

Contract Routing Form

printed on: 09/25/2019

ROUTING: Urgent Rush

Contract between: R. G. Huston Co. Inc  
 and Dept. or Division: Engineering Division  
 Name/Phone Number:

Project: Storm Structural Repairs 2019

Contract No.: 8468  
 Enactment No.: RES-19-00653  
 Dollar Amount: 347,545.00

File No.: 57176  
 Enactment Date: 09/23/2019

(Please DATE before routing)

Signatures Required	Date Received	Date Signed
City Clerk	9.25.19	9.25.19
Director of Civil Rights	9/25/19	9/30/19 MG
Risk Manager	9.30.19	9.30.19 mrc
Finance Director	9.30.19	9-30-19 JPA
City Attorney	1155 9-30-19	9-30-19 RAA
Mayor	9.30.19	10.01.19

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

Original + 2 Copies

09/25/2019 14:39:10 enhjf - Lauren Striegl 266-4094

Dis Rights: OK /  N/A / Problem - Hold  
 Prev Wage: AA / Agency /  No  
 Contract Value: see above  
 AA Plan: Approved  
 Amendment / Addendum # \_\_\_\_\_  
 Type: POS / DMp / Sbdv / Gov't /  
 Grant /  RW / Goal / Loan / Agrmt



Legislation Details (With Text)

**File #:** 57176      **Version:** 1      **Name:** Awarding Public Works Contract No. 8468, Storm Structural Repairs 2019.

**Type:** Resolution      **Status:** Passed

**File created:** 8/23/2019      **In control:** Engineering Division

**On agenda:** 9/17/2019      **Final action:** 9/17/2019

**Enactment date:** 9/23/2019      **Enactment #:** RES-19-00653

**Title:** Awarding Public Works Contract No. 8468, Storm Structural Repairs 2019. (10th & 14th ADs)

**Sponsors:** BOARD OF PUBLIC WORKS

**Indexes:**

**Code sections:**

**Attachments:** 1. Contract 8468.pdf

Date	Ver.	Action By	Action	Result
9/17/2019	1	COMMON COUNCIL	Adopt Under Suspension of Rules 2.04, 2.05, 2.24, and 2.25	Pass
9/4/2019	1	BOARD OF PUBLIC WORKS		
8/23/2019	1	Engineering Division	Refer	

Budget authority is available in the Acct. Nos. listed on the attached.  
Awarding Public Works Contract No. 8468, Storm Structural Repairs 2019. (10th & 14th ADs)  
**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 bidder 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. 8468) for itemization of bids.



Jurisdiction: Wisconsin

### Demographics

Company Name: Travelers Casualty and Surety Company of America  
 SBS Company Number: 54218780  
 Domicile Type: Foreign  
 NAIC Group Number: 3548 - Travelers Grp  
 Merger Flag: Yes

NAIC CoCode: 31194  
 State of Domicile: Connecticut  
 Organization Type: Stock

Short Name:  
 FEIN: 06-0907370  
 Country of Domicile: United States  
 Date of Incorporation: 07/18/1974

### Address

**Business Address**  
 1 TOWER SQ  
 HARTFORD, CT 06183  
 United States

**Mailing Address**  
 1 TOWER SQ  
 HARTFORD, CT 06183  
 United States

**Statutory Home Office Address**  
 1 TOWER SQ  
 HARTFORD, CT 06183  
 United States

**Main Administrative Office Address**  
 1 TOWER SQ  
 HARTFORD, CT 06183  
 United States

### Phone, Email, Website

**Phone**

Type	Number
Business Primary Phone	(860) 277-0111

**Email**

No results found.

**Website**

No results found.

### Company Type

Company Type: Property and Casualty  
 Status: Active  
 Effective Date: 07/01/1997  
 Issue Date: 09/10/1975  
 Articles of Incorporation Received: No

Status Reason:  
 Legacy State ID: 110846  
 Approval Date:  
 Article No:

Status Date: 09/10/1975  
 Expiration Date:  
 File Date:  
 COA Number:

### Appointments

Show 10 entries

Showing 1 to 2 of 4531 entries

Search: dennis b

Licensee Name	License Number	NPN	License Type	Line of Authority	Appointment Date	Effective Date	Expiration Date
DENNIS BARTON	283633	283633	Intermediary (Agent) Individual	Property	06/15/1993	01/24/2019	03/15/2020
DENNIS BARTON	283633	283633	Intermediary (Agent) Individual	Casualty	06/15/1993	01/24/2019	03/15/2020

First Previous 1 Next Last

### Line Of Business

Show 10 entries

Showing 1 to 10 of 11 entries

Search: Filter

Line of Business	Citation Type	Effective Date
Aircraft	Aircraft	09/10/1975
Automobile	Automobile	09/10/1975
Credit Insurance	Credit Insurance	09/10/1975
Disability Insurance	Disability Insurance	09/10/1975
Fidelity Insurance	Fidelity Insurance	09/10/1975
Fire, Inland Marine and Other Property Insurance	Fire, Inland Marine and Other Property Insurance	09/10/1975
Liability and Incidental Medical Expense Insurance (other than automobile)	Liability and Incidental Medical Expense Insurance (other than automobile)	09/10/1975
Miscellaneous	Miscellaneous	09/10/1975
Ocean Marine Insurance	Ocean Marine Insurance	09/10/1975
Surety Insurance	Surety Insurance	09/10/1975

First Previous 1 2 Next Last

### Contact

Contact Type	Preferred Name	Name	E-mail	Phone	Address
Registered Agent for Service of Process					Other CORPORATION SERVICE COMPANY 8040 EXCELSIOR DR STE 400 MADISON, WI United States County 53717

Company Merger

SBS Company Number	NAIC CoCode	Non-Surviving Company	Non-Surviving Company Type	Terminated Appointments	Transferred Appointments	Merger Date	Comments
54221052	22535	Seaboard Surety Company	Property and Casualty	N	N	01/02/2009	

Companies Absorbed

Name Change History

Previous Name	New Name	Effective Date
	Aetna Casualty & Surety Company of America	09/10/1975
Aetna Casualty & Surety Company of America	Travelers Casualty and Surety Company of America	07/01/1997

\$347,545.00  
CONTRACTOR'S OFFICE COPY

BID OF R. G. HUSTON CO., INC.

2019

PROPOSAL, CONTRACT, BOND AND SPECIFICATIONS

FOR

STORM STRUCTURAL REPAIRS 2019

CONTRACT NO. 8468

PROJECT NO. 11845

MUNIS NO. 11845

IN

MADISON, DANE COUNTY, WISCONSIN

AWARDED BY THE COMMON COUNCIL  
MADISON, WISCONSIN ON SEPTEMBER 17, 2019

CITY ENGINEERING DIVISION  
1600 EMIL STREET  
MADISON, WISCONSIN 53713

<https://bidexpress.com/login>

**STORM STRUCTURAL REPAIRS 2019  
CONTRACT NO. 8468**

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This Proposal, and Agreement have  
been prepared by:

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



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

RFP: LS

## 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:	STORM STRUCTURAL REPAIRS 2019
CONTRACT NO.:	8468
SBE GOAL	4%
BID BOND	5%
SBE PRE BID MEETING (1:00 P.M.)	08/16/2019
PREQUALIFICATION APPLICATION DUE (2:00 P.M.)	08/15/2019
BID SUBMISSION (2:00 P.M.)	08/22/2019
BID OPEN (2:30 P.M.)	08/22/2019
PUBLISHED IN WSJ	08/08/2019 & 08/15/2019

SBE PRE BID MEETING: Representatives of the Affirmative Action Department will be present to discuss the Small Business Enterprise requirements at 1600 Emil Street, Madison Wisconsin.

PREQUALIFICATION APPLICATION: Forms are available on our website, [www.cityofmadison.com/business/pw/forms.cfm](http://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](http://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 - 2019 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](http://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)l. 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](http://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 (City of Madison form) 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. Notwithstanding 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](http://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](http://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

#### 2 Small Business Enterprise (SBE) Program Information

##### 2.1 Policy and Goal

The City of Madison reaffirms its policy of nondiscrimination in the conduct of City business by maintaining a procurement process which remains open to all who have the potential and ability to sell goods and services to the City. It is the policy of the City of Madison to allow Small Business Enterprises (SBE) maximum feasible opportunity to participate in City of Madison contracting. The bidder acknowledges that its bid has been submitted in accordance with the SBE program and is for the public's protection and welfare.

Please refer to the "ADVERTISEMENT FOR BIDS" for the goal for the utilization of SBEs on this project. SBEs may participate as subcontractors, vendors and/or suppliers, which provide a commercially useful function. The dollar value for SBE suppliers or 'materials only' vendors shall be discounted to 60% for purposes of meeting SBE goals.

A bidder which achieves or exceeds the SBE goal will be in compliance with the SBE requirements of this project. In the event that the bidder is unable to achieve the SBE goal, the bidder must demonstrate that a good faith effort to do so was made. Failure to either achieve the goal or demonstrate a good faith effort to do so will be grounds for the bidder being deemed a non-responsible contractor ineligible for award of this contract.

A bidder may count towards its attainment of the SBE goal only those expenditures to SBEs that perform a commercially useful function. For purposes of evaluating a bidder's responsiveness to the attainment of the SBE goal, the contract participation by an SBE is based on the percentage of the total base bid proposed by the Contractor. The total base bid price is inclusive of all addenda.

Work performed by an SBE firm in a particular transaction can be counted toward the goal only if it involves a commercially useful function. That is, in light of industry practices and other relevant considerations, does the SBE firm have a necessary and useful role in the transaction, of a kind for which there is a market outside the context of the SBE Program, or is the firm's role a superfluous step added in an attempt to obtain credit towards goals? If, in the judgment of the Affirmative Action Division, the SBE firm will not perform a commercially useful function in the transaction, no credit towards goals will be awarded.

The question of whether a firm is performing a commercially useful function is completely separate from the question of whether the firm is an eligible SBE. A firm is eligible if it meets the definitional criteria and ownership and control requirements, as set forth in the City of Madison's SBE Program.

If the City of Madison determines that the SBE firm is performing a commercially useful function, then the City of Madison must then decide what that function is. If the commercially useful function is that of an SBE vendor / supplier that regularly transacts business with the respective product, then the City of Madison will count 60% of the value of the product supplied toward SBE goals.

To be counted, the SBE vendor / supplier must be engaged in selling the product in question to the public. This is important in distinguishing an SBE vendor / supplier, which has a regular trade with a variety of customers, from a firm which performs supplier-like functions on an ad hoc basis or for only one or two contractors with whom it has a special relationship.

A supplier of bulk goods may qualify as an eligible SBE vendor / supplier if it either maintains an inventory or owns or operates distribution equipment. With respect to the distribution equipment; e.g., a fleet of trucks, the term "operates" is intended to cover a situation in which the supplier leases the equipment on a regular basis for its entire business. It is not intended to cover a situation in which the firm simply provides drivers for trucks owned or leased by another party; e.g., a prime contractor, or leases such a party's trucks on an ad hoc basis for a specific job.

If the commercially useful function being performed is not that of a qualified SBE vendor / supplier, but rather that of delivery of products, obtaining bonding or insurance, procurement of personnel, acting as a broker or manufacturer's representative in the procurement of supplies, facilities, or materials, etc., only the fees or commissions will apply towards the goal.

For example, a business that simply transfers title of a product from manufacturer to ultimate purchaser; e. g., a sales representative who re-invoices a steel product from the steel company to the Contractor, or a firm that puts a product into a container for delivery would not be considered a qualified SBE vendor / supplier. The Contractor would not receive credit based on a percentage of the cost of the product for working with such firms.

Concerning the use of services that help the Contractor obtain needed supplies, personnel, materials or equipment to perform a contract: only the fee received by the service provider will be counted toward the goal. For example, use of a SBE sales representative or distributor for a steel company, if performing a commercially useful function at all, would entitle the Contractor receiving the steel to count only the fee paid to the representative or distributor toward the goal. This provision would also govern fees for professional and other services obtained expressly and solely to perform work relating to a specific contract.

Concerning transportation or delivery services: if an SBE trucking company picks up a product from a manufacturer or a qualified vendor / supplier and delivers the product to the Contractor, the commercially useful function it is performing is not that of a supplier, but simply that of a transporter of goods. Unless the trucking company is itself the manufacturer or a qualified vendor / supplier in the product, credit cannot be given based on a percentage of the cost of the product. Rather, credit would be allowed for the cost of the transportation service.

The City is aware that the rule's language does not explicitly mention every kind of business that may contribute work on this project. In administering these programs, the City would, on a case-by-case basis, determine the appropriate counting formula to apply in a particular situation.

## **2.2 Contract Compliance**

Questions concerning the SBE Program shall be directed to the Contract Compliance Officer of the City of Madison Department of Civil Rights, Affirmative Action Division, 210 Martin Luther King, Jr. Blvd., Room 523, Madison, WI 53703; telephone (608) 266-4910.

## 2.3 Certification of SBE by City of Madison

The Affirmative Action Division maintains a directory of SBEs which are currently certified as such by the City of Madison. Contact the Contract Compliance Officer as indicated in Section 2.2 to receive a copy of the SBE Directory or you may access the SBE Directory online at [www.cityofmadison.com/dcr/aaTBDDir.cfm](http://www.cityofmadison.com/dcr/aaTBDDir.cfm).

All contractors, subcontractors, vendors and suppliers seeking SBE status must complete and submit the **Targeted Business Certification Application** to the City of Madison Affirmative Action Division by the time and date established for receipt of bids. A copy of the Targeted Business Certification Application is available by contacting the Contract Compliance Officer at the address and telephone indicated in Section 2.2 or you may access the Targeted Business Certification Application online at [www.cityofmadison.com/dcr/aaTBDDir.cfm](http://www.cityofmadison.com/dcr/aaTBDDir.cfm). Submittal of the Targeted Business Certification Application by the time specified does not guarantee that the applicant will be certified as a SBE eligible to be utilized towards meeting the SBE goal for this project.

## 2.4 Small Business Enterprise Compliance Report

### 2.4.1 Good Faith Efforts

Bidders shall take all necessary affirmative steps to assure that SBEs are utilized when possible and that the established SBE goal for this project is achieved. A contractor who self performs a portion of the work, and is pre-qualified to perform that category of work, may subcontract that portion of the work, but shall not be required to do so. When a bidder is unable to achieve the established SBE goal, the bidder must demonstrate that a good faith effort to do so was made. Such a good faith effort should include the following:

- 2.4.1.1 Attendance at the pre-bid meeting.
- 2.4.1.2 Using the City of Madison's directory of certified SBEs to identify SBEs from which to solicit bids.
- 2.4.1.3 Assuring that SBEs are solicited whenever they are potential sources.
- 2.4.1.4 Referring prospective SBEs to the City of Madison Affirmative Action Division for certification.
- 2.4.1.5 Dividing total project requirements into smaller tasks and/or quantities, where economically feasible, to permit maximum feasible SBE participation.
- 2.4.1.6 Establishing delivery schedules, where requirements permit, which will encourage participation by SBEs.
- 2.4.1.7 Providing SBEs with specific information regarding the work to be performed.
- 2.4.1.8 Contacting SBEs in advance of the deadline to allow such businesses sufficient time to prepare a bid.
- 2.4.1.9 Utilizing the bid of a qualified and competent SBE when the bid of such a business is deemed reasonable (i.e. 5% above the lowest bidder), although not necessarily low.
- 2.4.1.10 Contacting SBEs which submit a bid, to inquire about the details of the bid and confirm that the scope of the work was interpreted as intended.
- 2.4.1.11 Completion of Cover Page (page C-6), Summary Sheet (page C-7) and SBE Contact Reports (pages C-8 and C9) if applicable.

## 2.4.2 Reporting SBE Utilization and Good Faith Efforts

The Small Business Enterprise Compliance Report is to be submitted by the bidder with the bid: This report is due by the specified bid closing time and date. Bids submitted without a completed SBE Compliance Report as outlined below may be deemed non-responsible and the bidder ineligible for award of this contract. Notwithstanding 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, performance of the contract, or percentage of SBE utilization.

2.4.2.1 If the Bidder meets or exceeds the goal established for SBE utilization, the Small Business Enterprise Compliance Report shall consist of the following:

2.4.2.1.1 **Cover Page**, Page C-6; and

2.4.2.1.2 **Summary Sheet**, C-7.

2.4.2.2 If the bidder does not meet the goal established for SBE utilization, the Small Business Enterprise Compliance Report shall consist of the following:

2.4.2.2.1 **Cover Page**, Page C-6;

2.4.2.2.2 **Summary Sheet**, C-7; and

2.4.2.2.3 **SBE Contact Report**, C-8 and C-9. (A separate Contact Report must be completed for each applicable SBE which is not utilized.)

## 2.5 Appeal Procedure

A bidder which does not achieve the established goal and is found non-responsible for failure to demonstrate a good faith effort to achieve such goal and subsequently denied eligibility for award of contract may appeal that decision to the Small Business Enterprises Appeals Committee. All appeals shall be made in writing, and shall be delivered to and received by the City Engineer no later than 4:30 PM on the third business day following the bidder's receipt of the written notification of ineligibility by the Affirmative Action Division Manager. Postmark not acceptable. The notice of appeal shall state the basis for the appeal of the decision of the Affirmative Action Division Manager. The Appeal shall take place in accordance with Madison General Ordinance 33.54.

## 2.6 SBE Requirements After Award of the Contract

The successful bidder shall identify SBE subcontractors, suppliers and vendors on the subcontractor list in accordance with the specifications. The Contractor shall submit a detailed explanation of any variances between the listing of SBE subcontractors, vendors and/or suppliers on the subcontractor list and the Contractor's SBE Compliance Report for SBE participation.

No change in SBE subcontractors, vendors and/or suppliers from those SBEs indicated in the SBE Compliance Report will be allowed without prior approval from the Engineer and the Affirmative Action Division. The contractor shall submit in writing to the City of Madison Affirmative Action Division a request to change any SBE citing specific reasons which necessitate such a change. The Affirmative Action Division will use a general test of reasonableness in approving or rejecting the contractor's request for change. If the request is approved, the Contractor will make every effort to utilize another SBE if available.

The City will monitor the project to ensure that the actual percentage commitment to SBE firms is carried out.

## **2.7 SBE Definition and Eligibility Guidelines**

A Small Business Enterprise is a business concern awarded certification by the City of Madison. For the purposes of this program a Small Business Enterprise is defined as:

- A. An independent business operated under a single management. The business may not be a subsidiary of any other business and the stock or ownership may not be held by any individual or any business operating in the same or a similar field. In determining whether an entity qualifies as a SBE, the City shall consider all factors relevant to being an independent business including, but not limited to, the date the business was established, adequacy of its resources for the work in which it proposes to involve itself, the degree to which financial, equipment leasing and other relationships exist with other ineligible firms in the same or similar lines of work. SBE owner(s) shall enjoy the customary incidents of ownership and shall share in the risks and profits commensurate with their enjoyment interests, as demonstrated by an examination of the substance rather than form or arrangements that may be reflected in its ownership documents.
- B. A business that has averaged no more than \$4.0 million in annual gross receipts over the prior three year period and the principal owner(s) do not have a personal net worth in excess of \$1.32 million.

Firm and/or individuals that submit fraudulent documents/testimony may be barred from doing business with the City and/or forfeit existing contracts.

SBE certification is valid for one (1) year unless revoked.



**SECTION D: SPECIAL PROVISIONS**  
**STORM STRUCTURAL REPAIRS 2019**  
**CONTRACT NO. 8468**

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 102.11: BEST VALUE CONTRACTING**

This Contract shall be considered a Best Value Contract if the Contractor's bid is equal to or greater than \$62,500 for a single trade contract; or equal to or greater than \$306,000 for a multi-trade contract pursuant to MGO 33.07(7).

**ARTICLE 101 DEFINITIONS AND TERMS**

In addition to the City of Madison Standard Specifications, contractor shall observe the following:

**Relationship Between the City and Strand Associates, Inc.®**

Strand Associates, Inc.® has been hired by the City to prepare drawings and specifications for this project. Additionally, Strand will assist the City by providing shop drawing review and responding to questions that may arise during construction. The City will provide resident engineering services and contract administration and is referred to as the City and/or Engineer in the Contract Documents.

Strand Associates, Inc.® will not supervise, direct, control or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or safety precautions and programs incidental thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the furnishing or performance of the Work. Strand Associates, Inc.® will not be responsible for Contractor's failure to perform or furnish the Work in accordance with the Contract Documents. Strand Associates, Inc.® will not be responsible for the acts or omissions of Contractor or of any subcontractor, any supplier, or of any person or organization performing or furnishing any of the Work.

During construction, the duties and responsibilities of Strand Associates, Inc.® include the following:

1. Attend one preconstruction meeting with Engineer and Contractor.
2. Review Contractor product submittals.
3. Report to Engineer when clarifications and interpretations of the Contract Documents are needed. Consider, evaluate, and report to Engineer, Contractor's requests for modification.

Strand Associates, Inc.® shall not:

1. Authorize any deviation from the Contract Documents or substitutions of materials or equipment.
2. Exceed limitations of Engineer's authority as set forth in the Contract Documents.
3. Undertake any of the responsibilities of Contractor, Subcontractor, Suppliers or Contractor's superintendent.

4. Advise on, issue directions relative to, or assume control over any aspect of the means, methods, techniques, sequences, or procedures of construction.
5. Advise on, issue directions regarding, or assume control over safety precautions and programs in connection with the Work.
6. Accept shop drawing or sample submittals from anyone other than Contractor.
7. Authorize the City to occupy the Project in whole or in part.
8. Participate in specialized field or laboratory tests or inspections conducted off-site by others except as specifically authorized by Engineer.

#### **ARTICLE 104 SCOPE OF WORK**

The work herein is three-fold: to repair an existing stormwater treatment device, to install a ~25' length of 42" RCP between two City of Madison structures, and to extend an existing weir within a creek vertically by 0.9'.

##### **ARBORETUM POND 3 STRUCTURE REPAIR**

The stormwater treatment device repair work shall consist of installing reinforced concrete framing, removing and replacing damaged reinforced concrete wall, and removing and replacing Coanda-style treatment screens at a City of Madison-owned screen treatment device, located on the West Beltline Highway frontage road near 2118 W Beltline Highway in Madison.

##### **DUNNS MARSH STRUCTURE MODIFICATIONS**

The pipe installation work shall consist of excavating around and tapping two City of Madison-owned stormwater structures (one access structure and one screen treatment device), installing a ~25' length of 42" RCP between the two structures, and regrading around the construction area to match existing grades. This site is located west of Dunns Marsh Terrace on the Madison/Fitchburg border.

##### **WILLOW CREEK WEIR EXTENSION**

The weir extension work shall consist of removing an existing stop gate, installing a 0.9' vertical reinforced concrete extension to an existing weir wall, installation of a new stop gate, and site restoration. This site is located on Herrick Dr near the UW Grounds and Facilities buildings.

The Contractor shall view **all** sites prior to bidding to become familiar with the existing conditions. It will be the responsibility of the Contractor to coordinate with the utilities located in the right of way to resolve conflicts during the construction process.

#### **SECTION 105.1 AUTHORITY OF THE ENGINEER**

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

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

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

decision the Contractor or the affected SBE applies in writing to the Board of Public Works for a review of such decision.

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

#### **SECTION 105.12      COOPERATION BY THE CONTRACTOR**

The Contractor shall use care around existing trees, plantings, fences, walls, steps and driveways that are indicated on the plans to remain. Damage to these items during construction shall be repaired or replaced at the Contractor's expense. No trees shall be cut without the approval of the Engineer and the City Forester; the abutting property owners shall be notified in accordance with the City's Administrative Procedure Memorandum No. 6-2.

For the Arboretum Pond 3 Structure Repair work, Contractor shall access and take deliveries on the site only from W. Badger Rd. along designated access road. All curb and gutter shall be protected on W. Badger Rd. Damaged curb and gutter shall be replaced by Contractor incidental to contract. Any damage caused to City or private property by the storage of materials or equipment will be repaired by the Contractor incidental to the contract.

For the Dunns Marsh Structure Modifications work, Contractor shall access and take deliveries on the site only from Crescent Rd via the bike/pedestrian path. All curb and gutter shall be protected on Crescent Rd. Damaged curb and gutter shall be replaced by Contractor incidental to contract. Any damage caused to City or private property by the storage of materials or equipment will be repaired by the Contractor incidental to the contract.

For the Willow Creek Weir Extension work, Contractor shall access and take deliveries on the site only from Herrick Dr. Access shall be limited to the concrete pad. All existing landscaping, curb and gutter and/or pavement on UW facilities property or in the creek shall be protected. Damaged landscaping, curb and gutter or pavement shall be replaced by Contractor incidental to contract. Any damage caused to City or private property by the storage of materials or equipment will be repaired by the Contractor incidental to the contract. Before beginning work, Contractor shall coordinate access and on-site parking, equipment storage and mobilization with UW Grounds staff. UW Grounds staff may be reached at 608-262-7266.

#### **SECTION 109.2      PROSECUTION OF THE WORK**

The Contractor shall begin work on or after OCTOBER 14, 2019, but no later than DECEMBER 31, 2020.

Work shall begin only after the start work letter is received. If it is desirable to begin work before the above-mentioned date, the Contractor shall establish a mutually acceptable date with the City Engineer (contact the Construction Engineer at 266-4094).

Once started, the Arboretum Pond 3 Structure Repair work has **21 calendar days** to complete. Once started, the Dunns Marsh Structure Modifications work has **14 calendar days** to complete. Once started, the Willow Creek Weir Extension work has **30 calendar days** to complete. Prior to starting any of the above work, the Contractor shall notify the Construction Engineer at 266-4094 at least two weeks prior to the planned start date.

### **BID ITEM 10911 - MOBILIZATION**

Mobilization shall be per Section 109.14 of the current City of Madison Standard Specifications for Public Works Construction. This item shall include any traffic control needed for the project. Mobilization is for all three projects.

### **BID ITEM 20221 – TOPSOIL**

### **BID ITEM 20701 – TERRACE SEEDING**

### **BID ITEM 21063 – EROSION MATTING, CLASS I, TYPE A – ORGANIC**

Topsoil shall be 6" in all restoration areas. Topsoil shall be applied prior to the native vegetated mat at Willow Creek as shown in the plan set.

Restoration shall be limited to no more than 20 ft on either side of the sewer pipe corridor near Dunns Marsh Terrace (see Sheets 2-4).

### **21002 – EROSION CONTROL INSPECTION**

Work under this bid item shall be for weekend inspections (inspections required for rain events that occur on a Friday or Saturday) by the Contractor after half inch or greater rain events or as directed by the construction engineer. All weekly inspections and rain event inspections required during the work week (Monday-Friday) shall be completed by the City of Madison construction inspector.

### **SECTION 301.10      CONCRETE WASTE MANAGEMENT**

The contractor shall be aware that all locations on the project site drain to surface waters. Appropriate steps shall be taken to manage concrete waste, including washing of truck & tools.

### **BID ITEM 90030 – COANDA SCREENS**

#### **DESCRIPTION**

Work under this item shall include all necessary work, materials, and incidentals necessary to procure and install static tilted "Coanda effect" wedge-wire screens at the location called for in the plan set.

Fourteen (14) Coanda screens, dimensions 5.0' X 6.0', shall be provided and installed in the structure, as shown in the details. The screens shall be purchased by the Contractor (self-constructed options shall not be allowed) and the Contractor shall be responsible for coordination and timing of delivery, unloading, and installation of the screen. The screens shall be self-supporting and shall be suitably framed for mounting on concrete supporting walls or frames if required. The screen material and all supporting bars and fasteners shall be Type 304 Stainless Steel. The wedge shaped profile wire screen material shall be Type #63 having 1.0 mm wire spacing. The wires shall be tilted 5 degrees from a plane perpendicular to the supporting bars; all wires shall be welded in a workman-like manner.

The support bars shall be rectangular in form, and shall be sized and spaced to accommodate debris and hydraulic loading of up to 3' without damage to the screen. Round support bars are not acceptable. The screen material shall be free of weld spatter. The screen assemblies shall be as manufactured by Hydroscreen, 2390 Forest Street, Denver Colorado 80207 (phone 1-303-333-6071, email rkweir@aol.com) or approved equal. All screen shall be manufactured in a flat condition; screen that is cut and straightened after a cylindrical manufacturing process is not acceptable.

The Contractor shall install the screen according to manufacturer's specifications and guidance and shall be anchored to the concrete on twelve inch centers with 3/8" anchor bolt or as recommended by manufacturer. Bidder shall submit the name and qualifications of its screen supplier to the City Design Engineer for approval at or before the pre-construction meeting. The supplier shall have been in business for a period of a minimum of five years, and have completed at least three similar projects. A minimum of

three references, including contact information, shall be supplied to the City Design Engineer with the submittal.

Prior to manufacture of the screens, the Contractor shall submit plans and/or details for the screens, including but not limited to mounting and bracing/support information, to the City Design Engineer for approval.

The Engineer for this project is Lauren Striegl at 608-266-4094 or Lstriegl@cityofmadison.com.

#### **METHOD OF MEASUREMENT**

Coanda Screens shall be measured as a completed lump sum upon complete fabrication and installation of the screens in the field.

#### **BASIS OF PAYMENT**

Coanda Screens shall be measured as described above which shall be full compensation for all work, materials and incidentals to complete the work as explained in the description above.

#### **BID ITEM 90031 – SCREEN STRUCTURE REPAIRS**

##### **DESCRIPTION**

Work under this item shall include all necessary work, materials and incidentals necessary to complete the structural modifications at the Arboretum Pond 3 Structure as shown in the drawings. Demolition work includes removal of existing structural steel framing, removal of existing stainless steel screens, and demolition of the failed reinforced concrete wall. Disposal of all removed/demolished materials shall be included in this item. The City of Madison reserves the right to select up to two (2) existing stainless steel screens for salvage. New construction includes a reinforced concrete wall, columns, beams, struts, and incidental work. Structure work shall be completed in accordance with the Standard Specifications for Public Works Construction and the attached Technical Specifications including sections 03 11 00, 03 20 00, 03 30 00, and 05 56 00.

Two design packages for projects associated with the Arboretum Pond 3 Structure are included as informational supplements to this contract. Supplement #1 is the City of Madison plan set (City project no. 53W1035, City contract no. 6855) for the original construction of the screen structure (SS 4565-042). The structure was constructed in 2012. Supplement #2 is the City of Madison plan set (City project no. 10316, City contract no. 7563) for the first structural repair of the screen structure (SS 4565-042). The repair was constructed in 2015, and was unsuccessful.

The Engineer for this project is Lauren Striegl at 608-266-4094 or Lstriegl@cityofmadison.com.

#### **METHOD OF MEASUREMENT**

Screen Structure Repairs shall be measured as a single lump sum unit for structure work acceptably completed.

#### **BASIS OF PAYMENT**

Screen Structure Repairs shall be measured as described above which shall be full compensation for all work, materials and incidentals to complete the work as explained in the description above.

#### **BID ITEM 90032 – STORM CONTROL PLAN & IMPLEMENTATION (ARBORETUM POND 3 STRUCTURE AND DUNNS MARSH STRUCTURE)**

## **DESCRIPTION**

Work under this item shall include all labor, materials, and incidentals required to prepare a storm control plan and to implement the approved plan for the Arboretum Pond 3 Structure Repair and Dunns Marsh Structure Modification work. A major storm sewer discharges into the screen structures. Contractor shall be fully responsible for protecting work from storm water during construction. All costs related to protecting work during construction including but not limited to diverting flow, pumping, and removing storm water from structure shall be included in the bid price for this item. The Contractor shall submit to the project engineer a plan that details how storm flows will be managed in the screen structures while repairs are being constructed. The approved methodology shall be installed prior to any storm sewer work. Any work, materials, and incidentals necessary to repair and restore the site due to the Storm Control Implementation shall be considered incidental to this bid item.

If phasing will be required to properly control the storm flows on site during project construction, this shall be defined and detailed in the Storm Control Plan. The Contractor shall provide appropriate storm control measures during the entire duration of the project. Removal of all equipment and materials used for storm control shall be considered incidental to this bid item.

Lake and storm control for the Willow Creek Extension work will be paid for under Bid Item 90035.

## **METHOD OF MEASUREMENT**

Storm Control Plan & Implementation (Arboretum Pond 3 Structure and Dunns Marsh Structure) shall be measured as a lump sum bid item.

## **BASIS OF PAYMENT**

Storm Control Plan & Implementation (Arboretum Pond 3 Structure and Dunns Marsh Structure), as measured above, shall be considered full compensation for all work, materials, and incidentals required to complete the work as described above.

## **BID ITEM 90033 – NEENAH R-1550 HYDROVENT CASTING**

### **DESCRIPTION**

Work under this item shall include all labor, materials, and incidentals required to install a Neenah R-1550 Hydrovent casting at City of Madison storm structure number AS 3670-023. The casting shall be as described in the City of Madison Standard Specifications, Section 507.2(b) and installed as described/shown in the City of Madison Standard Specifications Parts V and VIII. Removal and disposal of the existing casting at City of Madison storm structure number AS 3670-023 shall be incidental to this bid item.

### **METHOD OF MEASUREMENT**

Neenah R-1550 Hydrovent Casting shall be measured by the unit, acceptably installed.

### **BASIS OF PAYMENT**

Neenah R-1550 Hydrovent Casting, as measured above, shall be considered full compensation for all work, materials, and incidentals required to complete the work as described above.

## **BID ITEM 90034 – SAFETY FENCE (6-FT)**

### **DESCRIPTION**

Work under this item shall include all labor, materials and incidentals to construct and maintain a plastic safety fence surrounding the Arboretum screen structure (City structure number 4565-042) during

construction installation of new screens and the construction of screen structure repairs. Safety fence shall be required if the Contractor elects to temporarily remove the existing chain link fence during construction. Fence shall extend to the ground to be detectable by cane for the blind. Temporary removal and replacement of the existing chain link fence surrounding the screen structure shall be incidental to this bid item.

## **MATERIALS**

Provide notched conventional metal "T" or "U" shaped fence posts.  
Provide fence fabric meeting the following requirements.

Color:	International orange (UV stabilized)
Roll Height:	6 feet
Mesh opening:	1-inch min to 3-inch max
Resin/construction:	High density polyethylene diamond mesh
Service temperature:	-60° F to 200° F (ASTM D648)
Tensile Yield:	Avg. 2000 lb per 4 ft. width (ASTM D638)
Ultimate tensile strength:	Avg. 3000 lb per 4 ft. width (ASTM D638)
Elongation at break (%):	Greater than 100% (ASTM D638)
Chemical resistance:	Inert to most chemicals and acids

## **CONSTRUCTION**

Drive posts into the ground 12 to 18 in or use other Engineer approved method to secure posts. Space posts at 7 ft.

Use a minimum of three wire ties to secure the fence at each post. Weave tension wire through the top row of strands to provide a top stringer that prevents sagging. Overlap two rolls at a post and secure with wire ties.

## **METHOD OF MEASUREMENT**

Safety Fence (6-ft) shall be measured by the linear foot along the base of the fence, center to center of posts. Fence moved or removed and replaced for construction activities will not be measured and paid again.

## **BASIS OF PAYMENT**

Safety Fence (6-ft), as measured above, is full compensation for furnishing and installing fence and posts; maintaining the fence and posts in satisfactory condition; removing and disposing of fence and posts at project completion; and for furnishing all labor, tools, equipment and incidentals necessary to complete the work.

## **BID ITEM 90035 – LAKE & STORM CONTROL PLAN & IMPLEMENTATION (WILLOW CREEK WEIR EXTENSION)**

### **DESCRIPTION**

Work under this item shall include all labor, materials, and incidentals required to prepare a lake and storm control plan and to implement the approved plan for the Willow Creek Weir Extension work. The Contractor's proposed plan must hydraulically separate the work area from Lake Mendota such that the weir extension work can be completed satisfactorily, and such that construction-related sediment or debris cannot reach the creek downstream of the project site or Lake Mendota.

Willow Creek functions as a backwater for Lake Mendota; as such, the creek holds water at Lake Mendota levels year round. Additionally, a major City of Madison storm sewer discharges into the Willow Creek structure. Existing conditions are that the existing storm boxes have a small intermittent base flow year-

round, with up to ~1,000 cfs of storm flow during large (100-year) events. The Contractor is advised that sustained high water levels in Lake Mendota are possible. Lake level data is available from Dane County at:

<http://www.countyofdane.com/lwrld/landconservation/lakelevelsearchpg.aspx>

Contractor shall be fully responsible for protecting work from storm water during construction. All costs related to protecting work during construction including but not limited to diverting flow, pumping, and removing storm water from structure shall be included in the bid price for this item. The Contractor shall submit to the project engineer a plan that details how storm flows will be managed in the screen structures while repairs are being constructed. The approved methodology shall be installed prior to any storm sewer work.

If phasing will be required to properly control the storm flows on site during project construction, this shall be defined and detailed in the Lake & Storm Control Plan. The Contractor shall provide appropriate storm control measures during the entire duration of the project. Removal of all equipment and materials used for lake and storm control shall be considered incidental to this bid item.

#### **METHOD OF MEASUREMENT**

Lake & Storm Control Plan & Implementation (Willow Creek Weir Extension) shall be measured as a lump sum bid item.

#### **BASIS OF PAYMENT**

Lake & Storm Control Plan & Implementation (Willow Creek Weir Extension), as measured above, shall be considered full compensation for all work, materials, and incidentals required to complete the work as described above.

#### **BID ITEM 90036 – NATIVE VEGETATED MAT**

##### **DESCRIPTION**

Work under this item shall include all labor, materials, and incidentals required to install a native vegetated mat at the location shown in the plans. The mat shall be purchased by the City of Madison and delivered to the construction site.

The Contractor shall be responsible for the installation of the mat per the manufacturer's recommendations. Prior to the installation of the mat, the Contractor shall place a 6" layer of topsoil wherever the mat is to be installed. Topsoil shall be paid for under Bid Item 20221.

The Contractor shall also be responsible for one (1) year of maintenance per the manufacturer's recommendations. Maintenance may include (but will not be limited to): watering, hand-pulling weeds, debris removal, line trimming weeks, herbicide (only if necessary), or other suitable management practices depending on site conditions. Maintenance of the native vegetated mat is included in this bid item.

##### **METHOD OF MEASUREMENT**

Native Vegetated Mat shall be measured by the square yard based on "plan quantity" acceptably installed.

##### **BASIS OF PAYMENT**

Native Vegetated Mat, as measured above, shall be considered full compensation for all work, materials, and incidentals required to install and maintain the native vegetated mat in accordance with the manufacturer's recommendations.



## BID ITEM 90037 – SAFETY FENCE (4-FT)

### DESCRIPTION

Work under this item shall include all labor, materials and incidentals to construct and maintain a plastic safety fence surrounding the Arboretum screen structure (City structure number 4565-042) during construction installation of new screens and the construction of screen structure repairs. Safety fence shall be required if the Contractor elects to temporarily remove the existing chain link fence during construction. Fence shall extend to the ground to be detectable by cane for the blind. Temporary removal and replacement of the existing chain link fence surrounding the screen structure shall be incidental to this bid item.

### MATERIALS

Provide notched conventional metal "T" or "U" shaped fence posts.  
Provide fence fabric meeting the following requirements.

Color:	International orange (UV stabilized)
Roll Height:	4 feet
Mesh opening:	1-inch min to 3-inch max
Resin/construction:	High density polyethylene diamond mesh
Service temperature:	-60° F to 200° F (ASTM D648)
Tensile Yield:	Avg. 2000 lb per 4 ft. width (ASTM D638)
Ultimate tensile strength:	Avg. 3000 lb per 4 ft. width (ASTM D638)
Elongation at break (%):	Greater than 100% (ASTM D638)
Chemical resistance:	Inert to most chemicals and acids

### CONSTRUCTION

Drive posts into the ground 12 to 18 in or use other Engineer approved method to secure posts. Space posts at 7 ft.

Use a minimum of three wire ties to secure the fence at each post. Weave tension wire through the top row of strands to provide a top stringer that prevents sagging. Overlap two rolls at a post and secure with wire ties.

### METHOD OF MEASUREMENT

Safety Fence (4-ft) shall be measured by the linear foot along the base of the fence, center to center of posts. Fence moved or removed and replaced for construction activities will not be measured and paid again.

### BASIS OF PAYMENT

Safety Fence (4-ft), as measured above, is full compensation for furnishing and installing fence and posts; maintaining the fence and posts in satisfactory condition; removing and disposing of fence and posts at project completion; and for furnishing all labor, tools, equipment and incidentals necessary to complete the work.

## BID ITEM 90038 – WILLOW CREEK WEIR MODIFICATIONS

### DESCRIPTION

Work under this item shall include all necessary work, materials, and incidentals necessary to complete the work as shown on the plans including construction fencing, stop gate removal and replacement, salvage of original stop gate, and reinforced concrete. Work shall be completed in accordance with the

City of Madison Standard Specifications for Public Works Construction, Technical Specifications included in the Special Provisions, and the requirements noted on the drawings.

Structure work shall be completed in accordance with the Standard Specifications for Public Works Construction and the attached Technical Specifications including (but not limited to) sections 03 11 00, 03 20 00, 03 30 00, 05 50 10 and 05 56 00.

The Engineer for this project is Lauren Striegl at 608-266-4094 or Lstriegl@cityofmadison.com.

#### **METHOD OF MEASUREMENT**

Willow Creek Weir Modifications shall be measured as a single lump sum unit upon acceptable completion of weir modifications as shown in the plan set.

#### **BASIS OF PAYMENT**

Willow Creek Weir Modifications shall be measured as described above which shall be full compensation for all work, materials and incidentals to complete the work as explained in the description above.

#### **BID ITEM 90039 – REMOVE & REPLACE CHAIN LINK FENCE**

#### **DESCRIPTION**

Work under this item shall include all necessary work, materials, and incidentals necessary to remove, salvage and replace the chain link fence surrounding the Arboretum Pond 3 Structure, as described in the plan set. The bid item will be full compensation for all work necessary including any incidental items to remove, salvage and reset the fence to match the existing condition. If the existing chain link fence is damaged, the contractor shall replace the fence in-kind incidental to this bid item.

#### **METHOD OF MEASUREMENT**

Remove & Replace Chain Link Fence shall be measured as a single lump sum unit.

#### **BASIS OF PAYMENT**

Remove & Replace Chain Link Fence shall be measured as described above which shall be full compensation for all work, materials and incidentals to complete the work as explained in the description above.

Professional

Engineering

Services

Storm Structural  
Repairs 2019

Project No  
11845

## Technical Specifications

City of Madison, WI

Issued August 8, 2019



TECHNICAL SPECIFICATIONS  
STORM STRUCTURAL REPAIRS 2019  
PROJECT NUMBER 11845  
CITY OF MADISON, WISCONSIN

Prepared by:

STRAND ASSOCIATES, INC.®  
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Madison, WI 53715  
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Issued August 8, 2019



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END OF SECTION

## SPECIFICATIONS

SECTION 03 11 00  
CONCRETE FORMWORK

PART 1--GENERAL

1.01 SUMMARY

- A. Work Included:
  - 1. Forms for cast-in-place concrete.
  - 2. Form accessories.
  - 3. Openings for other work.
  - 4. Form stripping.
- B. Related Sections and Divisions: Applicable provisions of Division 01 shall govern work in this section.

1.02 REFERENCES

- A. ACI 117--Tolerances for Concrete Construction.
- B. ACI 301--Structural Concrete for Buildings.
- C. ACI 318--Building Code Requirements for Reinforced Concrete.
- D. ACI 347--Recommended Practice for Concrete Formwork.
- E. PS1--Construction and Industrial Plywood.

1.03 DESIGN

- A. All formwork shall comply with ACI 347 and ACI 301.
- B. CONTRACTOR shall assume the responsibility for the complete design and construction of the formwork.

PART 2--PRODUCTS

2.01 FORMS

- A. Forms shall be of wood, plywood, steel, fiberboard lined, or other approved materials which will produce concrete which meets the specified requirements. The type, size, quality, and shape of all materials of which the forms are made are subject to the review of ENGINEER.
- B. Caution shall be exercised in the use of wood or composition forms or form liner to be certain that no chemical reaction will take place which causes a damaging effect on the concrete surface.

## 2.02 FORM TIES–NONREMOVABLE

- A. Internal wall ties shall contain positive stops at the required wall thickness. The exterior clamp portions of the tie shall be adjustable in length. Ties shall provide a positive disconnection on both ends 1 to 1 1/2 inches inside the finished face of the concrete.
- B. The use of wood spacers and wire ties will not be approved.

## 2.03 FORM TIES–REMOVABLE

- A. Taper ties which are designed to be removed entirely from the wall may be used with forms designed for this tie type and spacing.
- B. Tie holes shall be plugged with either a neoprene plug, Sure-Plug by Dayton Superior, Inc., or an EPDM rubber plug, X-Plug by Sika Greenstreak, or equal.
- C. Cementitious waterproofing material for patching taper tie holes shall be Hey Di K-11, Xypex Patch-N-Plug, or equal. Taper tie holes above the normal operating water surface shall be patched with mortar mix as specified in Section 03 30 00–Cast-in-Place Concrete for patching tie holes.

## 2.04 FORM COATINGS

- A. Provide commercial formulation form-coating compounds that will not bond with, stain, nor adversely affect concrete surfaces requiring bond or adhesion, nor impede the wetting of surfaces to be cured with water or curing compounds.

## 2.05 CHAMFER STRIPS

- A. Provide 3/4-inch by 3/4-inch wood or plastic chamfer strips at all exposed corners, except as noted.

## PART 3–EXECUTION

### 3.01 CONSTRUCTION

- A. Forms shall conform to the shape, line, grade, and dimensions as shown on the drawings. They shall be mortar-tight and sufficiently rigid to prevent displacement or sagging between supports and shall support the loads and pressures without deflection from the prescribed lines. They shall be properly braced or tied together so as to maintain position and shape. Spacing of ties shall be recommended by the tie manufacturer.
- B. Formwork and finished concrete construction shall meet the tolerances specified in ACI 117.
- C. When forms are placed for successive concrete placement, thoroughly clean concrete surfaces, remove fins and laitance, and tighten forms to close all joints. Align and secure joints to avoid offsets.
- D. At the request of ENGINEER, temporary openings shall be provided at the base of column forms and wall forms and at other points where necessary to facilitate cleaning and observation immediately before depositing concrete.



- E. Provide inserts and provide openings in concrete form work to accommodate work of other trades. Verify size and location of openings, recesses, and chases with the trade requiring such items. Securely support items to be built into forms.
- F. Provide top forms for inclined surfaces where the slope is too steep to place and vibrate concrete.
- G. Bevel wood inserts for forming keyways (except in expansion joints where inserts shall have square edges), reglets, recesses, and the like to allow for ease of removal. Inserts shall be securely held in place prior to concrete placement. Unless otherwise shown, chamfer strips shall be placed in the angles of the forms to provide 3/4-inch bevels at exterior edges and corners of all exposed concrete.
- H. The forms shall be oiled with a field-applied commercial form oil or a factory-applied nonabsorptive liner. Oil shall not stain or impede the wetting of surfaces to be cured with water or curing compounds. The forms shall be coated prior to placing reinforcing steel. Oil on reinforcement will not be permitted.
- I. All form surfaces shall be thoroughly cleaned, patched, and repaired before reusing and are subject to review of ENGINEER.

### 3.02 FORM REMOVAL

- A. Supporting forms and shoring shall not be removed until the member has acquired sufficient strength to support its own weight and the construction live loads on it.
- B. All form removal shall be accomplished in such a manner that will prevent injury to the concrete.
- C. Forms shall not be removed before the expiration of the minimum times as stated below or until the concrete has attained its minimum 28-day design strength as confirmed by concrete cylinder tests, unless specifically authorized by ENGINEER.
  - 1. Wall and vertical faces: 24 hours.
  - 2. Columns: 24 hours.
  - 3. Beams and elevated slabs: 14 days.

END OF SECTION

## SECTION 03 20 00

### CONCRETE REINFORCEMENT

#### PART 1-GENERAL

##### 1.01 SUMMARY

- A. Work includes providing complete, in-place, all steel required for reinforcement of cast-in-place concrete as shown on the drawings.
- B. Related Sections and Divisions: Applicable provisions of Division 01 shall govern work in this section.

##### 1.02 REFERENCES

- A. Applicable standards listed in this section include, but are not necessarily limited to the following:
  - 1. ACI 315–Manual of Standard Practice for Detailing Reinforced Concrete Structures.
  - 2. ACI 318–Building Code Requirements for Reinforced Concrete.
  - 3. ASTM A1064–Standard Specifications for Carbon-Steel Wire and Welded Wire Reinforcement, Plain and Deformed, for Concrete.
  - 4. ASTM A615–Standard Specification for Deformed and Plain Billet-Steel Bars for Concrete Reinforcement.
  - 5. ASTM A996–Standard Specification for Rail-Steel and Axle-Steel Deformed Bars for Concrete Reinforcing.
  - 6. CRSI–Manual of Standard Practice.

##### 1.03 SUBMITTALS

- A. Comply with pertinent provisions of Section 01 33 00–Submittals.
- B. Provide complete shop drawings of all material to be furnished and installed under this section:
  - 1. Before fabrication of the reinforcement is begun, CONTRACTOR shall obtain the approval of ENGINEER on reinforcing bar lists and placing drawings.
  - 2. These drawings and lists shall show in detail the number, size, length, bending, and arrangement of the reinforcing. Reinforcing supports shall also be located on the shop drawings.
  - 3. Shop drawings shall be in accordance with ACI 315.

##### 1.04 PRODUCT HANDLING

- A. Delivery:
  - 1. Deliver reinforcement to the job site bundled, tagged, and marked.
  - 2. Use metal tags indicating bar size, lengths, and other information corresponding to markings shown on placement diagrams.
- B. Storage: Store reinforcement at the job site on blocks and in a manner to prevent damage and accumulation of dirt and excessive rust.

## PART 2--PRODUCTS

### 2.01 MATERIALS

- A. Reinforcing bars shall comply with ASTM A615 or A996 Type R, Grade 60. Reinforcing bars required to be welded shall be ASTM A706 low alloy.
- B. Steel wire and welded wire fabric shall comply with ASTM A1064. Fabric shall be provided in flat sheets. Rolled fabric shall not be used.
- C. Reinforcement supports including bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcement in place shall be:
  - 1. Wire bar-type supports complying with CRSI recommendations, unless otherwise indicated.
  - 2. For slabs on grade, supports with sand plates, or horizontal runners where base material will not support chair legs.
  - 3. For exposed-to-view concrete surfaces or where the concrete surface will be exposed to weather or moisture, where legs of supports are in contact with forms, supports with either hot-dipped galvanized or plastic protected legs.
  - 4. When supports bear directly on the ground and it is not practical to use steel bar supports, precast concrete blocks may be used to support only the bottom lift of reinforcement. The precast blocks must be solid, be of an equal or higher strength than the concrete being placed, must provide adequate support to the reinforcement, and be of proper height to provide specified reinforcing cover. The use of face bricks, hollow concrete blocks, rocks, wood blocks, or other unapproved objects will not be permitted.
- D. Mechanical Splices and Threaded Couplers:
  - 1. Mechanical splices shall be Zap Screwlok by Bar Splice Products, Inc., or equal.
  - 2. Threaded couplers and dowel bar replacements shall be Dowel Bar Splicer System by Dayton/Richmond, or equal.
  - 3. Mechanical splices and couplers shall be capable of developing at least 125% of the yield strength of the reinforcing bar.

### 2.02 FABRICATION

- A. General:
  - 1. Fabricate reinforcing bars to conform to required shapes and dimensions with fabrication tolerances which comply with CRSI Manual.
  - 2. In case of fabricating errors, do not rebend or straighten reinforcement in a manner that will injure or weaken the material.
  - 3. Unless otherwise shown on the drawings, all end hook dimensions shall conform with "ACI Standard Hooks."
- B. Reinforcement with any of the following defects shall be deemed unacceptable and will not be permitted in the work:
  - 1. Bar lengths, depths, and bends exceeding specified fabrication tolerances.
  - 2. Bend or kinks not indicated on drawings or final shop drawings.
  - 3. Bar with reduced cross section because of excessive rusting or other cause.

## PART 3-EXECUTION

### 3.01 INSPECTION

- A. Examine the substrate, formwork, and the conditions under which concrete reinforcement is to be placed.
- B. Correct conditions detrimental to the proper and timely completion of the work.
- C. Do not proceed until unsatisfactory conditions have been corrected.

### 3.02 INSTALLATION

- A. General:
  - 1. Comply with the specified standards for details and methods of placing reinforcement and supports.
  - 2. Clean reinforcement to remove loose rust, mill scale, earth, and other materials which reduce or destroy bond with concrete.
- B. Placing Reinforcement:
  - 1. All reinforcing shall be placed in accordance with Contract drawings and with shop drawings stamped and approved by ENGINEER.
  - 2. Position, support, and secure reinforcing against displacement by formwork, construction, or concrete placement operations.
  - 3. Support reinforcing by metal chairs, runners, bolsters, spacers, and hangers as needed.
  - 4. Unless otherwise shown on the drawings, the reinforcement is to be so detailed and placed as to allow the following concrete protection:
    - a. Three inches of cover where the concrete is placed directly against ground.
    - b. Two inches of cover where the concrete is placed in forms but is to be exposed to weather, liquid, or the ground.
    - c. One-inch cover in slabs and walls not exposed to weather, liquid, or the ground.
    - d. One and one-half-inch cover in beams, girders, and columns not exposed to weather, liquid, or the ground. This cover applies to beam stirrups and column ties where applicable.
  - 5. Reinforcement shall be positioned within  $\pm 3/8$ -inch for members with depth to tension reinforcing from compression face less than or equal to 8 inches. Tolerance shall be  $\pm 1/2$  inch for members with depth to tension reinforcing from compression face greater than 8 inches. Tolerance on dimension between adjacent bars in slab and wall reinforcing mats shall be 1 inch. Secure against displacement by anchoring at the supports and bar intersections with wire or clips.
  - 6. Bars shall be securely tied at all intersections except where spacing is less than 1 foot in each direction when alternate intersections shall be tied. To avoid interference with embedded items, bar spacing may be varied slightly if acceptable to ENGINEER. Tack welding of reinforcing will not be permitted.
  - 7. Set wire ties so that twisted ends are directed away from exposed concrete surfaces.
  - 8. If reinforcing must be cut because of openings or embedded items in the concrete, additional reinforcing must be provided adjacent to the opening at least equal in cross sectional area to that reinforcing which was cut, and it shall extend a minimum of 36 bar diameters beyond the opening on each side or as shown on the drawings. At sumps or depressions in slabs, bars shall be bent and/or extended under sumps or depressions.
  - 9. Wall reinforcing mats shall be secured in a vertical plane by providing clearance from forms with bar supports and by using Z-shaped bars at  $\pm 4$  feet on center wired between

two mats of steel, spacing and staying both of them. Nails shall not be driven into the forms to support reinforcement and neither shall wire for this purpose come in contact with the forms. Alternate top transverse bars in slab shall be supported by individual bar chairs at approximately 3-foot 0-inch centers. Bottom longitudinal bars shall be supported by continuous bar chairs at approximately 4-foot 0-inch centers.

10. If carrier bars are to be used, CONTRACTOR shall provide reinforcing bars for this purpose in addition to the reinforcing called for by the drawings and specifications.

C. Reinforcement Supports:

1. Strength and number of supports shall be sufficient to carry reinforcement.
2. Do not place reinforcing bars more than 2 inches beyond the last leg of any continuous bar support.
3. Do not use supports as bases for runways for concrete-conveying equipment and similar construction loads.

D. Welded Wire Fabric:

1. Install welded wire fabric in as long of lengths as practicable.
2. Lap adjoining pieces at least one full mesh.
3. Fabric shall be supported with bar supports.

E. Splices:

1. Provide standard reinforcement splices by lapping ends, placing bars in contact, and tightly wire tying.
2. Lap splices in reinforcing shall be provided as shown on the drawings. Where lap splice lengths are not shown on the drawings, provide Class B, Category 1 lap splices in accordance with ACI 318.
3. Adjacent splices of tangential bars in circular slabs and horizontal bars in circular walls shall be staggered a minimum of one full lap splice length or 3 feet, whichever is greater, unless otherwise shown. Stagger dimension shall be measured from center to center of lap splices.
4. For circular walls, horizontal bar lap splices shall not coincide in vertical arrays more frequently than every third bar.
5. Mechanical splices and threaded dowel bar inserts may be used where acceptable to ENGINEER.

F. Embedded Items:

1. Allow other trades to install embedded items as necessary.
2. Particularly after bottom layer of reinforcing is placed in slabs, allow electrical contractors to install conduit scheduled for encasement in slabs prior to placing upper layer of reinforcing.

- G. Minimum Reinforcing: Where reinforcing is not shown, provide a minimum of No. 4 at 8-inch centers each way in members 10 inches or less in thickness and No. 5 at 12-inch centers each way in each face in members greater than 10 inches thick.

END OF SECTION

## SECTION 03 30 00

### CAST-IN-PLACE CONCRETE

#### PART 1—GENERAL

##### 1.01 SUMMARY

- A. Work Included:
  - 1. All cast-in-place concrete as shown except as noted otherwise.
  - 2. Bonding agents, patching mortars, curing compounds, nonshrink grout, and other related items and accessories.
- B. Related Sections and Divisions: Applicable provisions of Division 01 shall govern work in this section.

##### 1.02 REFERENCES

- A. ACI 211.1—Standard Practice for Selecting Proportions for Normal, Heavyweight, and Mass Concrete.
- B. ACI 301—Specifications for Structural Concrete.
- C. ACI 304R—Guide for Measuring, Mixing, Transporting, and Placing Concrete.
- D. ACI 305R—Guide to Hot Weather Concreting.
- E. ACI 306R—Guide to Cold Weather Concreting.
- F. ACI 308—Specification for Curing Concrete.
- G. ACI 309—Guide for Consolidation of Concrete.
- H. ACI 318—Building Code Requirements for Structural Concrete and Commentary.
- I. ASTM C31—Standard Practice for Making and Curing Concrete Test Specimens in the Field.
- J. ASTM C33—Standard Specification for Concrete Aggregates.
- K. ASTM C39—Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens.
- L. ASTM C40—Standard Test Method for Organic Impurities in Fine Aggregates for Concrete.
- M. ASTM C88—Standard Test Method for Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate.
- N. ASTM C94—Standard Specification for Ready-Mixed Concrete.
- O. ASTM C143—Standard Test Method for Slump of Hydraulic-Cement Concrete.
- P. ASTM C150—Standard Specification for Portland Cement.

- Q. ASTM C156--Standard Test Method for Water Loss (from a Mortar Specimen) Through Liquid Membrane-Forming Curing Compounds for Concrete.
- R. ASTM C172--Standard Practice for Sampling Freshly Mixed Concrete.
- S. ASTM C231--Standard Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method.
- T. ASTM C260--Standard Specification for Air-Entraining Admixtures for Concrete.
- U. ASTM C309--Standard Specification for Liquid Membrane-Forming Compounds for Curing Concrete.
- V. ASTM C494--Standard Specification for Chemical Admixtures for Concrete.
- W. ASTM C618--Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete.
- X. ASTM C652--Standard Specification for Hollow Brick (Hollow Masonry Units Made From Clay or Shale).
- Y. ASTM D994--Standard Specification for Preformed Expansion Joint Filler for Concrete (Bituminous Type).
- Z. ASTM D1752--Standard Specification for Preformed Sponge Rubber Cork and Recycled PVC Expansion Joint Fillers for Concrete Paving and Structural Construction.

### 1.03 SUBMITTALS

- A. Submit shop drawings in accordance with Section 01 33 00--Submittals.
- B. Submit the following information:
  1. Gradation of fine and coarse aggregate--ASTM C33.
  2. Specific gravity and dry rodded density of each aggregate.
  3. Test of deleterious substances in fine and coarse aggregate--ASTM C33.
  4. Design mix of each individual concrete mix to be used.
  5. Previous test results or trial batch results with 7- and 28-day compressive strengths for each concrete mix proposed.
  6. Certified mill test results for cement identifying brand, type, and chemistry of cement to be used.
  7. Brand, type, principal ingredient, and amount of each admixture to be used.
- C. It is important that the above data be submitted to ENGINEER well in advance of anticipated concreting operations to avoid any delay in construction.

## PART 2--PRODUCTS

### 2.01 CEMENT

- A. Cement shall be Portland cement conforming to ASTM C150. Cement shall be Type I or Type I/II. Type III cement shall be used only when permitted by ENGINEER. All cement shall be the product of one reputable manufacturer and mill.

- B. Cement shall be stored in a dry, weathertight, properly ventilated structure with the floor raised not less than 1 foot above the ground.

2.02 FLY ASH

- A. All fly ash used as an admixture in Portland cement concrete shall be Class C or F conforming to the requirements of ASTM C618.

2.03 AGGREGATE

- A. All aggregates shall be washed and shall consist of natural sand, gravel, or crushed rock and shall have clean, hard, durable, uncoated grains of strong minerals. The amounts of deleterious substances present in the fine and coarse aggregate expressed in percentages by weight shall not exceed the following:

Deleterious Substance	Aggregate	
	Fine	Coarse
Clay Lumps and Friable Particles	3.0	3.0
Coal and Lignite	0.5	0.5
Mineral finer than No. 200 sieve	3.0	
Soft Fragments	3.0	3.0
Chert*	---	5.0
Sum of Chert and Clay Lumps		5.0

\* Material classified as chert and having a bulk specific gravity of less than 2.45. The percentage of chert shall be determined on the basis of the weight of chert in the sample retained on a 3/8-inch sieve divided by the weight of the total sample.

- B. The combined amount of all deleterious substances in an aggregate shall not exceed 5% of the weight of the aggregate.
- C. If required by ENGINEER, sodium sulfate soundness tests (ASTM C88) shall be performed on the aggregate. When the aggregate is subjected to 5 cycles, the weight loss shall not exceed 12%. Samples of proposed aggregates shall be submitted to an independent laboratory for testing in advance of concrete work. All testing shall be performed in accordance with ASTM C33. Certified test results shall be submitted to ENGINEER confirming that aggregate complies with all stated specifications. Report shall identify source of aggregate and absorbed water.
- D. Fine aggregate shall be well-graded from coarse to fine and shall conform to the following requirements:

Percentage by Weight	
Passing 3/8-inch sieve	100
Passing No. 4 sieve	95-100
Passing No. 8 sieve	80-100
Passing No. 16 sieve	50-85
Passing No. 30 sieve	25-60
Passing No. 50 sieve	5-30
Passing No. 100 sieve	0-10



- E. Gradation of fine aggregate shall be reasonably uniform and not subject to the extreme percentages of gradation specified above. The fineness modulus shall be not less than 2.3 or more than 3.1, nor shall the fineness modulus of any sample vary by more than +0.20 from the fineness modulus of the representative sample used in proportioning the concrete.
- F. If required by ENGINEER, fine aggregate shall be subjected to the color-metric test for organic impurities (ASTM C40) and shall not produce a color darker than Figure 1, unless they pass the mortar strength test. Aggregate producing color darker than Figure 2 shall not be used in any event.
- G. Coarse aggregate shall be well-graded from coarse to fine, and when tested by laboratory sieves having square openings, shall conform to the following requirements:

	Percentage by Weight Aggregate	
	3/4-inch Stone	1 1/2-inch Stone
Passing 2-inch sieve	---	100
Passing 1 1/2-inch sieve	---	90-100
Passing 1-inch sieve	100	20-55
Passing 3/4-inch sieve	90-100	0-15
Passing 3/8-inch sieve	20-55	0-5
Passing No. 4 sieve	0-10	---
Passing No. 8 sieve	0-5	---

- H. The 3/4-inch aggregate shall be used in concrete members no thinner than 4 inches and less than 10 inches thick. A blend of 3/4-inch and 1 1/2-inch aggregate shall be used in members 10 inches thick and thicker with the 3/4-inch aggregate comprising between 35% and 65% of the total course aggregate. When members thinner than 10 inches are placed monolithically with members thicker than 10 inches, the aggregate requirements for the thinner member shall apply.
- I. Aggregates must be allowed to drain for at least 12 hours before being used. The ground upon which aggregates are stored must be hard, firm, well-drained, and free from all vegetable matter. Various sizes of aggregates must be stored separately, and if they have become contaminated or merged with each other, they shall not be used.

#### 2.04 WATER

- A. Water used in mixing concrete shall be clean and free from injurious amounts of oil, alkali, organic matter, or other deleterious substances.

#### 2.05 ADMIXTURES

- A. Water Reducing Admixture shall be Master Pozzolith® 200 by BASF Admixtures, Inc., Daracem 19 by Grace, or equal. Water reducing admixture shall conform to ASTM C494, Type A and Type F. Water reducing admixture shall not reduce durability, shall increase strength 10%, and shall not affect bleeding characteristics over reference mix.
- B. Air-Entraining Admixture shall be equal to MasterAir® AE 90 by BASF Admixtures, Inc., Darex by Grace Construction Products, or equal. Air-entraining admixture shall conform to ASTM C260.

- C. No other admixture will be allowed without written approval of ENGINEER. All admixture shall be compatible with cement, aggregate, and water used.

2.06 PROPORTIONING

- A. The proportions of aggregate to cement shall be such as to produce a workable mixture that can be thoroughly compacted and that will work readily in the forms and around reinforcement without permitting materials to segregate or excess water to collect on the surfaces. The combined aggregates shall be such that when separated on the No. 4 sieve, the weight passing the sieve shall not be less than 30% nor greater than 50%.
- B. Concrete of various classes shall have the following maximum water/cement or water/(cement + fly ash) ratio minimum compressive strengths at 28 days and minimum cement and fly ash contents:

Class	Maximum Water/ Cement or Water/ (Cement+Fly Ash)	Minimum 28 Day Strength-Pounds per Square Inch	Cement Content-Pounds per Cubic Yard	Fly Ash- Pounds per Cubic Yard	
				Type C	Type F
AA	0.42	4,500	611	---	---
A	0.45	4,000	564	---	---
A-FA	0.45	4,000	480	110	125
B	0.53	3,500	517	---	---
C	0.53	3,000	517	---	---
X	---	2,000	376	---	---

- C. Except as otherwise indicated on the drawings or specified, all concrete shall be Class A or Class A-FA concrete.
- D. All concrete mixes shall be designed for a strength of 15% above that specified to allow for job variations. All mixes shall be designed in accordance with ACI 211.1 by a competent concrete engineer or competent laboratory technician. Required materials test data shall be submitted with design mixes for review and approval by ENGINEER. Mix computations shall be submitted if requested by ENGINEER.
- E. The slump for all concrete shall be 3 inches and concrete with a slump within the range of 2 to 3 1/2 inches will be acceptable unless otherwise stated.
- F. A water-reducing admixture shall be used in all concrete. A qualified representative of the manufacturer shall be available to assist in proportioning the concrete, advise on the proper addition of the admixture to the concrete, and advise on adjustments of concrete proportions to suit job conditions.
- G. An air-entraining admixture shall be used in all concrete except as noted. Air content shall be tested by the pressure method as outlined in ASTM C231 and shall be between 4% to 7% by volume. An air-entraining admixture is not required for concrete patching and for concrete floors, equipment pads, and supports in interior heated buildings where the concrete will be protected from freezing during and after construction.
- H. CONTRACTOR shall submit to ENGINEER concrete cylinder compressive strength results from previous projects for the same concrete mixes proposed on the current project. If this

information is not available, one cubic yard trial batches of each individual mix proposed for use shall be made prior to use in the work. Four test cylinders shall be made for each trial batch, two to be tested at 7 days and two at 28 days. The trial batches shall be made preceding actual placement operations so that the results of the 7-day tests can be obtained. All costs for material, equipment, and labor incurred during design of concrete mixes shall be borne by CONTRACTOR.

- I. All aggregates shall be measured by weight. The concrete mixer is to be equipped with an automatic water-measuring device that can be adjusted to deliver the desired amount of water.

## 2.07 BONDING AGENT

- A. Acceptable manufacturers include MasterEmaco® P 124 by BASF, or equal.

## 2.08 PATCHING ADDITIVE

- A. Acceptable manufacturers include MasterEmaco® A 660 by BASF, Sonocrete by Sonneborn Contech Co., or equal.

## 2.09 NONSHRINK GROUT

- A. Acceptable manufacturers include Dayton Superior, Master Builders, or equal. Grout shall be nonshrink, nonmetallic and shall achieve a strength of 7,500 psi in 28 days.

# PART 3-EXECUTION

## 3.01 MIXING

- A. Ready-mixed concrete shall be batched, mixed, and delivered in accordance with ASTM C94 and ACI 304R. In general, concrete shall be mixed 50 revolutions at plant, 20 upon arrival at site, and 20 each time water is added; maximum of 110 revolutions at mixing speed. Concrete shall be delivered and discharged within 1 1/2 hours or before the drum has revolved 300 times after introduction of water to the cement and aggregates or the cement to the aggregates. Truck mixers shall be equipped with drum revolution counters. In no event shall concrete which has taken its initial set be allowed to be used. Retempering of concrete is not permitted.
- B. A representative of ENGINEER may be at the batching plant periodically to observe the batching and mixing.
- C. No water shall be added on the job unless required by CONTRACTOR and with the knowledge of ENGINEER; the amount of water, if added, shall be recorded on all copies of the delivery tickets. If water is added, CONTRACTOR shall verify that the required water-cement ratio is not exceeded.
- D. Concrete shall have a temperature not less than 60°F nor more than 80°F as delivered to the jobsite.

- E. With each load of concrete, CONTRACTOR shall obtain delivery tickets and shall make these tickets available for review by ENGINEER. Delivery tickets shall provide the following information:
  - 1. Date.
  - 2. Name of ready-mix concrete plant, job location, and CONTRACTOR.
  - 3. Type of cement and admixtures, if any.
  - 4. Specified cement content in sacks per cubic yard of concrete and approved concrete mix number or designation.
  - 5. Amount of concrete in load, in cubic yards.
  - 6. Water-cement ratio.
  - 7. Water added at job, if any.
  - 8. Truck number and time dispatched.
  - 9. Number of mixing drum revolutions.
  
- F. For job-mixed concrete, all concrete materials shall be mixed in a machine batch mixer for at least 1 1/2 minutes after all ingredients are in the mixer and shall continue until there is a uniform distribution of the materials and the mass is uniform in color and homogeneous. The mixer shall not be loaded beyond the capacity given by the manufacturer and shall be rotated at the speed recommended by the manufacturer. The mixer is to be provided with positive timing device that will positively prevent discharging the mixture until the specified mixing time has elapsed.

### 3.02 JOINTS

- A. CONTRACTOR shall place all joints as shown on the drawings or specified herein. If approved by ENGINEER, CONTRACTOR may, at his own expense, place construction joints in addition to and at places other than those shown on the drawings. Unless otherwise shown, all joints shall be straight, truly vertical or horizontal, and proper methods shall be employed to obtain this result.
  
- B. Immediately after completion of the first pour at a joint, the concrete surface, and reinforcement projecting beyond the joint shall be thoroughly cleaned and laitance removed. Immediately before the second pour, all extraneous matter shall be removed from the joint, the steel cleaned, and the surface thoroughly wetted.
  
- C. Concrete at all joints shall have been in place at least 48 hours before abutting concrete is placed. At least two hours must elapse after depositing concrete in columns or walls before depositing in beams, girders, or slab supported thereon. Beams, girders, brackets, column capital, and haunches shall be considered as part of the floor system and shall be placed integrally therewith.

### 3.03 BONDING TO EXISTING CONCRETE

- A. When placing new concrete adjacent to existing concrete, the existing concrete shall be thoroughly roughened, cleaned, and saturated with water 24 hours before pouring new concrete. Existing concrete is defined as concrete more than six months old. At time of new pour, remove any standing water and apply bonding agent. Bonding agent shall be applied in accordance with manufacturer's recommendations.

### 3.04 PATCHING EXISTING CONCRETE

- A. When patching existing concrete, remove poor concrete until firm hard concrete is exposed; roughen and clean surface of the existing concrete, clean any exposed reinforcing bars, and pour new concrete. Concrete finish shall match existing concrete. New concrete shall be

4,000 psi 28-day strength mixed with patching additive, mixed according to manufacturer's instructions. Concrete shall not be air-entrained.

### 3.05 EMBEDDED ITEMS IN CONCRETE

- A. All sleeves, inserts, anchors, and embedded items required for adjoining work or for its support shall be placed prior to concreting.
- B. All contractors whose work is related to the concrete or must be supported by it shall be given ample notice and opportunity to introduce and/or furnish embedded items before the concrete is placed.
- C. Embedded items shall be positioned accurately and supported against displacement. Reinforcing bars shall clear embedded items a minimum of 2 inches.

### 3.06 PLACING CONCRETE

- A. Before placing concrete, all equipment, forms, ground, reinforcements, and other surfaces with which the concrete will come in contact are to be thoroughly cleaned of all debris, ice, and water. Ground shall be wetted prior to placement of concrete on it.
- B. After reinforcement is placed and before concrete is placed over it, ENGINEER shall be allowed sufficient time to observe the reinforcing.
- C. Unless otherwise authorized by ENGINEER, all concrete shall be placed in the presence of ENGINEER.
- D. Concrete shall be conveyed from the mixer to the place of final deposit as rapidly as practicable by methods that will prevent the segregation or loss of materials. Chuting for conveying purposes must be accomplished in such a manner as to prevent segregation or loss of materials. Receiving hoppers shall be installed at the chute discharge and at no point in its travel from the mixer to place of final deposit shall the concrete pass through a free vertical drop of more than 3 feet. Elephant trunks or tremies shall be used in all wall pours to prevent coating of forms and reinforcing bars.
- E. Care shall be taken to avoid an excess of water on the concrete surface. Excess water shall be drained or otherwise removed from the surface. Dry cement or a mixture of cement and sand shall not be sprinkled directly on the surface to absorb water.
- F. Concrete in wall and beam pours shall be deposited in approximately horizontal layers not to exceed 18 inches in thickness. Each layer shall be well worked into the preceding layer while both layers are still soft.
- G. Concrete shall be deposited as nearly as practicable in its final position to avoid segregation from rehandling or flowing. The maximum allowable lateral movement of the concrete after being deposited is 3 feet. Once concreting is started, it shall be carried on as a continuous operation until the placing of the section or panel is completed.
- H. All concrete shall be placed with the aid of mechanical vibrating equipment in accordance with ACI 309. In congested areas, vibration shall be supplemented by hand spading adjacent to the forms. Vibration should secure the desired results within 5 to 15 seconds at intervals of 18 inches apart maximum. The vibrator shall penetrate the preceding layer of concrete. Vibrators shall have a frequency of not less than 10,000 impulses per minute when in operation submerged in concrete.

- I. A sufficient number of spare vibrators shall be kept in ready reserve to provide adequate vibration in case of breakdown of those in use.
- J. In placing concrete in beams where it is intended to be continuous and monolithic with the slab above, a delay to provide for settlement of the deep concrete shall be scheduled before placing the upper concrete in the slab. The length of delay shall be as long as possible and still permit the revibration of the deep concrete.
- K. Concrete is not to be placed under water. A suitable means shall be provided for lowering the water level below surfaces upon which concrete is to be placed. This may require excavating approximately 12 inches below the bottom of the concrete surface and refilling with gravel and compacting. The groundwater shall not be allowed to rise to the bottom of the concrete until 24 hours after the concrete pour has been completed. Water shall not be allowed to fall upon or run across the concrete during this period.
- L. No extra payment will be allowed for dewatering, undercutting, and gravel fill.

### 3.07 MOIST CURING

- A. All concrete shall be maintained in a moist condition for at least 7 days after being deposited except that for high-early strength concrete, a 3-day period will be sufficient. Moist curing shall be accomplished by one of the following methods:
  - 1. Wood forms left in place and kept wet at all times. If the forms are not going to be kept wet, they shall be removed as soon as practicable and other methods of moist curing shall be started without delay.
  - 2. Use of a curing compound conforming to ASTM C309, Type I as approved by ENGINEER. Curing compound shall be applied at a uniform rate as indicated by the manufacturer sufficient to comply with the requirements of the test water retention of ASTM C156. Curing compound applied to vertical concrete surfaces after forms are removed shall be specially adapted to provide required coverage on the vertical surface. On nonformed surfaces, the curing compound shall be applied immediately after the disappearance of the water sheen after finishing of the concrete. Care shall be taken not to get curing compound on construction joints, reinforcing steel, and other surfaces against which new concrete will be poured.
  - 3. Use of plastic film. Plastic film shall have a minimum thickness of 4 mils. It shall be placed over the wet surface of the fresh concrete as soon as possible without marring the surface and shall be weighted so that it remains in contact with all exposed surfaces of the concrete. All joints and edges shall be lapped and weighted. Any tears in the film shall be immediately repaired.
  - 4. Application of wet coverings weighing 9 ounces per square yard such as burlap, cotton mats, or other moisture-retaining fabrics. The covering system shall include two layers and shall be kept continuously moist so that a film of water remains on the concrete surface throughout the curing period.
  - 5. Use of an approved waterproof curing paper. Edges of adjacent sheets shall be overlapped several inches and tightly sealed.
  - 6. Ponding of water or continuous sprinkling of water is permitted. Sprinkling at intervals will not be permitted.
  - 7. Construction joints shall be moist cured by one of the methods listed above except by Method "2."
- B. The use of moist earth, sand, hay, or another method that may discolor hardened concrete will not be permitted.

### 3.08 HOT WEATHER CONCRETING

- A. When the atmospheric temperature exceeds 80°F during concrete placement, this section and ACI 305 shall apply in addition to all other sections of the specifications.
- B. The temperature of the delivered concrete shall not exceed 85°F.
- C. Care shall be exercised to keep mixing time and elapsed time between mixing and placement at a minimum. Ready-mix trucks shall be dispatched so as to avoid delay in concrete placement, and the work shall be organized to use the concrete promptly after arrival at the jobsite.
- D. The subgrade, forms, and reinforcing shall be sprinkled with cool water just prior to placement of concrete. Prior to placing concrete, there shall be no standing water or puddles on the subgrade.
- E. If approved by ENGINEER, an admixture for retarding the setting of the concrete may be used.
- F. Exposed concrete surfaces shall be carefully protected from drying. Continuous water curing is preferred. Curing compounds shall be white pigmented.

### 3.09 COLD WEATHER CONCRETING

- A. Conditions of this section shall apply, in addition to all other sections of the specifications, when placing concrete in cold weather. Cold weather is defined as a period when, for more than 3 successive days, the average daily temperature drops below 40°F. When temperatures above 50°F occur during more than half of any 24-hour period, the period will no longer be regarded as cold weather. The average daily temperature is the average of the highest and lowest temperature during the period from midnight to midnight. Cold weather concreting shall conform to all requirements of ACI 306.1, except as modified by the requirements of these specifications.
- B. Detailed procedures for the production, placement, protection, curing, and temperature monitoring of concrete during cold weather shall be submitted to ENGINEER. Cold weather concreting shall not begin until these procedures have been reviewed for conformance with ACI 306.1.
- C. All concrete materials, forms, ground, mixing equipment, and other surfaces with which the concrete is to come in contact shall be free from frost, and the temperature of contact surfaces shall be 35°F or above. Ground upon which concrete is to be placed shall not be frozen at any depth.
- D. The mixing water and aggregates shall be heated and when entering the mixer shall have temperatures not exceeding 175°F and 80°F, respectively. Concrete temperature as mixed shall not exceed 80°F and shall typically be between 55°F and 70°F. Concrete, when placed in the forms, shall have a temperature of not less than 50°F.
- E. Freshly placed concrete shall be protected by adequate covering, insulating, or housing and heating. If heating is used, ambient temperature inside the housing shall be maintained at a minimum of 70°F for 3 days or 50°F for 5 days. The maximum ambient temperature during curing shall not exceed 80°F. If insulating methods are used, recommendations contained in ACI 306R shall be followed. Surface temperature shall be maintained at 50°F for 7 days. After the curing period, the temperature of the concrete shall be reduced uniformly at a rate

not to exceed 40°F per 24 hours until outside air temperature is reached. Heating of enclosure shall continue if it is anticipated that the outside air temperature will drop more than 20°F in the next 24 hours. The concrete temperature shall be obtained by attaching a thermometer provided by CONTRACTOR to the concrete surface. Concrete shall be kept moist.

- F. If heating is used, the housing shall be constructed weathertight and shall be constructed in a manner that will provide uniform air circulation and air temperatures over the complete concrete area that is being cured. Special attention shall be given to the edges and ends of a concrete pour with the housing extending at least 5 feet beyond any concrete surface being protected. The housing shall be in place and heat applied within 2 hours after concrete placement.
- G. Heating may be by steam or hot air. Heaters shall be vented to outside of the housing. Open burning salamanders will not be permitted. Heating devices shall not be placed so close to the concrete as to cause rapid drying or discoloration from smoke.
- H. If heating is used, CONTRACTOR shall provide sufficient 24-hour inspection of the heaters to provide compliance with the above-specified temperature requirements during the curing period. CONTRACTOR shall provide maximum-minimum thermometers for ENGINEER's use.
- I. The use of calcium chloride, salts, or other chemical admixtures for the prevention of freezing is prohibited.
- J. Salts or other deleterious materials shall not be used on temporary or permanent structures above concrete surfaces that are being placed, finished, or cured.

### 3.10 FINISHING

#### A. Flat Work:

1. Floated Finish: Place, consolidate, strike off, and level concrete eliminating high spots and low spots. Do not work concrete further until it is ready for floating. Begin floating with a hand float, a bladed power float equipped with float shoes, or a powered disk float when the bleed water sheen has disappeared and the surface has stiffened sufficiently to permit the operation. Immediately refloat the slab to a uniform texture.
2. Light Troweled Finish: Float concrete surface, then power trowel the surface. Hand trowel the surface smooth and free of trowel marks.
3. The above finishes shall be used on floor slabs.

#### B. Formed Surfaces:

1. Within 2 days after removing forms and prior to application of a curing compound, all concrete surfaces shall be observed and any poor joints, voids, stone pockets, or other defective areas shall be patched at once before the concrete is thoroughly dry. Defective areas shall be chipped away to remove all loose and partially bonded aggregate. The area shall be thoroughly wetted and filled with as dry as practical mortar mix placed to slightly overfill the recess. Mortar shall include a bonding agent. After partial set has taken place, the excess mortar shall be removed flush with the surface on the concrete using a wood float. All patching shall be cured, protected, and covered as specified for concrete. All cracks, leaks, or moist spots that appear shall be repaired. No extra compensation will be allowed CONTRACTOR for such work.
2. The exterior or removal portion of nonremovable ties shall be removed with the use of a special tool designed for this purpose. Cutting or chipping of concrete to permit removal of exterior portion will not be permitted.



3. For nonremovable ties, tie rod holes left by the removal of the exterior portion of the tie and cone shall be thoroughly wetted and filled by ramming with as dry as practical mortar mix in such a manner such that it completely fills the hole. Mortar shall include a bonding agent. All patching shall be cured, protected, and covered as specified for concrete. The holes are to be filled immediately after removal of the exterior portion of the tie.
  4. Holes left by removable ties shall be filled by installing a neoprene plug near the center of the wall. The balance of the hole shall be filled with mortar as specified above to within 1 inch of the face of the wall. The remainder of the hole shall be filled with a waterproofing compound.
  5. All finished or formed surfaces shall conform accurately to the shape, alignment, grades, and sections as shown or prescribed by ENGINEER. All surfaces shall be free from fins, bulges, ridges, offsets, honeycombing, or roughness. All sharp angles, where required, shall be rounded or beveled. The surface of the concrete shall be given the following finish immediately after form stripping. Surface imperfections greater than 3/8 inches shall be repaired or removed and the affected areas neatly patched.
- C. All precautions shall be taken to protect the concrete from stains or abrasions, and any such damage shall be removed or repaired under this Contract.

### 3.11 LOADING OF CONCRETE STRUCTURES

- A. No concrete structure or portion thereof shall be loaded with its design load until the concrete has obtained its specified 28-day compressive strength. This shall include but not be limited to vertical live load, equipment loading, water loading, groundwater loading, and backfill load. Concrete strength at time of loading shall be determined by testing field-cured concrete cylinders.
- B. Extreme care shall be taken so that construction loads do not exceed design loading of the structure.

### 3.12 TESTING AND SAMPLING

- A. The following tests of fresh concrete shall be performed by CONTRACTOR. CONTRACTOR shall prepare, protect, transport, and have tested all cylinders at his expense.
  1. Sampling of concrete for slump tests, air tests, temperature tests, and for making concrete test cylinders shall be performed in accordance with ASTM C172.
  2. Cylinders:
    - a. Three test cylinders shall be made for each pour less than 25 cubic yards, four test cylinders shall be made for each pour between 25 and 100 cubic yards, and eight test cylinders shall be made for each pour in excess of 100 cubic yards. Each concrete mix shall be represented by at least four cylinders for the entire job. Concrete for cylinders shall be collected near the middle of the load and/or as requested by ENGINEER.
    - b. Cylinders shall be made and tested in accordance with ASTM C31 and ASTM C39, respectively. The cylinders must be kept moist and at temperatures between 60°F and 80°F and shall remain undisturbed and stored in a location free from vibration. In hot weather, the cylinders shall be covered with wet burlap and stored in a shaded area. It is CONTRACTOR's responsibility to provide a suitable protected location for storing cylinders on the jobsite.
    - c. After 24 hours, the cylinders shall be transferred to an independent testing laboratory acceptable to OWNER. The cylinders shall be packed in sawdust or other cushioning material for transit to avoid any bumping or jarring of the cylinders.

- d. Cylinders shall be broken at 7 and 28 days or as requested by ENGINEER. Test results shall be mailed immediately and directly to ENGINEER. Test data shall include date and location of pour and concrete mix used.
- 3. Slump Test: CONTRACTOR shall make one slump test near the beginning of all pours with two tests being made for all pours in excess of 25 yards or as requested by ENGINEER. Slump tests shall conform to ASTM C143.
- 4. Air Test:
  - a. When air-entrained concrete is used, the air content shall be checked by CONTRACTOR near the beginning of all pours with at least two checks being made for all pours in excess of 25 cubic yards, or as requested by ENGINEER.
  - b. The air contents shall be checked using the pressure method in accordance with ASTM C231. The pocket-sized alcohol air indicator shall not be used unless it is first used in conjunction with the pressure method test.
- B. All costs of additional testing and sampling of fresh or hardened concrete needed because of suspected or actual violation of the specifications shall be borne by CONTRACTOR.

### 3.13 RECORDS

- A. A record is to be kept of all concrete work. The record shall include the date, location of pour, concrete mix, slump, air content, test cylinder identification, concrete temperature, and ambient air temperature. In addition, for cold weather concreting the record shall include the daily maximum-minimum thermometer readings of all thermometers during the entire curing period for all concrete pours. The project representative will keep this record, and CONTRACTOR shall assist in obtaining needed information.

### 3.14 CONCRETE REMOVAL AND PATCHING

- A. All areas disturbed as a result of concrete removal or repair shall be patched as specified in Bonding to Existing Concrete.

END OF SECTION

SECTION 05 50 10

STOP GATES

PART 1—GENERAL

1.01 SUMMARY

- A. Work Included: Stainless steel stop gates and grooves.
- B. Related Sections and Divisions: Applicable provisions of Division 01 shall govern work in this section.

1.02 REFERENCES

- A. ASTM A176—Specification for Stainless and Heat-Resisting Chromium Steel Plate, Sheet, and Strip.
- B. ASTM A276—Stainless Steel Bars and Shapes.
- C. AWS A2.0—USA Standard Welding Symbols.
- D. AWS D1.1—Structural Welding Code—Steel.

1.03 SUBMITTALS FOR REVIEW

- A. Shop Drawings: Indicate number, sizes, stiffeners, handles or handholes, anchorage, size and type of fasteners, and accessories.
- B. Indicate welded connections using standard AWS A2.0 welding symbols. Indicate net weld lengths.

1.04 QUALIFICATIONS

- A. Qualify welding processes and welding operators in accordance with AWS D1.1 Standard Qualifications Procedures.

1.05 STORAGE AND HANDLING

- A. Store all members off the ground using pallets, platforms, or other supports.
- B. Do not store materials on the structure in a manner that might cause distortion or damage to the members of the supporting structures.
- C. In the event of damage, immediately make all repairs and replacements necessary at no additional cost to OWNER.

## PART 2-PRODUCTS

### 2.01 MANUFACTURERS

- A. Stop gates and frames shall be as manufactured by Whipps, Inc., Fontaine, or equal.

### 2.02 MATERIALS

- A. Stop gates shall be fabricated of 304L stainless plate minimum 1/4-inch thick and shall be provided with handles.
- B. Provide stiffeners as required to limit plate deflection to 1/720 of the span of the plate.
- C. Stop gate frames shall be fabricated of 304L stainless steel.
- D. Ultra-high-molecular weight-bearing bars shall provide a maximum coefficient of friction of 0.125 between plate and groove under operating head.
- E. Mounting hardware shall be of stainless steel construction.

### 2.03 FABRICATION

- A. Stop gate frames shall be assembled continuous on sides and bottom and shall incorporate ultra-high-molecular weight-bearing bars on each side of the plate. Provide mechanical fasteners to prevent bars from sliding out of grooves with plate.
- B. Guide frames built up from plate or structural shapes will not be acceptable.
- C. Mounting hardware shall be of size and type recommended by the manufacturer and shall be provided as part of the stop plate groove.

## PART 3-EXECUTION

### 3.01 EXAMINATION

- A. Correct conditions detrimental to the proper and timely completion of the work.
- B. Do not proceed until unsatisfactory conditions have been corrected.

### 3.02 INSTALLATION

- A. Stop gate groove shall be anchored in forms so that plate bearing surface remains in a vertical plane.

END OF SECTION

## SECTION 05 56 00

### ANCHOR BOLTS AND POST-INSTALLED ANCHORS

#### PART 1--GENERAL

##### 1.01 SUMMARY

- A. Work Included: Expansion bolts, adhesive anchors, and screw anchors.
- B. Related Sections and Divisions: Applicable provisions of Division 01 shall govern work in this section.

##### 1.02 REFERENCES

- A. ASTM A36/A36M--Standard Specification for Carbon Structural Steel.
- B. ICC-ES International Code Council--Evaluation Service.
- C. AC 193--Acceptance Criteria for Mechanical Anchors in Concrete Elements.
- D. AC 308--Acceptance Criteria for Post-Installed Adhesive Anchors in Concrete.
- E. ACI 355.2--Qualification of Post-Installed Mechanical Anchors in Concrete and Commentary.
- F. ACI 355.4--Qualification of Post-Installed Adhesive Anchors in Concrete and Commentary.

#### PART 2--PRODUCTS

##### 2.01 EXPANSION BOLTS

- A. Expansion bolts shall be KWIK Bolt TZ by Hilti, Inc., Power-Stud+ SD2, SD4, or SD6 by DeWalt, Strong-Bolt or Strong-Bolt 2 by Simpson Strong-Tie Anchor Systems, or approved equal.
- B. All expansion bolts shall comply with the Wisconsin Commercial Building Code, AC 193, and ACI 355.2. They shall be ICC-ES approved for use in cracked and uncracked concrete.
- C. Unless indicated otherwise on the drawings or specified, use stainless steel bolts.

##### 2.02 ADHESIVE ANCHORS

- A. Adhesive anchors shall be HIT HY 200 by Hilti, Inc., Red Head C6+ or Red Head A7+ by ITW, Pure 110+ or AC200+ by DeWalt, Set-XP by Simpson Strong-Tie Anchor Systems, or approved equal.
- B. All adhesive anchors shall comply with the Wisconsin Commercial Building Code, AC 308, and ACI 355.4. They shall be ICC-ES approved for use in cracked and uncracked concrete.

## 2.03 SCREW ANCHORS

- A. Screw anchors shall be KWIK HUS-EZ by Hilti, Inc., Screw-Bolt by DeWalt, Titen-HD by Simpson Strong-Tie Anchor Systems, or approved equal.
- B. All screw anchors shall comply with the Wisconsin Commercial Building Code. They shall be ICC-ES approved for use in cracked and uncracked concrete.

## PART 3-EXECUTION

### 3.01 EXPANSION BOLTS

- A. Unless otherwise noted on the drawings, expansion bolt edge distance and spacing shall be in accordance with manufacturer's printed installation instructions.
- B. Bolt embedment shall at least equal 6-bolt diameters.
- C. Installation procedures shall be in accordance with the manufacturer's printed installation instructions.
- D. Where location of bolts is adjustable, reinforcing steel shall be located prior to drilling holes and bolts shall be located to clear reinforcing steel.

### 3.02 ADHESIVE ANCHORS

- A. At locations shown on the drawings, reinforcing bars or threaded rod shall be provided in existing concrete by drilling holes, injecting epoxy adhesive, and inserting the reinforcing bar.
- B. All existing surfaces to receive adhesive anchors, including the entire area in contact with the new concrete, shall be cleaned and roughened to amplitude of 1/4 inch.
- C. Installation procedures shall be in accordance with the manufacturer's printed installation instructions.
- D. Where location of anchors is adjustable, reinforcing steel shall be located prior to drilling holes and anchors shall be located to clear reinforcing steel.
- E. CONTRACTOR shall arrange an anchor manufacturer's representative to provide on-site installation training for installation of their adhesive anchor system products. Submit documentation that all CONTRACTOR's personnel or subcontractors who install adhesive anchors have been trained prior to the announcement of anchor installation.

### 3.03 SCREW ANCHORS

- A. Unless otherwise noted on the drawings, screw anchor edge distance and spacing shall be in accordance with manufacturer's recommendations.
- B. Anchor embedment shall at least equal 6-bolt diameters.

- C. Installation procedures shall be in accordance with the manufacturer's printed installation instructions.
- D. Where location of anchors is adjustable, reinforcing steel shall be located prior to drilling holes and anchors shall be located to clear reinforcing steel.

END OF SECTION

For more location information  
please visit [www.strand.com](http://www.strand.com)

## Office Locations

Brenham, Texas | 979.886.7937

Cincinnati, Ohio | 513.861.5600

Columbus, Indiana | 812.372.9911

Columbus, Ohio | 614.835.0460

Indianapolis, Indiana | 317.423.0935

Joliet, Illinois | 815.744.4200

Lexington, Kentucky | 859.225.8500

Louisville, Kentucky | 502.583.7020

Madison, Wisconsin\* | 608.251.4843

Milwaukee, Wisconsin | 414.271.0771

Phoenix, Arizona | 602.437.3733

\*Corporate Headquarters





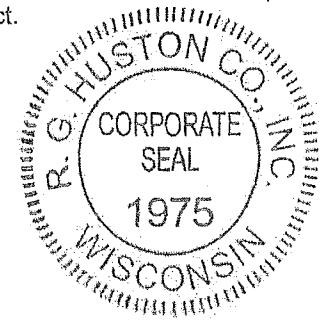
SECTION E: BIDDERS ACKNOWLEDGEMENT

STORM STRUCTURAL REPAIRS 2019  
CONTRACT NO. 8468

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 - 2019 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 Nos. \_\_\_ through \_\_\_ to the Contract, 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 R.G. HUSTON Co., INC. (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 \_\_\_\_\_ State of \_\_\_\_\_; that I have examined and carefully prepared this Proposal, from the plans and specifications and have checked the same in detail before submitting this Proposal; that I have fully authority to make such statements and submit this Proposal in (its, their) behalf and that the said statements are true and correct.

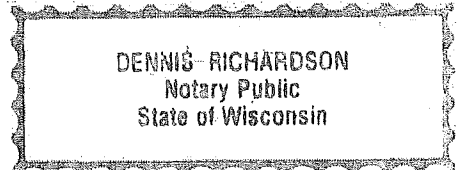
BAAD  
SIGNATURE  
PRESIDENT - BAAD HUSTON  
TITLE, IF ANY



Sworn and subscribed to before me this 22<sup>ND</sup> day of Aug-2019, 20 19.

(Notary Public or other officer authorized to administer oaths)  
My Commission Expires 1-10-20

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



Contract 8468 – R. G. Huston Co., Inc.

## Section F: Best Value Contracting (BVC)

This section is a required document for the bid to be considered complete. There are two methods for completing the Best Value Contracting (BVC) form. Method one: The form can be filled out online and submitted to this site to be included with your electronic bid. Method two: The form can be downloaded from the site and submitted by hand to the City of Madison.

Method of Submittal for BVC (click in box below to choose) \*

I will submit Bid Express fillable online form (BVC).

### Best Value Contracting

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

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 and FROST)
- IRON WORKER
- IRON WORKER (ASSEMBLER, METAL BLDGS)
- PAINTER and DECORATOR
- PLASTERER
- PLUMBER
- RESIDENTIAL ELECTRICIAN
- ROOFER and WATER PROOFER
- SHEET METAL WORKER
- SPRINKLER FITTER
- STEAMFITTER
- STEAMFITTER (REFRIGERATION)
- STEAMFITTER (SERVICE)
- TAPER and FINISHER
- TELECOMMUNICATIONS (VOICE, DATA and VIDEO) INSTALLER-TECHNICIAN
- TILE SETTER

STORM STRUCTURAL REPAIRS 2019

CONTRACT NO. 8468

Small Business Enterprise Compliance Report

Cover Sheet

This information **MUST** be submitted in a separate sealed envelope marked  
"ENVELOPE NO. 2 - SBE COMPLIANCE REPORT".

Prime Bidder Information:

Company: R.G. Huston Company, Inc.

Address: 2561 Coffeytown Road  
Cottage Grove, WI 53527

Telephone Number: (608) 255-9223

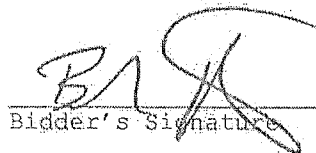
Fax Number: (608) 839-5936

Contact Person/Title: Brad Huston, President

Prime Bidder Certification:

I, Brad Huston, President of R.G. Huston Company, Inc. certify that the information contained in this SBE Compliance Report is true and correct to the best of my knowledge and belief.

  
Witness' Signature

  
Bidder's Signature

8-22-19  
Date



STORM STRUCTURAL REPAIRS 2019

CONTRACT NO. 8468

Small Business Enterprise Compliance Report

Summary Sheet

This information MUST be submitted in a separate sealed envelope marked "ENVELOPE NO. 2 - SBE COMPLIANCE REPORT".

SBE SUBCONTRACTORS WHO ARE NOT SUPPLIERS

<u>Name(S) of SBEs Utilized</u>	<u>Type of Work</u>	<u>% of Total Bid Amount</u>
Bullet	Trucking	0.2%
JR's Construction	Landscaping	3.3%

Subtotal SBE who are not suppliers: 3.5 %

SBE SUBCONTRACTORS WHO ARE SUPPLIERS

<u>Name(S) of SBEs Utilized</u>	<u>Type of Work</u>	<u>% of Total Bid Amount</u>
---------------------------------	---------------------	------------------------------

Subtotal SBE who are suppliers: \_\_\_\_\_ % X 0.6 = \_\_\_\_\_ % (discounted to 60%)

Total Percentage of SBE Utilization: 3.5 %

STORM STRUCTURAL REPAIRS 2019

CONTRACT NO. 8468

DATE: 8/22/19

R. G. Huston Co., Inc.

Item	Quantity	Price	Extension
<b>Section B: Proposal Page</b>			
10911 - MOBILIZATION (ALL PROJECT SITES) - LUMP SUM	1.00	\$50,000.75	\$50,000.75
20101 - EXCAVATION CUT (UNDISTRIBUTED) - CY	20.00	\$47.00	\$940.00
20217 - CLEAR STONE - TONS	10.00	\$23.00	\$230.00
20221 - TOPSOIL - SY	160.00	\$18.00	\$2,880.00
20701 - TERRACE SEEDING - SY	130.00	\$15.00	\$1,950.00
21002 - EROSION CONTROL INSPECTION - EACH	2.00	\$600.00	\$1,200.00
21011 - CONSTRUCTION ENTRANCE - EACH	2.00	\$900.00	\$1,800.00
21013 - STREET SWEEPING - LUMP SUM	1.00	\$4,546.00	\$4,546.00
21017 - SILT SOCK (8 INCH) - COMPLETE - LF	190.00	\$8.00	\$1,520.00
21055 - INLET PROTECTION, TYPE D HYBRID - COMPLETE - EACH	9.00	\$260.00	\$2,340.00
21063 - EROSION MATTING, CLASS I, TYPE A - ORGANIC - SY	130.00	\$15.00	\$1,950.00
50211 - SELECT BACKFILL FOR STORM SEWER - TF	25.00	\$0.01	\$0.25
50410 - 42 INCH TYPE I RCP STORM SEWER PIPE - LF	25.00	\$582.00	\$14,550.00
50792 - STORM SEWER TAP - EACH	2.00	\$5,140.00	\$10,280.00
90030 - COANDA SCREENS - LUMP SUM	1.00	\$93,000.00	\$93,000.00
90031 - SCREEN STRUCTURE REPAIRS - LUMP SUM	1.00	\$122,000.00	\$122,000.00
90032 - STORM CONTROL PLAN & IMPLEMENTATION (ARBORETUM POND 3 STRUCTURE AND DUNNS MARSH STRUCTURE) - LUMP SUM	1.00	\$700.00	\$700.00
90033 - NEENAH R-1550 HYDROVENT CASTING - EACH	1.00	\$3,338.00	\$3,338.00
90034 - SAFETY FENCE (6-FT) - LF	170.00	\$16.00	\$2,720.00
90035 - LAKE & STORM CONTROL PLAN & IMPLEMENTATION (WILLOW CREEK WEIR EXTENSION) - LUMP SUM	1.00	\$700.00	\$700.00
90036 - NATIVE VEGETATED MAT - SY	30.00	\$55.00	\$1,650.00
90037 - SAFETY FENCE (4-FT) - LF	60.00	\$16.00	\$960.00
90038 - WILLOW CREEK WEIR MODIFICATIONS - LUMP SUM	1.00	\$23,000.00	\$23,000.00
90039 - REMOVE & REPLACE CHAIN LINK FENCE - LUMP SUM	1.00	\$5,290.00	\$5,290.00
<b>24 Items</b>	<b>Totals</b>		<b>\$347,545.00</b>



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](mailto:engineering@cityofmadison.com)  
[www.cityofmadison.com/engineering](http://www.cityofmadison.com/engineering)

**Assistant City Engineer**

Gregory T. Fries, P.E.  
Kathleen M. Cryan

**Principal Engineer 2**

Christopher J. Petykowski, P.E.  
John S. Fahrney, P.E.

**Principal Engineer 1**

Christina M. Bachmann, P.E.  
Eric L. Dundee, P.E.

**Facilities & Sustainability**

Jeanne E. Hoffman, Manager

**Mapping Section Manager**

Eric T. Pederson, P.S.

**Financial Manager**

Steven B. Danner-Rivers

**BIENNIAL BID BOND**

R.G. Huston Co., Inc.

(a corporation of the State of Wisconsin)  
(individual), (partnership), (hereinafter referred to as the "Principal") and  
Travelers Casualty and Surety Company of America

a corporation of the State of Connecticut (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, 2018 through January 31, 2020.

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.

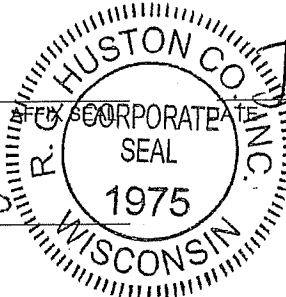
The Surety, for value received, hereby agrees that the obligations of it and its bond shall be in no way impaired or affected by any extension of time within which the City may accept a bid, and the Surety does hereby waive notice of any such extension.

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**

R.G. Huston Co., Inc.  
COMPANY NAME

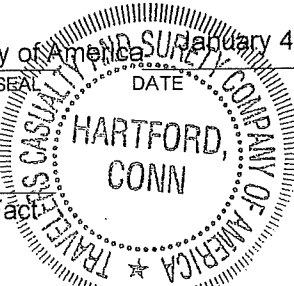


January 8, 2018

By: [Signature]  
SIGNATURE AND TITLE

**SURETY**

Travelers Casualty and Surety Company of America  
COMPANY NAME AFFIX SEALS HERE DATE January 4, 2018



By: [Signature]  
SIGNATURE AND TITLE Attorney-in-Fact

This certifies that I have been duly licensed as an agent for the Surety in Wisconsin under National Provider No. 283633 for the year 2018 and appointed as attorney in fact with authority to execute this bid bond, which power of attorney has not been revoked.

January 4, 2018  
DATE

[Signature]  
AGENT SIGNATURE

20975 Swenson Drive - Suite 175  
ADDRESS

Waukesha, Wisconsin 53186  
CITY, STATE AND ZIP CODE

262-317-8044  
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.





POWER OF ATTORNEY

Farmington Casualty Company
Fidelity and Guaranty Insurance Company
Fidelity and Guaranty Insurance Underwriters, Inc.
St. Paul Fire and Marine Insurance Company
St. Paul Guardian Insurance Company

St. Paul Mercury Insurance Company
Travelers Casualty and Surety Company
Travelers Casualty and Surety Company of America
United States Fidelity and Guaranty Company

Attorney-In Fact No.

232082

Certificate No. 007269866

KNOW ALL MEN BY THESE PRESENTS: That Farmington Casualty Company, St. Paul Fire and Marine Insurance Company, St. Paul Guardian Insurance Company, St. Paul Mercury Insurance Company, Travelers Casualty and Surety Company, Travelers Casualty and Surety Company of America, and United States Fidelity and Guaranty Company are corporations duly organized under the laws of the State of Connecticut, that Fidelity and Guaranty Insurance Company is a corporation duly organized under the laws of the State of Iowa, and that Fidelity and Guaranty Insurance Underwriters, Inc., is a corporation duly organized under the laws of the State of Wisconsin (herein collectively called the "Companies"), and that the Companies do hereby make, constitute and appoint

Anthony S. Von Rueden, Todd Looker, Robert E Flath, Dennis M Barton, Joseph L Vigna, and Elizabeth M Fedyn

of the City of Milwaukee/Waukesha, State of Wisconsin, their true and lawful Attorney(s)-in-Fact, each in their separate capacity if more than one is named above, to sign, execute, seal and acknowledge any and all bonds, recognizances, conditional undertakings and other writings obligatory in the nature thereof on behalf of the Companies in their business of guaranteeing the fidelity of persons, guaranteeing the performance of contracts and executing or guaranteeing bonds and undertakings required or permitted in any actions or proceedings allowed by law.

IN WITNESS WHEREOF, the Companies have caused this instrument to be signed and their corporate seals to be hereto affixed, this 19th day of June, 2017.

Farmington Casualty Company
Fidelity and Guaranty Insurance Company
Fidelity and Guaranty Insurance Underwriters, Inc.
St. Paul Fire and Marine Insurance Company
St. Paul Guardian Insurance Company

St. Paul Mercury Insurance Company
Travelers Casualty and Surety Company
Travelers Casualty and Surety Company of America
United States Fidelity and Guaranty Company



State of Connecticut
City of Hartford ss.

By:

[Handwritten signature of Robert L. Raney]

Robert L. Raney, Senior Vice President

On this the 19th day of June, 2017, before me personally appeared Robert L. Raney, who acknowledged himself to be the Senior Vice President of Farmington Casualty Company, Fidelity and Guaranty Insurance Company, Fidelity and Guaranty Insurance Underwriters, Inc., St. Paul Fire and Marine Insurance Company, St. Paul Guardian Insurance Company, St. Paul Mercury Insurance Company, Travelers Casualty and Surety Company, Travelers Casualty and Surety Company of America, and United States Fidelity and Guaranty Company, and that he, as such, being authorized so to do, executed the foregoing instrument for the purposes therein contained by signing on behalf of the corporations by himself as a duly authorized officer.

In Witness Whereof, I hereunto set my hand and official seal.
My Commission expires the 30th day of June, 2021.



[Handwritten signature of Marie C. Tetreault]
Marie C. Tetreault, Notary Public

This Power of Attorney is granted under and by the authority of the following resolutions adopted by the Boards of Directors of Farmington Casualty Company, Fidelity and Guaranty Insurance Company, Fidelity and Guaranty Insurance Underwriters, Inc., St. Paul Fire and Marine Insurance Company, St. Paul Guardian Insurance Company, St. Paul Mercury Insurance Company, Travelers Casualty and Surety Company, Travelers Casualty and Surety Company of America, and United States Fidelity and Guaranty Company, which resolutions are now in full force and effect, reading as follows:

**RESOLVED**, that the Chairman, the President, any Vice Chairman, any Executive Vice President, any Senior Vice President, any Vice President, any Second Vice President, the Treasurer, any Assistant Treasurer, the Corporate Secretary or any Assistant Secretary may appoint Attorneys-in-Fact and Agents to act for and on behalf of the Company and may give such appointee such authority as his or her certificate of authority may prescribe to sign with the Company's name and seal with the Company's seal bonds, recognizances, contracts of indemnity, and other writings obligatory in the nature of a bond, recognizance, or conditional undertaking, and any of said officers or the Board of Directors at any time may remove any such appointee and revoke the power given him or her; and it is

**FURTHER RESOLVED**, that the Chairman, the President, any Vice Chairman, any Executive Vice President, any Senior Vice President or any Vice President may delegate all or any part of the foregoing authority to one or more officers or employees of this Company, provided that each such delegation is in writing and a copy thereof is filed in the office of the Secretary; and it is

**FURTHER RESOLVED**, that any bond, recognizance, contract of indemnity, or writing obligatory in the nature of a bond, recognizance, or conditional undertaking shall be valid and binding upon the Company when (a) signed by the President, any Vice Chairman, any Executive Vice President, any Senior Vice President or any Vice President, any Second Vice President, the Treasurer, any Assistant Treasurer, the Corporate Secretary or any Assistant Secretary and duly attested and sealed with the Company's seal by a Secretary or Assistant Secretary; or (b) duly executed (under seal, if required) by one or more Attorneys-in-Fact and Agents pursuant to the power prescribed in his or her certificate or their certificates of authority or by one or more Company officers pursuant to a written delegation of authority; and it is

**FURTHER RESOLVED**, that the signature of each of the following officers: President, any Executive Vice President, any Senior Vice President, any Vice President, any Assistant Vice President, any Secretary, any Assistant Secretary, and the seal of the Company may be affixed by facsimile to any Power of Attorney or to any certificate relating thereto appointing Resident Vice Presidents, Resident Assistant Secretaries or Attorneys-in-Fact for purposes only of executing and attesting bonds and undertakings and other writings obligatory in the nature thereof, and any such Power of Attorney or certificate bearing such facsimile signature or facsimile seal shall be valid and binding upon the Company and any such power so executed and certified by such facsimile signature and facsimile seal shall be valid and binding on the Company in the future with respect to any bond or understanding to which it is attached.

I, Kevin E. Hughes, the undersigned, Assistant Secretary, of Farmington Casualty Company, Fidelity and Guaranty Insurance Company, Fidelity and Guaranty Insurance Underwriters, Inc., St. Paul Fire and Marine Insurance Company, St. Paul Guardian Insurance Company, St. Paul Mercury Insurance Company, Travelers Casualty and Surety Company, Travelers Casualty and Surety Company of America, and United States Fidelity and Guaranty Company do hereby certify that the above and foregoing is a true and correct copy of the Power of Attorney executed by said Companies, which is in full force and effect and has not been revoked.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the seals of said Companies this 4<sup>th</sup> day of January, 20 18.

  
Kevin E. Hughes, Assistant Secretary



To verify the authenticity of this Power of Attorney, call 1-800-421-3880 or contact us at [www.travelersbond.com](http://www.travelersbond.com). Please refer to the Attorney-In-Fact number, the above-named individuals and the details of the bond to which the power is attached.

## SECTION H: AGREEMENT

THIS AGREEMENT made this 18<sup>th</sup> day of September in the year Two Thousand and Nineteen between R. G. HUSTON CO., 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 SEPTEMBER 17, 2019, 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:

### STORM STRUCTURAL REPAIRS 2019 CONTRACT NO. 8468

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 THREE HUNDRED FORTY-SEVEN THOUSAND FIVE HUNDRED FORTY-FIVE AND NO/100 (\$347,545.00) 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 origin and that the employer shall provide harassment free work environment for the realization of the potential of each employee. Such action shall include, but not be limited to, the following: employment, upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination, rates of pay or other forms of compensation and selection for training including apprenticeship insofar as it is within the control of the Contractor. The Contractor agrees to post in conspicuous places available to employees and applicants notices to be provided by the City setting out the provisions of the nondiscrimination clauses in this contract.

#### Article II

The Contractor shall in all solicitations or advertisements for employees placed by or on behalf of the 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 ten thousand dollars (\$10,000), 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)(l), 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:



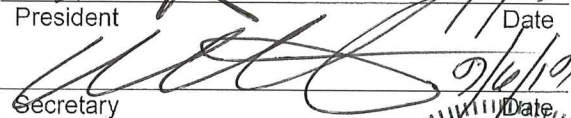
1. Hiring for a position where certain convictions or violations are a bar to employment in that position under applicable law, or
2. Hiring a position for which information about criminal or arrest record, or a background check is required by law to be performed at a time or in a manner that would otherwise 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.

**STORM STRUCTURAL REPAIRS 2019  
CONTRACT NO. 8468**

IN WITNESS WHEREOF, the Contractor has hereunto set his/her hand and seal and the City has caused this contract to be sealed with its corporate seal and to be executed by its Mayor and City Clerk on the dates written below

Countersigned:

	<u>09/06/19</u>	<u>BR</u>	<u>9/6/19</u>
Witness	Date	President	Date
	<u>9/6/19</u>		<u>9/6/19</u>
Witness	Date	Secretary	Date

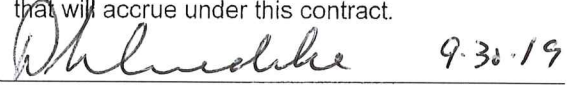
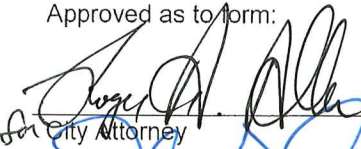




R. G. HUSTON CO., INC.

Company Name

CITY OF MADISON, WISCONSIN

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

Approved as to form:

	<u>9.30.19</u>		<u>9/30/19</u>
Finance Director	Date	City Attorney	Date
	<u>10.01.19</u>		<u>10.01.19</u>
Witness	Date	Mayor	Date
	<u>9.25.19</u>		<u>9/25/19</u>
Witness	Date	City Clerk	Date





**SECTION I: PAYMENT AND PERFORMANCE BOND**

KNOW ALL MEN BY THESE PRESENTS, that we R. G. HUSTON CO., INC., as principal, and Travelers Casualty and Surety Company of America Company of Hartford, Connecticut as surety, are held and firmly bound unto the City of Madison, Wisconsin, in the sum THREE HUNDRED FORTY-SEVEN THOUSAND FIVE HUNDRED FORTY-FIVE AND NO/100 (\$347,545.00) 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:

**STORM STRUCTURAL REPAIRS 2019  
CONTRACT NO. 8468**

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 18th day of September 2019

Countersigned:

[Signature]  
Witness  
[Signature]  
Secretary

R. G. HUSTON CO., INC.  
Company Name (Principal)  
[Signature]  
President



Approved as to form:

[Signature]  
City Attorney

Travelers Casualty and Surety Company of America  
Surety Seal  
 Salary Employee  Commission  
By [Signature]  
Attorney-in-Fact Dennis M. Barton

This certifies that I have been duly licensed as an agent for the above company in Wisconsin under National Producer Number 283633 for the year 2019, and appointed as attorney-in-fact with authority to execute this payment and performance bond which power of attorney has not been revoked.

September 18, 2019  
Date

[Signature]  
Agent Signature





**Travelers Casualty and Surety Company of America  
Travelers Casualty and Surety Company  
St. Paul Fire and Marine Insurance Company**

**POWER OF ATTORNEY**

**KNOW ALL MEN BY THESE PRESENTS:** That Travelers Casualty and Surety Company of America, Travelers Casualty and Surety Company, and St. Paul Fire and Marine Insurance Company are corporations duly organized under the laws of the State of Connecticut (herein collectively called the "Companies"), and that the Companies do hereby make, constitute and appoint **DENNIS M BARTON** of **MILWAUKEE Wisconsin**, their true and lawful Attorney-in-Fact to sign, execute, seal and acknowledge any and all bonds, recognizances, conditional undertakings and other writings obligatory in the nature thereof on behalf of the Companies in their business of guaranteeing the fidelity of persons, guaranteeing the performance of contracts and executing or guaranteeing bonds and undertakings required or permitted in any actions or proceedings allowed by law.  
**IN WITNESS WHEREOF**, the Companies have caused this instrument to be signed, and their corporate seals to be hereto affixed, this **3rd** day of **February**, 2017.



State of Connecticut

City of Hartford ss.

By:   
Robert L. Raney, Senior Vice President

On this the **3rd** day of **February**, 2017, before me personally appeared **Robert L. Raney**, who acknowledged himself to be the Senior Vice President of Travelers Casualty and Surety Company of America, Travelers Casualty and Surety Company, and St. Paul Fire and Marine Insurance Company, and that he, as such, being authorized so to do, executed the foregoing instrument for the purposes therein contained by signing on behalf of the corporations by himself as a duly authorized officer.

**In Witness Whereof**, I hereunto set my hand and official seal.

My Commission expires the **30th** day of **June**, 2021



Marie C Tetreault  
Marie C. Tetreault, Notary Public

This Power of Attorney is granted under and by the authority of the following resolutions adopted by the Boards of Directors of Travelers Casualty and Surety Company of America, Travelers Casualty and Surety Company, and St. Paul Fire and Marine Insurance Company, which resolutions are now in full force and effect, reading as follows:

**RESOLVED**, that the Chairman, the President, any Vice Chairman, any Executive Vice President, any Senior Vice President, any Vice President, any Second Vice President, the Treasurer, any Assistant Treasurer, the Corporate Secretary or any Assistant Secretary may appoint Attorneys-in-Fact and Agents to act for and on behalf of the Company and may give such appointee such authority as his or her certificate of authority may prescribe to sign with the Company's name and seal with the Company's seal bonds, recognizances, contracts of indemnity, and other writings obligatory in the nature of a bond, recognizance, or conditional undertaking, and any of said officers or the Board of Directors at any time may remove any such appointee and revoke the power given him or her; and it is

**FURTHER RESOLVED**, that the Chairman, the President, any Vice Chairman, any Executive Vice President, any Senior Vice President or any Vice President may delegate all or any part of the foregoing authority to one or more officers or employees of this Company, provided that each such delegation is in writing and a copy thereof is filed in the office of the Secretary; and it is

**FURTHER RESOLVED**, that any bond, recognizance, contract of indemnity, or writing obligatory in the nature of a bond, recognizance, or conditional undertaking shall be valid and binding upon the Company when (a) signed by the President, any Vice Chairman, any Executive Vice President, any Senior Vice President or any Vice President, any Second Vice President, the Treasurer, any Assistant Treasurer, the Corporate Secretary or any Assistant Secretary and duly attested and sealed with the Company's seal by a Secretary or Assistant Secretary; or (b) duly executed (under seal, if required) by one or more Attorneys-in-Fact and Agents pursuant to the power prescribed in his or her certificate or their certificates of authority or by one or more Company officers pursuant to a written delegation of authority; and it is

**FURTHER RESOLVED**, that the signature of each of the following officers: President, any Executive Vice President, any Senior Vice President, any Vice President, any Assistant Vice President, any Secretary, any Assistant Secretary, and the seal of the Company may be affixed by facsimile to any Power of Attorney or to any certificate relating thereto appointing Resident Vice Presidents, Resident Assistant Secretaries or Attorneys-in-Fact for purposes only of executing and attesting bonds and undertakings and other writings obligatory in the nature thereof, and any such Power of Attorney or certificate bearing such facsimile signature or facsimile seal shall be valid and binding upon the Company and any such power so executed and certified by such facsimile signature and facsimile seal shall be valid and binding on the Company in the future with respect to any bond or understanding to which it is attached.

I, **Kevin E. Hughes**, the undersigned, Assistant Secretary of Travelers Casualty and Surety Company of America, Travelers Casualty and Surety Company, and St. Paul Fire and Marine Insurance Company, do hereby certify that the above and foregoing is a true and correct copy of the Power of Attorney executed by said Companies, which remains in full force and effect.

Dated this **18th** day of **September**, 2019



Kevin E. Hughes  
Kevin E. Hughes, Assistant Secretary

**To verify the authenticity of this Power of Attorney, please call us at 1-800-421-3880.  
Please refer to the above-named Attorney-in-Fact and the details of the bond to which the power is attached.**