locations of connections before equipment and fixture installation.
   3. Examine walls, floors, and roofs for suitable conditions where products and systems are to be installed.
   4. Proceed with installation only after unsatisfactory conditions have been corrected.
   5. Proceeding with the Work indicates acceptance of surfaces and conditions.

1.3. CONSTRUCTION LAYOUT

A. VERIFICATION: Before proceeding to lay out the Work, verify layout information shown on Drawings, in relation to the property survey and existing benchmarks. If discrepancies are discovered, notify City Project Manager promptly.

B. SITE IMPROVEMENTS: Locate and lay out site improvements, including pavements, grading, fill and topsoil placement, utility slopes, and invert elevations.

C. BUILDING LINES AND LEVELS: Locate and lay out control lines and levels for structures, building foundations, column grids, and floor levels, including those required for mechanical and electrical work. Transfer survey markings and elevations for use with control lines and levels. Level foundations and piers from two or more locations.

D. RECORD LOG: Maintain a log of layout control work. Record deviations from required lines and levels. Include beginning and ending dates and times of surveys, weather conditions, name and duty of each survey party member, and types of instruments and tapes used. Make the log available for reference by Architect.

E. REFERENCE POINTS: Locate existing permanent benchmarks, control points, and similar reference points before beginning the Work. Preserve and protect permanent benchmarks and control points during construction operations. Do not change or relocate existing benchmarks or control points without prior written approval of Architect. Report lost or destroyed permanent benchmarks or control points promptly. Report the need to relocate permanent benchmarks or control points to City Project Manager before proceeding. Replace lost or destroyed permanent benchmarks and control points promptly. Base replacements on the original survey control points.

F. BENCHMARKS: Establish and maintain a minimum of two permanent benchmarks on Project site, referenced to data established by survey control points. Comply with authorities having jurisdiction for type and size of benchmark. Record bench-

mark locations, with horizontal and vertical data, on Project Record Documents. Where the actual location or elevation of layout points cannot be marked, provide temporary reference points sufficient to locate the Work. Remove temporary reference points when no longer needed. Restore marked construction to its original condition.

1.4. CONTINUITY OF SERVICES AND TRAFFIC

A. BUILDING ACCESS: Maintain existing access and egress throughout construction period. Maintain ANSI A117 compliant access, delivery access, emergency vehicle access, and emergency egress. Do not interrupt access and egress without approval by owner.

B. TRAFFIC: Do not interrupt or change existing traffic, delivery, or parking without prior written approval from owner. When interruption is required, coordinate schedule with the owner agency to minimize disruptions. When working in public right-of-way, obtain all necessary approvals and permits from applicable municipalities and WISDOT. When Contractor's activities impede or obstruct traffic flow, Contractor shall provide traffic control devices, signs and flaggers in accordance with other Contract Documents and the current version of the MUTCD, or as shown on the Drawings.

C. UTILITIES: Verify the locations of any water, drainage, gas, sewer, electric, drainage, gas, sewer, electric, telephone/communication, fuel, steam lines or other utilities and site features which may be encountered in any excavations or other sitework. All these shall be protected, properly underpinned and supported to avoid disruption of service.

D. HVAC: If the building is occupied and continues operation during construction, retrofit or demolition, Contractor must maintain ventilation, heating and air conditioning for as large parts of the building as technically feasible. Where maintaining space conditioning is not feasible with the existing system, the Contractor shall provide temporary sufficient air conditioning, heating and ventilation in coordination with the owner. The regular on-site energy provided by owner can be used (i.e. local natural gas) with all connections provided by contractor. Space temperatures in occupied spaces shall be equal to typical design temperatures and contractor has to provide more capacity upon request by owner.

E. For occupied buildings contractor shall provide and maintain continuous service (power, controls, fire alarm, fire suppression, alarms, communication, elevators, HVAC, roads etc.) during the entire construction period. Shutdowns need to be conform to the following:

1. Any outage must be scheduled 72 hours in advance and when the interruption causes the least interference with owner's operation and might be scheduled during after-hours if regular business hours are not acceptable to the owner. No extra costs will be paid to the Contractor for such work outside of regular weekly working hours. Postponement of scheduled shutdowns by the owner shall not constitute a basis for additional charges to the owner. Overtime cost to the utility is paid by Owner.
2. Prior to the shutdown the Contractor shall provide the following:
   a. Proof of receipt of all materials required for the shutdown or a written commitment from the responsible.
   b. A list of the qualified Contractor personnel assigned to perform the work.
   c. Analysis of any effect on the utility or building energy system(s) and the estimated duration of the shutdown.
   d. A 24-hour emergency callback phone number for any problems or concerns after the Contractor has left the site.

1.5. INSTALLATION

A. Install in accordance with recognized industry practices, code requirements and manufacturer's latest recommendations.

B. Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated. Make vertical work plumb and make horizontal work level. Where space is limited, install components to maximize space available for maintenance and ease of removal for replacement.

C. Install products at the time and under conditions that will ensure the best possible results. Maintain conditions required for product performance until Substantial Completion.

D. Conduct construction operations so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy.

E. ANCHORS AND FASTENERS: Provide anchors and fasteners as required to anchor each component securely in place, accurately located and aligned with other portions of the Work.

1. Mounting Heights: Where mounting heights are not indicated, mount components at heights directed by Architect.
2. Allow for building movement, including thermal expansion and contraction.
3. Coordinate installation of anchorages. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry.

F. CONSTRUCTION LOADS: During the construction period, the Contractor shall provide means for the adequate distribution of concentrated loads so that the carrying capacity of any member is not exceeded. Review plans and consult with engineer or manufacturer to determine allowable loads. Contractor shall hire a Professional Engineer to determine the adequacy of concentrated loads (e.g. construction equipment and material) point or wheel loads. The Contractor assumes full responsibility for damage.

1.6. STARTING AND ADJUSTING

A. Start and test equipment, controls and operating components to confirm proper operation. Remove malfunctioning units, replace with new units, and retest.

B. Once the equipment has been run, maintain lubrication in accordance with the manufacturer's instructions until the work is accepted by owner. Maintain a log of all lubricants used and frequency of lubrication.

C. Adjust operating components for proper operation without binding. Adjust equipment for proper operation.

1.7. CORRECTION OF THE WORK

A. Repair or remove and replace defective construction. Restore damaged substrates and finishes.
B. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment.
C. Restore permanent facilities used during construction to their specified condition.
D. Remove and replace damaged surfaces that are exposed to view if surfaces cannot be repaired without evidence of repair.
E. Repair components that do not operate properly. Remove and replace operating components that cannot be repaired.
F. Remove and replace chipped, scratched, and broken glass or reflective surfaces.

1.8. CUTTING AND PATCHING

A. CUTTING: Remove in-place construction necessary to permit installation of other Work. Cut in-place construction by sawing, drilling, breaking, chipping, grinding, and similar operations, including excavation, using methods least likely to damage elements retained or adjoining construction. 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.
   1. Finished Surfaces: Cut or drill from the exposed or finished side into concealed surfaces.
   2. Concrete or Masonry: Cut using a cutting machine, such as an abrasive saw or a diamond-core drill.
   3. 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.
B. PATCHING: Fit and repair work required to restore surfaces to original conditions after installation of other Work. 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. Before patching, verify compatibility with and suitability of substrates, including compatibility with in-place finishes or primers. Use materials identical to existing in-place materials. 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. 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. 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 in.
   4. Ceilings: Patch, repair, or re-hang in-place ceilings as necessary to provide an even-plane surface of uniform appearance.
   5. Exterior Building Enclosure: Patch components in a manner that restores enclosure to a weather tight condition.
G. STRUCTURAL ELEMENTS: Do not cut and patch structural elements in a manner that could change their load-carrying capacity. Contractor shall notify the owner of structural members, piping, conduit, or equipment not indicated for removal that may cause interference with the work. Work shall not proceed in the affected area until instructions have been issued. Do not drill or penetrate existing structures without prior permission. The removal of existing work shall be by methods that will not jeopardize the integrity of structures or systems that are to remain.
C. MISCELLANEOUS ELEMENTS: Do not cut and patch miscellaneous elements or related components in a manner that could change their load-carrying capacity, their capacity to perform as intended, or that may result in increased maintenance or decreased operational life or safety. This includes but is not limited to water, moisture, or vapor barriers, membranes and flashings, exterior curtain-wall construction, equipment supports, piping, ductwork, vessels, and equipment, 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 Architect's opinion, reduce the building's aesthetic qualities. Remove and replace construction that has been cut and patched in a visually unsatisfactory manner.
E. 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. All cutting and patching work performed under this contract shall be warranted like new work as defined by the Specification governing the work.
F. Before any drilling, cutting or other type of opening the contractor shall verify that no conduits, wires, pipes or other items are in or near opening area. X-ray or ground-penetrating radar technology shall be employed to survey ceilings, slabs or walls when potentially damaging opening techniques are employed. Existing available data and records may not be accurate regarding exact location of structural steel, pipes or conduit. This work shall be performed at least a week prior to give owner the opportunity to resolve any issues by rebar or other obstacles in unexpected locations.
G. 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. Provide temporary support of Work to be cut.

END OF SECTION

SECTION 01 74 00
CLEANING AND WASTE MANAGEMENT

PART 1 – GENERAL

1.1. SCOPE

A. This specification includes administrative and procedural requirements for the recycling, re-use, salvaging, and disposal of non-hazardous construction and demolition waste. GC shall be fully responsible for complying with all applicable ordinances and other such regulatory requirements during the execution of this contract.
B. 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.
C. Hazardous Abatement will be done under separate contract. Contractor is required to coordinate as needed.

1.2. REFERENCES

A. Work under this section depends on applicable provisions from other sections and the plan set in this contract.
B. There are 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.

1.3. DEFINITIONS

A. CLEAN: Untreated and unpainted material, free of contamination caused by oils, solvents, caulks, and other chemicals.
B. CONSTRUCTION AND DEMOLITION DEBRIS: Materials resulting from the construction, remodeling, repair, and demolition of utilities, structures, buildings, and roads.
C. DISPOSAL: Off-site removal of construction and demolition debris and the subsequent sale, recycling, reuse, or deposit in authorized landfill or incinerator.
D. HAZARDOUS: Exhibiting the characteristics of hazardous substance, i.e. ignitability, corrosiveness, toxicity, or reactivity and including but not limited to asbestos containing materials, lead, mercury and PCBs.
E. RECYCLABLE: The ability of a product or material to be recovered at the end of its life cycle and remanufactured into a new product.
F. RECYCLER: Any recycling facility, transfer station, or other waste handling facility which accepts construction and demolition debris for recycling, or for other transferring to a recycling facility.
G. RECYCLING: Process of sorting, cleaning, treating, or reconstituting solid waste and other discarded materials for the purpose of preparing the material to be recyclable. Recycling does not include burning, incinerating or thermally destroying waste.
H. RETURN: To give back reusable items or unused products to vendors for credit.
I. REUSE: Shall mean any of the following:
   1. The on-site use of reprocessed construction and demolitions debris.
   2. The off-site redistribution of a material, for use in the same manner or similar manner at another location.
   3. The use of non-toxic, clean wood as an alternative fuel source.
J. SALVAGE: To remove a waste material from the project site for resale or reuse by the Owner or others.
K. TOXIC: Poisonous to humans either immediately or after a long period of exposure.
L. TRASH: Any product or material unable to be re-used, returned, recycled, or salvaged.
M. WASTE: Extra materials or products that have reached the end of its useful life or its intended use. Waste includes salvageable, returnable, recyclable and re-useable construction and demolition materials, and trash.

1.4. WASTE MANAGEMENT

A. GC salvage/recycling/reuse 75% (minimum) by weight of the total waste generated by the Work.
B. The GC shall salvage or recycle 100% of all uncontaminated packaging materials including but not limited to the following:
   1. Paper
   2. Cardboard
   3. Beverage containers
   4. Boxes

5. Plastic Sheet and film
6. Polystyrene packaging
7. Wood crates and pallets
8. Plastic pails and buckets

C. Use all reasonable means to divert construction waste from landfills and incinerators through recycling, reuse, or salvage as appropriate.
D. WASTE MANAGEMENT COORDINATOR: The GC shall designate a Waste Management Coordinator. Coordinator may be any member of the GC staff having knowledge of proper waste management procedures and all applicable regulations.
E. REFRIGERANT RECOVERY TECHNICIAN QUALIFICATIONS: Certified by EPA-approved certification program.
F. 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.
G. Burying or burning waste materials on-site will not be permitted. Washing waste materials down sewers or into waterways will not be permitted.
H. Provide adequate containers, storage space, signage, transportation and other items required to manage waste.
I. Train all workers, sub-contractors, and suppliers on proper waste management procedures. Conduct additional training as needed during the execution of the contract to keep a positive focus on the waste management plan.
J. Distribute the waste management plan to everyone concerned including new workers, sub-contractors, and suppliers when they first appear on the project site.
K. Conduct waste management operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent and used facilities. Designate and label specific areas on the project site necessary for separating materials to be salvaged, recycled, reused, donated, and sold.
L. The GC and Waste Management Coordinator shall be responsible for monitoring and reporting the status of the Waste Management Plan and shall monitor the waste management practices on site as frequently as needed.
M. 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.
N. No burning of any kind of waste material shall be permitted on this project site at any time.
O. 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. Latex paint may be placed with general garbage if properly solidified as follows:
      a. 1" or less in can: Remove lids and allow paint to dry out in the can and harden. Protect cans from rain and freezing.
      b. 1" or more: Mix paint with equal amounts of cat litter or paint hardener, stir and allow to completely dry.
   3. 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.
P. 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.
Q. Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.
R. Do not hold materials more than 7 days during normal weather or 3 days if the temperature is expected to rise above 80°F.

1.5. WASTE MANAGEMENT PLAN

A. Develop and submit a plan consisting of waste identification, a waste reduction work plan, and cost/revenue analysis. Indicate quantities by weight or volume. Use the same units of measure throughout the waste management plan.
   1. Waste Identification: Indicate anticipated types and quantities of site clearing, demolition waste, and construction waste that will be generated during the execution of this contract. Include assumptions for the estimates.
   2. Waste Reduction Work Plan: The work plan shall consist of but not be limited to all of the following:
      a. Identify methods for reducing construction waste. Re-using, framing and forming materials, re-planning material cuts to minimize waste, etc.
      b. Identify what types of materials will be recycled. Provide lists of local companies that receive and/or process the materials. Include names, addresses, and phone numbers.
      c. Identify what types of materials will be disposed of and whether it will be disposed of in a landfill facility or by incineration facility. Provide lists of local companies that receive and/or process the materials. Include names, addresses, and phone numbers.
      d. Identify methods to be used on site for separating waste including all of the following:
         i. Sizes of containers to be used.
         ii. Labels to be used on the containers to identify the type of waste allowed in the container.
         iii. Designated locations on the project site for waste material containers.
   3. If a Waste Management Disposal Company that allows comingled and unsorted waste materials is used, include with Waste Management Plan the following:
      a. Name, address, phone number, state permitting information, and other pertinent information about the disposal company.
      b. Documentation from the disposal company indicating company policies and procedures regarding comingled and unsorted waste materials to include:
      c. Disposal company procedures for receiving, sorting, recycling, and disposing of comingled and unsorted waste material.

B. If project requires demolition incorporate the ordinance required (MGO 28.185) Recycling and Reuse Plan into the Waste Management Plan.
C. MANAGEMENT SUMMARY LOG:
   1. Indicate receipt and acceptance by individuals or organizations and if the organization is tax exempt.
   2. Records of Donations
   3. Records of Sales
   4. Recycling and Processing Facility Records: Include manifests, weight tickets, receipts and invoices.
   5. Landfill and Incinerator Disposal Records: Include manifests, weight tickets, receipts and invoices.
   6. Statement of Refrigerant Recovery: indicate all of the following:
      a. All recovery was performed according to EPA Regulations.
      b. All refrigerant present was recovered; indicate the total quantity recovered by unit.
      c. Date of Recovery.
      d. Name, address, company name, and phone number of technician performing the recovery.
      e. Technician shall sign and date the statement.

PART 2 – EXECUTION

2.1. PROJECT SITE CLEANING

A. The Contractor shall provide all required personnel, equipment, and materials necessary to maintain the required level of cleanliness as described in this specification. Employ experienced personnel or professional cleaners for final cleaning as necessary for the areas or equipment being cleaned.
B. Use only cleaning materials, equipment, and methods as recommended in the manufacturers care and use guide of the material, finish or equipment being cleaned. Contractor shall be responsible for replacing any finished work, finishes, fixtures, and trim damaged or disfigured because of inadequate or improper cleaning.
C. The overall appearance of the project site shall neat and orderly. Defined areas for material storage, material waste, and project area are clean and well maintained.
D. 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.
E. EXTERIOR PROJECT SITE AREAS:
   1. All erosion control measures are properly maintained, cleaned, and repaired as necessary.
   2. All loose materials (construction or waste) are properly tied or weighted down to resist blowing.
   3. 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.
   4. Dust control is applied as necessary or as required by any regulatory requirement.
F. INTERIOR PROJECT SITE AREAS:
   1. 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.
   2. 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.
   3. Boxes, pallets, and other such shipping containers, are broken down, stored in a consolidated area or, disposed of as often as is necessary.
   4. Hand tools, supplies, materials, electrical cords not being used are picked up and stored in gang boxes.
G. JOB TRAILER: The interior of the job trailer shall be kept clean and available as a work space at all times.
H. CONCEALED SPACES: Remove debris from concealed spaces before enclosing the space.
I. Daily cleanings shall be conducted by all contractors at the end of the work day as follows:
   1. Debris in excavated areas shall be removed prior to backfill and compaction.
   2. Debris in wall cavities, chase spaces, etc shall be removed prior to enclosing the spaces.
   3. Large items shall be properly stored, returned to designated areas, or disposed of as necessary.
   4. Loose materials shall be properly secured.
   5. Flammable or hazardous materials are properly stored or disposed of.
J. Surfaces receiving finishes shall be thoroughly cleaned prior to contractors applying finish materials. 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:
   1. 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.
   2. Metal surfaces shall be wiped clean of dirt and oily residues, and be free of surface imperfections prior to painting.

3. 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.

2.2. FINAL CLEANING AND CALL BACK WORK

A. 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.
B. Cleaning equipment used shall be commercial grade equipment commonly used by professional cleaners.
C. Cleaning equipment and materials shall be cleaned, rinsed, or replaced to ensure a uniform level of cleanliness is being maintained during the final cleaning.
D. 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.
E. 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 are 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.
F. 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 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.

2.3. HAZARDOUS AND TOXIC WASTE

A. All hazardous and toxic waste shall be separated, stored, and disposed of according to all applicable regulations.
B. All hazardous and toxic materials on site shall have a Material Safety and Data Sheet (MSDS) available that indicates storage requirements, emergency information, and disposal requirements as necessary.
C. Contractor removes, collects and stores, and disposes of hazardous substances on site if those substances were known to be present and mentioned in bid documents. If hazardous substances are found during construction, the owner assumes responsibility for additional cost due to removal, collection and storage on site.
D. Contractor will assume that all electronic components, machinery, refrigeration devices, appliances and other common devices to be removed under this contract contain hazardous substances and include disposal of such in bid price even if those substances are not mentioned separately.
E. ASBESTOS: Contractor's shall follow guidelines in WAC NR 447, WAC HSS 159 and the Occupational Safety and Health Act in general, part 1926.1101--ASBESTOS in particular. Contractor is responsible for compliance with all applicable regulations when the work includes fastening to or coring through Asbestos Containing Materials and disturbance of asbestos contain-ing caulking and mastics.
F. LEAD BASED PAINT: Conform with OSHA and EPA recommended worker safety requirements when removing lead based paint or material bearing lead based paint or material contaminated with lead by the demolition process. Follow Occupa-tional Safety and Health Act (OSHA) in general and particularly to 29 CFR 1910 (LEAD STANDARD) and to CFR 1926 (LEAD EXPOSURE IN THE CONSTRUCTION INDUSTRY). Dispose of refuse containing lead based paint or paint contaminated with lead by the demolition process in conformance with State of Wisconsin Hazardous Waste Regulations set forth by the De-partment of Natural Resources and in conformance with OSHA and EPA recommended worker safety requirements.
G. PCB: Contractor shall assume all ballasts and transformers not specifically labeled as "no PCB" to contain PCB.
H. MERCURY-CONTAINING DEVICES: Contractor shall assume typically mercury containing devices including but not lim-ited to building controls and switches, thermometers, and lamps are on site and shall have those recycled by certified contrac-tor. Lamps are stored in accordance with EPA universal waste regulation 40 CFR part 273 including storing them in containers with labels describing the contents and the start date of accumulation.
I. Hazardous Abatement will be done under separate contract. Contractor is required to coordinate as needed.

2.4. RECYCLABLE, RE-USABLE, AND SALVAGEABLE WASTE

A. ASPHALT PAVING: Break-up into transportable pieces or grind, transport to an authorized recycling facility.
B. CARPET AND PAD: Separate carpet and pad scraps, containerize and transport to an authorized recycling facility.
C. 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.
D. 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 owner representative 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.
E. 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 reused 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.
F. CONCRETE: Break-up into transportable pieces, remove all metals, transport to an authorized recycling facility.
G. GLASS PRODUCTS: Sort 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.
H. GYPSUM BOARD: Stack large clean pieces on wooden pallets or container, store in a dry location, transport to an authorized recycling facility.
I. 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.
J. 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.
K. 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.
L. 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.
M. ROOFING: Roofing materials shall be sorted and containerized by type, transport to authorized recycling facilities according to material types.
N. 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.

END OF SECTION

SECTION 01 76 00
PROTECTING INSTALLED CONSTRUCTION

PART 1 – GENERAL

1.1. SCOPE

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. 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.

1.2. QUALITY ASSURANCE

A. Contractor shall be responsible to provide all reasonable protection methods, materials, or precautionary measures required to protect new or existing construction of this project as a whole. The GC shall be responsible that any damaged new or existing construction is repaired or replaced at no additional cost to owner.

B. 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.

C. 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. Provide sufficient quantity of protection material to protect the construction as needed.

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

E. Report 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.

F. Conduct a site walk through prior to leaving at the end of each day to assess protection measures are properly in place, provide correction actions as necessary. Report any damage to CPM and repair/replace as needed.

G. Ensure all contractors and workers are being diligent in protecting existing work, and newly installed construction.

PART 2 - PRODUCTS

2.1. FENCING MATERIALS AND BARRICADES

A. Provide and maintain any of the following that sufficiently provide a sturdy physical barrier and/or visual barrier as necessary for the intended application.
   1. 4'0" high standard orange construction fence
   2. Type A, Jersey Barriers, used as permanent blocking devices to deny access to alternate project site entrances or exits.
   3. Type B, Traffic Barricades, used as temporary blocking devices to deny access to alternate project site entrances / exits.
   4. 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.
   5. Type D, Standard orange construction barrels each with a standard rubber base ring and reflective tape. Provide flashing amber lights as needed to increase night time visibility. Replace batteries pro-actively.

6. 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.
7. 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.
8. Type X, Other fencing or barricade types that may be designated and detailed within the construction documents shall use additional alpha numeric designations.
9. Other types of fencing or barricades typically used in the construction industry

PART 3 – EXECUTION

3.1. PROTECT ADJACENT PROPERTIES

A. Whenever possible the Owner shall have previously provided notice to adjacent property owners and shall 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 on or adjacent to the property line:
   1. Contact the adjacent property owner and provide them 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. For rented or leased space the GC shall provide the same information to the tenants.
   2. Determine from the owner and/or tenants if there are any concerns for children, pets, special plantings, etc.
   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. Enforce rules with all subs.
   4. Restoration shall include but not be limited to repair or replacement using like materials and finishes to its original condition or better.
   5. 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.
C. The GC shall keep the CPM informed directly to any issues pertaining to adjacent property owners and tenants.

3.2. PROTECT LANDSCAPING FEATURES

A. 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 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.

3.3. PROTECT UTILITIES

A. Contractor shall be responsible for notifying all utilities to determine emergency response procedures and protection requirements prior to installing any construction protection. This includes requesting utility marking through Diggers Hotline. http://www.diggershotline.com/ 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. 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.
C. Storm sewer structures shall have proper inlet protection according to City of Madison Standard Specification and Type C Construction Barrels when necessary.
D. 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.
   1. 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.
   2. 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..
E. 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:
   1. Provide Type E fencing for areas on soil.
   2. When paving operations are complete provide a construction barrel or cone near structures as necessary depending on required heavy construction traffic.

3.4. PROTECT PUBLIC RIGHT OF WAY

A. All public right-of-way 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.
B. Bus stops and bus stop structures shall remain accessible at all times.

C. 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. Protection at traffic signage/signals shall not obstruct the viewing of the sign/signal for its intended purpose at any time.

3.5. 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.

3.6. 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. Protect vinyl composite, rubber composite, painted/stained concrete, and tiled flooring as follows:
   1. 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.
      a. 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.
C. Repair tears immediately, replace worn areas with like material as necessary.
D. Protect carpeted areas as follows:
   1. Define foot traffic areas and protect with a minimum of 6mil, clear, polyethylene sheeting 3 feet wide. Products to be used shall be new.
   2. 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.
   3. Repair tears immediately, replace worn areas with like materials as necessary.
E. Protect all finished walls in high traffic areas with Ramboard Temporary Wall protection products or approved equal.
   1. 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.
   2. Repair tears immediately, replace worn areas with like materials as necessary.
F. 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.
G. All protection shall stay in place until the CPM 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.
H. 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. SCOPE

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

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. Construction Closeout must be completed before Contract Closeout can begin.
2. Contract closeout is related to closing out all of the administrative aspects of the contract in general.

1.2. DEFINITIONS

A. SUBSTANTIAL COMPLIANCE: A letter provided to the City of Madison Building Inspection and signed by the designing professional 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. 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.

E. FINAL PROGRESS PAYMENT: The progress payment associated with achieving Construction closeout as described 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.

PART 2 – EXECUTION

2.1. CONSTRUCTION CLOSEOUT REQUIREMENTS

A. 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 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.

B. All contractors shall be responsible for reviewing the drawings and specifications and provide any of the following (and examples) prior to moving into Contract Closeout Procedures:

1. Test reports of all types
2. Startup reports
3. As-builts and record drawings
4. Operation and maintenance data
5. Attic stock
6. Keys
7. Ducts cleaned
8. Filters replaced
9. Commissioning and LEED related items and submittals
10. Owner and Maintenance Training

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

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. Upon receipt and final approval of the Warranties the CPM may initiate final processing of the Final Progress Payment (100% contract total, less retainage).

2.3. CONTRACT CLOSEOUT REQUIREMENTS

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. Contractors will be required to submit reporting paperwork throughout the PW project process. Visit http://www.cityofmadison.com/Business/PW/contractCompliance.cfm Questions regarding the process should be directed to parties and offices as identified on the various forms, documents, and instructions or contact:

B. 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

C. 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

D. 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.

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

F. 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.

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

H. DCR or PW Staff will notify GC 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.

I. 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. SCOPE

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. 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. O&M DATA REQUIREMENTS

A. All contractors shall provide O&M Data for each piece of equipment, system, or finish installed in this contract.
B. Provide one document per specification section. Format: "Specification number_Equipment name_What"
C. PDF files shall be complete original consumer useable PDF documents as provided by Product manufacturer and/or Supplier of product. PDF files shall be word-searchable. Scanned printed material is not acceptable and will be rejected without further review. No hardcopy will be required.
D. 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. Installation instructions
   2. Parts lists, assembly diagrams, explosion diagrams
   3. Wiring diagrams
   4. Start-up, shut-down, troubleshooting and other related operation procedures
   5. Lubrication, testing, parts replacement, and other such maintenance procedures
   6. General use, care, and cleaning instructions
   7. Special precautions and safety requirements
   8. A list of certified equipment vendors, service companies, parts suppliers including company name, address, and phone number
   9. A list of the recommended spare parts to have on hand at all times
   10. A list by type of all recommended lubes, oils, packing material, and other maintenance supplies
   11. Copies of final test reports, balance reports, and other related documentation
   12. Warranty information for equipment and systems
E. Delete any blank or foreign language pages.
F. Provide one overall project document listing all contractors, contacts and emergency contacts.
G. The GC shall review all contractors' samples and checklists for compliance with this specification and shall return any to the originating contractor that are insufficient for re-submittal. When acceptable to the GC, he/she shall upload each O&M Data draft submittal file to the O&M Draft library on the Project Management Web Site.
H. 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.
I. 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.
J. Acceptance of O&M Data Final submittals is required to be complete prior to scheduling and conducting owner related training and construction closeout.

END OF SECTION

SECTION 01 78 36
WARRANTIES

PART 1 – GENERAL

1.1. SCOPE

A. Responsibilities and guide lines related to providing all Warranties and Guarantees related to the Work, workmanship, materials, equipment, and other such items required by Construction Documents.
B. Manufacturers' disclaimers and limitations on product warranties do not relieve any contractor, supplier or manufacturer of the warranty on the Work that includes the product.

1.2. DEFINITIONS

A. 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
B. 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.
C. 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.
D. 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 the date the Certificate of Substantial Completion was signed by the City Engineer. This is different from Substantial Completion as defined by Building Permit and Certificate of Occupancy.

1.3. CONTRACTOR RESPONSIBILITIES AND OWNER RIGHTS

A. For 1-year from the warranty date 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. Contractor's failure to conform to Contract Document requirements. 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. The GC's warranty with respect to Work repaired or replaced, including restored or replaced Work due to damage, will run for 1 year from the date of Owner Acceptance of said repair or replacement. This shall be regardless of any benefit the Owner may have had from the Work through any portion of its anticipated useful service life.
C. EMERGENCY REPAIR: The Owner 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.
D. REINSTATEMENT OF WARRANTY: When Work covered by a warranty has failed and been corrected contractor shall reinstate the warranty by a new written endorsement. The reinstated warranty shall be equal to the original warranty.
E. REPLACEMENT COST: Contractor is responsible for 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. Removal and replacement of construction to access the warranted work.
   4. Repair or replacement of any construction damaged due to the failure of warranted work.
   5. Permits and inspection fees
   6. This shall be regardless of any benefit the Owner may have had from the Work through any portion of its anticipated useful service life.
F. 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.

G. ON SITE ISNPECTION AND REPALCEMENT: Under no circumstances shall the owner be responsible for sending damaged equipment or material back for inspection. Manufacturer, vendor or contractor shall provide an on-site person to inpsect and discuss warranty items. Any shipment of a replacement shall be at no cost to owner.

1.4. LETTERS OF WARRANTY

A. Provide letter of warranty for items and systems with more than 1-year warranty. This includes warranties required by special mentioning in specifications and warranties by specifying a product or material with a specific warranty.
B. Letter of Warranty shall enable the owner to claim all warranty services without future assistance of contractors, vendors and without requiring additional documentation. If the manufacture requires invoices, shipment data, or any other documentation, this documentation shall be included in the letter of warranty. Format shall be:
   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 the manufacturer name and model number of the product if not specified within the warranty. Provide the plan identifier (LAV-1, WC-2, etc) when applicable.
   4. Provide a description of the warranty(ies) being provided.
   5. Indicate the effective Warranty Date.
   6. Contractor or supplier letters of Warranty shall be signed by a principal officer of the company scanned to color PDF.

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

A. WARRANTY NOTIFICATION:
   1. The Project Management Web Site, uses an email notification system for all warranty related issues. The GC will be required to provide, and keep current during the warranty period, a minimum of 2 email addresses and phone numbers of current employees to receive email notifications and provide response regarding Work associated with these construction documents.
   2. The GC shall notify any other sub-contractor, supplier, or installer that may be required to review the warranty issue.
B. WARRANTY RESPONSE: The GC shall upon notification by Owner provide warranty response as follows:
   1. Critical Systems or equipment: Owner will decide on criticality of the system or equipment. Where damage to equipment and other building components, or injury to personnel is probable provide immediate on-site response. In no case shall on-site response exceed 24 hours. Contractor shall pay for expedited delivery and work during off-hours if required by owner.
   2. For non-critical responses where damage or injury is unlikely provide on-site response no later than next business day. Correction shall be completed no later than what is possible with regular delivery times.
   3. Where Technical Assistance support is part of the written warranty provide all assistance necessary as indicated by the warranty. If issues cannot be resolved provide on-site response no later than the next business day.
   4. If the request cannot be supported in sufficient time as outlined above, the Owner reserves the right to contract other contractors or staff having similar capability to expedite the repair or replacement and GC shall pay all associated costs to the Owner.
C. WARRANTY EXECUTION:
   1. The GC shall provide all repairs or replacements as necessary to restore broken or damaged Work to the original level of acceptance as intended by the Contract Documents.
   2. Provide all cleaning services as may be required before, during, and after the repair or replacement as Specified.
   3. Provide any protection necessary for existing construction as specified.
   4. Provide new letters of warranty when required.
D. WARRANTY FOLLOW-UP:
   1. The GC shall provide complete documented responses of all logged Warranty Issues. Responses shall provide a description of work completed including dates, and photos of completed or repaired work. Provide call back response if work is not acceptable.

END OF SECTION

SECTION 02 40 00
DEMOLITION

PART 1 – GENERAL

1.1. SCOPE

A. This section includes information common to demolition and applies to the entire contract.
B. Remove items indicated, for salvage, relocation, recycling, and removal from premises.
C. Obtain required permits.
D. Take precautions to prevent catastrophic or uncontrolled collapse of structures to be removed; do not allow worker or public access within range of potential collapse of unstable structures.
E. Perform all demolition as indicated on the drawings to accomplish new work. Demolition Drawings are based on casual field observation and/or existing record documents. Verify field measurements and circuiting arrangements as shown on Drawings, verify that abandoned wiring, piping, ducting and equipment serve only abandoned facilities. Report discrepancies to owner before disturbing existing installation. Beginning of demolition means contractor accepts existing conditions.
F. Demolition all abandoned services and devices in areas affected by this contract, even if not shown on plans. This includes but is not limited to wiring, conduits, ductwork, piping, and equipment. Disconnect all services in a manner which allows for future connection to that service. Disconnect services to equipment at unions, flanges, valves, or fittings wherever possible. Abandon gas, electric and communication utilities in accordance with local utility company requirement.
G. Patch holes and openings caused by removal of material and equipment, or formerly covered by such, with like material and texture of surrounding surface. Paint to match surroundings.
H. Arrange selective demolition schedule so as not to interfere with Owner's operations.

1.2. REFERENCES

A. OSHA – Occupational Safety and Health Administration
   1. CFR 1926 - U.S. Occupational Safety and Health Standards.
B. NFPA - National Fire Protection Association
   1. NFPA 241 - Standard for Safeguarding Construction, Alteration, and Demolition Operations

1.3. SUBMITTALS

A. PRE-DEMOLITION PHOTOGRAPHS: Record existing conditions by use of preconstruction photographs. Show existing conditions of adjoining construction and site improvements, including finish surfaces that might be misconstrued as damage cause d by selective demolition operations.
B. PROJECT RECORD DOCUMENTS: Accurately record actual locations of capped and active utilities and subsurface construction.
C. PROPOSED PROTECTION MEASURES: Submit report, including Drawings, that indicates the measures proposed for protecting individuals and property, for environmental protection, for dust control and for noise control. Indicate proposed locations and construction of barriers.
D. Schedule of demolition activities with starting and ending dates for each activity.

1.4. QUALITY ASSURANCE

A. Coordinate work with owner to minimize disruption to the existing building occupants.
B. Dismantle each structure in an orderly manner to provide complete stability of the structure at all times. Provide bracing and shoring where necessary to avoid premature collapse of structure. Where necessary to prevent collapse of any construction, install temporary shores, underpinning, struts or bracing. Do not commence demolition work until all temporary construction is complete.
C. Verify the locations of, and protect, any buildings, structures, utilities, paved surfaces, signs, streetlights, utilities, landscaping and all other such facilities that are intended to remain or be salvaged. Make such explorations and probes as necessary to ascertain any required protection measures that shall be used before proceeding with demolition.

D. Explosives shall not be used for demolition.
E. Do not demolish or damage equipment and material that is to stay in place. The Contractor shall restore all disturbed areas in accordance with the drawings and specifications. If plans and specifications do not address restoration of specific areas, these areas will be restored to pre-construction conditions as approved by owner.
F. Masonry and concrete shall be demolished in small sections. Use braces and shores as necessary to support the structure of the building or structure and protect it from damage. Where limits of demolition are exposed in the finished work, cutting shall be made with saws, providing an absolutely straight line, plumb, true and square. Operate equipment so as to cause a minimum of damage to plaster which is to remain, and so as to keep dust and dirt to a minimum.
G. EXISTING WARRANTIES: Remove, replace, patch, and repair materials and surfaces cut or damaged during selective demolition, by methods and with materials and using approved contractors so as not to void existing warranties.
H. Comply with ASSE A10.6 and NFPA 241.

1.5. ENVIRONMENTAL AND INDOOR AIR QUALITY IMPACT

A. Minimize dust, noise and other nuisances to greatest extent possible.
B. Comply with governing EPA notification regulations before beginning demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.

PART 2 - PRODUCTS

2.1. REPAIR MATERIALS

A. Use repair materials identical to existing materials.
   1. If identical materials are unavailable or cannot be used for exposed surfaces, use materials that visually match existing adjacent surfaces to the fullest extent possible.
   2. Use materials whose installed performance equals or surpasses that of existing materials.
B. Comply with material and installation requirements specified in individual Specification Sections.

PART 3 – EXECUTION

3.1. EXAMINATION

A. Verify that utilities have been disconnected and capped before starting selective demolition operations.
B. Perform an engineering survey of condition of building to determine whether removing any element might result in structural deficiency or unplanned collapse of any portion of structure or adjacent structures during selective building demolition operations.
C. Inventory and record the condition of items to be removed and salvaged.

3.2. DEMOLITION

A. Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:
B. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering and chopping. Temporarily cover openings to remain.
C. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
D. Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before starting flame-cutting operations. Maintain portable fire-suppression devices during flame-cutting operations.
   1. Maintain fire watch during and for at least 2 hours after flame-cutting operations.
E. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
F. Site Access and Temporary Controls: Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
G. Removed and Salvaged Items:
   1. Clean salvaged items.
   2. Pack or crate items after cleaning. Identify contents of containers.
   3. Store items in a secure area until delivery to Owner.
   4. Transport items to Owner's storage area off-site designated by Owner.
   5. Protect items from damage during transport and storage.
H. Removed and Reinstalled Items:
   1. Clean and repair items to functional condition adequate for intended reuse.
   2. Pack or crate items after cleaning and repairing. Identify contents of containers.
   3. Protect items from damage during transport and storage.
I. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition.
J. Do not allow demolished materials to accumulate on-site.
K. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
L. Remove debris from elevated portions of building by chute, hoist, or other device that will convey debris to grade level in a controlled descent.

M. Clean adjacent structures and improvements of dust, dirt, and debris caused by demolition operations. Return adjacent areas to condition existing before selective demolition operations began.

3.3. GENERAL BUILDING DEMOLITION

A. Proceed with demolition in a systematic manner, from top of structure to ground. Complete demolition work above each floor or tier before disturbing supporting members on lower levels.
B. Remove structural framing members and lower to ground by hoists, derricks or other suitable means.
C. Locate demolition equipment and remove structure so as to not impose excessive loads to supporting walls, floors or framing.
D. Break up and remove concrete slabs-on-grade, unless otherwise shown to remain.
E. Demolish foundation walls and other below grade features in accordance with the plans. Unless otherwise noted, remove all below grade features to a point 4' below adjoining existing grade, or proposed grade, whichever is lower. Basement and/or lowest level floors more than 4' below existing grade need not be removed, but must be broken up to permit drainage.
F. Backfill and compact below grade areas and voids resulting from demolition of structures and other abandonment and demolition. Backfilling shall not begin until demolition and abandonment has been approved and documented by owner. Prior to placement of fill materials, ensure that areas to be filled are free of standing water, frost, frozen materials, trash and debris.
G. Carefully protect and/or replace drain tiles encountered during demolition which are necessary to maintain site drainage conditions. Immediately repair or replace any drain tiles not scheduled for demolition, but damaged. Report damage to owner.
H. Repairs to drain tile or replacement drain tile shall be comparable or better than the existing drain tile system.
I. Test drain lines with water to assure free flow before covering. Remove all obstructions, retest until satisfactory.

3.4. UTILITY SERVICES AND BUILDING SERVICES SYSTEMS

A. Existing Services/Systems to Remain: Maintain services/systems indicated to remain and protect them against damage.
B. Existing Services/Systems to Be Removed, Relocated, or Abandoned: Locate, identify, disconnect, and seal or cap off utility services and mechanical/electrical systems serving areas to be selectively demolished.
    1. Owner will arrange to shut off indicated services/systems when requested by Contractor.
    2. Arrange to shut off utilities with utility companies.
    3. If services/systems are required to be removed, relocated, or abandoned, provide temporary services/systems that bypass area of selective demolition and that maintain continuity of services/systems to other parts of building.
    4. Disconnect, demolish, and remove fire-suppression systems, plumbing, and HVAC systems, equipment, and components indicated on Drawings to be removed.
        a. Piping to Be Removed: Remove portion of piping indicated to be removed and cap or plug remaining piping with same or compatible piping material.
        b. Piping to Be Abandoned in Place: Drain piping and cap or plug piping with same or compatible piping material and leave in place.
        c. Equipment to Be Removed: Disconnect and cap services and remove equipment.
        d. Equipment to Be Removed and Reinstalled: Disconnect and cap services and remove, clean, and store equipment; when appropriate, reinstall, reconnect, and make equipment operational.
        e. Equipment to Be Removed and Salvaged: Disconnect and cap services and remove equipment and deliver to Owner.
        f. Ducts to Be Removed: Remove portion of ducts indicated to be removed and plug remaining ducts with same or compatible ductwork material.
        g. Ducts to Be Abandoned in Place: Cap or plug ducts with same or compatible ductwork material and leave in place.
C. All disconnected wiring shall be removed from all raceway systems, panels, enclosures pull boxes, junction boxes etc. irrespective of whether the removal is specified in the construction documents or not. The empty raceway systems shall be tagged spare on both ends of each termination.

3.5. PROTECTION

A. Temporary Protection: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.
B. Temporary Shoring: Design, provide, and maintain shoring, bracing, and structural supports as required to preserve stability and prevent movement, settlement, or collapse of construction and finishes to remain, and to prevent unexpected or uncontrolled movement or collapse of construction being demolished.
C. Remove temporary barricades and protections where hazards no longer exist.

END OF SECTION

SECTION 07 90 00
JOINT PROTECTION

PART 1 – GENERAL

1.1. SCOPE

A. Section covers all sealant and caulking materials and their application, wherever required for complete installation of building materials or systems, unless otherwise noted. This includes but is not limited to:
   1. Exterior Sealing: Clean out, caulk and seal exterior joints at the following locations.
      a. Metal air intakes and louvers
      b. Items projecting through or against walls or floors; building expansion joints
      c. Door and window frames, including lintels
      d. Building control joints.
      e. Other locations where sealing is required by material or product manufacturers.
   2. Interior Caulking:
      a. Metal-to-masonry and metal-to-gypsum board at metal frames caulked with paintable sealant.
      b. Joint between windows and window stools
      c. Joint between plumbing fixtures and adjacent surfaces.
      d. Building control joints.
      e. All other locations where caulking is required by material and product manufacturers even though not specifically mentioned herein.

1.2. REFERENCES

A. Work under this section depends on applicable provisions from other sections and the plan set in this contract.
B. ASTM - American Society for Testing and Materials
   1. ASTM C834 - Standard Specification for Latex Sealants
   2. ASTM C919 - Standard Practice for Use of Sealants in Acoustical Applications
   3. ASTM C920 - Standard Specification for Elastomeric Joint Sealants
   4. ASTM C1193 - Standard Guide for Use of Joint Sealants.

1.3. SUBMITTALS

A. In addition to below requirements, refer to section 01 33 23 – SUBMITTALS
B. Materials list of items proposed to be furnished under this Section.
C. Manufacturer's specifications and other data needed to prove compliance with the specified requirements.
D. Cured samples of exposed sealants for each color where required to match adjacent material.

1.4. QUALITY ASSURANCE

A. Mockups: Before installing, apply joint sealants to a designated mockup to verify selections made under sample Submittals and to demonstrate aesthetic effects and qualities of materials and execution.
B. Do not proceed with installation of joint sealants until contaminants capable of interfering with adhesion are removed from joint substrates.

1.5. PERFORMANCE REQUIREMENTS

A. Long lasting joint protection throughout the natural expansion and contraction cycles of the building materials.
B. Air and water tight joints

1.6. WARRANTY

A. All work in this Section shall be guaranteed to be free from defects in materials and workmanship for a period of 5 years from date of final completion of project.

B. Following will be considered defective work: Discoloration of sealant or materials to which sealant is applied, Improper bonding to surfaces to which sealant is applied and crazing, checking and discoloration of sealant.

1.7. ENVIRONMENTAL AND INDOOR AIR QUALITY IMPACT

A. Provide temporary ventilation during work of this Section.

PART 2 - PRODUCTS

2.1. POROUS AND NON-POROUS MATERIAL SEALANT

A. Apply on concrete, masonry, metal, windows, panels and other components enclosure protection

B. Tremco, "Dymonic 100" or euqal

C. Joint movement capability +100%/-50%

D. No Staining of Porous Material

2.2. HORIZONTAL SURFACE SEALANT

A. Expansion joints in Floors, sidewalks, decks, pools etc.

B. Tremco, "Vulkem 45"

C. Movement capability Modified ASTM C719: ±50%

2.3. PAINTABLE SEALANT

A. Interior, where painting over sealant is required

B. Tremco, "Tremflex 834"

C. Joint movement capability ±12.5%

2.4. BATHTUB / TILE SEALANT

A. Interior in tiled corners and joints between sanitary installations and wall/floor.

B. mildew resistant.

C. Tremco "Tremsil 200 Sanitary" or approved equal

2.5. ACOUSTICAL SEALANT

A. Permanently tacky non-hardening butyl sealant.

B. USG Corporation "SHEETROCK Acoustical Sealant"

C. Color: Match adjacent finished surfaces.

2.6. ACCESORIES

A. JOINT BACKING:

1. Provide sealant backings of material and type that are non-staining; are compatible with joint substrates, sealants, primers, and other joint fillers; and are approved for applications indicated by sealant manufacturer based on field experience and laboratory testing.
2. Round foam rod compatible with sealant; ASTM D 1667, closed cell PVC; oversized 30 to 50% larger than joint width.
3. Cylindrical Sealant Back-up Rod: ASTM C1330, of size and density to control sealant depth and otherwise contribute to producing optimum sealant performance:
4. Bond-Breaker Tape: Polyethylene tape or other plastic tape recommended by sealant manufacturer for preventing sealant from adhering to rigid, inflexible joint-filler materials or joint surfaces at back of joint where such adhesion would result in sealant failure.

B. FILLER:

1. Definition: Sealant backing used behind a back-up rod.
2. Material: Mineral fiber board: ASTM C612, Class 1.
3. Thickness same as joint width.
4. Depth to fill void completely behind back-up rod.

C. PRIMER: Non-staining type, recommended by sealant manufacturer to suit application.

PART 3 – EXECUTION

3.1. INSTALLATION

A. Install in accordance with manufacturer's instructions and all code requirements.

B. COLOR: Visible Sealants shall be in color of adjoining material for best aesthetics. Owner shall approve color.

C. PRIMER: Test Adhesion before application If owner deems necessary, use manufacturer-recommended primer.

D. SOLVENT CLEANER: as recommended by sealant manufacturer.

E. JOINT SEALANT BACKING:

1. Provide sealant backings of material and type that are non-staining; are compatible with joint substrates, sealants, primers, and other joint fillers; and are approved for applications indicated by sealant manufacturer based on field experience and laboratory testing.
2. Use Closed-cell polyethlyene backer rods backing material to control depth of sealant bead. Where space for back-up rod does not exist, install bond breaker tape strip at bottom (or back) of joint so sealant bonds only to two opposing surfaces. Take all necessary steps to prevent three sided adhesion of sealants. Do not apply sealant directly against mortar in a joint.
3. Cylindrical Sealant Back-up Rod: ASTM C1330, of size and density to control sealant depth. Install filler to fill void behind back-up rod at full joint thickness. Fillermaterial: Mineral fiber board: ASTM C612, Class 1.
4. Bond-Breaker Tape: Polyethylene tape or other plastic tape recommended by sealant manufacturer for preventing sealant from adhering to rigid, inflexible joint-filler materials or joint surfaces at back of joint where such adhesion would result in sealant failure.
5. Insert backer material uniformly into the joint cavity so that joint depth does not exceed one half (1/2) joint width.

F. PREPARATORY WORK
1. Prepare joints in accordance with manufacturer's instructions. Verify required proportion of joint width to depth.
2. Clean surfaces of joint to receive caulking or sealants leaving joint dry to the touch, free from frost, moisture, grease, oil, wax, lacquer paint, or other foreign matter that would tend to destroy or impair adhesion.
   a. Clean porous joint substrate surfaces to produce a clean, sound substrate capable of developing optimum bond with joint sealants.
   b. Remove laitance and form-release agents from concrete. Remove loose particles remaining from above cleaning. Porous joint surfaces include concrete, masonry glass, metal, porcelain enamel and unglazed surfaces of ceramic tile.

G. APPLICATION OF SEALANT:
1. Follow requirements of ASTM C1193 and manufacturer's instructions and tool to a concave surface.
2. Apply sealant by means of a pressure gun with nozzle diameter equal to width of joint. Firmly press sealant into joint to ensure complete wetting of bonding surface and obtain good adhesion.
3. Where practical, mask joints and do not remove tape until joint has been tooled and initial cure has taken place.

H. Seal all joints including, but not limited to, air intakes and louvers, Items projecting through or against walls or floors; building expansion and control joints, Door and window frames, including lintels, Building control joints, Metal-to-masonry and metal-to-gypsum board at metal frames caulked with paintable sealant, Joint between windows and window stools, Joint between plumbing fixtures and adjacent surfaces. All other locations where caulking is required by material and product manufacturers.

I. Perform work in accordance with ASTM C1193, "Standard Guide for Use or Joint Sealants", and Sealant, Waterproofing & Restoration Institute (SWR Institute), "Sealants: The Professional's Guide."

J. Do not apply sealants when surfaces are frosty, damp or wet or when temperatures are below 40°F without written approval from sealant manufacturer.

END OF SECTION

SECTION 08 41 13
ALUMINUM-FRAMED ENTRANCES AND STOREFRONT

PART 1 – GENERAL

1.1. SCOPE

A. This section includes information common to aluminum storefront system including entrances and windows.
B. Plans show approximate sizes, types and location of storefront systems. Typically plan dimensions reference outer edge or framing system and center of dividers.

1.2. REFERENCES

A. Work under this section depends on applicable provisions from other sections and the plan set in this contract. Examples of related sections include, but are not limited to:
   1. 07 05 00 - Common Work Results For Thermal And Moisture Protection
   2. 07 90 00 - Joint Protection
   3. 08 81 00 - Glass Glazing
B. AAMA - American Architectural Manufacturers Association
   1. AAMA Glossary (AAMA AG).
C. ASTM - American Society of Testing Materials
   1. ASTM E330-84: Structural Performance of Exterior Windows, Curtain Walls and Doors under the influence of wind loads.
   2. ASTM D1781-76: Climbing Drum Peel Test for Adhesives.
   3. ASTM - D3363-74: Method for Film Hardness by Pencil Test.
   4. ASTM - D2794-90: Resistance of Organic Coatings to the Effects of Rapid Deformation (Impact)
   5. ASTM - D3359-90: Method for Measuring Adhesion by the tape test.

1.3. SUBMITTALS

A. In addition to below requirements, refer to section 01 33 23 – SUBMITTALS
B. Product Data: Include construction details, material descriptions, dimensions of individual components and profiles, hardware, finishes, and installation instructions for each type indicated.
C. Shop Drawings: Include plans, elevations, sections, details, hardware, and attachments to other work, operational clearances and installation details. Verify actual dimensions of aluminum-framed storefront openings by field measurements before fabrication and indicate field measurements on Shop Drawings. Detail glazing methods, framing and tolerances to accommodate thermal movement.
D. Samples: For units with factory-applied color finishes including samples of hardware and accessories involving color selection. Panels require sample of panel make-up.
E. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency for each performance requirement.
F. Fabrication Sample: Of each vertical-to-horizontal intersection of aluminum-framed systems, made from 12" (304.8 mm) lengths of full-size components and showing details of the following:
   1. Joinery.
   2. Anchorage.
   3. Expansion provisions.
   4. Glazing.
   5. Flashing and drainage.
G. ENTRANCE DOOR HARDWARE SCHEDULE: Prepared by or under the supervision of supplier, detailing fabrication and assembly of entrance door hardware, as well as procedures and diagrams. Coordinate final entrance door hardware schedule with doors, frames, and related work to ensure proper size, thickness, hand, function, and finish of entrance door hardware.

1.4. QUALITY ASSURANCE

A. INSTALLER QUALIFICATIONS: An installer which has had successful experience with installation of the same or similar units required for the project and other projects of similar size and scope.

B. MANUFACTURER QUALIFICATIONS: A manufacturer with minimal 25 years experience producing products specified in this section.

C. SOURCE LIMITATIONS: Obtain aluminum-framed storefront system through one source from a single manufacturer.

D. MOCKUPS: Build mockups to verify selections made under sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution. Build mockup for type(s) of storefront elevation(s) indicated, in location(s) shown on Drawings

E. SEALANT: For sealants required within fabricated storefront system, provide permanently elastic, non-shrinking, and non-migrating type recommended by sealant manufacturer for joint size and movement.

1.5. PERFORMANCE REQUIREMENTS

A. AIR INFILTRATION: The test specimen shall be tested in accordance with ASTM E 283. Air infiltration rate shall not exceed 0.06 cfm/ft2 (0.3 l/s • m2) at a static air pressure differential of 1.57 psf (75 Pa).

B. WATER RESISTANCE: The test specimen shall be tested in accordance with ASTM E 331. There shall be no leakage at a minimum static air pressure differential of 10 psf (479 Pa) as defined in AAMA 501.

C. UNIFORM LOAD: A static air design load of 25 psf (1436 Pa) shall be applied in the positive and negative direction in accordance with ASTM E 330. There shall be no deflection in excess of L/175 of the span of any framing member. At a structural test load equal to 1.5 times the specified design load, no glass breakage or permanent set in the framing members in excess of 0.2% of their clear spans shall occur. Plans will indicate if larger loads apply.

D. SOUND TRANSMISSION CLASS (STC) AND OUTDOOR-INDOOR TRANSMISSION CLASS (OITC): When tested to AAMA Specification 1801 and in accordance with ASTM E1425 and ASTM E90, rating shall not be less than 37 (STC) and 30 (OITC).

E. TOLERANCES: Reference to tolerances for wall thickness and other cross-sectional dimensions of storefront members are nominal and in compliance with AA Aluminum Standards and Data.

1.6. WARRANTY

A. Aluminum Storefront: Provide warranty against defects in material and workmanship for 2 years from Date of Substantial Completion of the project.

B. Insulated Panels:
   1. Exterior Finish: 20 year finish warranty
   2. Exterior substrate: 25 year Lamination warranty

PART 2 - PRODUCTS

2.1. EXTERIOR STORE FRONT FRAMING

A. MANUFACTURER: Kawneer 451 UT or approved equal.

B. SYSTEM DIMENSIONS: 2" x 4-1/2" (50.8 mm x 114.3 mm)

C. THERMAL TRANSMITTANCE (U-factor): When tested with center-of-glass U-factor of 0.2 BTU/hr/ft²/°F to AAMA Specification 1503:
   1. Storefront Framing with standard NFRC specimen size of 2m x 2 m (78.75" x 78.75"). Overall U-factor shall not be more than 0.3 BTU/hr/ft²/°F.

D. ALUMINUM EXTRUSIONS: Alloy and temper recommended by aluminum storefront manufacturer for strength, corrosion resistance, and application of required finish and not less than 0.070" wall thickness at any location for the main frame and complying with ASTM B 221: 6063-T6 alloy and temper.

E. ANCHORS, CLIPS, AND ACCESSORIES: Aluminum, nonmagnetic stainless steel, or zinc-coated steel or iron complying with ASTM B 633 for SC 3 severe service conditions or other suitable zinc coating; provide sufficient strength to withstand design pressure indicated.

F. REINFORCING MEMBERS: Aluminum, nonmagnetic stainless steel, or nickel/chrome-plated steel complying with ASTM B 456 for Type SC 3 severe service conditions, or zinc-coated steel or iron complying with ASTM B 633 for SC 3 severe service conditions or other suitable zinc coating; provide sufficient strength to withstand design pressure indicated.

G. Thermal Barrier (Trifab™ 451UT): Kawneer DUAL IsoLock™ Thermal Break with two (2) 1/4" (6.4 mm) separations consisting of a two-part chemically curing, high-density polyurethane, which is mechanically and adhesively joined to aluminum storefront sections. Thermal Break shall be designed in accordance with AAMA TIR-A8 and tested in accordance with AAMA 505.

H. BRACKETS AND REINFORCEMENTS: Manufacturer's standard high-strength aluminum with nonstaining, nonferrous shims for aligning system components.

I. PERIMETER ANCHORS: When steel anchors are used, provide insulation between steel material and aluminum material to prevent galvanic action.

J. FASTENERS AND ACCESSORIES: Manufacturer's standard corrosion-resistant, nonstaining, nonbleeding fasteners and accessories compatible with adjacent materials. Aluminum, nonmagnetic stainless steel are acceptable.

K. BITUMINOUS PAINT: Cold-applied, asphalt-mastic paint complying with SSPC-Paint 12 requirements except containing no asbestos; formulated for 30 mil (0.762 mm) thickness per coat.

L. GLAZING: maximum allowable thickness meeting insulated glazing requirements.

M. FRAMING MEMBERS, GENERAL: Fabricate components that, when assembled, have the following characteristics:
   1. Profiles that are sharp, straight, and free of defects or deformations.
   2. Accurately fit joints; make joints flush, hairline and weatherproof.
   3. Means to drain water passing joints, condensation within framing members, and moisture migrating within the system to exterior.
   4. Physical and thermal isolation of glazing from framing members.
   5. Accommodations for thermal and mechanical movements of glazing and framing to maintain required glazing edge clearances.
   6. Provisions for field replacement of glazing.
   7. Fasteners, anchors, and connection devices that are concealed from view to greatest extent possible.

N. Mechanically Glazed Framing Members: Fabricate for flush glazing without projecting stops.

O. Structural-Sealant-Glazed Framing Members: Include accommodations for using temporary support device to retain glazing in place while structural sealant cures.

P. Storefront Framing: Fabricate components for assembly using manufacturer's standard installation instructions.

Q. After fabrication, clearly mark components to identify their locations in Project according to Shop Drawings.

R. Finish designations prefixed by AA comply with the system established by the Aluminum Association for designating aluminum finishes.

S. Provide scheduled finish. If no finish is indicated, provide anodized aluminum.

2.2. ENTRANCES

A. MANUFACTURER: Kawneer AA 250 and 425 or approved equal

B. Built to same standards as outlined in store front framing section.

C. THERMAL TRANSMITTANCE (U-factor): When tested with center-of-glass U-factor of 0.2 BTU/hr/ft²/°F : tested to AAMA Specification 1503:
   1. Single Door Entrance with NFRC specimen size of 0.96m x 2.09m (37-3/4" x 82-3/8"). Overall U-factor shall not be more than 0.43 BTU/hr/ft²/°F.
   2. Double Door Entrance with NFRC specimen size of 0.96m x 2.09m (37-3/4" x 82-3/8"). Overall U-factor shall not be more than 0.41 BTU/hr/ft²/°F.

D. Slide-In-Type Weather Stripping: Provide woven-pile weather stripping of wool, polypropylene, or nylon pile and resin-impregnated backing fabric. Comply with AAMA 701/702.

E. Weather Seals: Provide weather stripping with integral barrier fin or fins of semi-rigid, polypropylene sheet or polypropylene-coated material. Comply with AAMA 701/702.

F. Provide manufacturer's standard hardware fabricated from aluminum, stainless steel, or other corrosion-resistant material compatible with aluminum; designed to smoothly operate, tightly close, and securely lock aluminum-framed entrance doors. Standard Hardware:
   1. Weather-stripping:
      a. Meeting stiles on pairs of doors shall be equipped with two lines of weather-stripping utilizing wool pile with polymeric fin.
      b. The door weathering on a single acting offset pivot or butt hung door and frame (single or pairs) shall be comprised of a thermoplastic elastomer weathering on a tubular shape with a semi-rigid polymeric backing and a wool pile with polymeric fin.
   2. Sill Sweep Strips: EPDM blade gasket sweep strip in an aluminum extrusion applied to the interior exposed surface of the bottom rail with concealed fasteners (Necessary to meet specified performance tests).
   3. Threshold: Extruded aluminum, thermally broken, with ribbed surface.
   4. Offset Pivots: as required to meet design intent
   5. Continuous Hinge.
   6. Push/Pull: CO-12.
   7. Exit Device: Kawneer 1786

G. Fabricate thermally broken aluminum-framed doors that are re-glazable without dismantling perimeter framing.
   1. Door corner construction shall consist of mechanical clip fastening, SIGMA deep penetration plug welds and 1" (24 mm) long fillet welds inside and outside of all four corners. Glazing stops shall be hook-in type with EPDM glazing gaskets reinforced with non-stretchable cord.
   2. Accurately fit and secure joints and corners. Make joints hairline in appearance.
   3. Prepare components with internal reinforcement for door hardware.

H. Arrange fasteners and attachments to conceal from view.

I. Weather-stripping: Provide weather-stripping locked into extruded grooves in door panels or frames as indicated on manufactures drawings and details.

J. FINISH: match storefront system unless noted otherwise.

2.3. WINDOWS

A. MANUFACTURER: same as store-front system

B. THERMAL TRANSMITTANCE (U-factor): When tested with center-of-glass U-factor of 0.2 BTU/hr/ft²/°F to AAMA Specification 1503. Window based on standard NFRC specimen size of 1.5m x 0.6m (59-1/16" x 23-5/8"):
   1. Chose thermally best system based on manufacturer's size limitations:

1. Up to typically 48"x 32": GLASSvent UT with 1.75" Infill, shallow CW frame and warm edge spacer: Overall U-factor shall not be more than 0.31 BTU/hr/ft²/°F.
2. Up to typically 60"x 36": GLASSvent UT with 1.75" Infill, deep AW frame and warm edge spacer: Overall U-factor shall not be more than 0.31 BTU/hr/ft²/°F.
3. Up to typically 60"x 89": 8225TL: Overall U-factor shall not be more than 0.45 BTU/hr/ft²/°F.

C. HARDWARE: Provide manufacturer's hardware:
1. Stainless Steel 4-bar hinges
2. Pivot-Shoe-Roto-Operator
3. Hook Bolt Lock
4. 88SS support arm for heights exceeding 50"

D. Install awning type windows where indicated on plans. Elevations show dotted lines with typical architectural awning (project out) window symbol. A schedule may or may not be provided.

2.4. INSULATED PANELS

A. MANUFACTURER: Mapes
B. MODEL: R+ 8-ply
C. OVERALL THICKNESS: 4" unless noted differently on plans. Glazing leg thickness shall match glazing. Overall U-value of 0.05 Btu/(hr-°F)
D. EXTERIOR FINISH: Standard Kynar; color selected by owner during submittal review
E. EXTERIOR SUSBTRATE: Tempered hardboard with smooth mill aluminum
F. SECONDARY EXTERIOR SUSBTRATE: Tempered hardboard
G. CORES: Polystyrene
H. INTERIOR SUSBTRATE: Tempered hardboard
I. INTERIOR FINISH: Standard Kynar
J. TOLERANCES: 0.8% of panels dimension length and width - (+/-) 1/16" thickness
K. Weatherseal all joints

2.5. GLAZING

A. Use glass of thickness approved by manufacturer. Meet thermal and quality properties defined in section 08 81 00 for insulated glass.

PART 3 – EXECUTION

3.1. INSTALLATION

A. Install in accordance with manufacturer's instructions, architectural manuals and all code requirements.
B. Examine openings, substrates, structural support, anchorage, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of work. Verify rough opening dimensions, levelness of sill plate and operational clearances. Examine wall flashings, vapor retarders, water and weather barriers, and other built-in components to ensure a coordinated, weather tight aluminum-framed storefront installation.
1. Masonry Surfaces: Visibly dry and free of excess mortar, sand, and other construction debris.
2. Wood Frame Walls: Dry, clean, sound, well nailed, free of voids, and without offsets at joints. Ensure that nail heads are driven flush with surfaces in opening and within 3 inches (76 mm) of opening.
3. Metal Surfaces: Dry; clean; free of grease, oil, dirt, rust, corrosion, and welding slag; without sharp edges or offsets at joints.
4. Proceed with installation only after unsatisfactory conditions have been corrected.

C. Install aluminum-framed storefront system level, plumb, square, true to line, without distortion or impeding thermal movement, anchored securely in place to structural support, and in proper relation to wall flashing and other adjacent construction.
D. Set sill members in bed of sealant or with gaskets, as indicated, for weather tight construction.
E. Install aluminum-framed storefront system and components to drain condensation, water penetrating joints, and moisture migrating within aluminum-framed storefront system to the exterior.
F. Separate aluminum and other corrodible surfaces from sources of corrosion or electrolytic action at points of contact with other materials.
G. Clean aluminum surfaces immediately after installing aluminum framed storefronts. Avoid damaging protective coatings and finishes. Remove excess sealants, glazing materials, dirt, and other substances.
H. Weep holes and drainage channels must be unobstructed and free from dirt and sealant.
I. Clean glass immediately after installation. Comply with glass manufacturer's written recommendations for final cleaning and maintenance. Remove nonpermanent labels, and clean surfaces.
J. Remove and replace glass that has been broken, chipped, cracked, abraded, or damaged during construction period.
K. Water Infiltration Tests: Conduct tests in accordance with ASTM E 1105. No uncontrolled water leakage is permitted when tested at a static test pressure of two-thirds the specified water penetration pressure but not less than 6.24 psf (300 Pa).

END OF SECTION

SECTION 08 81 00
GLASS GLAZING

PART 1 – GENERAL

1.1. SCOPE

A. This section includes information common to Glass Glazing and applies to all sections in this Division.

1.2. REFERENCES

A. Work under this section depends on applicable provisions from other sections and the plan set in this contract. Examples of related sections include, but are not limited to:
   1. 07 05 00 – COMMON WORK RESULTS FOR THERMAL AND MOISTURE PROTECTION
   2. 07 90 00 – JOINT PROTECTION
   3. 08 05 00 – COMMON WORK RESULTS FOR OPENINGS

B. ANSI – American National Standards Institute
   1. ANSI Z97.1 Safety Glazing Materials Used in Buildings – Safety Performance Specifications and Methods of Test

C. ASTM - American Society for Testing and Materials
   1. ASTM C1036 - Standard Specification for Flat Glass
   2. ASTM C1048 - Standard Specification for Heat-Treated Flat Glass - Kind HS, Kind FT Coated and Uncoated Glass
   3. ASTM C1172 - Standard Specification for Laminated Architectural Flat Glass
   4. ASTM C1184 - Standard Specification for Structural Silicone Sealants
   5. ASTM C509 - Elastomeric Cellular Preformed Gasket and Sealing Material
   6. ASTM C864 - Dense Elastomeric Compression Seal Gaskets, Setting Blocks, and Spacers
   7. ASTM C920 - Standard Specification for Elastomeric Joint Sealants
   8. ASTM D2287 - Nonrigid Vinyl Chloride Polymer and Copolymer Molding and Extrusion Compounds
   9. ASTM D395 - Standard Test Methods for Rubber Property - Compression Set
   10. ASTM D4802 - Poly(Methyl Methacrylate) Acrylic Plastic Sheet
   11. ASTM E119 - Standard Test Methods for Fire Tests of Building Construction and Materials
   12. ASTM E1300 - Determining Load Resistance of Glass in Buildings
   13. ASTM E2226 - Standard Practice for Application of Hose Stream
   14. ASTM E413 - Rating Sound Insulation
   15. ASTM E90 - Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements

D. FGMA - Flat Glass Manufacturers Association
   1. FGMA Glazing Manual

E. GANA - Glass Association Of North America
   1. GANA Glazing Manual Glazing Manual
   2. GANA Sealant Manual Sealant Manual
   3. GANA Standards Manual Tempering Division's Engineering Standards Manual

F. IGMA - Insulating Glass Manufacturers Alliance
   1. IGMA TB-3001 - Guidelines for Sloped Glazing
   2. IGMA TM-3000 - North American Glazing Guidelines for Sealed Insulating Glass Units for Commercial & Residential Use
   3. IGMA TR-1200 - Guidelines for Commercial Insulating Glass Dimensional Tolerances

G. LSGA - Laminators Safety Glass Association
   1. LSGA Laminated Glass Design Guide

H. NARA - National Archives And Records Administration
   1. NARA 16 CFR 1201 - Safety Standard for Architectural Glazing Materials

I. NFPA - National Fire Protection Association
   1. NFPA 252 - Standard Methods of Fire Tests of Door Assemblies

2. NFPA 257 - Standard on Fire Test for Window and Glass Block Assemblies
3. NFPA 80 - Standard for Fire Doors and Other Opening Protectives

J. NFRC – National Fenestration Rating Council
1. NFRC 100 - Procedure for Determining Fenestration Product U-Factors
2. NFRC 200 - Procedure for Determining Fenestration Product Solar Heat Gain Coefficient and Visible Transmittance at Normal Incidence

K. UL – Underwriters Laboratory
1. UL 752 - Standard for Bullet-Resisting Equipment
2. UL MEAPD - Mechanical Equipment and Associated Products Directory

1.3. SUBMITTALS

A. In addition to below requirements, refer to section 01 33 23 – SUBMITTALS
B. Submit manufacturer's product literature, specifications and data sheets.
C. Performance documentation for all glass types
D. Submit 300 mm x 300 mm sized samples of each type of glass, clearly labelled with manufacturer's name and glass type. Reference glass types to those scheduled and specified herein.
E. Drawings showing complete details of the proposed setting methods, mullion details, edge blocking, size of openings, frame details, materials, and types and thickness of glass.
F. Prepare a stress analysis on all glass.

1.4. QUALITY ASSURANCE

A. Insulating glass units shall be certified by the Insulated Glass Manufacturers Alliance (IGMA)
B. Suitably protect glass products to prevent damage from weather and breakage. Individually wrap accessory materials to protect them from damage.
C. Store glass vertically, off the ground, on "A" frames, braced or blocked to prevent racking, twisting, or sagging.
D. Take special care to protect edges of insulating glass units from damage but do not apply tape or other materials to edges.
E. Do not start glazing work until the outdoor temperature is above 4 °C (40 °F) and rising, unless procedures recommended by the glass manufacturer and approved by the Contracting Officer are made to warm the glass and rabbet surfaces. Provide ventilation to prevent condensation of moisture on glazing work during installation. Do not perform glazing work during damp or rainy weather.

1.5. PERFORMANCE REQUIREMENTS

A. Fabricate and install watertight and airtight glazing systems to withstand thermal movement and wind loading without glass breakage, gasket failure, deterioration of glazing accessories, or defects in the work.
B. Glazed panels must comply with the safety standards, in accordance with ANSI Z97.1, and comply with indicated wind/snow loading in accordance with ASTM E1300.
C. Design to prevent the transfer of stress in the setting frames to the glass. Springing, twisting, or forcing of units during setting will not be permitted.

1.6. WARRANTY

A. Warranty glass units against development of material obstruction to vision (such as dust, fogging, or film formation on the inner glass surfaces) caused by failure of the hermetic seal, other than through glass breakage, for a 10-year period following acceptance of the work. Provide new units for any units failing to comply with terms of this warranty within 45 working days.

PART 2 - PRODUCTS

2.1. INTERIOR GLASS

A. This glass is for all general interior applications not described elsewhere including but not limited to interior windows, doors etc.
B. Clear Glass: ASTM C1036, Type 1 transparent flat, Class 1 clear, Quality q3 glazing select.
C. Clear Tempered Float Glass: ASTM C1048, Type 1 transparent flat, Class 1 clear, Quality q3 glazing select, Kind FT fully tempered.
D. Approved Manufacturers:
1. Cardinal
2. Guardian Industries Corp.
3. Oldcastle
4. PPG
5. Pilkington
6. ACH Glass Operations

E. Use double-strength sheet float glass for opening sizes:
1. <= 1.39 m^2 (15 ft^2): 3 mm (1/8")
2. <= 2.79 m^2 (30 ft^2) 4.5 mm (3/16")
3. 2.79 m^2 (30 ft^2) – 4.18m^2 (45 ft^2): 6 mm (1/4")

F. Rated Safety glass in doors, transoms and sidelights up to 6 ft height.

2.2. SAFETY GLASS

A. In doors and sidelights, provide safety glazing material conforming to:
   1. Building Code Requirements
   2. 16 CFR 1201.
   3. ANSI Z97.1
   4. ASTM C 1172
   5. ASTM C 1048

2.3. FIRE RATED GLASS

A. MANUFACTURER: Vetrotech Keralite F or approved equal
B. Provide UL listed glass for fire-rated windows, doors and assemblies rated per schedule when tested in accordance with ASTM E2226.
C. Entire assembly must be rated.
D. Tested in accordance with UL9, UL 10C, NFPA 80, NFPA 252, NFPA 257
E. Impact Safety Rating CPSC 16C Part 120
F. U-value: 0.88 Btu/hr-ft^2-°F
G. STC Rating: 35

2.4. INSULATING GLASS

A. This glazing is to be used for all envelope elements that don't specify a certain glass type. This includes but is not limited to windows, doors, storefront and curtainwall systems.
   1. Old Castle or approved equal
   2. U-value Winter: <= 0.17
   3. U-value Summer: <= 0.20
   4. SHGC: <= 0.25
   5. VT: >= 0.61
B. An example of approved type is:
   1. Oldcastle IG Vision:
      a. Exterior Lite: ¼"Guardian SunGuard SNX 62/27 on Clear Low-E#2
      b. Interior Lite: ¼"Guardian SunGuard IS 20 Interior Surface Low-E #4
      c. Cavity: ½" 90% Argon
C. Do not grind, nip, or cut edges or corners of units after the units have left the factory. Springing, forcing, or twisting of units during setting will not be permitted. Handle units so as not to strike frames or other objects. Installation must conform to applicable recommendations of IGMA TB-3001 and IGMA TM-3000.

2.5. ACCESSORIES

A. SETTING AND SEALING MATERIALS: Provide as specified in the GANA Glazing Manual, IGMA TM-3000, IGMA TB-3001, and manufacturer's recommendations, unless specified otherwise herein. Do not use metal sash putty, nonskinning compounds, nonresilient preformed sealers, or impregnated preformed gaskets. Materials exposed to view and unpainted must be gray or neutral color.
B. PUTTY AND GLAZING COMPOUND: Provide glazing compound as recommended by manufacturer for face-glazing metal sash. Putty must be linseed oil type. Do not use putty and glazing compounds with insulating glass or laminated glass.
C. SETTING BLOCKS AND EDGE BLOCKS: Closed-cell neoprene setting blocks must be dense extruded type conforming to ASTM C509 and ASTM D395, Method B, Shore A durometer between 70 and 90. Edge blocking must be Shore A durometer of 50 (plus or minus 5). Provide silicone setting blocks when blocks are in contact with silicone sealant. Profiles, lengths and locations must be as required and recommended in writing by glass manufacturer. Block color must be black.
D. GLAZING COMPOUND: Use for face glazing metal sash. Do not use with insulating glass units or laminated glass.
E. SEALANTS: ASTM C920, Type S, Grade NS, Class 12.5, Use G. Use for channel or stop glazing sash. Sealant must be chemically compatible with setting blocks, edge blocks, and sealing tapes, with sealants used in manufacture of insulating glass units. Color of sealant must be white.
   1. For cap beads and other glazing not in contact with insulated glass seal or PVB interlayer of laminated glass.
      a. Tremco, "Proglaze"
      b. GE, "Silglaze II SCS2800"
      c. Dow Corning, "999-A"
   2. Sealants in contact with insulating glass seal and sealants in contact with PVB interlayer of laminated glass shall be one part neutral cure silicone.
      a. Tremco, "Spectrem 2"
      b. GE, "Silpruf SCS-2000"
      c. Dow Corning, "799"
F. STRUCTURAL SEALANT: ASTM C1184, Type S.
G. JOINT BACKER: Joint backer must have a diameter size at least 25 percent larger than joint width; type and material as recommended in writing by glass and sealant manufacturer.

H. PREFORMED CHANNELS: Neoprene, vinyl, or rubber, as recommended by the glass manufacturer for the particular condition. Channels for bullet-resistant glass must be synthetic rubber, ASTM C864, not less than 6 mm 1/4 inch thick and sufficiently resilient to accommodate expansion and contraction while maintaining a vaportight seal between glass and frame. Channels must be chemically compatible with plastic sheet.

I. SEALING TAPES: Preformed, semisolid, PVC-based material of proper size and compressibility for the particular condition, complying with ASTM D2287. Use only where glazing rabbet is designed for tape and tape is recommended by the glass or sealant manufacturer. Provide spacer shims for use with compressible tapes. Tapes must be chemically compatible with the product being set.

J. SPACER SHIMS: neoprene, 80 durometer hardness, 75 mm long x minimum 6 mm thick. Do not use metal, plastic, or wood shims.

K. GLAZING GASKETS: Glazing gaskets must be extruded with continuous integral locking projection designed to engage into metal glass holding members to provide a watertight seal during dynamic loading, building movements and thermal movements. Glazing gaskets for a single glazed opening must be continuous one-piece units with factory-fabricated injection-molded corners free of flashing and burrs. Glazing gaskets must be in lengths or units recommended by manufacturer to ensure against pull-back at corners. Provide glazing gasket profiles as recommended by the manufacturer for the intended application.

1. Fixed Glazing Gaskets: Fixed glazing gaskets must be closed-cell (sponge) smooth extruded compression gaskets of cured elastomeric virgin neoprene compounds conforming to ASTM C509, Type 2, Option 1.
2. Wedge Glazing Gaskets: Wedge glazing gaskets must be high-quality extrusions of cured elastomeric virgin neoprene compounds, ozone resistant, conforming to ASTM C864, Option 1, Shore A durometer between 65 and 75.
3. Aluminum Framing Glazing Gaskets Glazing gaskets for aluminum framing must be permanent, elastic, non-shrinking, non-migrating, watertight and weathertight.

L. GLAZING SPLINES AND GASKETS: manufacturer's standard dry neoprene glazing splines and gaskets. Provide keyed type for fixed glazing stops and keyed or roll-in type for removable glazing retaining devices. Except where otherwise specified, colour shall match frame colour.

M. GLAZING TAPE: preformed butyl tape, 10 15 durometer hardness, with integral neoprene shim, 80 durometer hardness, paper release, match frame color where visible.

N. ACCESSORIES: Provide as required for a complete installation, including glazing points, clips, shims, angles, beads, and spacer strips. Provide noncorroding metal accessories. Provide primer-sealers and cleaners as recommended by the glass and sealant manufacturers.

PART 3 – EXECUTION

3.1. INSTALLATION

A. Comply with the manufacturer's warranty and written instructions, except as indicated. Install units with the heat-absorbing glass to the exterior. Secure glass in place with bolts and spring clips. The minimum clearance between bolts and edge of glass unit must be 4.75 mm 3/16 inch. The glass must be edged with 4.75 mm 3/16 inch thick continuous neoprene, vinyl, or other approved material. Trim edging after installation. The channel shapes or strips must be firmly held against the glass by the spring action of the extruded metal moldings. Resilient setting blocks, spacer strips, clips, bolts, washers, angles, applicable glazing compound, and resilient channels or cemented-on materials must be as recommended in the written instructions of the glass manufacturer, as approved.

B. PREPARATION: Preparation, unless otherwise specified or approved, must conform to applicable recommendations in the GANA Glazing Manual, GANA Sealant Manual, IGMA TB-3001, IGMA TM-3000, and manufacturer's recommendations. Determine the sizes to provide the required edge clearances by measuring the actual opening to receive the glass. Grind smooth in the shop glass edges that will be exposed in finish work. Leave labels in place until the installation is approved, except remove applied labels on heat-absorbing glass and on insulating glass units as soon as glass is installed. Securely fix movable items or keep in a closed and locked position until glazing compound has thoroughly set.

C. GLASS SETTING: Shop glaze or field glaze items to be glazed using glass of the quality and thickness specified or indicated. Glazing, unless otherwise specified or approved, must conform to applicable recommendations in the GANA Glazing Manual, GANA Sealant Manual, IGMA TB-3001, IGMA TM-3000, and manufacturer's recommendations. Aluminum windows, wood doors, and wood windows may be glazed in conformance with one of the glazing methods described in the standards under which they are produced, except that face puttying with no bedding will not be permitted. Handle and install glazing materials in accordance with manufacturer's instructions. Use beads or stops which are furnished with items to be glazed to secure the glass in place. Verify products are properly installed, connected, and adjusted.

D. Install in accordance with manufacturer's instructions and all code requirements.

E. Clean sealing surfaces at perimeter of glass and sealing surfaces of rabbets and stop beads before applying tapes, splines or gaskets. Use solvents and cleaning agents recommended by manufacturer of sealing materials.

F. Install glazing tapes, splines and gaskets uniformly with accurately formed corners and bevels. Ensure that proper contact is made with glass and rabbet interfaces.

G. Continuously and uniformly compress length of dry glazing splines and gaskets 38 50 mm per 1200 mm during installation.

H. Set glass on setting blocks, spaced as recommended by glass manufacturer. Provide at least one setting block at quarter points from each corner.

I. Centre glass in glazing rabbet to maintain required clearances at perimeter on all four sides.

J. Use spacers and shims in accordance with glass manufacturer's recommendations.

K. Remove dirt, scum, plaster, paint spatter and other harmful or deleterious matter from glass promptly and completely, before they establish tight adhesion. Use clean water or proprietary glass cleaning solutions that will not damage glass surfaces. Avoid using abrasives, steel wool, razor blades, solvents, alkaline or other harsh cleaning agents.

L. Identify glazed openings immediately following glass installation, using liquid shoe wax in a sponge topped bottle or similar easy-to-remove product.

M. Protect glass against scratches, pitting and other surface damage.

END OF SECTION

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Engineering Division
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Christina M. Bachmann, P.E.
Eric L. Dundee, P.E.
Facilities & Sustainability
Jeanne E. Hoffman, Manager
Operations Manager
Kathleen M. Cryan
Mapping Section Manager
Eric T. Pederson, P.S.
Financial Manager
Steven B. Danner-Rivers

October 30, 2017

NOTICE OF ADDENDUM
ADDENDUM NO. 1

CONTRACT NO. 8061, PROJECT NO. 11591
FIRE STATION 10 – STOREFRONT GLASS REPLACEMENT

Revise and amend the contract document(s) for the above project as stated in this addendum, otherwise, the original document shall remain in effect.

Please acknowledge this addendum on page E1 of the contract documents and/or in Section E: Bidder's Acknowledgement on Bid Express.

Electronic version of these documents can be found on the Bid Express web site at:

http://www.bidexpress.com

If you are unable to download plan revisions associated with the addendum, please contact the Engineering office at 608-266-4751 receive the material by another route.

Sincerely,

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

Cc: Greg Fries

Office of City Engineering
City Engineering
1600 Emil Street
Madison, WI 53713
TEL: 608/266-4751 FAX: 608/264-9275
Website: www.cityofmadison.com/engineering.html

ADDENDUM NO. 1
City of Madison, Engineering Department

CONTRACT NO. 8061
FIRE STATION #10 – Storefront Glass Replacement

This addendum is issued to modify, explain or correct the original Drawings, Specifications, or Contract Documents marked as ***Fire Station #10 – Storefront Glass Replacement*** and is hereby made a part of the contract documents.

No additional documents are associated with this addendum

1. **GENERAL CONTRACT CONDITIONS**
   Clarification of scope, hazardous material removal covered in separate contract. Window contractor shall coordinate work with haz-mat contractor.

2. **GENERAL QUESTIONS AND ANSWERS**
   This section is not used.

3. **ACCEPTABLE EQUIVALENTS**
   This section is not used.

4. **SPECIFICATIONS**
   Spec. Section 08 41 13 Aluminum-Framed Entrances and Storefront
   Part 2.3.E – Install window-manufacturer provided insect screens in all operable windows

5. **DRAWINGS**
   Drawings updated to remove Hazardous Substance section – not part of this project.
   Added glass manufacturer provided insect screens

6. **PROPOSAL**
   This section is not used.

Please acknowledge this addendum on page E1 of the contract documents and/or in Section E: Bidder's Acknowledgement on Bid Express.

Electronic version of these documents can be found on Bid Express at https://www.bidexpress.com/ and the City of Madison web site at http://www.cityofmadison.com/business/PW/contracts/openforBid.cfm

If you are unable to download plan revisions associated with the addendum, please contact the Engineering office at 608-266-4751 to receive the material by another method.

For questions regarding this bid, contact:

City Project Manager
Kay Schindel
City of Madison Engineering
210 Martin Luther King Jr Blvd Room 115
Email: kschindel@cityofmadison.com

SECTION E: BIDDERS ACKNOWLEDGEMENT

CONTRACT TITLE Fire Station 10 Storefront

CONTRACT NO. 8061

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

1. The undersigned having familiarized himself/herself with the Contract documents, including Advertisement for Bids, Instructions to Bidders, Form of Proposal, City of Madison Standard Specifications for Public Works Construction - 2017 Edition thereto, Form of Agreement, Form of Bond, and Addenda issued and attached to the plans and specifications on file in the office of the City Engineer, hereby proposes to provide and furnish all the labor, materials, tools, and expendable equipment necessary to perform and complete in a workmanlike manner the specified construction on this project for the City of Madison; all in accordance with the plans and specifications as prepared by the City Engineer, including Addenda to the Contract Nos. 1 through 1 issued thereto, at the prices for said work as contained in this proposal. (Electronic bids submittals shall acknowledge addendum under Section E and shall not acknowledge here)
2. If awarded the Contract, we will initiate action within seven (7) days after notification or in accordance with the date specified in the contract to begin work and will proceed with diligence to bring the project to full completion within the number of work days allowed in the Contract or by the calendar date stated in the Contract.
3. The undersigned Bidder or Contractor certifies that he/she is not a party to any contract, combination in form of trust or otherwise, or conspiracy in restraint of trade or commerce or any other violation of the anti-trust laws of the State of Wisconsin or of the United States, with respect to this bid or contract or otherwise.
4. I hereby certify that I have met the Bid Bond Requirements as specified in Section 102.5. *(IF BID BOND IS USED, IT SHALL BE SUBMITTED ON THE FORMS PROVIDED BY THE CITY. FAILURE TO DO SO MAY RESULT IN REJECTION OF THE BID).*
5. I hereby certify that all statements herein are made on behalf of Bachmann Construction (name of corporation, partnership, or person submitting bid) a corporation organized and existing under the laws of the State of Wisconsin ~~a partnership consisting of _____; an individual trading as _____~~; of the City of Madison State of Wisconsin; that I have examined and carefully prepared this Proposal, from the plans and specifications and have checked the same in detail before submitting this Proposal; that I have fully authority to make such statements and submit this Proposal in (its, their) behalf; and that the said statements are true and correct.

SIGNATURE

VP & Project Manager
TITLE, IF ANY

Sworn and subscribed to before me this 3rd day of November, 2017.

Lynn A Fetterer
(Notary Public or other officer authorized to administer oaths)

My Commission Expires 10-12-21

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

LYNN A FETTERER NOTARY PUBLIC STATE OF WISCONSIN

SECTION F: BEST VALUE CONTRACTING

CONTRACTOR NO. 8061

Best Value Contracting

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

   None

2. Madison General Ordinance (M.G.O.), 33.07(7), does provide for some exemptions from the active apprentice requirement. Apprenticeable trades are those trades considered apprenticeable by the State of Wisconsin. Please check applicable box if you are seeking an exemption.

   ☐ Contractor has a total skilled workforce of four or less individuals in all apprenticeable trades combined.

   ☐ No available trade training program; The Contractor has been rejected by the only available trade training program, or there is no trade training program within 90 miles.

   ☐ Contractor is not using an apprentice due to having a journey worker on layoff status, provided the journey worker was employed by the contractor in the past six months.

   ☐ First-time Contractor on City of Madison Public Works contract requests a onetime exemption but intends to comply on all future contracts and is taking steps typical of a "good faith" effort.

   ☐ Contractor has been in business less than one year.

   ☐ Contractor doesn't have enough journeyman trade workers to qualify for a trade training program in that respective trade.

   ☐ An exemption is granted in accordance with a time period of a "Documented Depression" as defined by the State of Wisconsin.

3. The Contractor shall indicate on the following section which apprenticeable trades are to be used on this contract. Compliance with active apprenticeship, to the extent required by M.G.O. 33.07(7), shall be satisfied by documentation from an applicable trade training body; an apprenticeship contract with the Wisconsin Department of Workforce Development or a similar agency in another state; or the U.S Department of Labor. This documentation is required prior to the Contractor beginning work on the project site.

   ☐ The Contractor has reviewed the list and shall not use any apprenticeable trades on this project.

LIST APPRENTICABLE TRADES (check all that apply to your work to be performed on this contract)

- ☐ BRICKLAYER
- ☒ CARPENTER
- ☐ CEMENT MASON / CONCRETE FINISHER
- ☐ CEMENT MASON (HEAVY HIGHWAY)
- ☒ CONSTRUCTION CRAFT LABORER
- ☐ DATA COMMUNICATION INSTALLER
- ☐ ELECTRICIAN
- ☐ ENVIRONMENTAL SYSTEMS TECHNICIAN / HVAC SERVICE TECH/HVAC INSTALL / SERVICE
- ☐ GLAZIER
- ☐ HEAVY EQUIPMENT OPERATOR / OPERATING ENGINEER
- ☐ INSULATION WORKER (HEAT & FROST)
- ☐ IRON WORKER
- ☐ IRON WORKER (ASSEMBLER, METAL BLDGS)
- ☐ PAINTER & DECORATOR
- ☐ PLASTERER
- ☐ PLUMBER
- ☐ RESIDENTIAL ELECTRICIAN
- ☐ ROOFER & WATER PROOFER
- ☐ SHEET METAL WORKER
- ☐ SPRINKLER FITTER
- ☐ STEAMFITTER
- ☐ STEAMFITTER (REFRIGERATION)
- ☐ STEAMFITTER (SERVICE)
- ☐ TAPER & FINISHER
- ☐ TELECOMMUNICATIONS (VOICE, DATA & VIDEO) INSTALLER-TECHNICIAN
- ☐ TILE SETTER

PROPOSAL

FIRE STATION 10 STOREFRONT REPLACEMENT

MUNIS NO. 11591 – CONTRACT NO. 8061

ITEM	DESCRIPTION	ESTIMATE		TOTAL BID
90001	Base Bid	1.00	Lump Sum	$81,469

GRAND TOTAL: $81,469

Bachmann Construction

NAME OF BIDDER

Note: No Bid Proposal form was provided on Bid Express for non-electronic Bid Submission. Please consider this to be our Bid Proposal form.

Department of Public Works
Engineering Division
Robert F. Phillips, P.E., City Engineer
City-County Building, Room 115
210 Martin Luther King, Jr. Boulevard
Madison, Wisconsin 53703
Phone: (608) 266-4751
Fax: (608) 264-9275
engineering@cityofmadison.com
www.cityofmadison.com/engineering

Assistant City Engineer
Michael R. Dailey, P.E.
Principal Engineer 2
Gregory T. Fries, P.E.
Christopher J. Petykowski, P.E.
Principal Engineer 1
Christina M. Bachmann, P.E.
Eric L. Dundee, P.E.
John S. Fahmey, P.E.
Facilities & Sustainability
Jeanne E. Hoffman, Manager
Operations Manager
Kathleen M. Cryan
Mapping Section Manager
Eric T. Pederson, P.S.
Financial Manager
Steven B. Danner-Rivers

BIENNIAL BID BOND

Bachmann Construction Company, Inc.
(a corporation of the State of Wisconsin)
(individual), (partnership), (hereinafter referred to as the "Principal") and
Old Republic Surety Company
a corporation of the State of Wisconsin (hereinafter referred to as the "Surety") and licensed to do business in the State of Wisconsin, are held and firmly bound unto the City of Madison, Wisconsin (hereinafter referred to as the "City"), in the sum equal to the individual proposal guaranty amounts of the total bid or bids of the Principal herein accepted by the City, for the payment of which the Principal and the Surety hereby jointly and severally bind ourselves, our heirs, executors, administrators, successors and assigns.

The condition of this obligation is that the Principal has submitted to the City certain bids for projects from the time period of February 1, 2017 through January 31, 2019.

If the Principal is awarded the contract(s) by the City and, within the time and manner required by law after the prescribed forms are presented for its signature, the Principal enters into (a) written contract(s) in accordance with the bid(s), and files with the City its bond(s) guaranteeing faithful performance and payment for all labor and materials, as required by law, or if the City rejects all bids for the work described, then this obligation shall be null and void; otherwise , it shall remain in full force and effect.

In the event the Principal shall fail to execute and deliver the contract(s) or the performance and payment bond(s), all within the time specified or any extension thereof, the Principal and Surety agree jointly and severally to pay to the City within ten (10) calendar days of written demand a total equal to the sum of the individual proposal guaranty amounts of the total bid(s) as liquidated damages.

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

This bond may be terminated by the Surety upon giving thirty (30) days written notice to the City of its intent to terminate this bond and to be released and discharged therefrom, but such termination shall not operate to relieve or discharge the Surety from any liability already accrued or which shall accrue before the expiration of such thirty (30) day period.

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

PRINCIPAL

Bachmann Construction Company, Inc. — 11-03-2016

COMPANY NAME — AFFIX SEAL — DATE

By: _____ PRES.

SIGNATURE AND TITLE

SURETY

Old Republic Surety Company — 11-03-2016

COMPANY NAME — AFFIX SEAL — DATE

By: _____

SIGNATURE AND TITLE

Elizabeth Mosca, Attorney-in-Fact

This certifies that I have been duly licensed as an agent for the Surety in Wisconsin under National Provider No. 12305256 for the year 2017 and appointed as attorney in fact with authority to execute this bid bond, which power of attorney has not been revoked.

11-03-2016

DATE

Liz Mosca @ Hausmann-Johnson Insurance

AGENT

PO Box 259408

ADDRESS

Madison, WI 53725-9408

CITY, STATE AND ZIP CODE

608-252-9674

TELEPHONE NUMBER

Note to Surety and Principal: Any bid submitted which this bond guarantees may be rejected if the Power of Attorney form showing that the Agent of Surety is currently authorized to execute bonds on behalf of Surety is not attached to this bond.

OLD REPUBLIC SURETY COMPANY

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS: That OLD REPUBLIC SURETY COMPANY, a Wisconsin stock insurance corporation, does make, constitute and appoint:

ANN MAY, JUDITH A. WALKER, TIMOTHY HAUSMANN, PATRICK A MCKENNA, BROOKE L PARKER, ELIZABETH MOSCA, OF MADISON, WI

its true and lawful Attorney(s)-in-Fact, with full power and authority, not exceeding $50,000,000, for and on behalf of the company as surety, to execute and deliver and affix the seal of the company thereto (if a seal is required), bonds, undertakings, recognizances or other written obligations in the nature thereof, (other than bail bonds, bank depository bonds, mortgage deficiency bonds, mortgage guaranty bonds, guarantees of installment paper and note guaranty bonds, self-insurance workers compensation bonds guaranteeing payment of benefits, asbestos abatement contract bonds, waste management bonds, hazardous waste remediation bonds or black lung bonds), as follows:

ALL WRITTEN INSTRUMENTS IN AN AMOUNT NOT TO EXCEED
TEN MILLION DOLLARS ($10,000,000) ---------- FOR ANY SINGLE OBLIGATION

and to bind OLD REPUBLIC SURETY COMPANY thereby, and all of the acts of said Attorneys-in-Fact, pursuant to these presents, are ratified and confirmed. This document is not valid unless printed on colored background and is multi-colored. This appointment is made under and by authority of the board of directors at a special meeting held on February 18, 1982. This Power of Attorney is signed and sealed by facsimile under and by the authority of the following resolutions adopted by the board of directors of the OLD REPUBLIC SURETY COMPANY on February 18, 1982.

RESOLVED that, the president, any vice-president, or assistant vice president, in conjunction with the secretary or any assistant secretary, may appoint attorneys-in-fact or agents with authority as defined or limited in the instrument evidencing the appointment in each case, for and on behalf of the company to execute and deliver and affix the seal of the company to bonds, undertakings, recognizances, and suretyship obligations of all kinds; and said officers may remove any such attorney-in-fact or agent and revoke any Power of Attorney previously granted to such person.

RESOLVED FURTHER, that any bond, undertaking, recognizance, or suretyship obligation shall be valid and binding upon the Company
(i) when signed by the president, any vice president or assistant vice president, and attested and sealed (if a seal be required) by any secretary or assistant secretary; or
(ii) when signed by the president, any vice president or assistant vice president, secretary or assistant secretary, and countersigned and sealed (if a seal be required) by a duly authorized attorney-in-fact or agent; or
(iii) when duly executed and sealed (if a seal be required) by one or more attorneys-in-fact or agents pursuant to and within the limits of the authority evidenced by the Power of Attorney issued by the company to such person or persons.

RESOLVED FURTHER, that the signature of any authorized officer and the seal of the company may be affixed by facsimile to any Power of Attorney or certification thereof authorizing the execution and delivery of any bond, undertaking, recognizance, or other suretyship obligations of the company; and such signature and seal when so used shall have the same force and effect as though manually affixed.

IN WITNESS WHEREOF, OLD REPUBLIC SURETY COMPANY has caused these presents to be signed by its proper officer, and its corporate seal to be affixed this 16TH day of FEBRUARY, 2016.

OLD REPUBLIC SURETY COMPANY

Assistant Secretary

President

STATE OF WISCONSIN, COUNTY OF WAUKESHA-SS

On this 16TH day of FEBRUARY, 2016, personally came before me, Alan Pavlic and Jane E Cherney, to me known to be the individuals and officers of the OLD REPUBLIC SURETY COMPANY who executed the above instrument, and they each acknowledged the execution of the same, and being by me duly sworn, did severally depose and say; that they are the said officers of the corporation aforesaid, and that the seal affixed to the above instrument is the seal of the corporation, and that said corporate seal and their signatures as such officers were duly affixed and subscribed to the said instrument by the authority of the board of directors of said corporation.

Kathryn R. Pearson
Notary Public

My commission expires: 9/28/2018

(Expiration of notary commission does not invalidate this instrument)

CERTIFICATE

I, the undersigned, assistant secretary of the OLD REPUBLIC SURETY COMPANY, a Wisconsin corporation, CERTIFY that the foregoing and attached Power of Attorney remains in full force and has not been revoked; and furthermore, that the Resolutions of the board of directors set forth in the Power of Attorney, are now in force.

24-3933

Signed and sealed at the City of Brookfield, WI this 3 day of November, 2016

Assistant Secretary

HAUSMANN-JOHNSON INSURANCE INC

THIS DOCUMENT HAS A COLORED BACKGROUND AND IS MULTI-COLORED ON THE FACE. THE COMPANY LOGO APPEARS ON THE BACK OF THIS DOCUMENT AS A WATERMARK. IF THESE FEATURES ARE ABSENT, THIS DOCUMENT IS VOID.

ORSC 22262 (5-10)
51-W

CERTIFICATE OF BIENNIAL BID BOND

TIME PERIOD- VALID (FROM/TO) February 1, 2017 through January 31, 2019
NAME OF SURETY Old Republic Surety Company
NAME OF CONTRACTOR Bachmann Construction Company, Inc.
CERTIFICATE HOLDER City of Madison, Wisconsin

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

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

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

SIGNATURE OF AUTHORIZED CONTRACTOR REPRESENTATIVE

Nov. 1 2017

DATE

SECTION H: AGREEMENT

THIS AGREEMENT made this 6th day of December in the year Two Thousand and Seventeen between **BACHMANN CONSTRUCTION COMPANY, INC.** hereinafter called the Contractor, and the City of Madison, Wisconsin, hereinafter called the City.

WHEREAS, the Common Council of the said City of Madison under the provisions of a resolution adopted **DECEMBER 5, 2017**, and by virtue of authority vested in the said Council, has awarded to the Contractor the work of performing certain construction.

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

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

FIRE STATION 10 STOREFRONT REPLACEMENT
CONTRACT NO. 8061

2. **Completion Date/Contract Time.** Construction work must begin within seven (7) calendar days after the date appearing on mailed written notice to do so shall have been sent to the Contractor and shall be carried on at a rate so as to secure full completion SEE SPECIAL PROVISIONS, the rate of progress and the time of completion being essential conditions of this Agreement.

3. **Contract Price.** The City shall pay to the Contractor at the times, in the manner and on the conditions set forth in said specifications, the sum of **EIGHTY-ONE THOUSAND FOUR HUNDRED SIXTY-NINE AND NO/100** (**$81,469.00**) Dollars being the amount bid by such Contractor and which was awarded to him/her as provided by law.

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

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

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

   The Contractor further agrees that, for at least twelve (12) months after the effective date of this contract, it will notify the City Affirmative Action Division of each of its job openings at facilities in Dane County for which applicants not already employees of the Contractor are to be considered. The notice will include a job description, classification, qualifications and application procedures

and deadlines. The Contractor agrees to interview and consider candidates referred by the Affirmative Action Division if the candidate meets the minimum qualification standards established by the Contractor, and if the referral is timely. A referral is timely if it is received by the Contractor on or before the date started in the notice.

Articles of Agreement

Article I

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

Article II

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

Article III

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

Article V

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

Article VI

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

Article VII

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

1. Cancel, terminate or suspend this Contract in whole or in part.

2. Declare the Contractor ineligible for further City contracts until the Affirmative Action requirements are met.

3. Recover on behalf of the City from the prime Contractor 0.5 percent of the contract award price for each week that such party fails or refuses to comply, in the nature of liquidated damages, but not to exceed a total of five percent (5%) of the contract price, or five thousand dollars ($5,000), whichever is less. Under public works contracts, if a subcontractor is in noncompliance, the City may recover liquidated damages from the prime Contractor in the manner described above. The preceding sentence shall not be construed to prohibit a prime Contractor from recovering the amount of such damage from the non-complying subcontractor.

Article VIII

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

Article IX

The Contractor shall allow the maximum feasible opportunity to small business enterprises to compete for any subcontracts entered into pursuant to this contract. (In federally funded contracts the terms "DBE, MBE and WBE" shall be substituted for the term "small business" in this Article.)

5. Substance Abuse Prevention Program Required. Prior to commencing work on the Contract, the Contractor, and any Subcontractor, shall have in place a written program for the prevention of substance abuse among its employees as required under Wis. Stat. Sec. 103.503.

6. **Contractor Hiring Practices.**

Ban the Box - Arrest and Criminal Background Checks. (Sec. 39.08, MGO)

This provision applies to all prime contractors on contracts entered into on or after January 1, 2016, and all subcontractors who are required to meet prequalification requirements under MGO 33.07(7)(I), MGO as of the first time they seek or renew pre-qualification status on or after January 1, 2016. The City will monitor compliance of subcontractors through the pre-qualification process.

a. **Definitions.** For purposes of this section, "Arrest and Conviction Record" includes, but is not limited to, information indicating that a person has been questioned, apprehended, taken into custody or detention, held for investigation, arrested, charged with, indicted or tried for any felony, misdemeanor or other offense pursuant to any law enforcement or military authority.

"Conviction record" includes, but is not limited to, information indicating that a person has been convicted of a felony, misdemeanor or other offense, placed on probation, fined, imprisoned or paroled pursuant to any law enforcement or military authority.

"Background Check" means the process of checking an applicant's arrest and conviction record, through any means.

b. **Requirements.** For the duration of this Contract, the Contractor shall:

1. Remove from all job application forms any questions, check boxes, or other inquiries regarding an applicant's arrest and conviction record, as defined herein.

2. Refrain from asking an applicant in any manner about their arrest or conviction record until after conditional offer of employment is made to the applicant in question.

3. Refrain from conducting a formal or informal background check or making any other inquiry using any privately or publicly available means of obtaining the arrest or conviction record of an applicant until after a conditional offer of employment is made to the applicant in question.

4. Make information about this ordinance available to applicants and existing employees, and post notices in prominent locations at the workplace with information about the ordinance and complaint procedure using language provided by the City.

5. Comply with all other provisions of Sec. 39.08, MGO.

c. **Exemptions:** This section shall not apply when:

1. Hiring for a position where certain convictions or violations are a bar to employment in that position under applicable law, or

2. Hiring a position for which information about criminal or arrest record, or a background check is required by law to be performed at a time or in a manner that would otherwise be prohibited by this ordinance, including a licensed trade or profession where the licensing authority explicitly authorizes or requires the inquiry in question.

To be exempt, Contractor has the burden of demonstrating that there is an applicable law or regulation that requires the hiring practice in question, if so, the contractor is exempt from all of the requirements of this ordinance for the position(s) in question.

FIRE STATION 10 STOREFRONT REPLACEMENT
CONTRACT NO. 8061

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

Countersigned:

Witness 11/6/17 Date

Witness 11/6/17 Date

BACHMANN CONTRUCTION COMPANY, INC.
Company Name

President 11/6/17 Date

Secretary 11/6/17 Date

CITY OF MADISON, WISCONSIN

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

Finance Director

Approved as to form:

City Attorney

Signed this 19 day of December, 20 17

Witness

Witness

Mayor 19 Dec 2017 Date

City Clerk 12-12-17 Date

SECTION I: PAYMENT AND PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS, that we **BACHMANN CONTRUCTION COMPANY, INC.** as principal, and Old Republic Surety Company Company of Wisconsin as surety, are held and firmly bound unto the City of Madison, Wisconsin, in the sum of **EIGHTY-ONE THOUSAND FOUR HUNDRED SIXTY-NINE AND NO/100** ($**81,469.00**) Dollars, lawful money of the United States, for the payment of which sum to the City of Madison, we hereby bind ourselves and our respective executors and administrators firmly by these presents.

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

FIRE STATION 10 STOREFRONT REPLACEMENT
CONTRACT NO. 8061

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

Signed and sealed this 6th day of December, 2017

Countersigned:

Witness

Secretary

BACHMANN CONTRUCTION COMPANY, INC.
Company Name (Principal)

President Seal

Approved as to form:

City Attorney

Old Republic Surety Company
Surety Seal
☐ Salary Employee ☒ Commission

By
Attorney-in-Fact , Patrick A. McKenna

This certifies that I have been duly licensed as an agent for the above company in Wisconsin under National Producer Number 650765 for the year 2018, and appointed as attorney-in-fact with authority to execute this payment and performance bond which power of attorney has not been revoked.

December 6, 2017
Date

Agent Signature

OLD REPUBLIC SURETY COMPANY

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS: That OLD REPUBLIC SURETY COMPANY, a Wisconsin stock insurance corporation, does make, constitute and appoint:

ANN MAY, JUDITH A. WALKER, TIMOTHY HAUSMANN, PATRICK A MCKENNA, BROOKE L PARKER, ELIZABETH MOSCA, OF MADISON, WI

its true and lawful Attorney(s)-in-Fact, with full power and authority, not exceeding $50,000,000, for and on behalf of the company as surety, to execute and deliver and affix the seal of the company thereto (if a seal is required), bonds, undertakings, recognizances or other written obligations in the nature thereof, (other than bail bonds, bank depository bonds, mortgage deficiency bonds, mortgage guaranty bonds, guarantees of installment paper and note guaranty bonds, self-insurance workers compensation bonds guaranteeing payment of benefits, asbestos abatement contract bonds, waste management bonds, hazardous waste remediation bonds or black lung bonds), as follows:

ALL WRITTEN INSTRUMENTS IN AN AMOUNT NOT TO EXCEED
TEN MILLION DOLLARS ($10,000,000) ---------- FOR ANY SINGLE OBLIGATION

and to bind OLD REPUBLIC SURETY COMPANY thereby, and all of the acts of said Attorneys-in-Fact, pursuant to these presents, are ratified and confirmed. This document is not valid unless printed on colored background and is multi-colored. This appointment is made under and by authority of the board of directors at a special meeting held on February 18, 1982. This Power of Attorney is signed and sealed by facsimile under and by the authority of the following resolutions adopted by the board of directors of the OLD REPUBLIC SURETY COMPANY on February 18, 1982.

RESOLVED that, the president, any vice-president, or assistant vice president, in conjunction with the secretary or any assistant secretary, may appoint attorneys-in-fact or agents with authority as defined or limited in the instrument evidencing the appointment in each case, for and on behalf of the company to execute and deliver and affix the seal of the company to bonds, undertakings, recognizances, and suretyship obligations of all kinds; and said officers may remove any such attorney-in-fact or agent and revoke any Power of Attorney previously granted to such person.

RESOLVED FURTHER, that any bond, undertaking, recognizance, or suretyship obligation shall be valid and binding upon the Company
(i) when signed by the president, any vice president or assistant vice president, and attested and sealed (if a seal be required) by any secretary or assistant secretary; or
(ii) when signed by the president, any vice president or assistant vice president, secretary or assistant secretary, and countersigned and sealed (if a seal be required) by a duly authorized attorney-in-fact or agent; or
(iii) when duly executed and sealed (if a seal be required) by one or more attorneys-in-fact or agents pursuant to and within the limits of the authority evidenced by the Power of Attorney issued by the company to such person or persons.

RESOLVED FURTHER, that the signature of any authorized officer and the seal of the company may be affixed by facsimile to any Power of Attorney or certification thereof authorizing the execution and delivery of any bond, undertaking, recognizance, or other suretyship obligations of the company; and such signature and seal when so used shall have the same force and effect as though manually affixed.

IN WITNESS WHEREOF, OLD REPUBLIC SURETY COMPANY has caused these presents to be signed by its proper officer, and its corporate seal to be affixed this 5TH day of OCTOBER, 2016.

OLD REPUBLIC SURETY COMPANY

Jane E Cherney
Assistant Secretary

OLD REPUBLIC SURETY COMPANY CORPORATE SEAL 1931

Alan Pavlic
President

STATE OF WISCONSIN, COUNTY OF WAUKESHA-SS

On this 5TH day of OCTOBER, 2016, personally came before me, Alan Pavlic and Jane E Cherney, to me known to be the individuals and officers of the OLD REPUBLIC SURETY COMPANY who executed the above instrument, and they each acknowledged the execution of the same, and being by me duly sworn, did severally depose and say; that they are the said officers of the corporation aforesaid, and that the seal affixed to the above instrument is the seal of the corporation, and that said corporate seal and their signatures as such officers were duly affixed and subscribed to the said instrument by the authority of the board of directors of said corporation.

KATHRYN R. PEARSON NOTARY PUBLIC STATE OF WISCONSIN

Kathryn R. Pearson
Notary Public

My commission expires: 9/28/2018

(Expiration of notary commission does not invalidate this instrument)

CERTIFICATE

I, the undersigned, assistant secretary of the OLD REPUBLIC SURETY COMPANY, a Wisconsin corporation, CERTIFY that the foregoing and attached Power of Attorney remains in full force and has not been revoked; and furthermore, that the Resolutions of the board of directors set forth in the Power of Attorney, are now in force.

24-3933

OLD REPUBLIC SURETY COMPANY CORPORATE SEAL 1931

Signed and sealed at the City of Brookfield, WI this 6th day of December, 2017

Jane E Cherney
Assistant Secretary

HAUSMANN-JOHNSON INSURANCE INC

THIS DOCUMENT HAS A COLORED BACKGROUND AND IS MULTI-COLORED ON THE FACE. THE COMPANY LOGO APPEARS ON THE BACK OF THIS DOCUMENT AS A WATERMARK. IF THESE FEATURES ARE ABSENT, THIS DOCUMENT IS VOID.