

# PROJECT MANUAL



**THP Limited**

Cincinnati, Ohio

Cleveland, Ohio

Raleigh, North Carolina

## THE CITY OF CHARLESTON

2025 Garage Repairs

Project No. E9 12/24-156

[THPLTD.COM](http://THPLTD.COM)

June 2015 – Bid Set

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City of Charleston, WV

2025 Garages Repairs

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### INSTRUCTIONS TO VENDORS SUBMITTING BIDS

**1. REVIEW DOCUMENTS THOROUGHLY:** The attached documents contain a solicitation for bids. Please read these instructions and all documents attached in their entirety. These instructions provide critical information about requirements that if overlooked could lead to disqualification of a Vendor's bid. All bids must be submitted in accordance with the provisions contained in these instructions and the Solicitation. Failure to do so may result in disqualification of Vendor's bid.

**2. MANDATORY TERMS:** The Solicitation may contain mandatory provisions identified by the use of the words "must," "will," and "shall." Failure to comply with a mandatory term in the Solicitation will result in bid disqualification.

**2A. PREBID MEETING:** The item identified below shall apply to this Solicitation.

☐ A pre-bid meeting will not be held prior to bid opening

☒ **A MANDATORY PRE-BID meeting will be held at the following place and time:**

|                 |   |
|-----------------|---|
| <b>Address:</b> | City Service Center<br>915 Quarrier Street<br>Charleston, WV<br>Suite 6 – Conference Room |
| <b>Date:</b>    | Wednesday, July 30, 2025  |
| <b>Time:</b>    | 10:00 AM EST  |

All Vendors submitting a bid must attend the mandatory pre-bid meeting. Failure to attend the mandatory pre-bid meeting shall result in disqualification of the Vendor's bid. No one individual is permitted to represent more than one vendor at the pre-bid meeting. Any individual that does attempt to represent two or more vendors will be required to select one vendor to which the individual's attendance will be attributed. The vendors not selected will be deemed to have not attended the pre-bid meeting unless another individual attended on their behalf. The required attribution of



attendance to a single vendor should be addressed during the pre-bid but may occur at any time deemed appropriate by the City of Charleston, WV.

An attendance sheet provided at the pre-bid meeting shall serve as the official document verifying attendance. Any person attending the pre-bid meeting on behalf of a Vendor must list on the attendance sheet his or her name and the name of the Vendor he or she is representing.

Additionally, the person attending the pre-bid meeting should include the Vendor's E-Mail address, phone number, and Fax number on the attendance sheet. It is the Vendor's responsibility to locate the attendance sheet and provide the required information. Failure to complete the attendance sheet as required may result in disqualification of Vendor's bid.

All Vendors should arrive prior to the starting time for the pre-bid. Vendors who arrive after the starting time but prior to the end of the pre-bid will be permitted to sign in but are charged with knowing all matters discussed at the pre-bid.

Questions submitted at least five business days prior to a scheduled pre-bid will be discussed at the pre-bid meeting if possible. Any discussions or answers to questions at the pre-bid meeting are preliminary in nature and are non-binding. Official and binding answers to questions will be published in a written addendum to the Solicitation prior to bid opening.

**3. VENDOR QUESTION DEADLINE:** Vendors may submit questions relating to this Solicitation to the City of Charleston's Purchasing Director. Questions must be submitted in writing. All questions must be submitted on or before the date listed below and to the address listed below to be considered. A written response will be published in a Solicitation addendum if a response is possible and appropriate. Non-written discussions, conversations, or questions and answers regarding this Solicitation are preliminary in nature and are nonbinding.

Submitted emails should have the solicitation number and name in the subject line.

|                                      |  |
|--------------------------------------|--|
| <b>QUESTION SUBMISSION DEADLINE:</b> | Friday, August 8, 2025 by 10:00 AM EST |
|--------------------------------------|--|



Submit Questions to:

|   |
|---|
| Purchasing Director   |
| City of Charleston, WV  |
| 501 Virginia Street East, Room 101<br>Charleston, WV 25301                      |
| Email: <a href="mailto:bids@cityofcharleston.org">bids@cityofcharleston.org</a> |

**4. BID SUBMISSION:** Electronic bid submission through BidExpress is preferred, however, paper bids will be accepted either by hand delivery or mail. Emailed bids will **not** be accepted. Regardless of delivery method, bids must be **received** by the City on or before the date and time of the bid opening. Any bid received by City staff is considered to be in the possession of the City and will not be returned for any reason.

|                          |                          |
|--------------------------|--------------------------|
| <b>BID OPENING DATE:</b> | Tuesday, August 26, 2025 |
| <b>BID OPENING TIME:</b> | 2:00pm                   |

Submit bids to:

|                                       |   |
|---------------------------------------|---|
| <b>Electronic Bids to BidExpress:</b> | <a href="https://www.bidexpress.com">https://www.bidexpress.com</a>                                     |
| <b>Paper Bids Submitted to:</b>       | Purchasing Director<br>City of Charleston<br>501 Virginia Street East, Room 101<br>Charleston, WV 25301 |

**5. PAPER BID DOCUMENTS:** Each paper bid must be submitted in a sealed envelope with the following information marked on the outside:

**5.1 Marked on the outside of the Envelope:**

1. Vendor Name
2. Vendor Address
3. Solicitation Number and Name
4. BID OPENING DATE
5. BID OPENING TIME



## **5.2 Completed Signed forms to include with the Bid:**

1. Bid Form – 004100
2. Substitution Request Form – 004325
3. Non-Collusion Affidavit – 004519
4. Material Supplier List – 004550
5. City of Charleston Addendum Acknowledgement Form
6. City of Charleston Purchasing Affidavit
7. Subcontractor List Submission
8. State of West Virginia Drug Free Workplace Conformance Affidavit
9. City of Charleston Required Licenses
10. Optional – City of Charleston Local Vendor Affidavit
11. Contractor to provide a list of all stockholders by name and address owning 5% or more of the bidder's current stock must be submitted with the bid. In the case of partnerships or sole proprietorships, those receiving a 5% or more share of the company's net profit must be listed.

**12. ADDENDUM ACKNOWLEDGEMENT:** Changes or revisions to this Solicitation will be made by an official addendum issued by the City. Vendor should acknowledge receipt of all addenda issued with this Solicitation by completing an Addendum Acknowledgment Form, a copy of which is included herewith. Failure to acknowledge addenda may result in bid disqualification. The addendum acknowledgement should be submitted with the bid to expedite document processing.

**13. BID FORMATTING:** Vendor should type or electronically enter the information onto its bid to prevent errors in the evaluation. Failure to type or electronically enter the information may result in bid disqualification.

**14. ALTERNATE MODEL OR BRAND:** Any model, brand, or specification listed in this Solicitation establishes the acceptable level of quality only and is not intended to reflect a preference for, or in any way favor, a particular brand or vendor. Vendors may bid alternates to a listed model or brand provided that the alternate is at least equal to the model or brand and complies with the required specifications. The equality of any alternate being bid shall be determined by the City at its sole discretion. Any Vendor bidding an alternate model or brand should clearly identify the alternate items in its bid and should include manufacturer's specifications, industry literature, and/or any other relevant documentation demonstrating the equality of the alternate items. Failure to provide information for alternate items may be grounds for rejection of a Vendor's bid.



**15. EXCEPTIONS AND CLARIFICATIONS:** The Solicitation contains the specifications that shall form the basis of a contractual agreement. Vendor shall clearly mark any exceptions, clarifications, or other proposed modifications in its bid. Exceptions to, clarifications of, or modifications of a requirement or term and condition of the Solicitation may result in bid disqualification.

**16. LOCAL VENDOR PREFERENCE:** A local vendor may qualify for a competitive advantage applied to its bid when certain conditions are met. The vendor has marked on its bid submission that it is requesting to be considered a local vendor for bid evaluation purposes; the vendor provides documentation evidencing that it has the right to conduct business in the State of West Virginia; and the vendor submits an affidavit confirming that it has paid all applicable business taxes to the City or has a non-delinquent payment plan with the City and has had an active and current business

and occupation tax account with the City Collector during the entire preceding one-year period.

Competitive advantages shall be applied in the following manner:

1. A competitive advantage of 4% shall be applied to the local vendor's bid when, prior to applying the competitive advantage, the lowest responsible bidder submits a bid that is greater than \$25,000 but does not exceed \$125,000.
2. The competitive advantage of \$5,000 shall be applied to the local vendor's bid when, prior to applying the competitive advantage, the lowest responsible bidder submits a bid that is greater than \$125,000.

**11. UNIT PRICE:** Unit prices shall prevail in cases of a discrepancy in the Vendor's bid.

**12. BUSINESS & OCCUPATION TAX:** The City of Charleston broadly imposes a Business & Occupation Privilege Tax for the act or privilege of engaging in business activities within the City of Charleston. Business & Occupation Tax is measured by the application of rates against gross receipts or gross income of the business. All business activities are classified, and the classifications are significant inasmuch as the tax liability varies based on the different rates established for the specific types of business activities. Individuals or





businesses who do not have a physical location or office located in the City of Charleston are also subject to Business & Occupation Tax if they:

1. Lease tangible personal property to lessees in Charleston
  2. Perform construction or installation contracts in Charleston
  3. Render services in Charleston.
  4. Business & Occupation Tax should be considered when preparing your bid.
- If you are uncertain as to your business activity or how your business should properly calculate the tax when preparing your bid, please contact us at [botax@cityofcharleston.org](mailto:botax@cityofcharleston.org).

***NOTE: No contract or purchase of materials or equipment will be awarded to a company whose Business & Occupation Tax status is delinquent.***

**13. NON-RESPONSIBLE:** The City reserves the right to reject the bid of any vendor as Non-Responsible in accordance with W. Va. Code of State Rules § 148- 1-5.3, when the City determines that the vendor submitting the bid does not have the capability to fully perform, or lacks the integrity and reliability to assure good-faith performance.”

**14. ACCEPTANCE/REJECTION:** The City may accept or reject any bid in whole, or in part, and may make partial awards if appropriate and necessary based on unit price.

**15. YOUR SUBMISSION IS A PUBLIC DOCUMENT:** Vendor’s entire response to the Solicitation and the resulting Contract are public documents. As public documents, they will be disclosed to the public following the bid/proposal opening or award of the contract, as required by the competitive bidding laws of West Virginia Code §§5-22-1 et seq., 5G-1- 1 et seq. and the Freedom of Information Act in West Virginia Code §§ 29B-1-1 et seq. DO NOT SUBMIT MATERIAL YOU CONSIDER TO BE CONFIDENTIAL, A TRADE SECRET, OR OTHERWISE NOT SUBJECT TO PUBLIC DISCLOSURE. Submission of any bid, proposal, or other document to the City constitutes your explicit consent to the subsequent public disclosure of the bid, proposal, or document. The City will disclose any document labeled “confidential,” “proprietary,” “trade secret,” “private,” or labeled with any other claim against public disclosure of the documents, to include any “trade secrets” as defined by West Virginia Code § 47-22-1 et seq. All submissions are subject to public disclosure without notice.

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DIVISION 00 - PROCUREMENT AND CONTRACTING REQUIREMENTS

SECTION 004100

BID FORM

Bid for The City of Charleston 2025 Garage Repairs (Divisions 01 through 32).

Bid submitted by \_\_\_\_\_ Date \_\_\_\_\_ 2025.

The Form of Proposal must be fully completed and sealed in an envelope clearly marked on the outside with the Contract designation. Refer to Section 002113: Instructions to Bidders, and Section 002213: Supplementary Instructions to Bidders for further instructions regarding Proposal Submittal.

In submitting this Proposal, the undersigned agrees that the Bid will not be withdrawn for a period of 60 consecutive calendar days following the date of Bid Opening. Further, that if a notice to proceed or if a prepared agreement provided by the Issuing Office is received at the successful business address identified below within the above named 60 day period, the undersigned will, within seven days of such receipt, acknowledge acceptance of the Contract Award and will deliver Certificates of Insurance and will proceed in accordance with the requirements of the Contract Documents for the project.

We, the undersigned, having familiarized ourselves with the local conditions affecting the cost of the Work, and with all Contract Documents for this Work, and also having visited the site and the structure incorporated in the Work, and having received and become familiar with and incorporated into the make-up of the Specifications, the following addenda:

| <u>Addendum Number</u> | <u>Date Received</u> | <u>Contractor Receipt Confirmation</u> |
|------------------------|----------------------|--|
| 1                      |                      |  |
| 2                      |                      |  |
| 3                      |                      |  |

for the construction of The City of Charleston 2025 Garage Repairs in conformance with the DRAWINGS AND SPECIFICATIONS prepared by THP Limited, Inc.

Hereby proposes to furnish all labor, equipment, utilities, and transportation to furnish and deliver all materials and to perform and supervise all Work as required by the said DRAWINGS AND SPECIFICATIONS, ADDENDA AND CONDITIONS OF THE CONTRACT, for completing the DIVISIONS OF WORK hereinafter designated, for the sums of money enumerated for the said divisions, the sums representing, respectively:

A. **Base Bid:** (*Total must be equal to Base Bid Itemization for Parking Garages 1 through 6.*)

For the sum of .....(\$\_\_\_\_\_)

\_\_\_\_\_ Dollars

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**1. Parking Garage 1 Base Bid Itemization:** *(Total Cost for all work included in the Contract Documents, inclusive of all lump sum and unit price work efforts outlined below.)*

For the sum of .....(\$\_\_\_\_\_)

\_\_\_\_\_ Dollars

|   | Item Description                              | UNIT      | Quantity | UNIT PRICE | Total Price |
|---|---|-----------|----------|------------|-------------|
| A | INCIDENTAL WORK: MOB. DEMOB, BARRICADES, ETC. | LUMP      | NA       | NA         |             |
| B | 4/401: CONCRETE TOPPING SLAB REPAIR           | SQ. FT.   | 130      |            |             |
| C | 5/401: FULL DEPTH DOUBLE TEE SLAB REPAIR      | SQ. FT.   | 2200     |            |             |
| D | 7/401: VERTICAL SURFACE CONCRETE REPAIR       | SQ. FT.   | 25       |            |             |
| E | 8/401: OVERHEAD CONCRETE REPAIR               | SQ. FT.   | 45       |            |             |
| F | 9/402: INVERTED TEE BEAM CONCRETE REPAIR      | SQ. FT.   | 20       |            |             |
| G | 10/402: CONCRETE CURB REPAIR                  | LIN. FT.  | 20       |            |             |
| H | 11/402: JOIST BOTTOM REPAIR                   | LIN. FT.  | 20       |            |             |
| I | 24/703: PG1 PERIMETER WALL TOP GROUT REPAIR   | LOCATION  | 25       |            |             |
| J | 12/402: PG1 PERIMETER WALL TOP REPAIR         | LIN. FT.  | 100      |            |             |
| K | 17/403: SUPP. SHEAR CONNECTOR ANGLE CASE A    | LOCATION  | 10       |            |             |
| L | 18/703: SUPP. SHEAR CONNECTOR ANGLE CASE B    | LOCATION  | 8        |            |             |
| M | 19/403: DOUBLE TEE BEARING REINFORCING        | LOCATION  | 1        |            |             |
| N | 21/403: LANDING ANGLE REPLACEMENT             | LOCATION  | 10       |            |             |
| O | 2/501: RANDOM CRACK                           | LIN. FT.  | 500      |            |             |
| P | 4/501: CONSTRUCTION JOINT SEALANT REPLACEMENT | LIN. FT.  | 900      |            |             |
| Q | 8/601: PG1 MEMBRANE STRIP REPAIR              | SQ. FT.   | 4000     |            |             |
| R | HEAVY DUTY MEMBRANE WITH LEVELING INSTALLAION | SQ. FT.   | 2750     |            |             |
| S | HEAVY DUTY MEMBRANE INSTALLATION              | SQ. FT.   | 550      |            |             |
| T | RESETTING OF PERIMETER RAILS                  | ALLOWANCE | NA       | NA         | \$10,000    |

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**2. Parking Garage 2 Base Bid Itemization:** *(Total Cost for all work included in the Contract Documents, inclusive of all lump sum and unit price work efforts outlined below.)*

For the sum of .....(\$\_\_\_\_\_)

\_\_\_\_\_ Dollars

|   | Item Description                              | UNIT     | Quantity | UNIT PRICE | Total Price |
|---|---|----------|----------|------------|-------------|
| A | INCIDENTAL WORK: MOB. DEMOB, BARRICADES, ETC. | LUMP     | NA       | NA         |             |
| B | 1/401: SLAB-ON-GRADE CONCRETE REPAIR          | SQ. FT.  | 60       |            |             |
| C | 4/401: CONCRETE TOPPING SLAB REPAIR           | SQ. FT.  | 20       |            |             |
| D | 8/401: OVERHEAD CONCRETE REPAIR               | SQ. FT.  | 10       |            |             |
| E | 11/502: EXPANSION JOINT HEADER REPAIR         | LIN. FT. | 10       |            |             |
| F | 4/501: CONSTRUCTION JOINT SEALANT REPLACEMENT | LIN. FT. | 500      |            |             |
| G | RAMP BEAM AND METAL FLASHING PAINTING 20/703  | LUMP     | NA       | NA         |             |
| H | POST - NEW BASE ANCHORS 21/703                | LUMP     | NA       | NA         |             |
| I | POST - NEW HSS POST REPLACEMENT 22/403        | LUMP     | NA       | NA         |             |
| J | POST - COVERING AND SEALANT REPAIR 23/703     | LUMP     | NA       | NA         |             |
| K | POST - SEALANT REPAIR 23/703 SIMILAR          | LUMP     | NA       | NA         |             |
| L | CFMF HVAC - BASE REPAIR 23/403                | LUMP     | NA       | NA         |             |
| M | POST HVAC - BASE REPAIR 24/403                | LUMP     | NA       | NA         |             |
| N | DRAIN LINE INSTALLATION AT LEVEL 1            | LUMP     | NA       | NA         |             |
| O | NEW GLASS DOORS AND FRAME AT ROOF             | LUMP     | NA       | NA         |             |

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**3. Parking Garage 3 Base Bid Itemization:** *(Total Cost for all work included in the Contract Documents, inclusive of all lump sum and unit price work efforts outlined below.)*

For the sum of .....(\$\_\_\_\_\_)

\_\_\_\_\_ Dollars

|   | Item Description                              | UNIT     | Quantity | UNIT PRICE | Total Price |
|---|---|----------|----------|------------|-------------|
| A | INCIDENTAL WORK: MOB. DEMOB, BARRICADES, ETC. | LUMP     | NA       | NA         |             |
| B | 4/401: CONCRETE TOPPING SLAB REPAIR           | SQ. FT.  | 25       |            |             |
| C | 7/401: VERTICAL SURFACE CONCRETE REPAIR       | SQ. FT.  | 35       |            |             |
| D | 8/401: OVERHEAD CONCRETE REPAIR               | SQ. FT.  | 15       |            |             |
| E | 036423: EPOXY INJECTION REPAIR                | LIN. FT. | 30       |            |             |
| F | 25/404: STAIR CHANNEL SUPPORT                 | LOCATION | 2        |            |             |
| G | 26/404: STAIR MODIFIED STAIR SUPPORT          | LOCATION | 2        |            |             |
| H | 27/404: STAIR ANGLE SUPPORT                   | LOCATION | 5        |            |             |
| I | 16/702: BARRIER CABLE SUPPORT                 | LOCATION | 32       |            |             |
| J | BARRIER CABLE REPLACEMENT 17/703              | LUMP     | NA       |            |             |
| K | 17/403: SUPP. SHEAR CONNECTOR ANGLE - A       | LOCATION | 5        |            |             |
| L | 18/703: SUPP. SHEAR CONNECTOR ANGLE - B       | LOCATION | 14       |            |             |
| M | 19/703: SUPP. SHEAR CONNECTOR ANGLE - C       | LOCATION | 2        |            |             |
| N | 18/403: SUPP. STEEL STRUT                     | LOCATION | 4        |            |             |
| O | FOUL ANCHORS AT SHEAR CONNECTORS              | LUMP     | NA       |            |             |
| P | INSTALL NEW ANCHORS AT SHEAR CONNECTORS       | LUMP     | NA       |            |             |
| Q | THREAD ROD AT COLUMN/WALL 15/702              | LUMP     | NA       |            |             |
| R | COMPRESSIBLE SEAL EJ AT SLAB 12/502           | LUMP     | NA       |            |             |
| S | COMPRESSIBLE SEAL EJ AT STAIR TOWER 13/502    | LUMP     | NA       |            |             |
| T | 2/501: RANDOM CRACK                           | LIN. FT. | 20       |            |             |
| U | 4/501: CONSTRUCTION JOINT SEALANT REPLACEMENT | LIN. FT. | 600      |            |             |

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|    | Item Description                             | UNIT     | Quantity | UNIT PRICE | Total Price |
|----|--|----------|----------|------------|-------------|
| V  | 16/222: STAIR WALL CLIP REPLACEMENTS         | LOCATION | 8        |            |             |
| W  | STAIRS: DOOR PANIC BAR AND CLOSER            | LOCATION | 2        |            |             |
| X  | STAIRS: PAINTING INTERER WALLS, CLIPS, DOORS | LUMP     | NA       | NA         |             |
| Y  | STAIRS: FULL STEEL REMOVAL AND REPLACEMENT   | LUMP     | NA       | NA         |             |
| Z  | STAIRS: DRYPIPE REPLACEMENT                  | LUMP     | NA       | NA         |             |
| AA | STAIRS: STEEL PAINTING AND TRACTION MEMBRANE | LUMP     | NA       | NA         |             |
| BB | STAIRS: ALL OTHER MISCELLANEOUS WORK         | LUMP     | NA       | NA         |             |

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**4. Parking Garage 4 Base Bid Itemization:** *(Total Cost for all work included in the Contract Documents, inclusive of all lump sum and unit price work efforts outlined below.)*

For the sum of .....(\$\_\_\_\_\_)

\_\_\_\_\_ Dollars

|   | Item Description                              | UNIT     | Quantity | UNIT PRICE | Total Price |
|---|---|----------|----------|------------|-------------|
| A | INCIDENTAL WORK: MOB. DEMOB, BARRICADES, ETC. | LUMP     | NA       | NA         |             |
| B | CURB REPAIR                                   | LUMP     | NA       | NA         |             |
| C | SOG ANGLE SUPPORTS AT WALL AND EJ 11/702      | LUMP     | NA       | NA         |             |
| D | 4/401: CONCRETE TOPPING SLAB REPAIR           | SQ. FT.  | 120      |            |             |
| E | 15/402: PEDESTRIAN WALL CABLE BARRIER         | LOCATION | 3        |            |             |
| F | 16/402: VEHICULAR COLUMN CABLE REPAIR         | LOCATION | 3        |            |             |
| G | MESH PANEL WELD REPAIR 12/702                 | LUMP     | NA       | NA         |             |
| H | THREAD ROD AT COLUMN/WALL 15/702              | LUMP     | NA       | NA         |             |
| I | WALL SCUPPER AND DRAIN REPAIR 13/702          | LUMP     | NA       | NA         |             |
| J | EXIT SIGN AT STAIR                            | LUMP     | NA       | NA         |             |
| K | OVERSIZED SEALANT AT STAIR CURB               | LUMP     | NA       | NA         |             |
| L | 4/501: CONSTRUCTION JOINT SEALANT REPLACEMENT | LIN. FT. | 2000     |            |             |
| M | 14/702:DRAIN PIPE REPAIR                      | LOCATION | 4        |            |             |
| N | PAINT WALL OF STAIR EXTERIOR                  | LUMP     | NA       | NA         |             |
| O | 16/222: STAIR WALL CLIP REPLACEMENTS          | LOCATION | 8        |            |             |
| P | STAIRS: DOOR PANIC BAR AND CLOSER             | LOCATION | 2        |            |             |
| Q | STAIRS: PAINTING INTERER WALLS, CLIPS, DOORS  | LUMP     | NA       | NA         |             |
| R | STAIRS: FULL STEEL REMOVAL AND REPLACEMENT    | LUMP     | NA       | NA         |             |
| S | STAIRS: DRYPIPE REPLACEMENT                   | LUMP     | NA       | NA         |             |
| T | STAIRS: STEEL PAINTING AND TRACTION MEMBRANE  | LUMP     | NA       | NA         |             |
| U | STAIRS: ALL OTHER MISCELLANEOUS WORK          | LUMP     | NA       | NA         |             |

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**5. Parking Garage 5 Base Bid Itemization:** *(Total Cost for all work included in the Contract Documents, inclusive of all lump sum and unit price work efforts outlined below.)*

For the sum of .....(\$\_\_\_\_\_)

\_\_\_\_\_ Dollars

|   | Item Description                              | UNIT     | Quantity | UNIT PRICE | Total Price |
|---|---|----------|----------|------------|-------------|
| A | INCIDENTAL WORK: MOB. DEMOB, BARRICADES, ETC. | LUMP     | NA       | NA         |             |
| B | 2/401: DOUBLE TEE SLAB REPAIR                 | SQ. FT.  | 30       |            |             |
| C | 3/401: CAST-IN-PLACE POUR STRIP REPAIR        | SQ. FT.  | 50       |            |             |
| D | 7/701: STAIR STRINGER HSS BEAM                | LOCATION | 4        |            |             |
| E | FAÇADE BOTTOM CONNECTION                      | LUMP     | NA       | NA         |             |
| F | FAÇADE TOP CONNECTION                         | LUMP     | NA       | NA         |             |
| G | FAÇADE RELOCATE MEMBER                        | LUMP     | NA       | NA         |             |



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**6. Parking Garage 6 Base Bid Itemization:** *(Total Cost for all work included in the Contract Documents, inclusive of all lump sum and unit price work efforts outlined below.)*

For the sum of .....(\$\_\_\_\_\_)

\_\_\_\_\_ Dollars

|   | Item Description                              | UNIT     | Quantity | UNIT PRICE | Total Price |
|---|---|----------|----------|------------|-------------|
| A | INCIDENTAL WORK: MOB. DEMOB, BARRICADES, ETC. | LUMP     | NA       | NA         |             |
| B | 2/401: DOUBLE TEE SLAB REPAIR                 | SQ. FT.  | 15       |            |             |
| C | 3/401: CAST-IN-PLACE POUR STRIP REPAIR        | SQ. FT.  | 10       |            |             |
| D | 11/402: JOIST BOTTOM REPAIR                   | LIN. FT. | 5        |            |             |
| E | 7/701: STAIR STRINGER HSS BEAM                | LOCATION | 5        |            |             |
| F | MASONRY PIER & ROOF SEALANT 1/701 AND 2/701   | LUMP     | NA       | NA         |             |
| G | PIPE GUARD AND MEMBRANE PATCH 3/701           | LUMP     | NA       | NA         |             |
| H | DRAIN MEMBRANE PATCH 4/701                    | LUMP     | NA       | NA         |             |
| I | WALL CONNECTION REPAIR 5/701                  | LUMP     | NA       | NA         |             |
| J | DRAIN STACK REPAIR 6/701                      | LUMP     | NA       | NA         |             |
| K | FAÇADE BOTTOM CONNECTION                      | LUMP     | NA       | NA         |             |
| L | FAÇADE TOP CONNECTION                         | LUMP     | NA       | NA         |             |

**B. Alternate Bids:** *(Total cost for Alternate work as identified on the Drawings and as described in Section 012300, as an addition to the Base Bid).*

No. 1 – *(PS3 and PS4 Exterior Stair Storefronts Sealant and Wall Panel Joints Repairs)*

For the sum of .....(\$.....)  
..... Dollars

**C. Labor Rates:** *(inclusive of all overhead, profit, benefits, and all other costs associated with the performance of any work efforts).*

1. Laborer hourly pay rate for work performed during normal work hours ..... (\$.....)  
..... Dollars per person hour
2. Laborer hourly pay rate for work performed outside normal work hours (standard overtime rate) ..... (\$.....)  
..... Dollars per person hour
3. Mason (Foreman or bricklayer) hourly pay rate for work performed during normal work hours..... (\$.....)  
..... Dollars per person hour
4. Mason (Foreman or bricklayer) hourly pay rate for work performed outside normal work hours (standard overtime rate)..... (\$.....)  
..... Dollars per person hour

**E. Project Team**

Project Manager ..... \_\_\_\_\_

Assistant Project Manager or General Superintendent ..... \_\_\_\_\_

Site Foreman..... \_\_\_\_\_

**Project Management Supervision Requirements:**

- Project Manager or Assistant Project Manager/Superintendent must be on site a minimum of 10% of the time, on a regular reoccurring basis, during performance of work.
- Site Foreman must be on site 100% of the time.

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The undersigned states that this Proposal is made in the character or capacity checked in this paragraph, that he or she is the agent of, and is duly authorized to sign for

\_\_\_\_\_  
(Legal Name of Firm)

\_\_\_\_\_  
(Address - No P.O. Box allowed)

\_\_\_\_\_  
City State Zip Code

that the Proposal is signed with the full understanding of the plans, provisions, specifications, and the foregoing terms of the Proposal.

Dated at \_\_\_\_\_ this \_\_\_\_\_ day of \_\_\_\_\_ 2025.

#### SIGNATURES

Name and Address of all Partners

\_\_\_\_\_

\_\_\_\_\_  
Name of Organization

\_\_\_\_\_

\_\_\_\_\_  
By

Attest:  
(Seal) \_\_\_\_\_

\_\_\_\_\_  
Title of Person Signing

END OF SECTION

DIVISION 00 - PROCUREMENT AND CONTRACTING REQUIREMENTS

SECTION 004300

SUPPLEMENTS TO BID FORM

PART 1 GENERAL

1.1 Requirements

- A. The following information (refer to attached forms as appropriate) must be submitted with the Bid Form (004100). Failure to submit any of the listed information, or the submittal of incomplete information, may be cause for rejection of Bid by the Owner.

| Form Name   | Section |
|---|---------|
| B. Substitution Request Form  | 004325  |
| C. Non-Collusion Affidavit  | 004519  |
| D. Material Supplier List   | 004550  |
| E. City of Charleston Addendum Acknowledgement Form   |         |
| F. City of Charleston Purchasing Affidavit  |         |
| G. Subcontractor List Submission  |         |
| H. State of West Virginia Drug Free Workplace Conformance Affidavit   |         |
| I. City of Charleston Required Licenses   |         |
| J. Optional – City of Charleston Local Vendor Affidavit   |         |
| K. Contractor to provide a list of all stockholders by name and address owning 5% or more of the bidder's current stock must be submitted with the bid. In the case of partnerships or sole proprietorships, those receiving a 5% or more share of the company's net profit must be listed. |         |

END OF SECTION

The City of Charleston  
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DIVISION 00 - PROCUREMENT AND CONTRACTING REQUIREMENTS

SECTION 004325

SUBSTITUTION REQUEST FORM

Bidder is to list here any "Substitutions" for which consideration is desired, showing the addition or reduction in price to be made, for each, if the substitution is accepted, or stating "No Change in Price", if none is proposed. The Bidder should also use this form to list "Approved Substitutions" for materials listed in the waterproofing technical Sections.

| WORK<br>SPECIFIED | SUBSTITUTION | PROPOSED<br>\$ ADD / (DEDUCT) |
|-------------------|--------------|-------------------------------|
|                   |              |                               |
|                   |              |                               |
|                   |              |                               |
|                   |              |                               |
|                   |              |                               |
|                   |              |                               |
|                   |              |                               |
|                   |              |                               |
|                   |              |                               |
|                   |              |                               |

It is understood and agreed that the Proposal / Bid submitted is based on furnishing "Standards" as specified and entitles the Owner to require that such named materials and methods be incorporated in the Work, except as substitutions for same, based on the supplementary quotations entered above are accepted and subsequently made a part of the written Contract.

Signed:

\_\_\_\_\_  
Principal/Officer

The City of Charleston  
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DIVISION 00 - PROCUREMENT AND CONTRACTING REQUIREMENTS

SECTION 004519

NON-COLLUSION AFFIDAVIT

STATE OF \_\_\_\_\_)

COUNTY OF \_\_\_\_\_)

\_\_\_\_\_ being first

duly sworn, deposes and says that he is \_\_\_\_\_  
(Title of Person Signing)

of \_\_\_\_\_

\_\_\_\_\_  
Name of Bidder

that all statements made, and facts set out in the Proposal for the above project are true and correct, and that the Bidder (The person, firm, association, or corporation making said bid) has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in connection with such bid or any contract which may result from its acceptance.

Affidavit further certifies that bidder is not financially interested in, or financially affiliated with, any other Bidder for the above project.

By \_\_\_\_\_

By \_\_\_\_\_

By \_\_\_\_\_

Sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_ 2025.

\_\_\_\_\_  
Notary public

My commission expires \_\_\_\_\_

END OF SECTION

The City of Charleston  
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DIVISION 00 - PROCUREMENT AND CONTRACTING REQUIREMENTS

SECTION 004550

MATERIAL SUPPLIER LIST

Bidders must list below all material suppliers used in the compilation of this Proposal when supplier bids are in excess of \$5,000 of the total Base Bid.

| BRANCH | MATERIAL SUPPLIER | AMOUNT OF BID |
|--------|-------------------|---------------|
|        |                   |               |
|        |                   |               |
|        |                   |               |
|        |                   |               |
|        |                   |               |
|        |                   |               |
|        |                   |               |
|        |                   |               |
|        |                   |               |
|        |                   |               |
|        |                   |               |

NOTE: Total of bids listed need not amount to sum of proposal. This listing is not meant to commit the Bidder to the material suppliers or subcontractors above. If the Bidder can show just cause at the time of awarding the Contract that a specific material supplier or subcontractor has withdrawn his bid, or raises his bid, the Bidder may substitute a material supplier or subcontractor upon approval of the Owner and at no additional cost to the Owner.

END OF SECTION



## ADDENDUM ACKNOWLEDGEMENT FORM

**SOLICITATION NO.:** The City of Charleston 2025 Garage Repairs

**Instructions:** Please acknowledge receipt of all addenda issued with this solicitation by completing this addendum acknowledgment form. Check the box next to each addendum received and sign below. Failure to acknowledge addenda may result in bid disqualification.

**Acknowledgment:** I hereby acknowledge receipt of the following addenda and have made the necessary revisions to my proposal, plans and/or specification, etc.

Addendum Numbers Received: (Check the box next to each addendum received)

- |   |  |
|---|--|
| <input type="checkbox"/> Addendum No. 1 | <input type="checkbox"/> Addendum No. 6  |
| <input type="checkbox"/> Addendum No. 2 | <input type="checkbox"/> Addendum No. 7  |
| <input type="checkbox"/> Addendum No. 3 | <input type="checkbox"/> Addendum No. 8  |
| <input type="checkbox"/> Addendum No. 4 | <input type="checkbox"/> Addendum No. 9  |
| <input type="checkbox"/> Addendum No. 5 | <input type="checkbox"/> Addendum No. 10 |

I understand that failure to confirm the receipt of addenda may be cause for rejection of this bid. I further understand that any verbal representation made or assumed to be made during any oral discussion held between Vendor's representatives and any state personnel is not binding. Only the information issued in writing and added to the specifications by an official addendum is binding.

|                       |  |
|-----------------------|--|
| Company Name:         |  |
| Authorized Signature: |  |
| Printed Name:         |  |
| Date:                 |  |

**NOTE: This addendum acknowledgement should be submitted with the bid to expedite document processing**



## CITY OF CHARLESTON PURCHASING AFFIDAVIT

### **VENDOR OWING A DEBT TO THE STATE OR POLITICAL SUBDIVISION:**

**West Virginia Code § 5A-3-10a** provides that: No contract or renewal of any contract may be awarded by the state or any of its political subdivisions to any vendor or prospective vendor when the vendor or prospective vendor or a related party to the vendor or prospective vendor is a debtor and the debt owed is an amount greater than one thousand dollars (\$1,000) in the aggregate.

### **PUBLIC IMPROVEMENT CONTRACTS & DRUG-FREE WORKPLACE ACT:**

If this is a solicitation for a public improvement construction contract, the vendor, by its signature below, affirms that it has a written plan for a drug-free workplace policy in compliance with Article 1D, Chapter 21 of the **West Virginia Code**. The vendor **must** make said affirmation with its bid submission. Further, public improvement construction contracts may not be awarded to a vendor who does not have a written plan for a drug-free workplace policy in compliance with Article 1D, Chapter 21 of the **West Virginia Code** and who has not submitted that plan to the appropriate contracting authority in a timely fashion. For a vendor who is a subcontractor, compliance with Section 5, Article 1D, Chapter 21 of the **West Virginia Code** may take place before their work on the public improvement is begun.

### **ANTITRUST:**

In submitting a bid to any agency for the State of West Virginia, the bidder offers and agrees that if the bid is accepted, the bidder will convey, sell, assign or transfer to the state of West Virginia all rights, title and interest in and to all causes of action it may now or hereafter acquire under the antitrust laws of the United States and the State of West Virginia for a price fixing and/or unreasonable restraints of trade relating to the particular commodities or services purchased or acquired by the state of West Virginia. Such assignment shall be made and become effective at the time the purchasing agency tenders the initial payment to the bidder.

I certify that this bid is made without prior understanding, agreement or connection with any corporation, firm, limited liability company, partnership or person or entity submitting a bid for the same materials, supplies, equipment or services and is in all respects fair and without collusion or fraud. I further certify that I am authorized to sign the certification on behalf of the bidder or this bid.

### **LICENSING:**

Vendors must be licensed and in good standing in accordance with any and all state and local laws and requirements by any state or local agency of West Virginia, including, but not limited to, the West Virginia Secretary of State's Office, the West Virginia Tax Department, the West Virginia Insurance Commission or any other state agencies or political subdivision. Furthermore, the vendor must provide all necessary releases to obtain information to enable the Director or spending unit to verify that the vendor is licensed and in good standing with the above entities.

### **CONFIDENTIALITY:**

The vendor agrees that he or she will not disclose to anyone, directly or indirectly, any such personally identifiable information or other confidential information gained from the agency, unless the individual who is the subject of the information consents to the disclosure in writing or the disclosure is made pursuant to the agency's policies, procedures and rules. Vendor further agrees to comply with the Confidentiality Policies and Information Security Accountability Requirements, set forth in <http://www.state.wv.us/admin/purchase/privacy/noticeConfidentiality.pdf>.

Under penalty of law for false swearing (**West Virginia Code § 61-5-3**), it is hereby certified that the vendor affirms and acknowledges the information in this affidavit and is in compliance with the requirements as stated.

Vendor's Name: \_\_\_\_\_

Authorized Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**Subcontractor List Submission (Construction Contracts Only)**

**Bidder's Name:** \_\_\_\_\_

☐ Check this box if no subcontractors will perform more than \$25,000.00 of work to complete the project.

| Subcontractor Name | License Number if Required by<br>W. Va. Code § 21-11-1 et. seq. |
|--------------------|---|
|                    |   |
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|                    |   |
|                    |   |

Attach additional pages if necessary



**State of West Virginia  
DRUG FREE WORKPLACE CONFORMANCE AFFIDAVIT  
West Virginia Code §21-1D-5**

I, \_\_\_\_\_, after being first duly sworn, depose and state as follows:

1. I am an employee of \_\_\_\_\_; and,  
(Company Name)
2. I do hereby attest that \_\_\_\_\_  
(Company Name)

maintains a written plan for a drug-free workplace policy and that such plan and policy are in compliance with **West Virginia Code** §21-1D.

The above statements are sworn to under the penalty of perjury.

Printed Name: \_\_\_\_\_

Signature: \_\_\_\_\_

Title: \_\_\_\_\_

Company Name: \_\_\_\_\_

Date: \_\_\_\_\_

STATE OF WEST VIRGINIA,

COUNTY OF \_\_\_\_\_, TO-WIT:

Taken, subscribed and sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

By Commission expires \_\_\_\_\_

(Seal)

\_\_\_\_\_  
(Notary Public)



**Required Licenses**

Bidders must be licensed contractors by the State of West Virginia and registered to do business in the City of Charleston.

**COMPANY NAME:**

\_\_\_\_\_

**ADDRESS:**

\_\_\_\_\_

**TELEPHONE:** \_\_\_\_\_

**WV STATE CONTRACTOR'S LICENSE #** \_\_\_\_\_

**EMAIL ADDRESS:**

\_\_\_\_\_

**Is your business registered with the Charleston City Collector?**

\_\_\_\_\_ **Yes** \_\_\_\_\_ **No**

**If yes, what is your vendor registration number?** \_\_\_\_\_



CITY OF CHARLESTON, WEST VIRGINIA

## LOCAL VENDOR AFFIDAVIT

Pursuant to § 2-480 of the Charleston City Code, a Local Vendor may qualify for a competitive advantage applied to its bid when certain conditions are met. One condition requires the vendor to submit this affidavit confirming that **(1)** the vendor has paid all applicable business taxes to the City or has a non-delinquent payment plan with the City, and **(2)** the vendor must state that it has had an active and current business & occupation tax account with the City Collector during the entire one-year period prior to the bid opening.

**AFFIRMATION:** By signing this form, the vendor's authorized signer affirms and acknowledges under the penalty of law for false swearing (W. Va. Code § 61-5-3) that **(1)** the vendor has paid all applicable business taxes to the City or has a non-delinquent payment plan with the City, and **(2)** the vendor has had an active and current business & occupation tax account with the City Collector during the entire one-year period prior to the scheduled bid opening for the procurement listed below.

WITNESS THE FOLLOWING SIGNATURE:

Vendor's Corporate Name: \_\_\_\_\_

Authorized Signature: \_\_\_\_\_ Date: \_\_\_\_\_

\_\_\_\_\_  
(Printed Name and Title)

State of \_\_\_\_\_

County of \_\_\_\_\_, to wit:

Taken, subscribed, and sworn before me this \_\_\_\_ day of \_\_\_\_\_, 20 \_\_\_\_.

[SEAL]

\_\_\_\_\_  
Notary Public

My Commission expires \_\_\_\_\_, 20 \_\_\_\_.

\*\*\*\*\*

Name of Procurement: \_\_\_\_\_ Bid Opening Date: \_\_\_\_\_

DIVISION 00 - PROCUREMENT AND CONTRACTING REQUIREMENTS

SECTION 005200

AGREEMENT FORMS, BONDS, CERTIFICATES AND AFFIDAVITS

PART 1 GENERAL

1.1 AGREEMENT

- A. Owner Agreement per AIA Document, A101-2017 Standard Form of Agreement between Owner and Contractor as modified by the Owner.
  - 1. AIA Document, A201-2017 Exhibit A, Insurance and Bonds.
  - 2. The City of Charleston General Terms and Conditions.
    - a. The terms and conditions of The City of Charleston General Terms and Conditions document shall prevail over anything contained in the AIA Documents or the Supplementary Conditions.
  - 3. AIA Document A201-2017, General Conditions of the Contract for Construction.
  - 4. Drawings, Specifications, and Addenda.

1.2 CERTIFICATE OF INSURANCE

- A. Certificate of insurance for the bidder setting forth the specified insurance requirements from the bidder's insurance provider.

1.3 BONDS

- A. AIA Document A312-2010, Payment Bond.
- B. AIA Documents A312-2010, Performance Bond.

1.4 CERTIFICATE FOR PAYMENT

- A. AIA Document G702-1992, Application and Certificate for Payment.
- B. AIA Document G703-1992, Continuation Sheet.

1.5 AFFIDAVITS

- A. AIA Document G706-1994, Contractor's Affidavit of Payment of Debts and Claims.
- B. AIA Document G706A-1994, Contractor's Affidavit of Release of Liens.

END OF SECTION

# **AIA® Document A101® – 2017**

## **Standard Form of Agreement Between Owner and Contractor** where the basis of payment is a Stipulated Sum

**AGREEMENT** made as of the  day of  in the year   
(In words, indicate day, month and year.)

**BETWEEN** the Owner:  
(Name, legal status, address and other information)

  
  
  

and the Contractor:  
(Name, legal status, address and other information)

  
  
  

for the following Project:  
(Name, location and detailed description)

The Architect:  
(Name, legal status, address and other information)

The Owner and Contractor agree as follows.

**ADDITIONS AND DELETIONS:**  
The author of this document may have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes revisions to the standard form text is available from the author and should be reviewed. A vertical line in the left margin of this document indicates where the author has added to or deleted from the original AIA text.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

The parties should complete A101®–2017, Exhibit A, Insurance and Bonds, contemporaneously with this Agreement. AIA Document A201®–2017, General Conditions of the Contract for Construction, is adopted in this document by reference. Do not use with other general conditions unless this document is modified.

**ELECTRONIC COPYING** of any portion of this AIA® Document to another electronic file is prohibited and constitutes a violation of copyright laws as set forth in the footer of this document.

## TABLE OF ARTICLES

- 1 THE CONTRACT DOCUMENTS
- 2 THE WORK OF THIS CONTRACT
- 3 DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION
- 4 CONTRACT SUM
- 5 PAYMENTS
- 6 DISPUTE RESOLUTION
- 7 TERMINATION OR SUSPENSION
- 8 MISCELLANEOUS PROVISIONS
- 9 ENUMERATION OF CONTRACT DOCUMENTS

## EXHIBIT A INSURANCE AND BONDS

### ARTICLE 1 THE CONTRACT DOCUMENTS

The Contract Documents consist of this Agreement, Conditions of the Contract (General, Supplementary, and other Conditions), Drawings, Specifications, Addenda issued prior to execution of this Agreement, other documents listed in this Agreement, and Modifications issued after execution of this Agreement, all of which form the Contract, and are as fully a part of the Contract as if attached to this Agreement or repeated herein. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations, or agreements, either written or oral. An enumeration of the Contract Documents, other than a Modification, appears in Article 9.

### ARTICLE 2 THE WORK OF THIS CONTRACT

The Contractor shall fully execute the Work described in the Contract Documents, except as specifically indicated in the Contract Documents to be the responsibility of others.

### ARTICLE 3 DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION

§ 3.1 The date of commencement of the Work shall be:

*(Check one of the following boxes.)*

[ ☐ ] The date of this Agreement.

[ ☐ ] A date set forth in a notice to proceed issued by the Owner.

[ ☐ ] Established as follows:

*(Insert a date or a means to determine the date of commencement of the Work.)*

If a date of commencement of the Work is not selected, then the date of commencement shall be the date of this Agreement.

§ 3.2 The Contract Time shall be measured from the date of commencement of the Work.

#### § 3.3 Substantial Completion

§ 3.3.1 Subject to adjustments of the Contract Time as provided in the Contract Documents, the Contractor shall achieve



Substantial Completion of the entire Work:

(Check one of the following boxes and complete the necessary information.)

[ ] Not later than ( ) calendar days from the date of commencement of the Work.

[ ] By the following date:

§ 3.3.2 Subject to adjustments of the Contract Time as provided in the Contract Documents, if portions of the Work are to be completed prior to Substantial Completion of the entire Work, the Contractor shall achieve Substantial Completion of such portions by the following dates:

Portion of Work

Substantial Completion Date

§ 3.3.3 If the Contractor fails to achieve Substantial Completion as provided in this Section 3.3, liquidated damages, if any, shall be assessed as set forth in Section 4.5.

#### ARTICLE 4 CONTRACT SUM

§ 4.1 The Owner shall pay the Contractor the Contract Sum in current funds for the Contractor's performance of the Contract. The Contract Sum shall be (\$) , subject to additions and deductions as provided in the Contract Documents.

#### § 4.2 Alternates

§ 4.2.1 Alternates, if any, included in the Contract Sum:

Item

Price

§ 4.2.2 Subject to the conditions noted below, the following alternates may be accepted by the Owner following execution of this Agreement. Upon acceptance, the Owner shall issue a Modification to this Agreement.

(Insert below each alternate and the conditions that must be met for the Owner to accept the alternate.)

Item

Price

Conditions for Acceptance

§ 4.3 Allowances, if any, included in the Contract Sum:

(Identify each allowance.)

Item

Price

§ 4.4 Unit prices, if any:

(Identify the item and state the unit price and quantity limitations, if any, to which the unit price will be applicable.)

Item

Units and Limitations

Price per Unit (\$0.00)

§ 4.5 Liquidated damages, if any:

(Insert terms and conditions for liquidated damages, if any.)

§ 4.6 Other:

(Insert provisions for bonus or other incentives, if any, that might result in a change to the Contract Sum.)

## ARTICLE 5 PAYMENTS

### § 5.1 Progress Payments

§ 5.1.1 Based upon Applications for Payment submitted to the Architect by the Contractor and Certificates for Payment issued by the Architect, the Owner shall make progress payments on account of the Contract Sum to the Contractor as provided below and elsewhere in the Contract Documents.

§ 5.1.2 The period covered by each Application for Payment shall be one calendar month ending on the last day of the month, or as follows:

§ 5.1.3 Provided that an Application for Payment is received by the Architect not later than the [ ] day of a month, the Owner shall make payment of the amount certified to the Contractor not later than the [ ] day of the [ ] month. If an Application for Payment is received by the Architect after the application date fixed above, payment of the amount certified shall be made by the Owner not later than [ ] ( [ ] ) days after the Architect receives the Application for Payment. *(Federal, state or local laws may require payment within a certain period of time.)*

§ 5.1.4 Each Application for Payment shall be based on the most recent schedule of values submitted by the Contractor in accordance with the Contract Documents. The schedule of values shall allocate the entire Contract Sum among the various portions of the Work. The schedule of values shall be prepared in such form, and supported by such data to substantiate its accuracy, as the Architect may require. This schedule of values shall be used as a basis for reviewing the Contractor's Applications for Payment.

§ 5.1.5 Applications for Payment shall show the percentage of completion of each portion of the Work as of the end of the period covered by the Application for Payment.

§ 5.1.6 In accordance with AIA Document A201™–2017, General Conditions of the Contract for Construction, and subject to other provisions of the Contract Documents, the amount of each progress payment shall be computed as follows:

§ 5.1.6.1 The amount of each progress payment shall first include:

- .1 That portion of the Contract Sum properly allocable to completed Work;
- .2 That portion of the Contract Sum properly allocable to materials and equipment delivered and suitably stored at the site for subsequent incorporation in the completed construction, or, if approved in advance by the Owner, suitably stored off the site at a location agreed upon in writing; and
- .3 That portion of Construction Change Directives that the Architect determines, in the Architect's professional judgment, to be reasonably justified.

§ 5.1.6.2 The amount of each progress payment shall then be reduced by:

- .1 The aggregate of any amounts previously paid by the Owner;
- .2 The amount, if any, for Work that remains uncorrected and for which the Architect has previously withheld a Certificate for Payment as provided in Article 9 of AIA Document A201–2017;
- .3 Any amount for which the Contractor does not intend to pay a Subcontractor or material supplier, unless the Work has been performed by others the Contractor intends to pay;
- .4 For Work performed or defects discovered since the last payment application, any amount for which the Architect may withhold payment, or nullify a Certificate of Payment in whole or in part, as provided in Article 9 of AIA Document A201–2017; and
- .5 Retainage withheld pursuant to Section 5.1.7.

### § 5.1.7 Retainage

§ 5.1.7.1 For each progress payment made prior to Substantial Completion of the Work, the Owner may withhold the following amount, as retainage, from the payment otherwise due:

*(Insert a percentage or amount to be withheld as retainage from each Application for Payment. The amount of retainage may be limited by governing law.)*

**§ 5.1.7.1.1** The following items are not subject to retainage:

*(Insert any items not subject to the withholding of retainage, such as general conditions, insurance, etc.)*

**§ 5.1.7.2** Reduction or limitation of retainage, if any, shall be as follows:

*(If the retainage established in Section 5.1.7.1 is to be modified prior to Substantial Completion of the entire Work, including modifications for Substantial Completion of portions of the Work as provided in Section 3.3.2, insert provisions for such modifications.)*

**§ 5.1.7.3** Except as set forth in this Section 5.1.7.3, upon Substantial Completion of the Work, the Contractor may submit an Application for Payment that includes the retainage withheld from prior Applications for Payment pursuant to this Section 5.1.7. The Application for Payment submitted at Substantial Completion shall not include retainage as follows:

*(Insert any other conditions for release of retainage upon Substantial Completion.)*

**§ 5.1.8** If final completion of the Work is materially delayed through no fault of the Contractor, the Owner shall pay the Contractor any additional amounts in accordance with Article 9 of AIA Document A201–2017.

**§ 5.1.9** Except with the Owner’s prior approval, the Contractor shall not make advance payments to suppliers for materials or equipment which have not been delivered and stored at the site.

**§ 5.2 Final Payment**

**§ 5.2.1** Final payment, constituting the entire unpaid balance of the Contract Sum, shall be made by the Owner to the Contractor when

- .1 the Contractor has fully performed the Contract except for the Contractor’s responsibility to correct Work as provided in Article 12 of AIA Document A201–2017, and to satisfy other requirements, if any, which extend beyond final payment; and
- .2 a final Certificate for Payment has been issued by the Architect.

**§ 5.2.2** The Owner’s final payment to the Contractor shall be made no later than 30 days after the issuance of the Architect’s final Certificate for Payment, or as follows:

**§ 5.3 Interest**

Payments due and unpaid under the Contract shall bear interest from the date payment is due at the rate stated below, or in the absence thereof, at the legal rate prevailing from time to time at the place where the Project is located.

*(Insert rate of interest agreed upon, if any.)*

%

**ARTICLE 6 DISPUTE RESOLUTION**

**§ 6.1 Initial Decision Maker**

The Architect will serve as the Initial Decision Maker pursuant to Article 15 of AIA Document A201–2017, unless the parties appoint below another individual, not a party to this Agreement, to serve as the Initial Decision Maker.

(If the parties mutually agree, insert the name, address and other contact information of the Initial Decision Maker, if other than the Architect.)

## § 6.2 Binding Dispute Resolution

For any Claim subject to, but not resolved by, mediation pursuant to Article 15 of AIA Document A201–2017, the method of binding dispute resolution shall be as follows:

(Check the appropriate box.)

- [ ☐ ] Arbitration pursuant to Section 15.4 of AIA Document A201–2017
- [ ☐ ] Litigation in a court of competent jurisdiction
- [ ☐ ] Other (Specify)

If the Owner and Contractor do not select a method of binding dispute resolution, or do not subsequently agree in writing to a binding dispute resolution method other than litigation, Claims will be resolved by litigation in a court of competent jurisdiction.

## ARTICLE 7 TERMINATION OR SUSPENSION

§ 7.1 The Contract may be terminated by the Owner or the Contractor as provided in Article 14 of AIA Document A201–2017.

§ 7.1.1 If the Contract is terminated for the Owner’s convenience in accordance with Article 14 of AIA Document A201–2017, then the Owner shall pay the Contractor a termination fee as follows:

(Insert the amount of, or method for determining, the fee, if any, payable to the Contractor following a termination for the Owner’s convenience.)

§ 7.2 The Work may be suspended by the Owner as provided in Article 14 of AIA Document A201–2017.

## ARTICLE 8 MISCELLANEOUS PROVISIONS

§ 8.1 Where reference is made in this Agreement to a provision of AIA Document A201–2017 or another Contract Document, the reference refers to that provision as amended or supplemented by other provisions of the Contract Documents.

§ 8.2 The Owner’s representative:

(Name, address, email address, and other information)

§ 8.3 The Contractor’s representative:

(Name, address, email address, and other information)

§ 8.4 Neither the Owner’s nor the Contractor’s representative shall be changed without ten days’ prior notice to the other party.

§ 8.5 Insurance and Bonds

§ 8.5.1 The Owner and the Contractor shall purchase and maintain insurance as set forth in AIA Document A101™–2017, Standard Form of Agreement Between Owner and Contractor where the basis of payment is a Stipulated Sum, Exhibit A, Insurance and Bonds, and elsewhere in the Contract Documents.

§ 8.5.2 The Contractor shall provide bonds as set forth in AIA Document A101™–2017 Exhibit A, and elsewhere in the Contract Documents.

§ 8.6 Notice in electronic format, pursuant to Article 1 of AIA Document A201–2017, may be given in accordance with a building information modeling exhibit, if completed, or as otherwise set forth below:

*(If other than in accordance with a building information modeling exhibit, insert requirements for delivering notice in electronic format such as name, title, and email address of the recipient and whether and how the system will be required to generate a read receipt for the transmission.)*

§ 8.7 Other provisions:

ARTICLE 9 ENUMERATION OF CONTRACT DOCUMENTS

§ 9.1 This Agreement is comprised of the following documents:

- .1

AIA Document A101™–2017, Standard Form of Agreement Between Owner and Contractor
- .2

AIA Document A101™–2017, Exhibit A, Insurance and Bonds
- .3

AIA Document A201™–2017, General Conditions of the Contract for Construction
- .4

Building information modeling exhibit, dated as indicated below:  
*(Insert the date of the building information modeling exhibit incorporated into this Agreement.)*

.5 Drawings

Number

Title

Date

.6 Specifications

Section

Title

Date

Pages

.7 Addenda, if any:

**Number** **Date** **Pages**

Portions of Addenda relating to bidding or proposal requirements are not part of the Contract Documents unless the bidding or proposal requirements are also enumerated in this Article 9.

**.8 Other Exhibits:**

*(Check all boxes that apply and include appropriate information identifying the exhibit where required.)*

[ ] AIA Document E204™–2017, Sustainable Projects Exhibit, dated as indicated below:  
*(Insert the date of the E204-2017 incorporated into this Agreement.)*

[ ] The Sustainability Plan:

**Title** **Date** **Pages**

[ ] Supplementary and other Conditions of the Contract:

**Document** **Title** **Date** **Pages**

**.9 Other documents, if any, listed below:**

*(List here any additional documents that are intended to form part of the Contract Documents. AIA Document A201™–2017 provides that the advertisement or invitation to bid, Instructions to Bidders, sample forms, the Contractor's bid or proposal, portions of Addenda relating to bidding or proposal requirements, and other information furnished by the Owner in anticipation of receiving bids or proposals, are not part of the Contract Documents unless enumerated in this Agreement. Any such documents should be listed here only if intended to be part of the Contract Documents.)*

Specification Section 004100 Bid Form.

The City of Charleston General Terms and Conditions

This Agreement entered into as of the day and year first written above.

**OWNER** *(Signature)*

*(Printed name and title)*

**CONTRACTOR** *(Signature)*

*(Printed name and title)*

# **AIA® Document A101® – 2017 Exhibit A**

## **Insurance and Bonds**

This Insurance and Bonds Exhibit is part of the Agreement, between the Owner and the Contractor, dated the  day of  in the year   
(In words, indicate day, month and year.)

for the following **PROJECT**:  
(Name and location or address)

**THE OWNER:**  
(Name, legal status and address)

**THE CONTRACTOR:**  
(Name, legal status and address)

### **TABLE OF ARTICLES**

- A.1 GENERAL**
- A.2 OWNER'S INSURANCE**
- A.3 CONTRACTOR'S INSURANCE AND BONDS**
- A.4 SPECIAL TERMS AND CONDITIONS**

#### **ARTICLE A.1 GENERAL**

The Owner and Contractor shall purchase and maintain insurance, and provide bonds, as set forth in this Exhibit. As used in this Exhibit, the term General Conditions refers to AIA Document A201™–2017, General Conditions of the Contract for Construction.

#### **ARTICLE A.2 OWNER'S INSURANCE**

##### **§ A.2.1 General**

Prior to commencement of the Work, the Owner shall secure the insurance, and provide evidence of the coverage, required under this Article A.2 and, upon the Contractor's request, provide a copy of the property insurance policy or policies required by Section A.2.3. The copy of the policy or policies provided shall contain all applicable conditions, definitions, exclusions, and endorsements.

##### **§ A.2.2 Liability Insurance**

#### **ADDITIONS AND DELETIONS:**

The author of this document may have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes revisions to the standard form text is available from the author and should be reviewed. A vertical line in the left margin of this document indicates where the author has added to or deleted from the original AIA text.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

This document is intended to be used in conjunction with AIA Document A201®–2017, General Conditions of the Contract for Construction. Article 11 of A201®–2017 contains additional insurance provisions.

**ELECTRONIC COPYING** of any portion of this AIA® Document to another electronic file is prohibited and constitutes a violation of copyright laws as set forth in the footer of this document.



The Owner shall be responsible for purchasing and maintaining the Owner’s usual general liability insurance.

§ A.2.3 Required Property Insurance

§ A.2.3.1 Unless this obligation is placed on the Contractor pursuant to Section A.3.3.2.1, the Owner shall purchase and maintain, from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located, property insurance written on a builder's risk “all-risks” completed value or equivalent policy form and sufficient to cover the total value of the entire Project on a replacement cost basis. The Owner’s property insurance coverage shall be no less than the amount of the initial Contract Sum, plus the value of subsequent Modifications and labor performed and materials or equipment supplied by others. The property insurance shall be maintained until Substantial Completion and thereafter as provided in Section A.2.3.1.3, unless otherwise provided in the Contract Documents or otherwise agreed in writing by the parties to this Agreement. This insurance shall include the interests of the Owner, Contractor, Subcontractors, and Sub-subcontractors in the Project as insureds. This insurance shall include the interests of mortgagees as loss payees.

§ A.2.3.1.1 Causes of Loss. The insurance required by this Section A.2.3.1 shall provide coverage for direct physical loss or damage, and shall not exclude the risks of fire, explosion, theft, vandalism, malicious mischief, collapse, earthquake, flood, or windstorm. The insurance shall also provide coverage for ensuing loss or resulting damage from error, omission, or deficiency in construction methods, design, specifications, workmanship, or materials. Sub-limits, if any, are as follows:  
(Indicate below the cause of loss and any applicable sub-limit.)

| Causes of Loss | Sub-Limit |
|----------------|-----------|
|                |           |

§ A.2.3.1.2 Specific Required Coverages. The insurance required by this Section A.2.3.1 shall provide coverage for loss or damage to falsework and other temporary structures, and to building systems from testing and startup. The insurance shall also cover debris removal, including demolition occasioned by enforcement of any applicable legal requirements, and reasonable compensation for the Architect’s and Contractor’s services and expenses required as a result of such insured loss, including claim preparation expenses. Sub-limits, if any, are as follows:  
(Indicate below type of coverage and any applicable sub-limit for specific required coverages.)

| Coverage | Sub-Limit |
|----------|-----------|
|          |           |

§ A.2.3.1.3 Unless the parties agree otherwise, upon Substantial Completion, the Owner shall continue the insurance required by Section A.2.3.1 or, if necessary, replace the insurance policy required under Section A.2.3.1 with property insurance written for the total value of the Project that shall remain in effect until expiration of the period for correction of the Work set forth in Section 12.2.2 of the General Conditions.

§ A.2.3.1.4 Deductibles and Self-Insured Retentions. If the insurance required by this Section A.2.3 is subject to deductibles or self-insured retentions, the Owner shall be responsible for all loss not covered because of such deductibles or retentions.

§ A.2.3.2 Occupancy or Use Prior to Substantial Completion. The Owner’s occupancy or use of any completed or partially completed portion of the Work prior to Substantial Completion shall not commence until the insurance company or companies providing the insurance under Section A.2.3.1 have consented in writing to the continuance of coverage. The Owner and the Contractor shall take no action with respect to partial occupancy or use that would cause cancellation, lapse, or reduction of insurance, unless they agree otherwise in writing.

§ A.2.3.3 Insurance for Existing Structures

If the Work involves remodeling an existing structure or constructing an addition to an existing structure, the Owner shall purchase and maintain, until the expiration of the period for correction of Work as set forth in Section 12.2.2 of the General Conditions, “all-risks” property insurance, on a replacement cost basis, protecting the existing structure against direct physical loss or damage from the causes of loss identified in Section A.2.3.1, notwithstanding the undertaking of the Work. The Owner shall be responsible for all co-insurance penalties.

§ A.2.4 Optional Extended Property Insurance.

The Owner shall purchase and maintain the insurance selected and described below.



(Select the types of insurance the Owner is required to purchase and maintain by placing an X in the box(es) next to the description(s) of selected insurance. For each type of insurance selected, indicate applicable limits of coverage or other conditions in the fill point below the selected item.)

- [ ☐ ] **§ A.2.4.1 Loss of Use, Business Interruption, and Delay in Completion Insurance**, to reimburse the Owner for loss of use of the Owner's property, or the inability to conduct normal operations due to a covered cause of loss.
- [ ☐ ] **§ A.2.4.2 Ordinance or Law Insurance**, for the reasonable and necessary costs to satisfy the minimum requirements of the enforcement of any law or ordinance regulating the demolition, construction, repair, replacement or use of the Project.
- [ ☐ ] **§ A.2.4.3 Expediting Cost Insurance**, for the reasonable and necessary costs for the temporary repair of damage to insured property, and to expedite the permanent repair or replacement of the damaged property.
- [ ☐ ] **§ A.2.4.4 Extra Expense Insurance**, to provide reimbursement of the reasonable and necessary excess costs incurred during the period of restoration or repair of the damaged property that are over and above the total costs that would normally have been incurred during the same period of time had no loss or damage occurred.
- [ ☐ ] **§ A.2.4.5 Civil Authority Insurance**, for losses or costs arising from an order of a civil authority prohibiting access to the Project, provided such order is the direct result of physical damage covered under the required property insurance.
- [ ☐ ] **§ A.2.4.6 Ingress/Egress Insurance**, for loss due to the necessary interruption of the insured's business due to physical prevention of ingress to, or egress from, the Project as a direct result of physical damage.
- [ ☐ ] **§ A.2.4.7 Soft Costs Insurance**, to reimburse the Owner for costs due to the delay of completion of the Work, arising out of physical loss or damage covered by the required property insurance: including construction loan fees; leasing and marketing expenses; additional fees, including those of architects, engineers, consultants, attorneys and accountants, needed for the completion of the construction, repairs, or reconstruction; and carrying costs such as property taxes, building permits, additional interest on loans, realty taxes, and insurance premiums over and above normal expenses.

#### **§ A.2.5 Other Optional Insurance.**

The Owner shall purchase and maintain the insurance selected below.

(Select the types of insurance the Owner is required to purchase and maintain by placing an X in the box(es) next to the description(s) of selected insurance.)

- [ ☐ ] **§ A.2.5.1 Cyber Security Insurance** for loss to the Owner due to data security and privacy breach, including costs of investigating a potential or actual breach of confidential or private information.

(Indicate applicable limits of coverage or other conditions in the fill point below.)

[ ] § A.2.5.2 Other Insurance

(List below any other insurance coverage to be provided by the Owner and any applicable limits.)

Coverage

Limits

## ARTICLE A.3 CONTRACTOR'S INSURANCE AND BONDS

### § A.3.1 General

**§ A.3.1.1 Certificates of Insurance.** The Contractor shall provide certificates of insurance acceptable to the Owner evidencing compliance with the requirements in this Article A.3 at the following times: (1) prior to commencement of the Work; (2) upon renewal or replacement of each required policy of insurance; and (3) upon the Owner's written request. An additional certificate evidencing continuation of commercial liability coverage, including coverage for completed operations, shall be submitted with the final Application for Payment and thereafter upon renewal or replacement of such coverage until the expiration of the periods required by Section A.3.2.1 and Section A.3.3.1. The certificates will show the Owner as an additional insured on the Contractor's Commercial General Liability and excess or umbrella liability policy or policies.

**§ A.3.1.2 Deductibles and Self-Insured Retentions.** The Contractor shall disclose to the Owner any deductible or self-insured retentions applicable to any insurance required to be provided by the Contractor.

**§ A.3.1.3 Additional Insured Obligations.** To the fullest extent permitted by law, the Contractor shall cause the commercial general liability coverage to include (1) the Owner, the Architect, and the Architect's consultants as additional insureds for claims caused in whole or in part by the Contractor's negligent acts or omissions during the Contractor's operations; and (2) the Owner as an additional insured for claims caused in whole or in part by the Contractor's negligent acts or omissions for which loss occurs during completed operations. The additional insured coverage shall be primary and non-contributory to any of the Owner's general liability insurance policies and shall apply to both ongoing and completed operations. To the extent commercially available, the additional insured coverage shall be no less than that provided by Insurance Services Office, Inc. (ISO) forms CG 20 10 07 04, CG 20 37 07 04, and, with respect to the Architect and the Architect's consultants, CG 20 32 07 04.

### § A.3.2 Contractor's Required Insurance Coverage

**§ A.3.2.1** The Contractor shall purchase and maintain the following types and limits of insurance from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located. The Contractor shall maintain the required insurance until the expiration of the period for correction of Work as set forth in Section 12.2.2 of the General Conditions, unless a different duration is stated below:

(If the Contractor is required to maintain insurance for a duration other than the expiration of the period for correction of Work, state the duration.)

### § A.3.2.2 Commercial General Liability

**§ A.3.2.2.1** Commercial General Liability insurance for the Project written on an occurrence form with policy limits of not less than one million dollars (\$ 1,000,000 ) each occurrence, two million dollars (\$ 2,000,000 ) general aggregate, and two million dollars (\$ 2,000,000 ) aggregate for products-completed operations hazard, providing coverage for claims including

- .1 damages because of bodily injury, sickness or disease, including occupational sickness or disease, and death of any person;
- .2 personal injury and advertising injury;
- .3 damages because of physical damage to or destruction of tangible property, including the loss of use of such property;
- .4 bodily injury or property damage arising out of completed operations; and
- .5 the Contractor's indemnity obligations under Section 3.18 of the General Conditions.

**§ A.3.2.2.2** The Contractor's Commercial General Liability policy under this Section A.3.2.2 shall not contain an exclusion or restriction of coverage for the following:

- .1 Claims by one insured against another insured, if the exclusion or restriction is based solely on the fact that the claimant is an insured, and there would otherwise be coverage for the claim.
- .2 Claims for property damage to the Contractor's Work arising out of the products-completed operations hazard where the damaged Work or the Work out of which the damage arises was performed by a Subcontractor.
- .3 Claims for bodily injury other than to employees of the insured.
- .4 Claims for indemnity under Section 3.18 of the General Conditions arising out of injury to employees of the insured.
- .5 Claims or loss excluded under a prior work endorsement or other similar exclusionary language.
- .6 Claims or loss due to physical damage under a prior injury endorsement or similar exclusionary language.
- .7 Claims related to residential, multi-family, or other habitational projects, if the Work is to be performed on such a project.
- .8 Claims related to roofing, if the Work involves roofing.
- .9 Claims related to exterior insulation finish systems (EIFS), synthetic stucco or similar exterior coatings or surfaces, if the Work involves such coatings or surfaces.
- .10 Claims related to earth subsidence or movement, where the Work involves such hazards.
- .11 Claims related to explosion, collapse and underground hazards, where the Work involves such hazards.

**§ A.3.2.3** Automobile Liability covering vehicles owned, and non-owned vehicles used, by the Contractor, with policy limits of not less than one million dollars (\$ 1,000,000 ) per accident, for bodily injury, death of any person, and property damage arising out of the ownership, maintenance and use of those motor vehicles along with any other statutorily required automobile coverage.

**§ A.3.2.4** The Contractor may achieve the required limits and coverage for Commercial General Liability and Automobile Liability through a combination of primary and excess or umbrella liability insurance, provided such primary and excess or umbrella insurance policies result in the same or greater coverage as the coverages required under Section A.3.2.2 and A.3.2.3, and in no event shall any excess or umbrella liability insurance provide narrower coverage than the primary policy. The excess policy shall not require the exhaustion of the underlying limits only through the actual payment by the underlying insurers.

**§ A.3.2.5** Workers' Compensation at statutory limits.

**§ A.3.2.6** Employers' Liability with policy limits not less than one million dollars (\$ 1,000,000 ) each accident, one million dollars (\$ 1,000,000 ) each employee, and one million dollars (\$ 1,000,000 ) policy limit.

**§ A.3.2.7** Jones Act, and the Longshore & Harbor Workers' Compensation Act, as required, if the Work involves hazards arising from work on or near navigable waterways, including vessels and docks

**§ A.3.2.8** If the Contractor is required to furnish professional services as part of the Work, the Contractor shall procure Professional Liability insurance covering performance of the professional services, with policy limits of not less than            (\$            ) per claim and            (\$            ) in the aggregate.

**§ A.3.2.9** If the Work involves the transport, dissemination, use, or release of pollutants, the Contractor shall procure Pollution Liability insurance, with policy limits of not less than            (\$            ) per claim and            (\$            ) in the aggregate.

**§ A.3.2.10** Coverage under Sections A.3.2.8 and A.3.2.9 may be procured through a Combined Professional Liability and Pollution Liability insurance policy, with combined policy limits of not less than            (\$            ) per claim and            (\$            ) in the aggregate.

**§ A.3.2.11** Insurance for maritime liability risks associated with the operation of a vessel, if the Work requires such activities, with policy limits of not less than            (\$            ) per claim and            (\$            ) in the aggregate.

**§ A.3.2.12** Insurance for the use or operation of manned or unmanned aircraft, if the Work requires such activities, with policy

limits of not less than [ ] (\$ [ ]) per claim and [ ] (\$ [ ]) in the aggregate.

§ A.3.3 Contractor’s Other Insurance Coverage

§ A.3.3.1 Insurance selected and described in this Section A.3.3 shall be purchased from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located. The Contractor shall maintain the required insurance until the expiration of the period for correction of Work as set forth in Section 12.2.2 of the General Conditions, unless a different duration is stated below:

(If the Contractor is required to maintain any of the types of insurance selected below for a duration other than the expiration of the period for correction of Work, state the duration.)

[ ]

§ A.3.3.2 The Contractor shall purchase and maintain the following types and limits of insurance in accordance with Section A.3.3.1.

(Select the types of insurance the Contractor is required to purchase and maintain by placing an X in the box(es) next to the description(s) of selected insurance. Where policy limits are provided, include the policy limit in the appropriate fill point.)

- [ ] § A.3.3.2.1 Property insurance of the same type and scope satisfying the requirements identified in Section A.2.3, which, if selected in this section A.3.3.2.1, relieves the Owner of the responsibility to purchase and maintain such insurance except insurance required by Section A.2.3.1.3 and Section A.2.3.3. The Contractor shall comply with all obligations of the Owner under Section A.2.3 except to the extent provided below. The Contractor shall disclose to the Owner the amount of any deductible, and the Owner shall be responsible for losses within the deductible. Upon request, the Contractor shall provide the Owner with a copy of the property insurance policy or policies required. The Owner shall adjust and settle the loss with the insurer and be the trustee of the proceeds of the property insurance in accordance with Article 11 of the General Conditions unless otherwise set forth below:

(Where the Contractor’s obligation to provide property insurance differs from the Owner’s obligations as described under Section A.2.3, indicate such differences in the space below. Additionally, if a party other than the Owner will be responsible for adjusting and settling a loss with the insurer and acting as the trustee of the proceeds of property insurance in accordance with Article 11 of the General Conditions, indicate the responsible party below.)

[ ]

- [ ] § A.3.3.2.2 Railroad Protective Liability Insurance, with policy limits of not less than [ ] (\$ [ ]) per claim and [ ] (\$ [ ]) in the aggregate, for Work within fifty (50) feet of railroad property.

- [ ] § A.3.3.2.3 Asbestos Abatement Liability Insurance, with policy limits of not less than [ ] (\$ [ ]) per claim and [ ] (\$ [ ]) in the aggregate, for liability arising from the encapsulation, removal, handling, storage, transportation, and disposal of asbestos-containing materials.

- [ ] § A.3.3.2.4 Insurance for physical damage to property while it is in storage and in transit to the construction site on an “all-risks” completed value form.

- [ ] § A.3.3.2.5 Property insurance on an “all-risks” completed value form, covering property owned by the Contractor and used on the Project, including scaffolding and other equipment.

- [ ] § A.3.3.2.6 Other Insurance  
(List below any other insurance coverage to be provided by the Contractor and any applicable limits.)

| Coverage | Limits |
|----------|--------|
| [ ]      |        |

§ A.3.4 Performance Bond and Payment Bond

The Contractor shall provide surety bonds, from a company or companies lawfully authorized to issue surety bonds in the

jurisdiction where the Project is located, as follows:  
(Specify type and penal sum of bonds.)

| Type             | Penal Sum (\$0.00) |
|------------------|--------------------|
| Payment Bond     |                    |
| Performance Bond |                    |

Payment and Performance Bonds shall be AIA Document A312™, Payment Bond and Performance Bond, or contain provisions identical to AIA Document A312™, current as of the date of this Agreement.

ARTICLE A.4 SPECIAL TERMS AND CONDITIONS

Special terms and conditions that modify this Insurance and Bonds Exhibit, if any, are as follows:



## **GENERAL TERMS AND CONDITIONS**

**1. CONTRACTUAL AGREEMENT:** Issuance of an Award Document signed by the City of Charleston, WV constitutes acceptance by the City of this Contract made by and between the City of Charleston and the Vendor. Vendor's signature on its bid, or on the Contract if the Contract is not the result of a bid solicitation, signifies Vendor's agreement to be bound by and accept the terms and conditions contained in this Contract.

**2. DEFINITIONS:** As used in this Solicitation/Contract, the following terms shall have the meanings attributed to them below. Additional definitions may be found in the specifications included with this Solicitation/Contract.

**2.1. "City"** means the City of Charleston, WV that is identified on the first page of the Solicitation seeking to procure goods or services under this Contract.

**2.2. "Bid" or "Proposal"** means the vendors submitted response to this solicitation.

**2.3. "Contract"** means the binding agreement that is entered into between the City and the Vendor to provide the goods or services requested in the Solicitation.

**2.4. "Solicitation"** means the official notice of an opportunity to supply the City with goods or services that is published by the City.

**2.5. "Vendor" or "Vendors"** means any entity submitting a bid in response to the Solicitation, the entity that has been selected as the lowest responsible bidder, or the entity that has been awarded the Contract as context requires.

**3. CONTRACT TERM; RENEWAL; EXTENSION:** The term of this Contract shall be determined in accordance with the category that has been identified as applicable to this Contract below:

[ X ] Construction/Project: This Contract becomes effective on the effective start date and continues until the project for which the vendor is awarded is complete, with all specific timeframes set forth in the AIA documents incorporated herewith.

**4. AUTHORITY TO PROCEED:** Vendor is authorized to begin performance of this contract upon the date of the Notice to Proceed signed by the City Manager, or their designee.

**5. QUANTITIES:** The quantities required under this Contract shall be determined in accordance with the category that has been identified as applicable to this Contract below.



☐ **Open End Contract:** Quantities listed in this Solicitation/Award Document are approximations only, based on estimates supplied by the City. It is understood and agreed that the Contract shall cover the quantities actually ordered for delivery during the term of the Contract, whether more or less than the quantities shown.

☐ **Service:** The scope of the service to be provided will be more clearly defined in the specifications included herewith.

☐ **Combined Service and Goods:** The scope of the service and deliverable goods to be provided will be more clearly defined in the specifications included herewith.

☐ **One-Time Purchase:** This Contract is for the purchase of a set quantity of goods that are identified in the specifications included herewith. Once those items have been delivered, no additional goods may be procured under this Contract without an appropriate change order approved by the Vendor and City.

☒ **Construction:** This Contract is for construction activity more fully defined in the specifications.

**6. EMERGENCY PURCHASES:** The City may authorize a purchase of goods or services in the open market that Vendor would otherwise provide under this Contract if those goods or services are for immediate or expedited delivery in an emergency. Emergencies shall include, but are not limited to, delays in transportation or an unanticipated increase in the volume of work. An emergency purchase in the open market, approved by the City, shall not constitute a breach of this Contract and shall not entitle the Vendor to any form of compensation or damages. This provision does not excuse the City from fulfilling its obligations under a One-Time Purchase contract.

**7. REQUIRED DOCUMENTS:** In addition to any requirements under the Section of the General Terms and Conditions entitled Licensing, the apparent successful Vendor shall furnish proof of the following licenses, certifications, and/or permits upon request and in a form acceptable to the City. The request may be prior to or after contract award at the City's sole discretion. All of the items checked in this section must be provided to the City by the Vendor as specified:

☐ **LICENSE(S) :**

☐ **CERTIFICATION (S)**

☐ **PERMIT(S)**





☒ The apparent successful Vendor shall also furnish proof of any additional licenses or certifications contained in the specifications regardless of whether or not that requirement is listed above.

**8. INSURANCE:** The apparent successful Vendor shall furnish proof of the insurance identified by a checkmark below prior to Contract award. The insurance coverages identified below must be maintained throughout the life of this contract. Thirty (30) days prior to the expiration of the insurance policies, Vendor shall provide the City with proof that the insurance mandated herein has been continued. Vendor must also provide the City with immediate notice of any changes in its insurance policies, including but not limited to, policy cancelation, policy reduction, or change in insurers. The apparent successful Vendor shall also furnish proof of any additional insurance requirements contained in the specifications prior to Contract award regardless of whether that insurance requirement is listed in this section. Vendor must maintain all coverages and limits as set forth in the AIA documents incorporated herewith.

**9. WORKERS' COMPENSATION INSURANCE:** Vendor shall comply with laws relating to workers compensation, shall maintain workers' compensation insurance when required, and shall furnish proof of workers' compensation insurance upon request.

**10. LIQUIDATED DAMAGES:** This clause shall in no way be considered exclusive and shall not limit the City's right to pursue any other available remedy. Vendor shall pay liquidated damages in the amount specified below or as described in the specifications:

☐ \_\_\_\_\_ for \_\_\_\_\_.

☒ Liquidated Damages Contained in the Specifications.

☐ Liquidated Damages Are Not Included in this Contract.

**10. ACCEPTANCE:** Vendor's signature on its bid, or on the certification and signature page, constitutes an offer to the City that cannot be unilaterally withdrawn, signifies that the product or service proposed by vendor meets the mandatory requirements contained in the Solicitation for that product or service, unless otherwise indicated, and signifies acceptance of the terms and conditions contained in the Solicitation unless otherwise indicated.

**11. PRICING:** The pricing set forth herein is firm for the life of the Contract, unless specified elsewhere within this Solicitation/Contract by the City. A Vendor's inclusion of price adjustment provisions in its bid, without an express authorization from the City in the





Solicitation to do so, may result in bid disqualification. Notwithstanding the foregoing, Vendor must extend any publicly advertised sale price to the City and invoice at the lower of the contract price or the publicly advertised sale price.

**12. PAYMENT IN ARREARS:** Payments for goods/services will be made in arrears only upon receipt of a proper invoice, detailing the goods/services provided or receipt of the goods/services, whichever is later. Notwithstanding the foregoing, payments for software licenses, subscriptions, or maintenance may be paid monthly or annually in advance.

**13. TAXES:** The Vendor shall pay any applicable sales, use, personal property or any other taxes arising out of this Contract and the transactions contemplated thereby. The City is exempt from federal and state taxes and will not pay or reimburse such taxes.

**14. ADDITIONAL FEES, INTEREST:** Vendor is not permitted to charge additional fees or assess additional charges that were not either expressly provided for in the solicitation published by the City, included in the Contract, or included in the unit price or lump sum bid amount that Vendor is required by the solicitation to provide. Including such fees or charges as notes to the solicitation may result in rejection of vendor's bid. Requesting such fees or charges be paid after the contract has been awarded may result in cancellation of the contract.

**15. CANCELLATION:** The City reserves the right to cancel this Contract immediately upon written notice to the vendor if the materials or workmanship supplied do not conform to the specifications contained in the Contract.

**16. TIME:** Time is of the essence regarding all matters of time and performance in this Contract.

**17. COMPLIANCE WITH LAWS:** Vendor shall comply with all applicable federal, state, and local laws, regulations and ordinances. By submitting a bid, Vendor acknowledges that it has reviewed, understands, and will comply with all applicable laws, regulations, and ordinances.

**17.1 SUBCONTRACTOR COMPLIANCE:** Vendor shall notify all subcontractors providing commodities or services related to this Contract that as subcontractors, they too are required to comply with all applicable laws, regulations, and ordinances. Notification under this provision must occur prior to the performance of any work under the contract by the subcontractor.



**18. DISPUTE RESOLUTION, JURISDICTION AND VENUE:** Any references to arbitration contained in the Agreement are hereby deleted, as is any requirement to waive a jury trial. If any breach, default, or other dispute arises out of this Agreement, the Parties agree that they will exercise good faith and commercially reasonable efforts to resolve said breach, default or other dispute through negotiation and/or mediation. If the parties cannot resolve the matter without litigation, the Parties acknowledge and agree that either the Circuit Court of Kanawha County, West Virginia or the Federal District Court for the Southern District of West Virginia shall have exclusive jurisdiction to resolve the breach, default or other dispute giving rise to the litigation. Any language requiring or permitting disputes under the Agreement to be resolved in any other court is deleted. Vendor acknowledges and agrees that resolution agreements reached through consultation and negotiation, or any other form of dispute resolution, may be subject to approval by City's governing body during a public meeting.

**19. MODIFICATIONS:** This writing is the parties' final expression of intent. Notwithstanding anything contained in this Contract to the contrary no modification of this Contract shall be binding without mutual written consent of the City and the Vendor. Any change to existing contracts that add to work or changes in contract cost, and were not included in the original contract, must be approved by the City.

**20. WAIVER:** The failure of either party to insist upon a strict performance of any of the terms or provision of this Contract, or to exercise any option, right, or remedy herein contained, shall not be construed as a waiver or a relinquishment for the future of such term, provision, option, right, or remedy, but the same shall continue in full force and effect. Any waiver must be expressly stated in writing and signed by the waiving party.

**21. SUBSEQUENT FORMS:** The terms and conditions contained in this Contract shall supersede all subsequent terms and conditions which may appear on any form documents submitted by Vendor to the City such as price lists, order forms, invoices, sales agreements, or maintenance agreements, and includes internet websites or other electronic documents. Acceptance or use of Vendor's forms does not constitute acceptance of the terms and conditions contained thereon.

**22. ASSIGNMENT:** Neither this Contract nor any monies due, or to become due hereunder, may be assigned by the Vendor without the express written consent of the City.

**23. WARRANTY:** The Vendor expressly warrants that the goods and/or services covered by this Contract will: (a) conform to the specifications, drawings, samples, or other



description furnished or specified by the Agency; (b) be merchantable and fit for the purpose intended; and (c) be free from defect in material and workmanship.

**24. CITY EMPLOYEES:** City employees are not permitted to utilize this Contract for personal use and the Vendor is prohibited from permitting or facilitating the same.

**25. PRIVACY, SECURITY, AND CONFIDENTIALITY:** The Vendor agrees that it will not disclose to anyone, directly or indirectly, any such personally identifiable information or other confidential information gained from the City, unless the individual who is the subject of the information consents to the disclosure in writing or the disclosure is made pursuant to the City's policies, procedures, and rules.

**26. YOUR SUBMISSION IS A PUBLIC DOCUMENT:** Vendor's entire response to the Solicitation and the resulting Contract are public documents. As public documents, they will be disclosed to the public following the bid/proposal opening or award of the contract, as required by the Freedom of Information Act West Virginia Code §§ 29B-1-1 et seq. DO NOT SUBMIT MATERIAL YOU CONSIDER TO BE CONFIDENTIAL, A TRADE SECRET, OR OTHERWISE NOT SUBJECT TO PUBLIC DISCLOSURE. Submission of any bid, proposal, or other document to the City constitutes your explicit consent to the subsequent public disclosure of the bid, proposal, or document. The City will disclose any document labeled "confidential," "proprietary," "trade secret," "private," or labeled with any other claim against public disclosure of the documents, to include any "trade secrets" as defined by West Virginia Code § 47-22-1 et seq. All submissions are subject to public disclosure without notice.

**27. LICENSING:** In accordance with West Virginia Code of State Rules § 148-1-6.1.e, Vendor must be licensed and in good standing in accordance with any and all state and local laws and requirements by any state or local agency of West Virginia, including, but not limited to, the West Virginia Secretary of State's Office, the West Virginia Tax Department, West Virginia Insurance Commission, or any other state agency or political subdivision. Obligations related to political subdivisions may include, but are not limited to, business licensing, business and occupation taxes, inspection compliance, permitting, etc. Upon request, the Vendor must provide all necessary releases to obtain information to enable the City to verify that the Vendor is licensed and in good standing with the above entities.

**27.1 SUBCONTRACTOR COMPLIANCE:** Vendor shall notify all subcontractors providing commodities or services related to this Contract that as subcontractors, they too are required to be licensed, in good standing, and up to date on all state and local obligations as described in this section. Obligations related to political



subdivisions may include, but are not limited to, business licensing, business and occupation taxes, inspection compliance, permitting, etc. Notification under this provision must occur prior to the performance of any work under the contract by the subcontractor.

**28. ANTITRUST:** In submitting a bid to, signing a contract with, or accepting an Award Document from the City, the Vendor agrees to convey, sell, assign, or transfer to the City all rights, title, and interest in and to all causes of action it may now or hereafter acquire under the antitrust laws of the United States and the State of West Virginia for price fixing and/or unreasonable restraints of trade relating to the particular commodities or services purchased or acquired by the City. Such an assignment shall be made and become effective at the time the City tenders the initial payment to Vendor.

**29. VENDOR NON-CONFLICT:** Neither Vendor nor its representatives are permitted to have any interest, nor shall they acquire any interest, direct or indirect, which would compromise the performance of its services hereunder. Any such interests shall be promptly presented in detail to the City.

**30. VENDOR RELATIONSHIP:** The relationship of the Vendor to the City shall be that of an independent contractor and no principal-agent relationship or employer-employee relationship is contemplated or created by this Contract. The Vendor as an independent contractor is solely liable for the acts and omissions of its employees and agents. Vendor shall be responsible for selecting, supervising, and compensating any and all individuals employed pursuant to the terms of this Solicitation and resulting contract. Neither the Vendor, nor any employees or subcontractors of the Vendor, shall be deemed to be employees of the City for any purpose whatsoever. Vendor shall be exclusively responsible for payment of employees and contractors for all wages and salaries, taxes, withholding payments, penalties, fees, fringe benefits, professional liability insurance premiums, contributions to insurance and pension, or other deferred compensation plans, including but not limited to, Workers' Compensation and Social Security obligations, licensing fees, etc. and the filing of all necessary documents, forms, and returns pertinent to all of the foregoing. Vendor shall hold harmless the City and shall provide the City with a defense against any and all claims including, but not limited to, the foregoing payments, withholdings, contributions, taxes, Social Security taxes, and employer income tax returns.

**31. INDEMNIFICATION:** The Vendor agrees to indemnify, defend, and hold harmless the City, their officers, and employees from and against: (1) Any claims or losses for services rendered by any subcontractor, person, or firm performing or supplying services, materials,



or supplies in connection with the performance of the Contract; (2) Any claims or losses resulting to any person or entity injured or damaged by the Vendor, its officers, employees, or subcontractors by the publication, translation, reproduction, delivery, performance, use, or disposition of any data used under the Contract in a manner not authorized by the Contract, or by Federal or State statutes or regulations; and (3) Any failure of the Vendor, its officers, employees, or subcontractors to observe Local, State and Federal laws including, but not limited to, labor and wage and hour laws.

**32. NO DEBT CERTIFICATION:** The City is prohibited from awarding a contract to any bidder that owes a debt to the City. By submitting a bid, or entering into a contract with the City, Vendor is affirming that (1) for construction contracts, the Vendor is not in default on any monetary obligation owed to the City (2) for all other contracts, neither the Vendor nor any related party owe a debt as defined above, and neither the Vendor nor any related party are in employer default as defined in the statute cited above unless the debt or employer default is permitted under the statute.

**33. CONFLICT OF INTEREST:** Vendor, its officers or members or employees, shall not presently have or acquire an interest, direct or indirect, which would conflict with or compromise the performance of its obligations hereunder. Vendor shall periodically inquire of its officers, members and employees to ensure that a conflict of interest does not arise. Any conflict of interest discovered shall be promptly presented in detail to the City.

**34. REPORTS:** Vendor shall provide the City with the following reports identified by a checked box below:

☒ [ x ] Such reports as the City may request.

☐ [ ] Quarterly reports detailing the total quantity of purchases in units and dollars, along with a listing of purchases by agency.

**35. PROHIBITION AGAINST USED OR REFURBISHED:** Unless expressly permitted in the solicitation published by the City, Vendor must provide new, unused commodities, and is prohibited from supplying used or refurbished commodities, in fulfilling its responsibilities under this Contract.

**36. GOVERNING LAW:** The Agreement shall be deemed to be executed in the City of Charleston, State of West Virginia, and shall be governed by the laws of the City of Charleston and State of West Virginia. This provision replaces any references to any other State's governing law.



**37. CONTRACTOR'S LICENSE:** As of June 15, 2021, West Virginia Code § 21-11-2, and § 30-42-2, requires that all people desiring to perform contracting work in this state be licensed. The West Virginia Contractors Licensing Board is empowered to issue the contractor's license. Applications for a contractor's license may be made by contacting the West Virginia Contractor Licensing Board. The apparent successful Vendor must furnish a copy of its contractor's license prior to the issuance of a contract award document.

**38. BONDS:** The following bonds must be submitted:

☒ **BID BOND:** Pursuant to the requirements contained in W. Va. Code § 5-22-1(c), All Vendors submitting a bid on a construction project shall furnish a valid bid bond in the amount of five percent (5%) of the total amount of the bid protecting the City of Charleston. **THE BID BOND MUST BE SUBMITTED WITH THE BID OR VENDOR'S BID WILL BE DISQUALIFIED.**

☒ **PERFORMANCE BOND:** The apparent successful Vendor shall provide a performance bond in the amount of 100% of the contract. The performance bond must be received by the City prior to Contract award.

☒ **LABOR/MATERIAL PAYMENT BOND:** The apparent successful Vendor shall provide a labor/material payment bond in the amount of 100% of the Contract value. The labor/material payment bond must be delivered to the City prior to Contract award.

At a minimum, all construction projects require a bid bond, performance bond, and labor/material payment bond. Failure on the part of the City checkmark the required bonds above does not relieve the vendor from the legal requirement of providing these bonds. In lieu of the Bid Bond, the Vendor may provide certified checks or, cashier's checks. Any certified check or cashier's check in lieu of the bid bond must be of the same amount required of the Bid Bond and delivered with the bid.

**39. DRUG-FREE WORKPLACE AFFIDAVIT:** W. Va. Code § 21-1D-5 provides that any solicitation for a public improvement contract requires each Vendor that submits a bid for the work to submit an affidavit that the Vendor has a written plan for a drug-free workplace policy. If the affidavit is not submitted with the bid submission, the City shall promptly request by telephone and electronic mail that the low bidder and second low bidder provide the affidavit within one business day of the request. Failure to submit the affidavit within one business day of receiving the request shall result in disqualification of the bid. To comply with this law, Vendor should complete the enclosed drug-free workplace affidavit



and submit the same with its bid. Failure to submit the signed and notarized drugfree workplace affidavit or a similar affidavit that fully complies with the requirements of the applicable code, within one business day of being requested to do so shall result in disqualification of Vendor's bid. Pursuant to W. Va. Code 21-1D-2(b) and (k), this provision does not apply to public improvement contracts the value of which is \$100,000 or less or temporary or emergency repairs.

**39.1. DRUG-FREE WORKPLACE POLICY:** Pursuant to W. Va. Code § 21-1D-4, Vendor and its subcontractors must implement and maintain a written drug-free workplace policy that complies with said article. The awarding public authority shall cancel this contract if: (1) Vendor fails to implement and maintain a written drug-free workplace policy described in the preceding paragraph, (2) Vendor fails to provide information regarding implementation of its drug-free workplace policy at the request of the public authority; or (3) Vendor provides to the public authority false information regarding the contractor's drug-free workplace policy. Pursuant to W. Va. Code 21-1D-2(b) and (k), this provision does not apply to public improvement contracts the value of which is \$100,000 or less or temporary or emergency repairs.

**40. DRUG FREE WORKPLACE REPORT:** Pursuant to W. Va. Code § 21-1D-7b, no less than once per year, or upon completion of the project, every contractor shall provide a certified report to the public authority which let the contract.

**40.1 The report shall include:**

- (1) Information to show that the education and training service to the requirements of West Virginia Code § 21-1D-5 was provided
- (2) The name of the laboratory certified by the United States Department of Health and Human Services or its successor that performs the drug tests
- (3) The average number of employees in connection with the construction on the public improvement
- (4) Drug test results for the following categories including the number of positive tests and the number of negative tests
  - (A) Pre-employment and new hires
  - (B) Reasonable suspicion
  - (C) Postaccident





(D) Random.

Vendor should utilize the attached Certified Drug Free Workplace Report Coversheet when submitting the report required hereunder. Pursuant to W. Va. Code 21-1D-2(b) and (k), this provision does not apply to public improvement contracts the value of which is \$100,000 or less or temporary or emergency repairs.

**41. AIA DOCUMENTS:** All construction contracts that will be completed under W.Va. Code §5-22-1 in conjunction with architectural services procured under W.Va. Code §5G-1 will be governed by the attached AIA documents, as amended by the Supplementary Conditions for the State of West Virginia, in addition to the terms and conditions contained herein. The terms and conditions of this document shall prevail over anything contained in the AIA Documents or the Supplementary Conditions.

**42. PROHIBITION AGAINST GENERAL CONDITIONS:** Notwithstanding anything contained in the AIA Documents or the Supplementary Conditions, the City will not pay for general conditions, or winter conditions, or any other condition representing a delay in the contracts. The Vendor is expected to mitigate delay costs to the greatest extent possible and any costs associated with Delays must be specifically and concretely identified. The City will not consider an average daily rate multiplied by the number of days extended to be an acceptable charge.

**43. SUBCONTRACTOR LIST SUBMISSION:** In accordance with W. Va. Code § 5-22-1, the apparent low bidder on a contract valued at more than \$250,000.00 for the construction, alteration, decoration, painting or improvement of a new or existing building or structure shall submit a list of all subcontractors who will perform more than \$25,000.00 of work on the project including labor and materials. (This section does not apply to any other construction projects, such as highway, mine reclamation, water or sewer projects.) The subcontractor list shall be provided to the City within one business day of the opening of bids for review. If the apparent low bidder fails to submit the subcontractor list, the City shall promptly request by telephone and electronic mail that the low bidder and second low bidder provide the subcontractor list within one business day of the request. Failure to submit the subcontractor list within one business day of receiving the request shall result in disqualification of the bid. If no subcontractors who will perform more than \$25,000.00 of work are to be used to complete the project, the apparent low bidder must make this clear on the subcontractor list, in the bid itself, or in response to the City's request for the subcontractor list.





**43.1 Required Information.** The subcontractor list must contain the following information:

1. Bidder's name
2. Name of each subcontractor performing more than \$25,000 of work on the project.
3. The license number of each subcontractor, as required by W. Va. Code § 21-11- 1 et. seq.
4. If applicable, a notation that no subcontractor will be used to perform more than \$25,000.00 of work. (This item is not required if the vendor makes this clear in the bid itself or in documentation following the request for the subcontractor list.)

**43.2. Subcontractor List Submission Form:** The subcontractor list may be submitted in any form, as long as the required information noted above is included. If any information is missing from the bidder's subcontractor list submission, it may be obtained from other documents such as bids, emails, letters, etc. that accompany the subcontractor list submission.

**43.3. Substitution of Subcontractor:** Written approval must be obtained from the City before any subcontractor substitution is permitted.

**43.3.1** Substitutions are not permitted unless:

1. The subcontractor listed in the original bid has filed for bankruptcy;
2. The subcontractor in the original bid has been debarred or suspended
3. The contractor certifies in writing that the subcontractor listed in the original bid fails, is unable, or refuses to perform his subcontract.

# AIA® Document A201® – 2017

## General Conditions of the Contract for Construction

for the following PROJECT:

(Name and location or address)

The City of Charleston

2025 Garage Repairs

THE OWNER:

(Name, legal status and address)

THE ARCHITECT:

(Name, legal status and address)

THP Limited, Inc.

221 E. 4<sup>th</sup> Street, Suite 1150

Cincinnati, OH 45202

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### ADDITIONS AND DELETIONS:

The author of this document may have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes revisions to the standard form text is available from the author and should be reviewed. A vertical line in the left margin of this document indicates where the author has added to or deleted from the original AIA text.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

For guidance in modifying this document to include supplementary conditions, see AIA Document A503™–2017, Guide for Supplementary Conditions.

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## **ARTICLE 1 GENERAL PROVISIONS**

### **§ 1.1 Basic Definitions**

#### **§ 1.1.1 The Contract Documents**

The Contract Documents are enumerated in the Agreement between the Owner and Contractor (hereinafter the Agreement) and consist of the Agreement, Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications, Addenda issued prior to execution of the Contract, other documents listed in the Agreement, and Modifications issued after execution of the Contract. A Modification is (1) a written amendment to the Contract signed by both parties, (2) a Change Order, (3) a Construction Change Directive, or (4) a written order for a minor change in the Work issued by the Architect. Unless specifically enumerated in the Agreement, the Contract Documents do not include the advertisement or invitation to bid, Instructions to Bidders, sample forms, other information furnished by the Owner in anticipation of receiving bids or proposals, the Contractor's bid or proposal, or portions of Addenda relating to bidding or proposal requirements.

Section 004100 is herein incorporated as a part of the Contract Documents.

#### **§ 1.1.2 The Contract**

The Contract Documents form the Contract for Construction. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations, or agreements, either written or oral. The Contract may be amended or modified only by a Modification. The Contract Documents shall not be construed to create a contractual relationship of any kind (1) between the Contractor and the Architect or the Architect's consultants, (2) between the Owner and a Subcontractor or a Sub-subcontractor, (3) between the Owner and the Architect or the Architect's consultants, or (4) between any persons or entities other than the Owner and the Contractor. The Architect shall, however, be entitled to performance and enforcement of obligations under the Contract intended to facilitate performance of the Architect's duties.

#### **§ 1.1.3 The Work**

The term "Work" means the construction and services required by the Contract Documents, whether completed or partially completed, and includes all other labor, materials, equipment, and services provided or to be provided by the Contractor to fulfill the Contractor's obligations. The Work may constitute the whole or a part of the Project.

#### **§ 1.1.4 The Project**

The Project is the total construction of which the Work performed under the Contract Documents may be the whole or a part and which may include construction by the Owner and by Separate Contractors.

#### **§ 1.1.5 The Drawings**

The Drawings are the graphic and pictorial portions of the Contract Documents showing the design, location and dimensions of the Work, generally including plans, elevations, sections, details, schedules, and diagrams.

#### **§ 1.1.6 The Specifications**

The Specifications are that portion of the Contract Documents consisting of the written requirements for materials, equipment, systems, standards and workmanship for the Work, and performance of related services.

#### **§ 1.1.7 Instruments of Service**

Instruments of Service are representations, in any medium of expression now known or later developed, of the tangible and intangible creative work performed by the Architect and the Architect's consultants under their respective professional services agreements. Instruments of Service may include, without limitation, studies, surveys, models, sketches, drawings, specifications, and other similar materials.

#### **§ 1.1.8 Initial Decision Maker**

The Initial Decision Maker is the person identified in the Agreement to render initial decisions on Claims in accordance with Section 15.2. The Initial Decision Maker shall not show partiality to the Owner or Contractor and shall not be liable for results of interpretations or decisions rendered in good faith.

#### **§ 1.1.9 The Architect**

Where the term "Architect" is found it shall mean "Architect/Engineer" throughout AIA Document A201.

§ 1.1.10 "Provide" shall mean furnishing of all labor, products, transportation, and services for the Work.

§ 1.1.11 "Product" shall mean material, systems, and equipment.

## **§ 1.2 Correlation and Intent of the Contract Documents**

§ 1.2.1 The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by the Contractor. The Contract Documents are complementary, and what is required by one shall be as binding as if required by all; performance by the Contractor shall be required only to the extent consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the indicated results. The Work shall conform to the requirements of all the Contract Documents. Should conflicts be found between Drawings, between Specifications, or between Drawings and Specifications, the costliest material, method or detail shall be included in the Contract. Large scale Drawings take precedence over smaller scale Drawings which they are intended to amplify.

§ 1.2.1.1 The invalidity of any provision of the Contract Documents shall not invalidate the Contract or its remaining provisions. If it is determined that any provision of the Contract Documents violates any law, or is otherwise invalid or unenforceable, then that provision shall be revised to the extent necessary to make that provision legal and enforceable. In such case the Contract Documents shall be construed, to the fullest extent permitted by law, to give effect to the parties' intentions and purposes in executing the Contract.

§ 1.2.2 Organization of the Specifications into divisions, sections and articles, and arrangement of Drawings shall not control the Contractor in dividing the Work among Subcontractors or in establishing the extent of Work to be performed by any trade.

§ 1.2.3 Unless otherwise stated in the Contract Documents, words that have well-known technical or construction industry meanings are used in the Contract Documents in accordance with such recognized meanings.

§ 1.2.4 The Sections of Division 01 - General Requirements, govern the execution of the work of all Sections of the specifications and shall apply with equal force to Contractor, subcontractor's work, extra work, and similar work which may be specified herein or performed in or about the building or site under this Contract.

## **§ 1.3 Capitalization**

Terms capitalized in these General Conditions include those that are (1) specifically defined, (2) the titles of numbered articles, or (3) the titles of other documents published by the American Institute of Architects.

## **§ 1.4 Interpretation**

In the interest of brevity the Contract Documents frequently omit modifying words such as "all" and "any" and articles such as "the" and "an," but the fact that a modifier or an article is absent from one statement and appears in another is not intended to affect the interpretation of either statement. The Contract Documents may be written in condensed form and without the use of a grammatical sentence structure.

## **§ 1.5 Ownership and Use of Drawings, Specifications, and Other Instruments of Service**

§ 1.5.1 The Architect and the Architect's consultants shall be deemed the authors and owners of their respective Instruments of Service, including the Drawings and Specifications, and retain all common law, statutory, and other reserved rights in their Instruments of Service, including copyrights. The Contractor, Subcontractors, Sub-subcontractors, and suppliers shall not own or claim a copyright in the Instruments of Service. Submittal or distribution to meet official regulatory requirements or for other purposes in connection with the Project is not to be construed as publication in derogation of the Architect's or Architect's consultants' reserved rights.

§ 1.5.2 The Contractor, Subcontractors, Sub-subcontractors, and suppliers are authorized to use and reproduce the Instruments of Service provided to them, subject to any protocols established pursuant to Sections 1.7 and 1.8, solely and exclusively for execution of the Work. All copies made under this authorization shall bear the copyright notice, if any, shown on the Instruments of Service. The Contractor, Subcontractors, Sub-subcontractors, and suppliers may not use the Instruments of Service on other projects or for additions to the Project outside the scope of the Work without the specific written consent of the Owner, Architect, and the Architect's consultants.

## **§ 1.6 Notice**

**§ 1.6.1** Except as otherwise provided in Section 1.6.2, where the Contract Documents require one party to notify or give notice to the other party, such notice shall be provided in writing to the designated representative of the party to whom the notice is addressed and shall be deemed to have been duly served if delivered in person, by mail, by courier, or by electronic transmission if a method for electronic transmission is set forth in the Agreement.

**§ 1.6.2** Notice of Claims as provided in Section 15.1.3 shall be provided in writing and shall be deemed to have been duly served only if delivered to the designated representative of the party to whom the notice is addressed by certified or registered mail, or by courier providing proof of delivery.

## **§ 1.7 Digital Data Use and Transmission**

The parties shall agree upon written protocols governing the transmission and use of, and reliance on, Instruments of Service or any other information or documentation in digital form.

## **§ 1.8 Building Information Models Use and Reliance**

Any use of, or reliance on, all or a portion of a building information model without agreement to written protocols governing the use of, and reliance on, the information contained in the model shall be at the using or relying party's sole risk and without liability to the other party and its contractors or consultants, the authors of, or contributors to, the building information model, and each of their agents and employees.

# **ARTICLE 2 OWNER**

## **§ 2.1 General**

**§ 2.1.1** The Owner is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Owner shall designate in writing a representative who shall have express authority to bind the Owner with respect to all matters requiring the Owner's approval or authorization. Except as otherwise provided in Section 4.2.1, the Architect does not have such authority. The term "Owner" means the Owner or the Owner's authorized representative.

**§ 2.1.2** The Owner shall furnish to the Contractor, within fifteen days after receipt of a written request, information necessary and relevant for the Contractor to evaluate, give notice of, or enforce mechanic's lien rights. Such information shall include a correct statement of the record legal title to the property on which the Project is located, usually referred to as the site, and the Owner's interest therein.

## **§ 2.2 Evidence of the Owner's Financial Arrangements**

**§ 2.2.1** Prior to commencement of the Work and upon written request by the Contractor, the Owner shall furnish to the Contractor reasonable evidence that the Owner has made financial arrangements to fulfill the Owner's obligations under the Contract. The Contractor shall have no obligation to commence the Work until the Owner provides such evidence. If commencement of the Work is delayed under this Section 2.2.1, the Contract Time shall be extended appropriately.

**§ 2.2.2** Following commencement of the Work and upon written request by the Contractor, the Owner shall furnish to the Contractor reasonable evidence that the Owner has made financial arrangements to fulfill the Owner's obligations under the Contract only if (1) the Owner fails to make payments to the Contractor as the Contract Documents require; (2) the Contractor identifies in writing a reasonable concern regarding the Owner's ability to make payment when due; or (3) a change in the Work materially changes the Contract Sum. If the Owner fails to provide such evidence, as required, within fourteen days of the Contractor's request, the Contractor may immediately stop the Work and, in that event, shall notify the Owner that the Work has stopped. However, if the request is made because a change in the Work materially changes the Contract Sum under (3) above, the Contractor may immediately stop only that portion of the Work affected by the change until reasonable evidence is provided. If the Work is stopped under this Section 2.2.2, the Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable costs of shutdown, delay and start-up, plus interest as provided in the Contract Documents.

**§ 2.2.3** After the Owner furnishes evidence of financial arrangements under this Section 2.2, the Owner shall not materially vary such financial arrangements without prior notice to the Contractor.

**§ 2.2.4** Where the Owner has designated information furnished under this Section 2.2 as "confidential," the Contractor shall

keep the information confidential and shall not disclose it to any other person. However, the Contractor may disclose “confidential” information, after seven (7) days’ notice to the Owner, where disclosure is required by law, including a subpoena or other form of compulsory legal process issued by a court or governmental entity, or by court or arbitrator(s) order. The Contractor may also disclose “confidential” information to its employees, consultants, sureties, Subcontractors and their employees, Sub-subcontractors, and others who need to know the content of such information solely and exclusively for the Project and who agree to maintain the confidentiality of such information.

### **§ 2.3 Information and Services Required of the Owner**

**§ 2.3.1** Except for permits and fees that are the responsibility of the Contractor under the Contract Documents, including those required under Section 3.7.1, the Owner shall secure and pay for necessary approvals, easements, assessments and charges required for construction, use or occupancy of permanent structures or for permanent changes in existing facilities.

**§ 2.3.2** The Owner shall retain an architect lawfully licensed to practice architecture, or an entity lawfully practicing architecture, in the jurisdiction where the Project is located. That person or entity is identified as the Architect in the Agreement and is referred to throughout the Contract Documents as if singular in number.

**§ 2.3.3** If the employment of the Architect terminates, the Owner shall employ a successor to whom the Contractor has no reasonable objection and whose status under the Contract Documents shall be that of the Architect.

**§ 2.3.4** The Owner shall furnish surveys describing physical characteristics, legal limitations and utility locations for the site of the Project, and a legal description of the site. The Contractor shall be entitled to rely on the accuracy of information furnished by the Owner but shall exercise proper precautions relating to the safe performance of the Work.

**§ 2.3.5** The Owner shall furnish information or services required of the Owner by the Contract Documents with reasonable promptness. The Owner shall also furnish any other information or services under the Owner’s control and relevant to the Contractor’s performance of the Work with reasonable promptness after receiving the Contractor’s written request for such information or services.

**§ 2.3.6** Unless otherwise provided in the Contract Documents, the Owner shall furnish to the Contractor one copy of the Contract Documents for purposes of making reproductions pursuant to Section 1.5.2.

### **§ 2.4 Owner’s Right to Stop the Work**

If the Contractor fails to correct Work that is not in accordance with the requirements of the Contract Documents as required by Section 12.2 or repeatedly fails to carry out Work in accordance with the Contract Documents, the Owner may issue a written order to the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, the right of the Owner to stop the Work shall not give rise to a duty on the part of the Owner to exercise this right for the benefit of the Contractor or any other person or entity, except to the extent required by Section 6.1.3.

### **§ 2.5 Owner’s Right to Carry Out the Work**

If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within a ten-day period after receipt of notice from the Owner to commence and continue correction of such default or neglect with diligence and promptness, the Owner may, without prejudice to other remedies the Owner may have, correct such default or neglect. Such action by the Owner and amounts charged to the Contractor are both subject to prior approval of the Architect and the Architect may, pursuant to Section 9.5.1, withhold or nullify a Certificate for Payment in whole or in part, to the extent reasonably necessary to reimburse the Owner for the reasonable cost of correcting such deficiencies, including Owner’s expenses and compensation for the Architect’s additional services made necessary by such default, neglect, or failure. If current and future payments are not sufficient to cover such amounts, the Contractor shall pay the difference to the Owner. If the Contractor disagrees with the actions of the Owner or the Architect, or the amounts claimed as costs to the Owner, the Contractor may file a Claim pursuant to Article 15.

## **ARTICLE 3 CONTRACTOR**

### **§ 3.1 General**

**§ 3.1.1** The Contractor is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Contractor shall be lawfully licensed, if required in the jurisdiction where the Project is located. The Contractor shall designate in writing a representative who shall have express authority to bind the Contractor

with respect to all matters under this Contract. The term “Contractor” means the Contractor or the Contractor’s authorized representative.

**§ 3.1.2** The Contractor shall perform the Work in accordance with the Contract Documents.

**§ 3.1.3** The Contractor shall not be relieved of its obligations to perform the Work in accordance with the Contract Documents either by activities or duties of the Architect in the Architect’s administration of the Contract, or by tests, inspections or approvals required or performed by persons or entities other than the Contractor.

### **§ 3.2 Review of Contract Documents and Field Conditions by Contractor**

**§ 3.2.1** Execution of the Contract by the Contractor is a representation that the Contractor has visited the site, become generally familiar with local conditions under which the Work is to be performed, and correlated personal observations with requirements of the Contract Documents.

**§ 3.2.2** Because the Contract Documents are complementary, the Contractor shall, before starting each portion of the Work, carefully study and compare the various Contract Documents relative to that portion of the Work, as well as the information furnished by the Owner pursuant to Section 2.3.4, shall take field measurements of any existing conditions related to that portion of the Work, and shall observe any conditions at the site affecting it. These obligations are for the purpose of facilitating coordination and construction by the Contractor and are not for the purpose of discovering errors, omissions, or inconsistencies in the Contract Documents; however, the Contractor shall promptly report to the Architect any errors, inconsistencies or omissions discovered by or made known to the Contractor as a request for information in such form as the Architect may require. It is recognized that the Contractor’s review is made in the Contractor’s capacity as a contractor and not as a licensed design professional, unless otherwise specifically provided in the Contract Documents.

**§ 3.2.3** The Contractor is not required to ascertain that the Contract Documents are in accordance with applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, but the Contractor shall promptly report to the Architect any nonconformity discovered by or made known to the Contractor as a request for information in such form as the Architect may require.

**§ 3.2.4** If the Contractor believes that additional cost or time is involved because of clarifications or instructions the Architect issues in response to the Contractor’s notices or requests for information pursuant to Sections 3.2.2 or 3.2.3, the Contractor shall submit Claims as provided in Article 15. If the Contractor fails to perform the obligations of Sections 3.2.2 or 3.2.3, the Contractor shall pay such costs and damages to the Owner, subject to Section 15.1.7, as would have been avoided if the Contractor had performed such obligations. If the Contractor performs those obligations, the Contractor shall not be liable to the Owner or Architect for damages resulting from errors, inconsistencies or omissions in the Contract Documents, for differences between field measurements or conditions and the Contract Documents, or for nonconformities of the Contract Documents to applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities.

**§ 3.2.5** Discrepancies between existing conditions and those represented by the Contract Drawings shall be immediately reported to the Architect/Engineer. Work affected by the discrepancy shall not proceed, except at the Contractor’s risk, until directed, in writing by the Architect/Engineer.

### **§ 3.3 Supervision and Construction Procedures**

**§ 3.3.1** The Contractor shall supervise and direct the Work, using the Contractor’s best skill and attention. The Contractor shall be solely responsible for, and have control over, construction means, methods, techniques, sequences, and procedures, and for coordinating all portions of the Work under the Contract. If the Contract Documents give specific instructions concerning construction means, methods, techniques, sequences, or procedures, the Contractor shall evaluate the jobsite safety thereof and shall be solely responsible for the jobsite safety of such means, methods, techniques, sequences, or procedures. If the Contractor determines that such means, methods, techniques, sequences or procedures may not be safe, the Contractor shall give timely notice to the Owner and Architect, and shall propose alternative means, methods, techniques, sequences, or procedures. The Architect shall evaluate the proposed alternative solely for conformance with the design intent for the completed construction. Unless the Architect objects to the Contractor’s proposed alternative, the Contractor shall perform the Work using its alternative means, methods, techniques, sequences, or procedures.

**§ 3.3.2** The Contractor shall be responsible to the Owner for acts and omissions of the Contractor’s employees, Subcontractors

and their agents and employees, and other persons or entities performing portions of the Work for, or on behalf of, the Contractor or any of its Subcontractors.

**§ 3.3.3** The Contractor shall be responsible for inspection of portions of Work already performed to determine that such portions are in proper condition to receive subsequent Work.

**§ 3.3.4** Where laws, codes, or standards require supervision or inspection of portions of the Work by an architect, engineer, or other competent or qualified person, it is the Contractor's responsibility to furnish such supervision and/or inspection to the satisfaction of the governing authority. Such requirements shall in no way be the responsibility of the Owner, Architect/Engineer, or their field representatives.

#### **§ 3.4 Labor and Materials**

**§ 3.4.1** Unless otherwise provided in the Contract Documents, the Contractor shall provide and pay for labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for proper execution and completion of the Work, whether temporary or permanent and whether or not incorporated or to be incorporated in the Work.

**§ 3.4.2** Except in the case of minor changes in the Work approved by the Architect in accordance with Section 3.12.8 or ordered by the Architect in accordance with Section 7.4, the Contractor may make substitutions only with the consent of the Owner, after evaluation by the Architect and in accordance with a Change Order or Construction Change Directive. Should the Contractor desire consideration for use of materials, equipment, etc., not named in the Specifications or shown on the Contract Drawings the Contractor may, at the time of bidding only, submit proposals for substitutions as provided in the Bid Form – Section 004100 and Substitution Request Form – Section 004325.

**§ 3.4.3** The Contractor shall enforce strict discipline and good order among the Contractor's employees and other persons carrying out the Work. The Contractor shall not permit employment of unfit persons or persons not properly skilled in tasks assigned to them.

**§ 3.4.4** Contractor to provide products in accordance with current specifications, requirements and recommendations of their manufacturers or fabricators. Should the Contract Documents show or specify the applications of a product not conforming to such specifications, requirements, or recommendations, notify Owner in writing.

**§ 3.4.5** Prior to purchasing or fabrication of products for his Work, the Contractor shall examine the Contract Documents for all adjacent and related Work. He shall notify the Owner in writing of all conditions of such Work as shown or specified that are unsatisfactory for the proper installation and subsequent performance of his Work or that are not in accordance with the product manufacturer's or fabricator's specifications, requirements or recommendations.

**§ 3.4.6** Failure to make the required checks and reports in Paragraphs 3.4.4 and 3.4.5 above shall be taken as acceptance by the Contractor of specified materials. No subsequent claims for extra compensation arising from failure of materials to perform intended function will be considered.

**§ 3.4.7** Standards for products and workmanship shall, as a minimum, comply with industrial standards, recognized standards of good quality and published standards of recognized National Trade Associations. Products shall be new, sound and of quality suitable for their application. They shall be orderly positioned, aligned with the structure with vertical components plumb, horizontal components level and surface true to line and dimension. Joinery and connections shall be accurate, close fitting and well made.

**§ 3.4.8** All manufactured materials, equipment, devices, or apparatus shall bear the identification mark of the manufacturer.

**§ 3.4.9** If material, equipment devices or apparatus is of questionable acceptability for incorporation into the Project, the Owner (at his option) may require certification by an approved testing laboratory.

**§ 3.4.10** If changes required to the structure, finish, detail, or space requirements are not enumerated in the Bid by the Contractor for a proposed substitution, and the substitution is accepted by the Owner, then the Contractor shall bear the cost of redesign and revision by the Owner and Engineer, and the cost of changes in the construction caused by the substitution. The

redesign and revision changes will be billed directly to the Contractor involved. The construction changes will be made through change order.

**§ 3.4.11** All materials entering into this project, together with name of dealer furnishing same, shall be subject to Owner's approval.

**§ 3.4.12** All workers employed on the Project shall work together in harmony and all workers newly assigned to the Project shall cooperate and work harmoniously with workers on the site, including work forces of the Owner.

**§ 3.4.13** Any worker not complying with the provisions of the Contract Documents shall be immediately removed by the Contractor from the Owner's premises upon notice of the Owner or his representative.

### **§ 3.5 Warranty**

**§ 3.5.1** The Contractor warrants to the Owner and Architect that materials and equipment furnished under the Contract will be of good quality and new unless the Contract Documents require or permit otherwise. The Contractor further warrants that the Work will conform to the requirements of the Contract Documents and will be free from defects, except for those inherent in the quality of the Work the Contract Documents require or permit. Work, materials, or equipment not conforming to these requirements may be considered defective. The Contractor's warranty excludes remedy for damage or defect caused by abuse, alterations to the Work not executed by the Contractor, improper or insufficient maintenance, improper operation, or normal wear and tear and normal usage. If required by the Architect, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment.

**§ 3.5.2** All material, equipment, or other special warranties required by the Contract Documents shall be issued in the name of the Owner, or shall be transferable to the Owner, and shall commence in accordance with Section 9.8.4.

### **§ 3.6 Taxes**

The Contractor shall pay sales, consumer, use and similar taxes for the Work provided by the Contractor that are legally enacted when bids are received or negotiations concluded, whether or not yet effective or merely scheduled to go into effect.

### **§ 3.7 Permits, Fees, Notices and Compliance with Laws**

**§ 3.7.1** Unless otherwise provided in the Contract Documents, the Contractor shall secure and pay for the building permit as well as for other permits, fees, licenses, and inspections by government agencies necessary for proper execution and completion of the Work that are customarily secured after execution of the Contract and legally required at the time bids are received or negotiations concluded.

**§ 3.7.2** The Contractor shall comply with and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities applicable to performance of the Work.

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

### **§ 3.7.4 Concealed or Unknown Conditions**

If the Contractor encounters conditions at the site that are (1) subsurface or otherwise concealed physical conditions that differ materially from those indicated in the Contract Documents or (2) unknown physical conditions of an unusual nature that differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, the Contractor shall promptly provide notice to the Owner and the Architect before conditions are disturbed and in no event later than 14 days after first observance of the conditions. The Architect will promptly investigate such conditions and, if the Architect determines that they differ materially and cause an increase or decrease in the Contractor's cost of, or time required for, performance of any part of the Work, will recommend that an equitable adjustment be made in the Contract Sum or Contract Time, or both. If the Architect determines that the conditions at the site are not materially different from those indicated in the Contract Documents and that no change in the terms of the Contract is justified, the Architect shall promptly notify the Owner and Contractor, stating the reasons. If either party disputes the Architect's determination or recommendation, that party may submit a Claim as provided in Article 15.

**§ 3.7.5** If, in the course of the Work, the Contractor encounters human remains or recognizes the existence of burial markers, archaeological sites or wetlands not indicated in the Contract Documents, the Contractor shall immediately suspend any operations that would affect them and shall notify the Owner and Architect. Upon receipt of such notice, the Owner shall promptly take any action necessary to obtain governmental authorization required to resume the operations. The Contractor shall continue to suspend such operations until otherwise instructed by the Owner but shall continue with all other operations that do not affect those remains or features. Requests for adjustments in the Contract Sum and Contract Time arising from the existence of such remains or features may be made as provided in Article 15.

**§ 3.7.6** Certificates showing that required inspections have been made shall be submitted to the Owner at completion of the Project by the General Contractor. Final payment will be contingent upon Owner's receipt of the above submittals.

**§ 3.7.7** A copy of all permit certificates shall be delivered to the Owner prior to the starting of work.

### **§ 3.8 Allowances**

**§ 3.8.1** The Contractor shall include in the Contract Sum all allowances stated in the Contract Documents. Items covered by allowances shall be supplied for such amounts and by such persons or entities as the Owner may direct, but the Contractor shall not be required to employ persons or entities to whom the Contractor has reasonable objection.

**§ 3.8.2** Unless otherwise provided in the Contract Documents,

- .1 allowances shall cover the cost to the Contractor of materials and equipment delivered at the site and all required taxes, less applicable trade discounts;
- .2 Contractor's costs for unloading and handling at the site, labor, installation costs, overhead, profit, and other expenses contemplated for stated allowance amounts shall be included in the Contract Sum but not in the allowances; and
- .3 whenever costs are more than or less than allowances, the Contract Sum shall be adjusted accordingly by Change Order. The amount of the Change Order shall reflect (1) the difference between actual costs and the allowances under Section 3.8.2.1 and (2) changes in Contractor's costs under Section 3.8.2.2.

**§ 3.8.3** Materials and equipment under an allowance shall be selected by the Owner with reasonable promptness.

### **§ 3.9 Superintendent**

**§ 3.9.1** The Contractor shall employ a competent superintendent and necessary assistants who shall be in attendance at the Project site during performance of the Work. The superintendent shall represent the Contractor, and communications given to the superintendent shall be as binding as if given to the Contractor.

**§ 3.9.2** The Contractor, as soon as practicable after award of the Contract, shall notify the Owner and Architect of the name and qualifications of a proposed superintendent. Within 14 days of receipt of the information, the Architect may notify the Contractor, stating whether the Owner or the Architect (1) has reasonable objection to the proposed superintendent or (2) requires additional time for review. Failure of the Architect to provide notice within the 14-day period shall constitute notice of no reasonable objection.

**§ 3.9.3** The Contractor shall not employ a proposed superintendent to whom the Owner or Architect has made reasonable and timely objection. The Contractor shall not change the superintendent without the Owner's consent, which shall not unreasonably be withheld or delayed.

### **§ 3.10 Contractor's Construction and Submittal Schedules**

**§ 3.10.1** The Contractor, promptly after being awarded the Contract, shall submit for the Owner's and Architect's information a Contractor's construction schedule for the Work. The schedule shall contain detail appropriate for the Project, including (1) the date of commencement of the Work, interim schedule milestone dates, and the date of Substantial Completion; (2) an apportionment of the Work by construction activity; and (3) the time required for completion of each portion of the Work. The schedule shall provide for the orderly progression of the Work to completion and shall not exceed time limits current under the Contract Documents. The schedule shall be revised at appropriate intervals as required by the conditions of the Work and Project.

**§ 3.10.2** The Contractor, promptly after being awarded the Contract and thereafter as necessary to maintain a current submittal



schedule, shall submit a submittal schedule for the Architect's approval. The Architect's approval shall not be unreasonably delayed or withheld. The submittal schedule shall (1) be coordinated with the Contractor's construction schedule, and (2) allow the Architect reasonable time to review submittals. If the Contractor fails to submit a submittal schedule, or fails to provide submittals in accordance with the approved submittal schedule, the Contractor shall not be entitled to any increase in Contract Sum or extension of Contract Time based on the time required for review of submittals.

**§ 3.10.3** The Contractor shall perform the Work in general accordance with the most recent schedules submitted to the Owner and Architect.

### **§ 3.11 Documents and Samples at the Site**

The Contractor shall make available, at the Project site, the Contract Documents, including Change Orders, Construction Change Directives, and other Modifications, in good order and marked currently to indicate field changes and selections made during construction, and the approved Shop Drawings, Product Data, Samples, and similar required submittals. These shall be in electronic form or paper copy, available to the Architect and Owner, and delivered to the Architect for submittal to the Owner upon completion of the Work as a record of the Work as constructed.

### **§ 3.12 Shop Drawings, Product Data and Samples**

**§ 3.12.1** Shop Drawings are drawings, diagrams, schedules, and other data specially prepared for the Work by the Contractor or a Subcontractor, Sub-subcontractor, manufacturer, supplier, or distributor to illustrate some portion of the Work.

**§ 3.12.2** Product Data are illustrations, standard schedules, performance charts, instructions, brochures, diagrams, and other information furnished by the Contractor to illustrate materials or equipment for some portion of the Work.

**§ 3.12.3** Samples are physical examples that illustrate materials, equipment, or workmanship, and establish standards by which the Work will be judged.

**§ 3.12.4** Shop Drawings, Product Data, Samples, and similar submittals are not Contract Documents. Their purpose is to demonstrate how the Contractor proposes to conform to the information given and the design concept expressed in the Contract Documents for those portions of the Work for which the Contract Documents require submittals. Review by the Architect is subject to the limitations of Section 4.2.7. Informational submittals upon which the Architect is not expected to take responsive action may be so identified in the Contract Documents. Submittals that are not required by the Contract Documents may be returned by the Architect without action.

**§ 3.12.5** The Contractor shall review for compliance with the Contract Documents, approve, and submit to the Architect, Shop Drawings, Product Data, Samples, and similar submittals required by the Contract Documents, in accordance with the submittal schedule approved by the Architect or, in the absence of an approved submittal schedule, with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of the Owner or of Separate Contractors.

**§ 3.12.6** By submitting Shop Drawings, Product Data, Samples, and similar submittals, the Contractor represents to the Owner and Architect that the Contractor has (1) reviewed and approved them, (2) determined and verified materials, field measurements and field construction criteria related thereto, or will do so, and (3) checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents.

**§ 3.12.7** The Contractor shall perform no portion of the Work for which the Contract Documents require submittal and review of Shop Drawings, Product Data, Samples, or similar submittals, until the respective submittal has been approved by the Architect.

**§ 3.12.8** The Work shall be in accordance with approved submittals except that the Contractor shall not be relieved of responsibility for deviations from the requirements of the Contract Documents by the Architect's approval of Shop Drawings, Product Data, Samples, or similar submittals, unless the Contractor has specifically notified the Architect of such deviation at the time of submittal and (1) the Architect has given written approval to the specific deviation as a minor change in the Work, or (2) a Change Order or Construction Change Directive has been issued authorizing the deviation. The Contractor shall not be relieved of responsibility for errors or omissions in Shop Drawings, Product Data, Samples, or similar submittals, by the Architect's approval thereof.

**§ 3.12.9** The Contractor shall direct specific attention, in writing or on resubmitted Shop Drawings, Product Data, Samples, or similar submittals, to revisions other than those requested by the Architect on previous submittals. In the absence of such notice, the Architect's approval of a resubmission shall not apply to such revisions.

**§ 3.12.10** The Contractor shall not be required to provide professional services that constitute the practice of architecture or engineering unless such services are specifically required by the Contract Documents for a portion of the Work or unless the Contractor needs to provide such services in order to carry out the Contractor's responsibilities for construction means, methods, techniques, sequences, and procedures. The Contractor shall not be required to provide professional services in violation of applicable law.

**§ 3.12.10.1** If professional design services or certifications by a design professional related to systems, materials, or equipment are specifically required of the Contractor by the Contract Documents, the Owner and the Architect will specify all performance and design criteria that such services must satisfy. The Contractor shall be entitled to rely upon the adequacy and accuracy of the performance and design criteria provided in the Contract Documents. The Contractor shall cause such services or certifications to be provided by an appropriately licensed design professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings, and other submittals prepared by such professional. Shop Drawings, and other submittals related to the Work, designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to the Architect. The Owner and the Architect shall be entitled to rely upon the adequacy and accuracy of the services, certifications, and approvals performed or provided by such design professionals, provided the Owner and Architect have specified to the Contractor the performance and design criteria that such services must satisfy. Pursuant to this Section 3.12.10, the Architect will review and approve or take other appropriate action on submittals only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents.

**§ 3.12.10.2** If the Contract Documents require the Contractor's design professional to certify that the Work has been performed in accordance with the design criteria, the Contractor shall furnish such certifications to the Architect at the time and in the form specified by the Architect.

### **§ 3.13 Use of Site**

The Contractor shall confine operations at the site to areas permitted by applicable laws, statutes, ordinances, codes, rules and regulations, lawful orders of public authorities, and the Contract Documents and shall not unreasonably encumber the site with materials or equipment.

### **§ 3.14 Cutting and Patching**

**§ 3.14.1** The Contractor shall be responsible for cutting, fitting, or patching required to complete the Work or to make its parts fit together properly. All areas requiring cutting, fitting, or patching shall be restored to the condition existing prior to the cutting, fitting, or patching, unless otherwise required by the Contract Documents.

**§ 3.14.2** The Contractor shall not damage or endanger a portion of the Work or fully or partially completed construction of the Owner or Separate Contractors by cutting, patching, or otherwise altering such construction, or by excavation. The Contractor shall not cut or otherwise alter construction by the Owner or a Separate Contractor except with written consent of the Owner and of the Separate Contractor. Consent shall not be unreasonably withheld. The Contractor shall not unreasonably withhold, from the Owner or a Separate Contractor, its consent to cutting or otherwise altering the Work.

**§ 3.14.3** The Contractor shall be responsible for all cutting, fitting and patching, including attendant excavation and backfill required to complete the Work or to:

1. Make its several pieces fit together properly.
2. Uncover portions of the Work to provide for installation of ill-timed Work.
3. Remove and replace defective Work.
4. Remove and replace Work not conforming to requirements of the Contract Documents.
5. Remove samples of installed Work as specified for testing.

**§ 3.14.4** Provide protection from the elements for that portion of the Project which may be exposed by cutting and patching.

**§ 3.14.5** Execute Work in such a manner as to interfere as little as possible with functioning and normal operations of the

existing structure and with the safety and conveniences of those employed in and about the premises or those using the facility.

**§ 3.14.6** Execute cutting and demolition by methods which will prevent damage to other Work and will provide proper surfaces to receive installation of repairs.

**§ 3.14.7** Restore Work which has been cut or removed; install new products to completed Work in accordance with the requirements of the Contract Documents.

### **§ 3.15 Cleaning Up**

**§ 3.15.1** The Contractor shall keep the premises and surrounding area free from accumulation of waste materials and rubbish caused by operations under the Contract. At completion of the Work, the Contractor shall remove waste materials, rubbish, the Contractor's tools, construction equipment, machinery, and surplus materials from and about the Project.

**§ 3.15.2** If the Contractor fails to clean up as provided in the Contract Documents, the Owner may do so and the Owner shall be entitled to reimbursement from the Contractor.

### **§ 3.16 Access to Work**

The Contractor shall provide the Owner and Architect with access to the Work in preparation and progress wherever located.

### **§ 3.17 Royalties, Patents and Copyrights**

The Contractor shall pay all royalties and license fees. The Contractor shall defend suits or claims for infringement of copyrights and patent rights and shall hold the Owner and Architect harmless from loss on account thereof, but shall not be responsible for defense or loss when a particular design, process, or product of a particular manufacturer or manufacturers is required by the Contract Documents, or where the copyright violations are contained in Drawings, Specifications, or other documents prepared by the Owner or Architect. However, if an infringement of a copyright or patent is discovered by, or made known to, the Contractor, the Contractor shall be responsible for the loss unless the information is promptly furnished to the Architect. The Owner reserves the right to eliminate, if possible, such copyrighted or patented article or process and substitute others.

### **§ 3.18 Indemnification**

**§ 3.18.1** To the fullest extent permitted by law, the Contractor shall indemnify and hold harmless the Owner, Architect, Architect's consultants, and agents and employees of any of them from and against claims, damages, losses, and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work, provided that such claim, damage, loss, or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), but only to the extent caused by the negligent acts or omissions of the Contractor, a Subcontractor, anyone directly or indirectly employed by them, or anyone for whose acts they may be liable, regardless of whether or not such claim, damage, loss, or expense is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity that would otherwise exist as to a party or person described in this Section 3.18.

**§ 3.18.2** In claims against any person or entity indemnified under this Section 3.18 by an employee of the Contractor, a Subcontractor, anyone directly or indirectly employed by them, or anyone for whose acts they may be liable, the indemnification obligation under Section 3.18.1 shall not be limited by a limitation on amount or type of damages, compensation, or benefits payable by or for the Contractor or a Subcontractor under workers' compensation acts, disability benefit acts, or other employee benefit acts.

**§ 3.18.3** The Contractor is fully responsible under this paragraph 3.18 for conforming to all safety codes and regulations applying to the performance of his Contract, and the Architect/Engineer, Owner and/or Owner's representative shall in no way be liable for observing, checking, instructing, and giving directions thereto or for any responsibilities thereof.

## **ARTICLE 4 ARCHITECT**

### **§ 4.1 General**

**§ 4.1.1** The Architect is the person or entity retained by the Owner pursuant to Section 2.3.2 and identified as such in the Agreement. Where the term "Architect" is found it shall mean "Architect/Engineer" throughout AIA Document A201.

**§ 4.1.2** Duties, responsibilities, and limitations of authority of the Architect as set forth in the Contract Documents shall not be restricted, modified, or extended without written consent of the Owner, Contractor, and Architect. Consent shall not be unreasonably withheld.

## **§ 4.2 Administration of the Contract**

**§ 4.2.1** The Architect will provide administration of the Contract as described in the Contract Documents and will be an Owner's representative during construction until the date the Architect issues the final Certificate for Payment. The Architect will have authority to act on behalf of the Owner only to the extent provided in the Contract Documents.

**§ 4.2.1.1** The Architect/Engineer will provide administrative and field services during the Contract period of the Project only to the extent provided under separate agreement between Architect/Engineer and Owner. Additional inspection may also be provided by other consultants serving as Owner's representatives. All references to Architect/Engineer's or Owner's representative's duties, functions and responsibilities throughout the Contract Documents shall be interpreted accordingly, and where services described are not within the scope of the Architect/Engineer's or Owner's representative's agreement with the Owner, the Owner will perform said services.

**§ 4.2.2** The Architect will visit the site at intervals appropriate to the stage of construction, or as otherwise agreed with the Owner, to become generally familiar with the progress and quality of the portion of the Work completed, and to determine in general if the Work observed is being performed in a manner indicating that the Work, when fully completed, will be in accordance with the Contract Documents. However, the Architect will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. The Architect will not have control over, charge of, or responsibility for the construction means, methods, techniques, sequences or procedures, or for the safety precautions and programs in connection with the Work, since these are solely the Contractor's rights and responsibilities under the Contract Documents.

**§ 4.2.3** On the basis of the site visits, the Architect will keep the Owner reasonably informed about the progress and quality of the portion of the Work completed, and promptly report to the Owner (1) known deviations from the Contract Documents, (2) known deviations from the most recent construction schedule submitted by the Contractor, and (3) defects and deficiencies observed in the Work. The Architect will not be responsible for the Contractor's failure to perform the Work in accordance with the requirements of the Contract Documents. The Architect will not have control over or charge of, and will not be responsible for acts or omissions of, the Contractor, Subcontractors, or their agents or employees, or any other persons or entities performing portions of the Work.

Oral assistance, advice or interpretations rendered by the Architect/Engineer or Owner's representative relative to construction means, methods, techniques, sequences, procedures, safety precaution or programs shall be considered a gratuitous service and shall not be binding upon the Contractor nor make the Architect/Engineer or Owner's representative responsible for any of these items. The Architect/Engineer or Owner's representative will endeavor to observe the Work, but omissions or failures to provide proper material and failure to perform work correctly are totally the responsibility of the Contractor. The Contractor, not the Architect/Engineer or Owner's representative, is responsible for determination that all work under his Contract as it proceeds or as completed is performed and installed in accordance with the Drawings and Specifications and governing regulations.

**§ 4.2.3.1** Where laws, codes or standards require supervision or inspection of portions of the Contractor's work by an architect, engineer, or other competent or qualified person, it is the Contractor's responsibility to furnish such supervision and/or inspection to the satisfaction of the governing authority and without cost to the Owner. Such requirements shall in no way be the responsibility of the Architect/Engineer or the Owner's representative.

## **§ 4.2.4 Communications**

The Owner and Contractor shall include the Architect in all communications that relate to or affect the Architect's services or professional responsibilities. The Owner shall promptly notify the Architect of the substance of any direct communications between the Owner and the Contractor otherwise relating to the Project. Communications by and with the Architect's consultants shall be through the Architect. Communications by and with Subcontractors and suppliers shall be through the Contractor. Communications by and with Separate Contractors shall be through the Owner. The Contract Documents may specify other communication protocols.

**§ 4.2.5** Based on the Architect's evaluations of the Contractor's Applications for Payment, the Architect will review and certify the amounts due the Contractor and will issue Certificates for Payment in such amounts.

**§ 4.2.6** The Architect has authority to reject Work that does not conform to the Contract Documents. Whenever the Architect considers it necessary or advisable, the Architect will have authority to require inspection or testing of the Work in accordance with Sections 13.4.2 and 13.4.3, whether or not the Work is fabricated, installed or completed. However, neither this authority of the Architect nor a decision made in good faith either to exercise or not to exercise such authority shall give rise to a duty or responsibility of the Architect to the Contractor, Subcontractors, suppliers, their agents or employees, or other persons or entities performing portions of the Work.

**§ 4.2.7** The Architect will review and approve, or take other appropriate action upon, the Contractor's submittals such as Shop Drawings, Product Data, and Samples, but only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. The Architect's action will be taken in accordance with the submittal schedule approved by the Architect or, in the absence of an approved submittal schedule, with reasonable promptness while allowing sufficient time in the Architect's professional judgment to permit adequate review. Review of such submittals is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, all of which remain the responsibility of the Contractor as required by the Contract Documents. The Architect's review of the Contractor's submittals shall not relieve the Contractor of the obligations under Sections 3.3, 3.5, and 3.12. The Architect's review shall not constitute approval of safety precautions or of any construction means, methods, techniques, sequences, or procedures. The Architect's approval of a specific item shall not indicate approval of an assembly of which the item is a component.

**§ 4.2.7.1** The Architect/Engineer shall act as the Owner's agent in the reception of all submittals required by the Contract Documents.

**§ 4.2.8** The Architect will prepare Change Orders and Construction Change Directives, and may order minor changes in the Work as provided in Section 7.4. The Architect will investigate and make determinations and recommendations regarding concealed and unknown conditions as provided in Section 3.7.4. The Owner's representative does not have the authority to order or approve modifications in the Work. Such authorization must be in writing signed by the Project Manager for those items for which the Architect/Engineer has authority under the Contract, or by Change Order.

**§ 4.2.9** The Architect will conduct inspections to determine the date or dates of Substantial Completion and the date of final completion; issue Certificates of Substantial Completion pursuant to Section 9.8; receive and forward to the Owner, for the Owner's review and records, written warranties and related documents required by the Contract and assembled by the Contractor pursuant to Section 9.10; and issue a final Certificate for Payment pursuant to Section 9.10.

**§ 4.2.10** If the Owner and Architect agree, the Architect will provide one or more Project representatives to assist in carrying out the Architect's responsibilities at the site. The Owner shall notify the Contractor of any change in the duties, responsibilities and limitations of authority of the Project representatives.

**§ 4.2.11** The Architect will interpret and decide matters concerning performance under, and requirements of, the Contract Documents on written request of either the Owner or Contractor. The Architect's response to such requests will be made in writing within any time limits agreed upon or otherwise with reasonable promptness.

**§ 4.2.12** Interpretations and decisions of the Architect will be consistent with the intent of, and reasonably inferable from, the Contract Documents and will be in writing or in the form of drawings. When making such interpretations and decisions, the Architect will endeavor to secure faithful performance by both Owner and Contractor, will not show partiality to either, and will not be liable for results of interpretations or decisions rendered in good faith.

**§ 4.2.13** The Architect's decisions on matters relating to aesthetic effect will be final if consistent with the intent expressed in the Contract Documents.

**§ 4.2.14** The Architect will review and respond to requests for information about the Contract Documents. The Architect's response to such requests will be made in writing within any time limits agreed upon or otherwise with reasonable promptness. If appropriate, the Architect will prepare and issue supplemental Drawings and Specifications in response to the

requests for information.

## **ARTICLE 5 SUBCONTRACTORS**

### **§ 5.1 Definitions**

**§ 5.1.1** A Subcontractor is a person or entity who has a direct contract with the Contractor to perform a portion of the Work at the site. The term “Subcontractor” is referred to throughout the Contract Documents as if singular in number and means a Subcontractor or an authorized representative of the Subcontractor. The term “Subcontractor” does not include a Separate Contractor or the subcontractors of a Separate Contractor.

**§ 5.1.2** A Sub-subcontractor is a person or entity who has a direct or indirect contract with a Subcontractor to perform a portion of the Work at the site. The term “Sub-subcontractor” is referred to throughout the Contract Documents as if singular in number and means a Sub-subcontractor or an authorized representative of the Sub-subcontractor.

### **§ 5.2 Award of Subcontracts and Other Contracts for Portions of the Work**

**§ 5.2.1** Unless otherwise stated in the Contract Documents, the Contractor, as soon as practicable after award of the Contract, shall notify the Owner and Architect of the persons or entities proposed for each principal portion of the Work, including those who are to furnish materials or equipment fabricated to a special design. Within 14 days of receipt of the information, the Architect may notify the Contractor whether the Owner or the Architect (1) has reasonable objection to any such proposed person or entity or (2) requires additional time for review. Failure of the Architect to provide notice within the 14-day period shall constitute notice of no reasonable objection.

**§ 5.2.2** The Contractor shall not contract with a proposed person or entity to whom the Owner or Architect has made reasonable and timely objection. The Contractor shall not be required to contract with anyone to whom the Contractor has made reasonable objection.

**§ 5.2.3** If the Owner or Architect has reasonable objection to a person or entity proposed by the Contractor, the Contractor shall propose another to whom the Owner or Architect has no reasonable objection. If the proposed but rejected Subcontractor was reasonably capable of performing the Work, the Contract Sum and Contract Time shall be increased or decreased by the difference, if any, occasioned by such change, and an appropriate Change Order shall be issued before commencement of the substitute Subcontractor’s Work. However, no increase in the Contract Sum or Contract Time shall be allowed for such change unless the Contractor has acted promptly and responsively in submitting names as required.

**§ 5.2.4** The Contractor shall not substitute a Subcontractor, person, or entity for one previously selected if the Owner or Architect makes reasonable objection to such substitution.

### **§ 5.3 Subcontractual Relations**

By appropriate written agreement, the Contractor shall require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound to the Contractor by terms of the Contract Documents, and to assume toward the Contractor all the obligations and responsibilities, including the responsibility for safety of the Subcontractor’s Work that the Contractor, by these Contract Documents, assumes toward the Owner and Architect. Each subcontract agreement shall preserve and protect the rights of the Owner and Architect under the Contract Documents with respect to the Work to be performed by the Subcontractor so that subcontracting thereof will not prejudice such rights, and shall allow to the Subcontractor, unless specifically provided otherwise in the subcontract agreement, the benefit of all rights, remedies, and redress against the Contractor that the Contractor, by the Contract Documents, has against the Owner. Where appropriate, the Contractor shall require each Subcontractor to enter into similar agreements with Sub-subcontractors. The Contractor shall make available to each proposed Subcontractor, prior to the execution of the subcontract agreement, copies of the Contract Documents to which the Subcontractor will be bound, and, upon written request of the Subcontractor, identify to the Subcontractor terms and conditions of the proposed subcontract agreement that may be at variance with the Contract Documents. Subcontractors will similarly make copies of applicable portions of such documents available to their respective proposed Sub-subcontractors.

### **§ 5.4 Contingent Assignment of Subcontracts**

**§ 5.4.1** Each subcontract agreement for a portion of the Work is assigned by the Contractor to the Owner, provided that

- .1 assignment is effective only after termination of the Contract by the Owner for cause pursuant to Section 14.2 and only for those subcontract agreements that the Owner accepts by notifying the Subcontractor and Contractor; and

.2 assignment is subject to the prior rights of the surety, if any, obligated under bond relating to the Contract.

When the Owner accepts the assignment of a subcontract agreement, the Owner assumes the Contractor's rights and obligations under the subcontract.

§ 5.4.2 Upon such assignment, if the Work has been suspended for more than 30 days, the Subcontractor's compensation shall be equitably adjusted for increases in cost resulting from the suspension.

§ 5.4.3 Upon assignment to the Owner under this Section 5.4, the Owner may further assign the subcontract to a successor contractor or other entity. If the Owner assigns the subcontract to a successor contractor or other entity, the Owner shall nevertheless remain legally responsible for all of the successor contractor's obligations under the subcontract.

## **ARTICLE 6 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS**

### **§ 6.1 Owner's Right to Perform Construction and to Award Separate Contracts**

§ 6.1.1 The term "Separate Contractor(s)" shall mean other contractors retained by the Owner under separate agreements. The Owner reserves the right to perform construction or operations related to the Project with the Owner's own forces, and with Separate Contractors retained under Conditions of the Contract substantially similar to those of this Contract, including those provisions of the Conditions of the Contract related to insurance and waiver of subrogation.

§ 6.1.2 When separate contracts are awarded for different portions of the Project or other construction or operations on the site, the term "Contractor" in the Contract Documents in each case shall mean the Contractor who executes each separate Owner-Contractor Agreement.

§ 6.1.3 The Owner shall provide for coordination of the activities of the Owner's own forces and of each Separate Contractor with the Work of the Contractor, who shall cooperate with them. The Contractor shall participate with any Separate Contractors and the Owner in reviewing their construction schedules. The Contractor shall make any revisions to its construction schedule deemed necessary after a joint review and mutual agreement. The construction schedules shall then constitute the schedules to be used by the Contractor, Separate Contractors, and the Owner until subsequently revised.

§ 6.1.4 Unless otherwise provided in the Contract Documents, when the Owner performs construction or operations related to the Project with the Owner's own forces or with Separate Contractors, the Owner or its Separate Contractors shall have the same obligations and rights that the Contractor has under the Conditions of the Contract, including, without excluding others, those stated in Article 3, this Article 6, and Articles 10, 11, and 12.

### **§ 6.2 Mutual Responsibility**

§ 6.2.1 The Contractor shall afford the Owner and Separate Contractors reasonable opportunity for introduction and storage of their materials and equipment and performance of their activities, and shall connect and coordinate the Contractor's construction and operations with theirs as required by the Contract Documents.

§ 6.2.2 If part of the Contractor's Work depends for proper execution or results upon construction or operations by the Owner or a Separate Contractor, the Contractor shall, prior to proceeding with that portion of the Work, promptly notify the Architect of apparent discrepancies or defects in the construction or operations by the Owner or Separate Contractor that would render it unsuitable for proper execution and results of the Contractor's Work. Failure of the Contractor to notify the Architect of apparent discrepancies or defects prior to proceeding with the Work shall constitute an acknowledgment that the Owner's or Separate Contractor's completed or partially completed construction is fit and proper to receive the Contractor's Work. The Contractor shall not be responsible for discrepancies or defects in the construction or operations by the Owner or Separate Contractor that are not apparent.

§ 6.2.3 The Contractor shall reimburse the Owner for costs the Owner incurs that are payable to a Separate Contractor because of the Contractor's delays, improperly timed activities or defective construction. The Owner shall be responsible to the Contractor for costs the Contractor incurs because of a Separate Contractor's delays, improperly timed activities, damage to the Work or defective construction.

§ 6.2.4 The Contractor shall promptly remedy damage that the Contractor wrongfully causes to completed or partially completed construction or to property of the Owner or Separate Contractor as provided in Section 10.2.5.

**§ 6.2.5** The Owner and each Separate Contractor shall have the same responsibilities for cutting and patching as are described for the Contractor in Section 3.14.

### **§ 6.3 Owner's Right to Clean Up**

If a dispute arises among the Contractor, Separate Contractors, and the Owner as to the responsibility under their respective contracts for maintaining the premises and surrounding area free from waste materials and rubbish, the Owner may clean up and the Architect will allocate the cost among those responsible.

## **ARTICLE 7 CHANGES IN THE WORK**

### **§ 7.1 General**

**§ 7.1.1** Changes in the Work may be accomplished after execution of the Contract, and without invalidating the Contract, by Change Order, Construction Change Directive or order for a minor change in the Work, subject to the limitations stated in this Article 7 and elsewhere in the Contract Documents.

**§ 7.1.2** A Change Order shall be based upon agreement among the Owner, Contractor, and Architect. A Construction Change Directive requires agreement by the Owner and Architect and may or may not be agreed to by the Contractor. An order for a minor change in the Work may be issued by the Architect alone.

**§ 7.1.3** Changes in the Work shall be performed under applicable provisions of the Contract Documents. The Contractor shall proceed promptly with changes in the Work, unless otherwise provided in the Change Order, Construction Change Directive, or order for a minor change in the Work.

### **§ 7.2 Change Orders**

**§ 7.2.1** A Change Order is a written instrument prepared by the Architect and signed by the Owner, Contractor, and Architect stating their agreement upon all of the following:

- .1 The change in the Work;
- .2 The amount of the adjustment, if any, in the Contract Sum; and
- .3 The extent of the adjustment, if any, in the Contract Time.

### **§ 7.3 Construction Change Directives**

**§ 7.3.1** A Construction Change Directive is a written order prepared by the Architect and signed by the Owner and Architect, directing a change in the Work prior to agreement on adjustment, if any, in the Contract Sum or Contract Time, or both. The Owner may by Construction Change Directive, without invalidating the Contract, order changes in the Work within the general scope of the Contract consisting of additions, deletions, or other revisions, the Contract Sum and Contract Time being adjusted accordingly.

**§ 7.3.2** A Construction Change Directive shall be used in the absence of total agreement on the terms of a Change Order.

**§ 7.3.3** If the Construction Change Directive provides for an adjustment to the Contract Sum, the adjustment shall be based on one of the following methods:

- .1 Mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation;
- .2 Unit prices stated in the Contract Documents or subsequently agreed upon;
- .3 Cost to be determined in a manner agreed upon by the parties and a mutually acceptable fixed or percentage fee; or
- .4 As provided in Section 7.3.4.

**§ 7.3.4** If the Contractor does not respond promptly or disagrees with the method for adjustment in the Contract Sum, the Architect shall determine the adjustment on the basis of reasonable expenditures and savings of those performing the Work attributable to the change, including, in case of an increase in the Contract Sum, an amount for overhead and profit as set forth in the Agreement, or if no such amount is set forth in the Agreement, a reasonable amount. In such case, and also under Section 7.3.3.3, the Contractor shall keep and present, in such form as the Architect may prescribe, an itemized accounting together with appropriate supporting data. Unless otherwise provided in the Contract Documents, costs for the purposes of this



Section 7.3.4 shall be limited to the following:

- .1 Costs of labor, including applicable payroll taxes, fringe benefits required by agreement or custom, workers' compensation insurance, and other employee costs approved by the Architect;
- .2 Costs of materials, supplies, and equipment, including cost of transportation, whether incorporated or consumed;
- .3 Rental costs of machinery and equipment, exclusive of hand tools, whether rented from the Contractor or others;
- .4 Costs of premiums for all bonds and insurance, permit fees, and sales, use, or similar taxes, directly related to the change; and
- .5 Costs of supervision and field office personnel directly attributable to the change.

**§ 7.3.5** If the Contractor disagrees with the adjustment in the Contract Time, the Contractor may make a Claim in accordance with applicable provisions of Article 15.

**§ 7.3.6** Upon receipt of a Construction Change Directive, the Contractor shall promptly proceed with the change in the Work involved and advise the Architect of the Contractor's agreement or disagreement with the method, if any, provided in the Construction Change Directive for determining the proposed adjustment in the Contract Sum or Contract Time.

**§ 7.3.7** A Construction Change Directive signed by the Contractor indicates the Contractor's agreement therewith, including adjustment in Contract Sum and Contract Time or the method for determining them. Such agreement shall be effective immediately and shall be recorded as a Change Order.

**§ 7.3.8** The amount of credit to be allowed by the Contractor to the Owner for a deletion or change that results in a net decrease in the Contract Sum shall be actual net cost as confirmed by the Architect. When both additions and credits covering related Work or substitutions are involved in a change, the allowance for overhead and profit shall be figured on the basis of net increase, if any, with respect to that change.

**§ 7.3.9** Pending final determination of the total cost of a Construction Change Directive to the Owner, the Contractor may request payment for Work completed under the Construction Change Directive in Applications for Payment. The Architect will make an interim determination for purposes of monthly certification for payment for those costs and certify for payment the amount that the Architect determines, in the Architect's professional judgment, to be reasonably justified. The Architect's interim determination of cost shall adjust the Contract Sum on the same basis as a Change Order, subject to the right of either party to disagree and assert a Claim in accordance with Article 15.

**§ 7.3.10** When the Owner and Contractor agree with a determination made by the Architect concerning the adjustments in the Contract Sum and Contract Time, or otherwise reach agreement upon the adjustments, such agreement shall be effective immediately and the Architect will prepare a Change Order. Change Orders may be issued for all or any part of a Construction Change Directive.

#### **§ 7.4 Minor Changes in the Work**

The Architect may order minor changes in the Work that are consistent with the intent of the Contract Documents and do not involve an adjustment in the Contract Sum or an extension of the Contract Time. The Architect's order for minor changes shall be in writing. If the Contractor believes that the proposed minor change in the Work will affect the Contract Sum or Contract Time, the Contractor shall notify the Architect and shall not proceed to implement the change in the Work. If the Contractor performs the Work set forth in the Architect's order for a minor change without prior notice to the Architect that such change will affect the Contract Sum or Contract Time, the Contractor waives any adjustment to the Contract Sum or extension of the Contract Time.

### **ARTICLE 8 TIME**

#### **§ 8.1 Definitions**

**§ 8.1.1** Unless otherwise provided, Contract Time is the period of time, including authorized adjustments, allotted in the Contract Documents for Substantial Completion of the Work.

**§ 8.1.2** The date of commencement of the Work is the date established in the Agreement.

**§ 8.1.3** The date of Substantial Completion is the date certified by the Architect in accordance with Section 9.8.

**§ 8.1.4** The term “day” as used in the Contract Documents shall mean calendar day unless otherwise specifically defined.

## **§ 8.2 Progress and Completion**

**§ 8.2.1** Time limits stated in the Contract Documents are of the essence of the Contract. By executing the Agreement, the Contractor confirms that the Contract Time is a reasonable period for performing the Work.

**§ 8.2.2** The Contractor shall not knowingly, except by agreement or instruction of the Owner in writing, commence the Work prior to the effective date of insurance required to be furnished by the Contractor and Owner.

**§ 8.2.3** The Contractor shall proceed expeditiously with adequate forces and shall achieve Substantial Completion within the Contract Time.

**§ 8.2.4** The Contractor, by accepting a Contract, agrees that they will expedite their Work to achieve the earliest possible completion, that the Contractor will maintain on the Work the maximum practicable labor and supervision force at all times, that they will cooperate with all other Contractors and coordinate their Work with other Contractors work so as to achieve the maximum prosecution of the entire Project, and that they will complete their Contract within the minimum time possible.

## **§ 8.3 Delays and Extensions of Time**

**§ 8.3.1** If the Contractor is delayed at any time in the commencement or progress of the Work by (1) an act or neglect of the Owner or Architect, of an employee of either, or of a Separate Contractor; (2) by changes ordered in the Work; (3) by labor disputes, fire, unusual delay in deliveries, unavoidable casualties, adverse weather conditions documented in accordance with Section 15.1.6.2, or other causes beyond the Contractor’s control; (4) by delay authorized by the Owner pending mediation and binding dispute resolution; or (5) by other causes that the Contractor asserts, and the Architect determines, justify delay, then the Contract Time shall be extended for such reasonable time as the Architect may determine.

**§ 8.3.2** Claims relating to time shall be made in accordance with applicable provisions of Article 15.

**§ 8.3.3** This Section 8.3 does not preclude recovery of damages for delay by either party under other provisions of the Contract Documents.

## **ARTICLE 9 PAYMENTS AND COMPLETION**

### **§ 9.1 Contract Sum**

**§ 9.1.1** The Contract Sum is stated in the Agreement and, including authorized adjustments, is the total amount payable by the Owner to the Contractor for performance of the Work under the Contract Documents.

**§ 9.1.2** If unit prices are stated in the Contract Documents or subsequently agreed upon, and if quantities originally contemplated are materially changed so that application of such unit prices to the actual quantities causes substantial inequity to the Owner or Contractor, the applicable unit prices shall be equitably adjusted.

### **§ 9.2 Schedule of Values**

Where the Contract is based on a stipulated sum or Guaranteed Maximum Price, the Contractor shall submit a schedule of values to the Architect before the first Application for Payment, allocating the entire Contract Sum to the various portions of the Work. The schedule of values shall be prepared in the form, and supported by the data to substantiate its accuracy, required by the Architect. This schedule, unless objected to by the Architect, shall be used as a basis for reviewing the Contractor’s Applications for Payment. Any changes to the schedule of values shall be submitted to the Architect and supported by such data to substantiate its accuracy as the Architect may require, and unless objected to by the Architect, shall be used as a basis for reviewing the Contractor’s subsequent Applications for Payment.

### **§ 9.3 Applications for Payment**

**§ 9.3.1** At least ten days before the date established for each progress payment, the Contractor shall submit to the Architect an itemized Application for Payment prepared in accordance with the schedule of values, if required under Section 9.2, for completed portions of the Work. The application shall be notarized, if required, and supported by all data substantiating the Contractor’s right to payment that the Owner or Architect require, such as copies of requisitions, and releases and waivers of

liens from Subcontractors and suppliers, and shall reflect retainage if provided for in the Contract Documents.

The Contractor shall submit Application and Certificate for Payment reflecting ten (10) percent retainage

**§ 9.3.1.1** As provided in Section 7.3.9, such applications may include requests ...

**§ 9.3.1.2** Applications for Payment shall not include requests for payment for portions of the Work for which the Contractor does not intend to pay a Subcontractor or supplier, unless such Work has been performed by others whom the Contractor intends to pay.

**§ 9.3.2** Unless otherwise provided in the Contract Documents, payments shall be made on account of materials and equipment delivered and suitably stored at the site for subsequent incorporation in the Work. If approved in advance by the Owner, payment may similarly be made for materials and equipment suitably stored off the site at a location agreed upon in writing. Payment for materials and equipment stored on or off the site shall be conditioned upon compliance by the Contractor with procedures satisfactory to the Owner to establish the Owner's title to such materials and equipment or otherwise protect the Owner's interest, and shall include the costs of applicable insurance, storage, and transportation to the site, for such materials and equipment stored off the site.

**§ 9.3.3** The Contractor warrants that title to all Work covered by an Application for Payment will pass to the Owner no later than the time of payment. The Contractor further warrants that upon submittal of an Application for Payment all Work for which Certificates for Payment have been previously issued and payments received from the Owner shall, to the best of the Contractor's knowledge, information, and belief, be free and clear of liens, claims, security interests, or encumbrances, in favor of the Contractor, Subcontractors, suppliers, or other persons or entities that provided labor, materials, and equipment relating to the Work.

#### **§ 9.4 Certificates for Payment**

**§ 9.4.1** The Architect will, within seven days after receipt of the Contractor's Application for Payment, either (1) issue to the Owner a Certificate for Payment in the full amount of the Application for Payment, with a copy to the Contractor; or (2) issue to the Owner a Certificate for Payment for such amount as the Architect determines is properly due, and notify the Contractor and Owner of the Architect's reasons for withholding certification in part as provided in Section 9.5.1; or (3) withhold certification of the entire Application for Payment, and notify the Contractor and Owner of the Architect's reason for withholding certification in whole as provided in Section 9.5.1.

**§ 9.4.2** The issuance of a Certificate for Payment will constitute a representation by the Architect to the Owner, based on the Architect's evaluation of the Work and the data in the Application for Payment, that, to the best of the Architect's knowledge, information, and belief, the Work has progressed to the point indicated, the quality of the Work is in accordance with the Contract Documents, and that the Contractor is entitled to payment in the amount certified. The foregoing representations are subject to an evaluation of the Work for conformance with the Contract Documents upon Substantial Completion, to results of subsequent tests and inspections, to correction of minor deviations from the Contract Documents prior to completion, and to specific qualifications expressed by the Architect. However, the issuance of a Certificate for Payment will not be a representation that the Architect has (1) made exhaustive or continuous on-site inspections to check the quality or quantity of the Work; (2) reviewed construction means, methods, techniques, sequences, or procedures; (3) reviewed copies of requisitions received from Subcontractors and suppliers and other data requested by the Owner to substantiate the Contractor's right to payment; or (4) made examination to ascertain how or for what purpose the Contractor has used money previously paid on account of the Contract Sum.

#### **§ 9.5 Decisions to Withhold Certification**

**§ 9.5.1** The Architect may withhold a Certificate for Payment in whole or in part, to the extent reasonably necessary to protect the Owner, if in the Architect's opinion the representations to the Owner required by Section 9.4.2 cannot be made. If the Architect is unable to certify payment in the amount of the Application, the Architect will notify the Contractor and Owner as provided in Section 9.4.1. If the Contractor and Architect cannot agree on a revised amount, the Architect will promptly issue a Certificate for Payment for the amount for which the Architect is able to make such representations to the Owner. The Architect may also withhold a Certificate for Payment or, because of subsequently discovered evidence, may nullify the whole or a part of a Certificate for Payment previously issued, to such extent as may be necessary in the Architect's opinion to protect the Owner from loss for which the Contractor is responsible, including loss resulting from acts and omissions described in Section 3.3.2, because of

- .1 defective Work not remedied;
- .2 third party claims filed or reasonable evidence indicating probable filing of such claims, unless security acceptable to the Owner is provided by the Contractor;
- .3 failure of the Contractor to make payments properly to Subcontractors or suppliers for labor, materials or equipment;
- .4 reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Sum;
- .5 damage to the Owner or a Separate Contractor;
- .6 reasonable evidence that the Work will not be completed within the Contract Time, and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay; or
- .7 repeated failure to carry out the Work in accordance with the Contract Documents.

**§ 9.5.2** When either party disputes the Architect's decision regarding a Certificate for Payment under Section 9.5.1, in whole or in part, that party may submit a Claim in accordance with Article 15.

**§ 9.5.3** When the reasons for withholding certification are removed, certification will be made for amounts previously withheld.

**§ 9.5.4** If the Architect withholds certification for payment under Section 9.5.1.3, the Owner may, at its sole option, issue joint checks to the Contractor and to any Subcontractor or supplier to whom the Contractor failed to make payment for Work properly performed or material or equipment suitably delivered. If the Owner makes payments by joint check, the Owner shall notify the Architect and the Contractor shall reflect such payment on its next Application for Payment.

## **§ 9.6 Progress Payments**

**§ 9.6.1** After the Architect has issued a Certificate for Payment, the Owner shall make payment in the manner and within the time provided in the Contract Documents, and shall so notify the Architect.

**§ 9.6.2** The Contractor shall pay each Subcontractor, no later than seven days after receipt of payment from the Owner, the amount to which the Subcontractor is entitled, reflecting percentages actually retained from payments to the Contractor on account of the Subcontractor's portion of the Work. The Contractor shall, by appropriate agreement with each Subcontractor, require each Subcontractor to make payments to Sub-subcontractors in a similar manner.

**§ 9.6.3** The Architect will, on request, furnish to a Subcontractor, if practicable, information regarding percentages of completion or amounts applied for by the Contractor and action taken thereon by the Architect and Owner on account of portions of the Work done by such Subcontractor.

**§ 9.6.4** The Owner has the right to request written evidence from the Contractor that the Contractor has properly paid Subcontractors and suppliers amounts paid by the Owner to the Contractor for subcontracted Work. If the Contractor fails to furnish such evidence within seven days, the Owner shall have the right to contact Subcontractors and suppliers to ascertain whether they have been properly paid. Neither the Owner nor Architect shall have an obligation to pay, or to see to the payment of money to, a Subcontractor or supplier, except as may otherwise be required by law.

**§ 9.6.5** The Contractor's payments to suppliers shall be treated in a manner similar to that provided in Sections 9.6.2, 9.6.3 and 9.6.4.

**§ 9.6.6** A Certificate for Payment, a progress payment, or partial or entire use or occupancy of the Project by the Owner shall not constitute acceptance of Work not in accordance with the Contract Documents.

**§ 9.6.7** Unless the Contractor provides the Owner with a payment bond in the full penal sum of the Contract Sum, payments received by the Contractor for Work properly performed by Subcontractors or provided by suppliers shall be held by the Contractor for those Subcontractors or suppliers who performed Work or furnished materials, or both, under contract with the Contractor for which payment was made by the Owner. Nothing contained herein shall require money to be placed in a separate account and not commingled with money of the Contractor, create any fiduciary liability or tort liability on the part of the Contractor for breach of trust, or entitle any person or entity to an award of punitive damages against the Contractor for breach of the requirements of this provision.

**§ 9.6.8** Provided the Owner has fulfilled its payment obligations under the Contract Documents, the Contractor shall defend and indemnify the Owner from all loss, liability, damage or expense, including reasonable attorney's fees and litigation expenses, arising out of any lien claim or other claim for payment by any Subcontractor or supplier of any tier. Upon receipt of notice of a lien claim or other claim for payment, the Owner shall notify the Contractor. If approved by the applicable court, when required, the Contractor may substitute a surety bond for the property against which the lien or other claim for payment has been asserted.

**§ 9.6.9** No lien of any kind shall attach to any premises of Owner or any part hereof or improvement thereon with respect to any work done or materials furnished by Contractor; Contractor hereby expressly waives and relinquishes any right to a lien for any labor or materials furnished by it pursuant to the terms or conditions of the Contract Documents.

## **§ 9.7 Failure of Payment**

If the Architect does not issue a Certificate for Payment, through no fault of the Contractor, within seven days after receipt of the Contractor's Application for Payment, or if the Owner does not pay the Contractor within seven days after the date established in the Contract Documents, the amount certified by the Architect or awarded by binding dispute resolution, then the Contractor may, upon seven additional days' notice to the Owner and Architect, stop the Work until payment of the amount owing has been received. The Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable costs of shutdown, delay and start-up, plus interest as provided for in the Contract Documents.

## **§ 9.8 Substantial Completion**

**§ 9.8.1** Substantial Completion is the stage in the progress of the Work when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work for its intended use.

**§ 9.8.2** When the Contractor considers that the Work, or a portion thereof which the Owner agrees to accept separately, is substantially complete, the Contractor shall prepare and submit to the Architect a comprehensive list of items to be completed or corrected prior to final payment. Failure to include an item on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

**§ 9.8.3** Upon receipt of the Contractor's list, the Architect will make an inspection to determine whether the Work or designated portion thereof is substantially complete. If the Architect's inspection discloses any item, whether or not included on the Contractor's list, which is not sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work or designated portion thereof for its intended use, the Contractor shall, before issuance of the Certificate of Substantial Completion, complete or correct such item upon notification by the Architect. In such case, the Contractor shall then submit a request for another inspection by the Architect to determine Substantial Completion.

**§ 9.8.4** When the Work or designated portion thereof is substantially complete, the Architect will prepare a Certificate of Substantial Completion that shall establish the date of Substantial Completion; establish responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the Work and insurance; and fix the time within which the Contractor shall finish all items on the list accompanying the Certificate. Warranties required by the Contract Documents shall commence on the date of Substantial Completion of the Work or designated portion thereof unless otherwise provided in the Certificate of Substantial Completion.

**§ 9.8.5** The Certificate of Substantial Completion shall be submitted to the Owner and Contractor for their written acceptance of responsibilities assigned to them in the Certificate. Upon such acceptance, and consent of surety if any, the Owner shall make payment of retainage applying to the Work or designated portion thereof. Such payment shall be adjusted for Work that is incomplete or not in accordance with the requirements of the Contract Documents.

## **§ 9.9 Partial Occupancy or Use**

**§ 9.9.1** The Owner may occupy or use any completed or partially completed portion of the Work at any stage when such portion is designated by separate agreement with the Contractor, provided such occupancy or use is consented to by the insurer and authorized by public authorities having jurisdiction over the Project. Such partial occupancy or use may commence whether or not the portion is substantially complete, provided the Owner and Contractor have accepted in writing the responsibilities assigned to each of them for payments, retainage, if any, security, maintenance, heat, utilities, damage to the Work and insurance, and have agreed in writing concerning the period for correction of the Work and commencement of

warranties required by the Contract Documents. “When the Architect/Contractor in consultation with the Owner's representative considers a portion substantially complete, the Architect/Engineer or Owner's representative shall prepare a list as provided under subparagraph 9.8.2.” The stage of the progress of the Work shall be determined by written agreement between the Owner and Contractor or, if no agreement is reached, by decision of the Architect.

**§ 9.9.2** Immediately prior to such partial occupancy or use, the Owner, Contractor, and Architect shall jointly inspect the area to be occupied or portion of the Work to be used in order to determine and record the condition of the Work.

**§ 9.9.3** Unless otherwise agreed upon, partial occupancy or use of a portion or portions of the Work shall not constitute acceptance of Work not complying with the requirements of the Contract Documents.

## **§ 9.10 Final Completion and Final Payment**

**§ 9.10.1** Upon receipt of the Contractor's notice that the Work is ready for final inspection and acceptance and upon receipt of a final Application for Payment, the Architect will promptly make such inspection. When the Architect finds the Work acceptable under the Contract Documents and the Contract fully performed, the Architect will promptly issue a final Certificate for Payment stating that to the best of the Architect's knowledge, information and belief, and on the basis of the Architect's on-site visits and inspections, the Work has been completed in accordance with the Contract Documents and that the entire balance found to be due the Contractor and noted in the final Certificate is due and payable. The Architect's final Certificate for Payment will constitute a further representation that conditions listed in Section 9.10.2 as precedent to the Contractor's being entitled to final payment have been fulfilled.

**§ 9.10.2** Neither final payment nor any remaining retained percentage shall become due until the Contractor submits to the Architect (1) an affidavit that payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the Owner or the Owner's property might be responsible or encumbered (less amounts withheld by Owner) have been paid or otherwise satisfied, (2) a certificate evidencing that insurance required by the Contract Documents to remain in force after final payment is currently in effect, (3) a written statement that the Contractor knows of no reason that the insurance will not be renewable to cover the period required by the Contract Documents, (4) consent of surety, if any, to final payment, (5) documentation of any special warranties, such as manufacturers' warranties or specific Subcontractor warranties, and (6) if required by the Owner, other data establishing payment or satisfaction of obligations, such as receipts and releases and waivers of liens, claims, security interests, or encumbrances arising out of the Contract, to the extent and in such form as may be designated by the Owner. If a Subcontractor refuses to furnish a release or waiver required by the Owner, the Contractor may furnish a bond satisfactory to the Owner to indemnify the Owner against such lien, claim, security interest, or encumbrance. If a lien, claim, security interest, or encumbrance remains unsatisfied after payments are made, the Contractor shall refund to the Owner all money that the Owner may be compelled to pay in discharging the lien, claim, security interest, or encumbrance, including all costs and reasonable attorneys' fees.

**§ 9.10.3** If, after Substantial Completion of the Work, final completion thereof is materially delayed through no fault of the Contractor or by issuance of Change Orders affecting final completion, and the Architect so confirms, the Owner shall, upon application by the Contractor and certification by the Architect, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed, corrected, and accepted. If the remaining balance for Work not fully completed or corrected is less than retainage stipulated in the Contract Documents, and if bonds have been furnished, the written consent of the surety to payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by the Contractor to the Architect prior to certification of such payment. Such payment shall be made under terms and conditions governing final payment, except that it shall not constitute a waiver of Claims.

**§ 9.10.4** The making of final payment shall constitute a waiver of Claims by the Owner except those arising from

- .1 liens, Claims, security interests, or encumbrances arising out of the Contract and unsettled;
- .2 failure of the Work to comply with the requirements of the Contract Documents;
- .3 terms of special warranties required by the Contract Documents; or
- .4 audits performed by the Owner, if permitted by the Contract Documents, after final payment.

**§ 9.10.5** Acceptance of final payment by the Contractor, a Subcontractor, or a supplier, shall constitute a waiver of claims by that payee except those previously made in writing and identified by that payee as unsettled at the time of final Application for Payment.

## **ARTICLE 10 PROTECTION OF PERSONS AND PROPERTY**

### **§ 10.1 Safety Precautions and Programs**

The Contractor shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the performance of the Contract. The requirements apply continuously and are not limited to normal working hours. The Contractor accepts full responsibility for all safety requirements and precautions related to his Contract and relieve the Architect/Engineer of any responsibility thereto. The presence of Architect/Engineer or Owner's representative is not intended to include review of the adequacy of the Contractor's safety measures in, on or near construction site.

### **§ 10.2 Safety of Persons and Property**

**§ 10.2.1** The Contractor shall take reasonable precautions for safety of, and shall provide reasonable protection to prevent damage, injury, or loss to

- .1 employees on the Work and other persons who may be affected thereby;
- .2 the Work and materials and equipment to be incorporated therein, whether in storage on or off the site, under care, custody, or control of the Contractor, a Subcontractor, or a Sub-subcontractor; and
- .3 other property at the site or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, roadways, structures, and utilities not designated for removal, relocation, or replacement in the course of construction.

**§ 10.2.2** The Contractor shall comply with, and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities, bearing on safety of persons or property or their protection from damage, injury, or loss.

**§ 10.2.3** The Contractor shall implement, erect, and maintain, as required by existing conditions and performance of the Contract, reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards; promulgating safety regulations; and notifying the owners and users of adjacent sites and utilities of the safeguards.

**§ 10.2.4** When use or storage of explosives or other hazardous materials or equipment, or unusual methods are necessary for execution of the Work, the Contractor shall exercise utmost care and carry on such activities under supervision of properly qualified personnel.

**§ 10.2.5** The Contractor shall promptly remedy damage and loss (other than damage or loss insured under property insurance required by the Contract Documents) to property referred to in Sections 10.2.1.2 and 10.2.1.3 caused in whole or in part by the Contractor, a Subcontractor, a Sub-subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable and for which the Contractor is responsible under Sections 10.2.1.2 and 10.2.1.3. The Contractor may make a Claim for the cost to remedy the damage or loss to the extent such damage or loss is attributable to acts or omissions of the Owner or Architect or anyone directly or indirectly employed by either of them, or by anyone for whose acts either of them may be liable, and not attributable to the fault or negligence of the Contractor. The foregoing obligations of the Contractor are in addition to the Contractor's obligations under Section 3.18.

**§ 10.2.6** The Contractor shall designate a responsible member of the Contractor's organization at the site whose duty shall be the prevention of accidents. This person shall be the Contractor's superintendent unless otherwise designated by the Contractor in writing to the Owner and Architect.

**§ 10.2.7** The Contractor shall not permit any part of the construction or site to be loaded so as to cause damage or create an unsafe condition.

### **§ 10.2.8 Injury or Damage to Person or Property**

If either party suffers injury or damage to person or property because of an act or omission of the other party, or of others for whose acts such party is legally responsible, notice of the injury or damage, whether or not insured, shall be given to the other party within a reasonable time not exceeding 21 days after discovery. The notice shall provide sufficient detail to enable the other party to investigate the matter.

**§ 10.2.9** In addition, the Work shall be conducted in strict accordance with the Occupational Safety and Health Act of 1970 (OSHA)

### **§ 10.2.10 Weather Protection**

Contractor shall at all times provide protection against weather, rains, wind storms, frost or heat in order to maintain all work, materials, apparatus, fixtures, etc., free from damage.

#### **§ 10.2.11 Fire Protection**

Bonfires or other open fires shall not be built on premises.

Unless otherwise required under OSHA 1970, the Contractor shall provide fire extinguishers in sufficient quantity to locate three (3) fire extinguishers in each area of the project during the construction period. Extinguishers shall be standard UL labeled 2-1/2 gallon pressurized water type except under electrical installation where they shall be a minimum five- (5) pound carbon dioxide type. Fire extinguishers shall also be provided in all temporary offices and tool sheds. Should OSHA require fewer, the above quoted quantities shall be required as a minimum under this Contract.

**§ 10.2.12** Where welding or flame cutting is done on premises, the Contractor doing the welding or flame cutting shall remove all combustibles from the vicinity of the welding or cutting and shall protect all "in place" work or materials with fireproof coverings. Contractor doing the work shall keep at a minimum 2-1/2 gallon fire extinguisher at the site of the work at all times while welding or flame cutting is in progress. The Contractor is responsible for obtaining all necessary burn permits or other permits as required by the local authorities.

**§ 10.2.13** The Contractor shall not wait for or expect direction from the Owner, Architect/Engineer or Owner's representative for compliance with all Federal, State and local statutes, rules, regulations and orders. The Contractor shall be responsible for the payments of all fines levied against the Owner, Architect/Engineer or Owner's representative for deficiencies relating to said Contractor's conduct of his work. The Contractor shall indemnify and hold harmless the Owner, Architect/Engineer and Owner's representative for any damages or liability resulting from any claim made by or on the behalf of any employee of the Contractor relating to the conduct of the work by said Contractor.

#### **§ 10.3 Hazardous Materials and Substances**

**§ 10.3.1** The Contractor is responsible for compliance with any requirements included in the Contract Documents regarding hazardous materials or substances. If the Contractor encounters a hazardous material or substance not addressed in the Contract Documents and if reasonable precautions will be inadequate to prevent foreseeable bodily injury or death to persons resulting from a material or substance, including but not limited to asbestos or polychlorinated biphenyl (PCB), encountered on the site by the Contractor, the Contractor shall, upon recognizing the condition, immediately stop Work in the affected area and notify the Owner and Architect of the condition.

**§ 10.3.2** Upon receipt of the Contractor's notice, the Owner shall obtain the services of a licensed laboratory to verify the presence or absence of the material or substance reported by the Contractor and, in the event such material or substance is found to be present, to cause it to be rendered harmless. Unless otherwise required by the Contract Documents, the Owner shall furnish in writing to the Contractor and Architect the names and qualifications of persons or entities who are to perform tests verifying the presence or absence of the material or substance or who are to perform the task of removal or safe containment of the material or substance. The Contractor and the Architect will promptly reply to the Owner in writing stating whether or not either has reasonable objection to the persons or entities proposed by the Owner. If either the Contractor or Architect has an objection to a person or entity proposed by the Owner, the Owner shall propose another to whom the Contractor and the Architect have no reasonable objection. When the material or substance has been rendered harmless, Work in the affected area shall resume upon written agreement of the Owner and Contractor. By Change Order, the Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable additional costs of shutdown, delay, and start-up.

**§ 10.3.3** To the fullest extent permitted by law, the Owner shall indemnify and hold harmless the Contractor, Subcontractors, Architect, Architect's consultants, and agents and employees of any of them from and against claims, damages, losses, and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work in the affected area if in fact the material or substance presents the risk of bodily injury or death as described in Section 10.3.1 and has not been rendered harmless, provided that such claim, damage, loss, or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), except to the extent that such damage, loss, or expense is due to the fault or negligence of the party seeking indemnity.

**§ 10.3.4** The Owner shall not be responsible under this Section 10.3 for hazardous materials or substances the Contractor brings to the site unless such materials or substances are required by the Contract Documents. The Owner shall be responsible



for hazardous materials or substances required by the Contract Documents, except to the extent of the Contractor's fault or negligence in the use and handling of such materials or substances.

**§ 10.3.5** The Contractor shall reimburse the Owner for the cost and expense the Owner incurs (1) for remediation of hazardous materials or substances the Contractor brings to the site and negligently handles, or (2) where the Contractor fails to perform its obligations under Section 10.3.1, except to the extent that the cost and expense are due to the Owner's fault or negligence.

**§ 10.3.6** If, without negligence on the part of the Contractor, the Contractor is held liable by a government agency for the cost of remediation of a hazardous material or substance solely by reason of performing Work as required by the Contract Documents, the Owner shall reimburse the Contractor for all cost and expense thereby incurred.

#### **§ 10.4 Emergencies**

In an emergency affecting safety of persons or property, the Contractor shall act, at the Contractor's discretion, to prevent threatened damage, injury, or loss. Additional compensation or extension of time claimed by the Contractor on account of an emergency shall be determined as provided in Article 15 and Article 7.

#### **§ 10.5 Compliance**

Responsibility for compliance with the requirements of Article 10 lies solely with the Contractor. The Architect/Engineer or Owner's representative will neither inspect nor be responsible for compliance with the requirements of Article 10.

### **ARTICLE 11 INSURANCE AND BONDS**

#### **§ 11.1 Contractor's Insurance and Bonds**

**§ 11.1.1** The Contractor shall purchase and maintain insurance of the types and limits of liability, containing the endorsements, and subject to the terms and conditions, as described in the Agreement or elsewhere in the Contract Documents. The Contractor shall purchase and maintain the required insurance from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located. The Owner, Architect, and Architect's consultants shall be named as additional insureds under the Contractor's commercial general liability policy or as otherwise described in the Contract Documents.

.1 Certificates of Insurance shall be submitted to the Owner no later than ten (10) days after Notice of Award by the Owner. No Contractor/Subcontractor shall be allowed to continue to work on-site after the expiration of full insurance coverage. Partial payment shall be withheld until current Certificates of Insurance are submitted to the Owner.

.2 The Owner requires the following specific conditions regarding health and safety on this project

The Contractor shall keep himself fully informed of and shall carefully observe and comply with all Federal, State, County, City, and local laws, ordinances, rules, permits, licenses, or inspections; the legal rights of all workers employed under this Contract; and any other items which in any manner affect the conduct of the work and all such orders or decrees that exist at present, or those which may be enacted later, or tribunal having any jurisdiction or authority over the work; and he will be required to indemnify and save harmless the Owner and all its officers and agents against any claim or liability rising from the acts or omissions of the contractor or Contractor's agents or employees based upon any violation of any such law, ordinance, regulation, order or degree whether by himself or his employees or subcontractor.

This obligation to indemnify shall include indemnity for civil actions for personal injury or property damage in tort as well as enforcement actions for regulatory violations. The Contractor's obligation to indemnify includes the costs of litigation, including attorney's fees and expert witness fees, as well as the cost of any judgment or settlement for damages or fines. Should the contractor at any time find that any requirement of this contract is at variance with applicable laws, ordinances, or building code requirements, he shall promptly notify the Owner and any necessary adjustment of the contract will be made as specified under the section herein entitled "Changes in the Work".

The Contractor will be required to give all notices and pay all fees for any and/or all permits, licenses, or inspections necessary for the prosecution of the contract.

If the Owner receives any violation of employment risk reduction standards, in connections with the work performed under the contract, the contractor shall perform all work required to abate the violation. Such work shall be performed at no cost to

the Owner. If the Contractor should fail or refuse to abate the violation, the Owner may, at its option, abate the violation either through its own employees or by contracting out the work. The Contractor shall pay the Owner all expenses incurred in abating the violation, including but not limited to the expense of using the Owners' employees and supplies. The obligations herein survive the completion or termination of this contract.

.3 Each Subcontractor shall procure and maintain during the life of his Subcontract, insurance of the type and in the same amount as listed in the General Conditions.

.4 The Contractor shall indemnify and save harmless the Owner, Engineer or Owner's representative from and against any and all liability, loss, damage or expense (including Attorney's fees) due to injuries (including death) or property damage to members of the public, the Owner and its employees, the Engineer or Owner's representative and his employees, or anyone else arising out of the operations of the Contractor or anyone directly or indirectly employed by him, his agents, invitees or licensees.

**§ 11.1.2** The Contractor shall furnish bonds covering faithful performance of the Contract and payment of obligations arising thereunder. Bonds may be obtained through the Contractor's usual source and the cost thereof shall be included in the Contract Sum. The amount of each bond shall be equal to 100 percent of the Contract Sum.

**§ 11.1.3** Upon the request of any person or entity appearing to be a potential beneficiary of bonds covering payment of obligations arising under the Contract, the Contractor shall promptly furnish a copy of the bonds or shall authorize a copy to be furnished.

.1 The Contractor shall deliver the required bonds to the Owner not later than three days following the date the Agreement is entered into, or if the Work is to be commenced prior thereto in response to a Notice of Award or letter of intent, the Contractor shall, prior to the commencement of the Work, submit evidence satisfactory to the Owner that such bonds will be furnished.

.2 The Contractor shall require the attorney-in-fact who executes the required bonds on behalf of the surety to affix thereto a certified and current copy of the power of attorney, and certificates showing the legal right of the Bonding Company and attorney to do business in the State of the Project.

**§ 11.1.4 Notice of Cancellation or Expiration of Contractor's Required Insurance.** Within three (3) business days of the date the Contractor becomes aware of an impending or actual cancellation or expiration of any insurance required by the Contract Documents, the Contractor shall provide notice to the Owner of such impending or actual cancellation or expiration. Upon receipt of notice from the Contractor, the Owner shall, unless the lapse in coverage arises from an act or omission of the Owner, have the right to stop the Work until the lapse in coverage has been cured by the procurement of replacement coverage by the Contractor. The furnishing of notice by the Contractor shall not relieve the Contractor of any contractual obligation to provide any required coverage.

## **§ 11.2 Owner's Insurance**

**§ 11.2.1** The Owner shall purchase and maintain insurance of the types and limits of liability, containing the endorsements, and subject to the terms and conditions, as described in the Agreement or elsewhere in the Contract Documents. The Owner shall purchase and maintain the required insurance from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located. Until the work is completed and accepted by the Owner, the Owner shall purchase and maintain Property Insurance upon the entire Work at the site to the full insurable values thereof. This insurance shall include the interest in the Work of the Owner, Contractor and Subcontractors and shall insure against the perils of Fire and Extended Coverage and shall include "All Risk" insurance for physical loss or damage including without duplication, theft, vandalism, malicious mischief, collapse and water damage. Any deductible included in the Owner purchased Property Insurance shall be the responsibility of the Owner and shall not prejudice the Contractor's right to complete recovery of an insured loss to property.

**§ 11.2.2 Failure to Purchase Required Property Insurance.** If the Owner fails to purchase and maintain the required property insurance, with all of the coverages and in the amounts described in the Agreement or elsewhere in the Contract Documents, the Owner shall inform the Contractor in writing prior to commencement of the Work. Upon receipt of notice from the Owner,

the Contractor may delay commencement of the Work and may obtain insurance that will protect the interests of the Contractor, Subcontractors, and Sub-Subcontractors in the Work. When the failure to provide coverage has been cured or resolved, the Contract Sum and Contract Time shall be equitably adjusted. In the event the Owner fails to procure coverage, the Owner waives all rights against the Contractor, Subcontractors, and Sub-subcontractors to the extent the loss to the Owner would have been covered by the insurance to have been procured by the Owner. The cost of the insurance shall be charged to the Owner by a Change Order. If the Owner does not provide written notice, and the Contractor is damaged by the failure or neglect of the Owner to purchase or maintain the required insurance, the Owner shall reimburse the Contractor for all reasonable costs and damages attributable thereto.

**§ 11.2.3 Notice of Cancellation or Expiration of Owner's Required Property Insurance.** Within three (3) business days of the date the Owner becomes aware of an impending or actual cancellation or expiration of any property insurance required by the Contract Documents, the Owner shall provide notice to the Contractor of such impending or actual cancellation or expiration. Unless the lapse in coverage arises from an act or omission of the Contractor: (1) the Contractor, upon receipt of notice from the Owner, shall have the right to stop the Work until the lapse in coverage has been cured by the procurement of replacement coverage by either the Owner or the Contractor; (2) the Contract Time and Contract Sum shall be equitably adjusted; and (3) the Owner waives all rights against the Contractor, Subcontractors, and Sub-subcontractors to the extent any loss to the Owner would have been covered by the insurance had it not expired or been cancelled. If the Contractor purchases replacement coverage, the cost of the insurance shall be charged to the Owner by an appropriate Change Order. The furnishing of notice by the Owner shall not relieve the Owner of any contractual obligation to provide required insurance.

### **§ 11.3 Waivers of Subrogation**

**§ 11.3.1** The Owner and Contractor waive all rights against (1) each other and any of their subcontractors, sub-subcontractors, agents, and employees, each of the other; (2) the Architect and Architect's consultants; and (3) Separate Contractors, if any, and any of their subcontractors, sub-subcontractors, agents, and employees, for damages caused by fire, or other causes of loss, to the extent those losses are covered by property insurance required by the Agreement or other property insurance applicable to the Project, except such rights as they have to proceeds of such insurance. The Owner or Contractor, as appropriate, shall require similar written waivers in favor of the individuals and entities identified above from the Architect, Architect's consultants, Separate Contractors, subcontractors, and sub-subcontractors. The policies of insurance purchased and maintained by each person or entity agreeing to waive claims pursuant to this section 11.3.1 shall not prohibit this waiver of subrogation. This waiver of subrogation shall be effective as to a person or entity (1) even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, (2) even though that person or entity did not pay the insurance premium directly or indirectly, or (3) whether or not the person or entity had an insurable interest in the damaged property.

**§ 11.3.2** If during the Project construction period the Owner insures properties, real or personal or both, at or adjacent to the site by property insurance under policies separate from those insuring the Project, or if after final payment property insurance is to be provided on the completed Project through a policy or policies other than those insuring the Project during the construction period, to the extent permissible by such policies, the Owner waives all rights in accordance with the terms of Section 11.3.1 for damages caused by fire or other causes of loss covered by this separate property insurance.

### **§ 11.4 Loss of Use, Business Interruption, and Delay in Completion Insurance**

The Owner, at the Owner's option, may purchase and maintain insurance that will protect the Owner against loss of use of the Owner's property, or the inability to conduct normal operations, due to fire or other causes of loss. The Owner waives all rights of action against the Contractor and Architect for loss of use of the Owner's property, due to fire or other hazards however caused.

### **§ 11.5 Adjustment and Settlement of Insured Loss**

**§ 11.5.1** A loss insured under the property insurance required by the Agreement shall be adjusted by the Owner as fiduciary and made payable to the Owner as fiduciary for the insureds, as their interests may appear, subject to requirements of any applicable mortgagee clause and of Section 11.5.2. The Owner shall pay the Architect and Contractor their just shares of insurance proceeds received by the Owner, and by appropriate agreements the Architect and Contractor shall make payments to their consultants and Subcontractors in similar manner.

**§ 11.5.2** Prior to settlement of an insured loss, the Owner shall notify the Contractor of the terms of the proposed settlement as well as the proposed allocation of the insurance proceeds. The Contractor shall have 14 days from receipt of notice to object to the proposed settlement or allocation of the proceeds. If the Contractor does not object, the Owner shall settle the loss and the

Contractor shall be bound by the settlement and allocation. Upon receipt, the Owner shall deposit the insurance proceeds in a separate account and make the appropriate distributions. Thereafter, if no other agreement is made or the Owner does not terminate the Contract for convenience, the Owner and Contractor shall execute a Change Order for reconstruction of the damaged or destroyed Work in the amount allocated for that purpose. If the Contractor timely objects to either the terms of the proposed settlement or the allocation of the proceeds, the Owner may proceed to settle the insured loss, and any dispute between the Owner and Contractor arising out of the settlement or allocation of the proceeds shall be resolved pursuant to Article 15. Pending resolution of any dispute, the Owner may issue a Construction Change Directive for the reconstruction of the damaged or destroyed Work.

## **ARTICLE 12 UNCOVERING AND CORRECTION OF WORK**

### **§ 12.1 Uncovering of Work**

**§ 12.1.1** If a portion of the Work is covered contrary to the Architect's request or to requirements specifically expressed in the Contract Documents, it must, if requested in writing by the Architect, be uncovered for the Architect's examination and be replaced at the Contractor's expense without change in the Contract Time.

**§ 12.1.2** If a portion of the Work has been covered that the Architect has not specifically requested to examine prior to its being covered, the Architect may request to see such Work and it shall be uncovered by the Contractor. If such Work is in accordance with the Contract Documents, the Contractor shall be entitled to an equitable adjustment to the Contract Sum and Contract Time as may be appropriate. If such Work is not in accordance with the Contract Documents, the costs of uncovering the Work, and the cost of correction, shall be at the Contractor's expense.

### **§ 12.2 Correction of Work**

#### **§ 12.2.1 Before Substantial Completion**

The Contractor shall promptly correct Work rejected by the Architect or failing to conform to the requirements of the Contract Documents, discovered before Substantial Completion and whether or not fabricated, installed or completed. Costs of correcting such rejected Work, including additional testing and inspections, the cost of uncovering and replacement, and compensation for the Architect's services and expenses made necessary thereby, shall be at the Contractor's expense.

#### **§ 12.2.2 After Substantial Completion**

**§ 12.2.2.1** In addition to the Contractor's obligations under Section 3.5, if, within one year after the date of Substantial Completion of the Work or designated portion thereof or after the date for commencement of warranties established under Section 9.9.1, or by terms of any applicable special warranty required by the Contract Documents, any of the Work is found to be not in accordance with the requirements of the Contract Documents, the Contractor shall correct it promptly after receipt of notice from the Owner to do so, unless the Owner has previously given the Contractor a written acceptance of such condition. The Owner shall give such notice promptly after discovery of the condition. During the one-year period for correction of Work, if the Owner fails to notify the Contractor and give the Contractor an opportunity to make the correction, the Owner waives the rights to require correction by the Contractor and to make a claim for breach of warranty. If the Contractor fails to correct nonconforming Work within a reasonable time during that period after receipt of notice from the Owner or Architect, the Owner may correct it in accordance with Section 2.5.

**§ 12.2.2.2** The one-year period for correction of Work shall be extended with respect to portions of Work first performed after Substantial Completion by the period of time between Substantial Completion and the actual completion of that portion of the Work.

**§ 12.2.2.3** The one-year period for correction of Work shall not be extended by corrective Work performed by the Contractor pursuant to this Section 12.2.

**§ 12.2.3** The Contractor shall remove from the site portions of the Work that are not in accordance with the requirements of the Contract Documents and are neither corrected by the Contractor nor accepted by the Owner.

**§ 12.2.4** The Contractor shall bear the cost of correcting destroyed or damaged construction of the Owner or Separate Contractors, whether completed or partially completed, caused by the Contractor's correction or removal of Work that is not in accordance with the requirements of the Contract Documents.

**§ 12.2.5** Nothing contained in this Section 12.2 shall be construed to establish a period of limitation with respect to other

obligations the Contractor has under the Contract Documents. Establishment of the one-year period for correction of Work as described in Section 12.2.2 relates only to the specific obligation of the Contractor to correct the Work, and has no relationship to the time within which the obligation to comply with the Contract Documents may be sought to be enforced, nor to the time within which proceedings may be commenced to establish the Contractor's liability with respect to the Contractor's obligations other than specifically to correct the Work.

### **§ 12.3 Acceptance of Nonconforming Work**

If the Owner prefers to accept Work that is not in accordance with the requirements of the Contract Documents, the Owner may do so instead of requiring its removal and correction, in which case the Contract Sum will be reduced as appropriate and equitable. Such adjustment shall be effected whether or not final payment has been made.

### **§ 12.4 Specific Warranties**

**§ 12.4.1** Warranty period on work shall be the manufacturer's standard, unless specified otherwise in the Contract Documents.

**§ 12.4.2** Defects in the Work within the specified periods due to faulty materials or workmanship shall be corrected as required to satisfy Contract Documents. Execute such repairs, corrective work, including cost of making good other work damaged or otherwise affected by making of repairs, without extra charge to Owner, within 5 calendar days after written note to Contractor by Owner. On parts of the Work corrected under the Warranty, the Warranty period for those parts shall be extended for a period of one year from the date of correction, or to the end of the warranty period, whichever is longer.

## **ARTICLE 13 MISCELLANEOUS PROVISIONS**

### **§ 13.1 Governing Law**

The Contract shall be governed by the law of the place where the Project is located, excluding that jurisdiction's choice of law rules. If the parties have selected arbitration as the method of binding dispute resolution, the Federal Arbitration Act shall govern Section 15.4.

**§ 13.1.1** In connection with the performance of work under this Contract, the Contractor agrees to comply with all statutes, Federal, State, or Local, prohibiting discrimination against any employee or applicant for employment and agrees further that he will not discriminate against such employee or applicant for employment because of age, race, religion, color, nation of origin or sex. The following agreement shall include, but not be limited to, the following: employment, upgrading, demotion, or transfer, recruitment, or recruitment advertising, lay-off or termination rates of pay or other forms of compensation, and selection for training, including apprenticeship.

### **§ 13.2 Successors and Assigns**

**§ 13.2.1** The Owner and Contractor respectively bind themselves, their partners, successors, assigns, and legal representatives to covenants, agreements, and obligations contained in the Contract Documents. Except as provided in Section 13.2.2, neither party to the Contract shall assign the Contract as a whole without written consent of the other. If either party attempts to make an assignment without such consent, that party shall nevertheless remain legally responsible for all obligations under the Contract.

**§ 13.2.2** The Owner may, without consent of the Contractor, assign the Contract to a lender providing construction financing for the Project, if the lender assumes the Owner's rights and obligations under the Contract Documents. The Contractor shall execute all consents reasonably required to facilitate the assignment.

### **§ 13.3 Rights and Remedies**

**§ 13.3.1** Duties and obligations imposed by the Contract Documents and rights and remedies available thereunder shall be in addition to and not a limitation of duties, obligations, rights, and remedies otherwise imposed or available by law.

**§ 13.3.2** No action or failure to act by the Owner, Architect, or Contractor shall constitute a waiver of a right or duty afforded them under the Contract, nor shall such action or failure to act constitute approval of or acquiescence in a breach thereunder, except as may be specifically agreed upon in writing.

### **§ 13.4 Tests and Inspections**

**§ 13.4.1** Tests, inspections, and approvals of portions of the Work shall be made as required by the Contract Documents and by

applicable laws, statutes, ordinances, codes, rules, and regulations or lawful orders of public authorities. Unless otherwise provided, the Contractor shall make arrangements for such tests, inspections, and approvals with an independent testing laboratory or entity acceptable to the Owner, or with the appropriate public authority, and shall bear all related costs of tests, inspections, and approvals. The Contractor shall give the Architect timely notice of when and where tests and inspections are to be made so that the Architect may be present for such procedures. The Owner shall bear costs of tests, inspections, or approvals that do not become requirements until after bids are received or negotiations concluded. The Owner shall directly arrange and pay for tests, inspections, or approvals where building codes or applicable laws or regulations so require.

**§ 13.4.2** If the Architect, Owner, or public authorities having jurisdiction determine that portions of the Work require additional testing, inspection, or approval not included under Section 13.4.1, the Architect will, upon written authorization from the Owner, instruct the Contractor to make arrangements for such additional testing, inspection, or approval, by an entity acceptable to the Owner, and the Contractor shall give timely notice to the Architect of when and where tests and inspections are to be made so that the Architect may be present for such procedures. Such costs, except as provided in Section 13.4.3, shall be at the Owner's expense.

**§ 13.4.3** If procedures for testing, inspection, or approval under Sections 13.4.1 and 13.4.2 reveal failure of the portions of the Work to comply with requirements established by the Contract Documents, all costs made necessary by such failure, including those of repeated procedures and compensation for the Architect's services and expenses, shall be at the Contractor's expense.

**§ 13.4.4** Required certificates of testing, inspection, or approval shall, unless otherwise required by the Contract Documents, be secured by the Contractor and promptly delivered to the Architect.

**§ 13.4.5** If the Architect is to observe tests, inspections, or approvals required by the Contract Documents, the Architect will do so promptly and, where practicable, at the normal place of testing.

**§ 13.4.6** Tests or inspections conducted pursuant to the Contract Documents shall be made promptly to avoid unreasonable delay in the Work.

**§ 13.4.7** Field tests shall be made in the presence of the Owner's representative.

### **§ 13.5 Interest**

Payments due and unpaid under the Contract Documents shall bear interest from the date payment is due at the rate the parties agree upon in writing or, in the absence thereof, at the legal rate prevailing from time to time at the place where the Project is located.

## **ARTICLE 14 TERMINATION OR SUSPENSION OF THE CONTRACT**

### **§ 14.1 Termination by the Contractor**

**§ 14.1.1** The Contractor may terminate the Contract if the Work is stopped for a period of 30 consecutive days through no act or fault of the Contractor, a Subcontractor, a Sub-subcontractor, their agents or employees, or any other persons or entities performing portions of the Work, for any of the following reasons:

- .1 Issuance of an order of a court or other public authority having jurisdiction that requires all Work to be stopped;
- .2 An act of government, such as a declaration of national emergency, that requires all Work to be stopped;
- .3 Because the Architect has not issued a Certificate for Payment and has not notified the Contractor of the reason for withholding certification as provided in Section 9.4.1, or because the Owner has not made payment on a Certificate for Payment within the time stated in the Contract Documents; or
- .4 The Owner has failed to furnish to the Contractor reasonable evidence as required by Section 2.2.

**§ 14.1.2** The Contractor may terminate the Contract if, through no act or fault of the Contractor, a Subcontractor, a Sub-subcontractor, their agents or employees, or any other persons or entities performing portions of the Work, repeated suspensions, delays, or interruptions of the entire Work by the Owner as described in Section 14.3, constitute in the aggregate more than 100 percent of the total number of days scheduled for completion, or 120 days in any 365-day period, whichever is less.

**§ 14.1.3** If one of the reasons described in Section 14.1.1 or 14.1.2 exists, the Contractor may, upon seven days' notice to the

Owner and Architect, terminate the Contract and recover from the Owner payment for Work executed, as well as reasonable overhead and profit on Work not executed, and costs incurred by reason of such termination.

**§ 14.1.4** If the Work is stopped for a period of 60 consecutive days through no act or fault of the Contractor, a Subcontractor, a Sub-subcontractor, or their agents or employees or any other persons or entities performing portions of the Work because the Owner has repeatedly failed to fulfill the Owner's obligations under the Contract Documents with respect to matters important to the progress of the Work, the Contractor may, upon seven additional days' notice to the Owner and the Architect, terminate the Contract and recover from the Owner as provided in Section 14.1.3.

## **§ 14.2 Termination by the Owner for Cause**

**§ 14.2.1** The Owner may terminate the Contract if the Contractor

- .1 repeatedly refuses or fails to supply enough properly skilled workers or proper materials;
- .2 fails to make payment to Subcontractors or suppliers in accordance with the respective agreements between the Contractor and the Subcontractors or suppliers;
- .3 repeatedly disregards applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of a public authority; or
- .4 otherwise is guilty of substantial breach of a provision of the Contract Documents.

**§ 14.2.2** When any of the reasons described in Section 14.2.1 exist, and upon certification by the Architect that sufficient cause exists to justify such action, the Owner may, without prejudice to any other rights or remedies of the Owner and after giving the Contractor and the Contractor's surety, if any, seven days' notice, terminate employment of the Contractor and may, subject to any prior rights of the surety:

- .1 Exclude the Contractor from the site and take possession of all materials, equipment, tools, and construction equipment and machinery thereon owned by the Contractor;
- .2 Accept assignment of subcontracts pursuant to Section 5.4; and
- .3 Finish the Work by whatever reasonable method the Owner may deem expedient. Upon written request of the Contractor, the Owner shall furnish to the Contractor a detailed accounting of the costs incurred by the Owner in finishing the Work.

**§ 14.2.3** When the Owner terminates the Contract for one of the reasons stated in Section 14.2.1, the Contractor shall not be entitled to receive further payment until the Work is finished.

**§ 14.2.4** If the unpaid balance of the Contract Sum exceeds costs of finishing the Work, including compensation for the Architect's services and expenses made necessary thereby, and other damages incurred by the Owner and not expressly waived, such excess shall be paid to the Contractor. If such costs and damages exceed the unpaid balance, the Contractor shall pay the difference to the Owner. The amount to be paid to the Contractor or Owner, as the case may be, shall be certified by the Initial Decision Maker, upon application, and this obligation for payment shall survive termination of the Contract.

## **§ 14.3 Suspension by the Owner for Convenience**

**§ 14.3.1** The Owner may, without cause, order the Contractor in writing to suspend, delay or interrupt the Work, in whole or in part for such period of time as the Owner may determine.

**§ 14.3.2** The Contract Sum and Contract Time shall be adjusted for increases in the cost and time caused by suspension, delay, or interruption under Section 14.3.1. Adjustment of the Contract Sum shall include profit. No adjustment shall be made to the extent

- .1 that performance is, was, or would have been, so suspended, delayed, or interrupted, by another cause for which the Contractor is responsible; or
- .2 that an equitable adjustment is made or denied under another provision of the Contract.

## **§ 14.4 Termination by the Owner for Convenience**

**§ 14.4.1** The Owner may, at any time, terminate the Contract for the Owner's convenience and without cause.

**§ 14.4.2** Upon receipt of notice from the Owner of such termination for the Owner's convenience, the Contractor shall

- .1 cease operations as directed by the Owner in the notice;

- .2 take actions necessary, or that the Owner may direct, for the protection and preservation of the Work; and
- .3 except for Work directed to be performed prior to the effective date of termination stated in the notice, terminate all existing subcontracts and purchase orders and enter into no further subcontracts and purchase orders.

**§ 14.4.3** In case of such termination for the Owner's convenience, the Owner shall pay the Contractor for Work properly executed; costs incurred by reason of the termination, including costs attributable to termination of Subcontracts; and the termination fee, if any, set forth in the Agreement.

## **ARTICLE 15 CLAIMS AND DISPUTES**

### **§ 15.1 Claims**

#### **§ 15.1.1 Definition**

A Claim is a demand or assertion by one of the parties seeking, as a matter of right, payment of money, a change in the Contract Time, or other relief with respect to the terms of the Contract. The term "Claim" also includes other disputes and matters in question between the Owner and Contractor arising out of or relating to the Contract. The responsibility to substantiate Claims shall rest with the party making the Claim. This Section 15.1.1 does not require the Owner to file a Claim in order to impose liquidated damages in accordance with the Contract Documents.

#### **§ 15.1.2 Time Limits on Claims**

The Owner and Contractor shall commence all Claims and causes of action against the other and arising out of or related to the Contract, whether in contract, tort, breach of warranty or otherwise, in accordance with the requirements of the binding dispute resolution method selected in the Agreement and within the period specified by applicable law, but in any case not more than 10 years after the date of Substantial Completion of the Work. The Owner and Contractor waive all Claims and causes of action not commenced in accordance with this Section 15.1.2.

#### **§ 15.1.3 Notice of Claims**

**§ 15.1.3.1** Claims by either the Owner or Contractor, where the condition giving rise to the Claim is first discovered prior to expiration of the period for correction of the Work set forth in Section 12.2.2, shall be initiated by notice to the other party and to the Initial Decision Maker with a copy sent to the Architect, if the Architect is not serving as the Initial Decision Maker. Claims by either party under this Section 15.1.3.1 shall be initiated within 21 days after occurrence of the event giving rise to such Claim or within 21 days after the claimant first recognizes the condition giving rise to the Claim, whichever is later.

**§ 15.1.3.2** Claims by either the Owner or Contractor, where the condition giving rise to the Claim is first discovered after expiration of the period for correction of the Work set forth in Section 12.2.2, shall be initiated by notice to the other party. In such event, no decision by the Initial Decision Maker is required.

#### **§ 15.1.4 Continuing Contract Performance**

**§ 15.1.4.1** Pending final resolution of a Claim, except as otherwise agreed in writing or as provided in Section 9.7 and Article 14, the Contractor shall proceed diligently with performance of the Contract and the Owner shall continue to make payments in accordance with the Contract Documents.

**§ 15.1.4.2** The Contract Sum and Contract Time shall be adjusted in accordance with the Initial Decision Maker's decision, subject to the right of either party to proceed in accordance with this Article 15. The Architect will issue Certificates for Payment in accordance with the decision of the Initial Decision Maker.

#### **§ 15.1.5 Claims for Additional Cost**

If the Contractor wishes to make a Claim for an increase in the Contract Sum, notice as provided in Section 15.1.3 shall be given before proceeding to execute the portion of the Work that is the subject of the Claim. Prior notice is not required for Claims relating to an emergency endangering life or property arising under Section 10.4.

#### **§ 15.1.6 Claims for Additional Time**

**§ 15.1.6.1** If the Contractor wishes to make a Claim for an increase in the Contract Time, notice as provided in Section 15.1.3 shall be given. The Contractor's Claim shall include an estimate of cost and of probable effect of delay on progress of the Work. In the case of a continuing delay, only one Claim is necessary.



**§ 15.1.6.2** If adverse weather conditions are the basis for a Claim for additional time, such Claim shall be documented by data substantiating that weather conditions were abnormal for the period of time, could not have been reasonably anticipated, and had an adverse effect on the scheduled construction.

#### **§ 15.1.7 Waiver of Claims for Consequential Damages**

The Contractor and Owner waive Claims against each other for consequential damages arising out of or relating to this Contract. This mutual waiver includes

- .1 damages incurred by the Owner for rental expenses, for losses of use, income, profit, financing, business and reputation, and for loss of management or employee productivity or of the services of such persons; and
- .2 damages incurred by the Contractor for principal office expenses including the compensation of personnel stationed there, for losses of financing, business and reputation, and for loss of profit, except anticipated profit arising directly from the Work.

This mutual waiver is applicable, without limitation, to all consequential damages due to either party's termination in accordance with Article 14. Nothing contained in this Section 15.1.7 shall be deemed to preclude assessment of liquidated damages, when applicable, in accordance with the requirements of the Contract Documents.

#### **§ 15.2 Initial Decision**

**§ 15.2.1** Claims, excluding those where the condition giving rise to the Claim is first discovered after expiration of the period for correction of the Work set forth in Section 12.2.2 or arising under Sections 10.3, 10.4, and 11.5, shall be referred to the Initial Decision Maker for initial decision. The Architect will serve as the Initial Decision Maker, unless otherwise indicated in the Agreement. Except for those Claims excluded by this Section 15.2.1, an initial decision shall be required as a condition precedent to mediation of any Claim. If an initial decision has not been rendered within 30 days after the Claim has been referred to the Initial Decision Maker, the party asserting the Claim may demand mediation and binding dispute resolution without a decision having been rendered. Unless the Initial Decision Maker and all affected parties agree, the Initial Decision Maker will not decide disputes between the Contractor and persons or entities other than the Owner.

**§ 15.2.2** The Initial Decision Maker will review Claims and within ten days of the receipt of a Claim take one or more of the following actions: (1) request additional supporting data from the claimant or a response with supporting data from the other party, (2) reject the Claim in whole or in part, (3) approve the Claim, (4) suggest a compromise, or (5) advise the parties that the Initial Decision Maker is unable to resolve the Claim if the Initial Decision Maker lacks sufficient information to evaluate the merits of the Claim or if the Initial Decision Maker concludes that, in the Initial Decision Maker's sole discretion, it would be inappropriate for the Initial Decision Maker to resolve the Claim.

**§ 15.2.3** In evaluating Claims, the Initial Decision Maker may, but shall not be obligated to, consult with or seek information from either party or from persons with special knowledge or expertise who may assist the Initial Decision Maker in rendering a decision. The Initial Decision Maker may request the Owner to authorize retention of such persons at the Owner's expense.

**§ 15.2.4** If the Initial Decision Maker requests a party to provide a response to a Claim or to furnish additional supporting data, such party shall respond, within ten days after receipt of the request, and shall either (1) provide a response on the requested supporting data, (2) advise the Initial Decision Maker when the response or supporting data will be furnished, or (3) advise the Initial Decision Maker that no supporting data will be furnished. Upon receipt of the response or supporting data, if any, the Initial Decision Maker will either reject or approve the Claim in whole or in part.

**§ 15.2.5** The Initial Decision Maker will render an initial decision approving or rejecting the Claim, or indicating that the Initial Decision Maker is unable to resolve the Claim. This initial decision shall (1) be in writing; (2) state the reasons therefor; and (3) notify the parties and the Architect, if the Architect is not serving as the Initial Decision Maker, of any change in the Contract Sum or Contract Time or both. The initial decision shall be final and binding on the parties but subject to mediation and, if the parties fail to resolve their dispute through mediation, to binding dispute resolution.

**§ 15.2.6** Either party may file for mediation of an initial decision at any time, subject to the terms of Section 15.2.6.1.

**§ 15.2.6.1** Either party may, within 30 days from the date of receipt of an initial decision, demand in writing that the other party file for mediation. If such a demand is made and the party receiving the demand fails to file for mediation within 30 days after receipt thereof, then both parties waive their rights to mediate or pursue binding dispute resolution proceedings with

respect to the initial decision.

**§ 15.2.7** In the event of a Claim against the Contractor, the Owner may, but is not obligated to, notify the surety, if any, of the nature and amount of the Claim. If the Claim relates to a possibility of a Contractor's default, the Owner may, but is not obligated to, notify the surety and request the surety's assistance in resolving the controversy.

**§ 15.2.8** If a Claim relates to or is the subject of a mechanic's lien, the party asserting such Claim may proceed in accordance with applicable law to comply with the lien notice or filing deadlines.

### **§ 15.3 Mediation**

**§ 15.3.1** Claims, disputes, or other matters in controversy arising out of or related to the Contract, except those waived as provided for in Sections 9.10.4, 9.10.5, and 15.1.7, shall be subject to mediation as a condition precedent to binding dispute resolution.

**§ 15.3.2** The parties shall endeavor to resolve their Claims by mediation which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with its Construction Industry Mediation Procedures in effect on the date of the Agreement. A request for mediation shall be made in writing, delivered to the other party to the Contract, and filed with the person or entity administering the mediation. The request may be made concurrently with the filing of binding dispute resolution proceedings but, in such event, mediation shall proceed in advance of binding dispute resolution proceedings, which shall be stayed pending mediation for a period of 60 days from the date of filing, unless stayed for a longer period by agreement of the parties or court order. If an arbitration is stayed pursuant to this Section 15.3.2, the parties may nonetheless proceed to the selection of the arbitrator(s) and agree upon a schedule for later proceedings.

**§ 15.3.3** Either party may, within 30 days from the date that mediation has been concluded without resolution of the dispute or 60 days after mediation has been demanded without resolution of the dispute, demand in writing that the other party file for binding dispute resolution. If such a demand is made and the party receiving the demand fails to file for binding dispute resolution within 60 days after receipt thereof, then both parties waive their rights to binding dispute resolution proceedings with respect to the initial decision.

**§ 15.3.4** The parties shall share the mediator's fee and any filing fees equally. The mediation shall be held in the place where the Project is located, unless another location is mutually agreed upon. Agreements reached in mediation shall be enforceable as settlement agreements in any court having jurisdiction thereof.

### **§ 15.4 Arbitration**

**§ 15.4.1** If the parties have selected arbitration as the method for binding dispute resolution in the Agreement, any Claim subject to, but not resolved by, mediation shall be subject to arbitration which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with its Construction Industry Arbitration Rules in effect on the date of the Agreement. The Arbitration shall be conducted in the place where the Project is located, unless another location is mutually agreed upon. A demand for arbitration shall be made in writing, delivered to the other party to the Contract, and filed with the person or entity administering the arbitration. The party filing a notice of demand for arbitration must assert in the demand all Claims then known to that party on which arbitration is permitted to be demanded.

**§ 15.4.1.1** A demand for arbitration shall be made no earlier than concurrently with the filing of a request for mediation, but in no event shall it be made after the date when the institution of legal or equitable proceedings based on the Claim would be barred by the applicable statute of limitations. For statute of limitations purposes, receipt of a written demand for arbitration by the person or entity administering the arbitration shall constitute the institution of legal or equitable proceedings based on the Claim.

**§ 15.4.2** The award rendered by the arbitrator or arbitrators shall be final, and judgment may be entered upon it in accordance with applicable law in any court having jurisdiction thereof.

**§ 15.4.3** The foregoing agreement to arbitrate and other agreements to arbitrate with an additional person or entity duly consented to by parties to the Agreement, shall be specifically enforceable under applicable law in any court having jurisdiction thereof.

#### **§ 15.4.4 Consolidation or Joinder**

**§ 15.4.4.1** Subject to the rules of the American Arbitration Association or other applicable arbitration rules, either party may consolidate an arbitration conducted under this Agreement with any other arbitration to which it is a party provided that (1) the arbitration agreement governing the other arbitration permits consolidation, (2) the arbitrations to be consolidated substantially involve common questions of law or fact, and (3) the arbitrations employ materially similar procedural rules and methods for selecting arbitrator(s).

**§ 15.4.4.2** Subject to the rules of the American Arbitration Association or other applicable arbitration rules, either party may include by joinder persons or entities substantially involved in a common question of law or fact whose presence is required if complete relief is to be accorded in arbitration, provided that the party sought to be joined consents in writing to such joinder. Consent to arbitration involving an additional person or entity shall not constitute consent to arbitration of any claim, dispute or other matter in question not described in the written consent.

**§ 15.4.4.3** The Owner and Contractor grant to any person or entity made a party to an arbitration conducted under this Section 15.4, whether by joinder or consolidation, the same rights of joinder and consolidation as those of the Owner and Contractor under this Agreement.

## DIVISION 01 - GENERAL REQUIREMENTS

### SECTION 011000

#### SUMMARY OF WORK

#### PART 1 GENERAL

##### 1.1 SUMMARY

###### A. Section Includes

1. Parking Garage 1 repairs per Specification Section 004100 – Bid Form.
2. Parking Garage 2 repairs per Specification Section 004100 – Bid Form.
3. Parking Garage 3 repairs per Specification Section 004100 – Bid Form.
4. Parking Garage 4 repairs per Specification Section 004100 – Bid Form.
5. Parking Garage 5 repairs per Specification Section 004100 – Bid Form.
6. Parking Garage 6 repairs per Specification Section 004100 – Bid Form.

###### B. Alternates

1. PS3 and PS4 Exterior Stair Storefronts Sealant and Wall Panel Joints Repairs.

##### 1.2 CONTRACTS

- ###### A.
- A complete Bid including all Base Scope and Alternate Work Items must be received from the Contractor.

##### 1.3 CONTRACTOR'S DUTIES

- ###### A.
- Assume all Contractor responsibilities and provide for the Work required by the Contract Documents.
- ###### B.
- Give required notices where and when requested.
- ###### C.
- Comply with codes, ordinances, rules, regulations, orders, and other legal requirements of public authorities which bear on the performance of the Work.
- ###### D.
- Pay all legally required taxes. Refer to Bidding Requirements, General Conditions for information relative to sales tax for which the Owner is exempt.
- ###### E.
- Apply, secure, and pay for all required local permits, fees, licenses, and approvals per the General Conditions of the Contract.

##### 1.4 NOTES TO CONTRACTOR

- ###### A.
- The division of the body of the Specifications into various Parts has been arranged for clarity in the delineation of the various parts of the whole Work. It is not the intent of such division to develop any secondary responsibilities for the satisfactory completion of the Work and all of its parts as required of the Contractor by the Contract Documents, nor is the assignment of any parts of the Work to any trade or craft to be inferred from the Contract Documents.
- ###### B.
- Division 01 Specifications typically address items in a general nature and the Contractor

must take notice that more specific requirements may be included in the Technical Sections.

## 1.5 PROJECT COORDINATION

- A. The Contractor has full responsibility and authority regarding the scheduling and coordination of the Work within the Contract time and within the requirements of Article 1.7.
- B. The Contractor also has full responsibility for the completeness and quality of the Work as outlined in the Contract Documents, and must staff the project with qualified, competent personnel to the extent required for the Work.
- C. The Contractor's Project Manager and Lead Project Superintendent are subject to the review and approval of the Owner. Upon request at any portion of the project (i.e. pre-award, post-award and prior to project start, or during the project), the Contractor shall produce a detailed resume, with references, documenting the experience of the Project Manager and Lead Project Superintendent for the Owner's review and approval.
- D. All subcontractors shall abide by the Project Schedule and coordination requests made by the Contractor.
- E. If a subcontractor is substantially responsible for specific components of the Work (i.e. concrete repairs or new concrete placements, waterproofing efforts, electrical work, painting, etc.), the Contractor must have a regular, periodic site presence during those efforts, not less than two separate days per week, nor less than 20 percent of the total work week time, to provide a level of coordination and quality control consistent with that expected of a wholly self-performing Contractor labor force.
- F. Unless otherwise directed or allowed, the Owner (or the Owner's representative) communicates directly with the Contractor. All dealings and decisions regarding execution of the Work shall be from the Owner, (or Owner's representative,) to the Contractor, and the reverse flow.
- G. The Contractor communicates directly with the subcontractors, vendors, and suppliers. At the Engineer's option, direct communications between the Engineer and subcontractor may occur, for clarification of material delivery, installation procedures, technical support, logistics and other matters. Contractor will be kept advised of any such Engineer/subcontractor communications.
- H. The subcontractor shall coordinate with the Contractor who has the overall responsibility for the Work.
- I. Where Work of any one Section of the Specifications affects the Work of other Sections, successive Work shall not be installed until conditions have been inspected by the Contractor and are satisfactory for successive Work. Installation of successive Work shall serve as the Contractor's acceptance and confidence with the conditions being covered by subsequent work. The performance of successive Work shall be the responsibility of the Contractor to coordinate.
- J. Contractor is required to be on site to conduct regular, bi-weekly job progress meetings with the Owner. Contractor shall include Engineer via telephone for said progress meetings and shall distribute written meeting minutes as directed by Owner.

- K. The Owner reserves the right to hold additional job progress and coordination meetings on an as-needed basis as determined by the Owner. The Contractor shall be given 48 hours' notice (when possible) to said meeting.
- L. A preconstruction project meeting shall be held by the Owner prior to the start of work.

#### 1.6 APPLICABLE CODES

- A. The Contractor shall comply with all Federal, State and Municipal laws, codes, ordinances and regulations applicable to the Work in this Contract and also with all requirements of the National Fire Protection Association, the National Electric Code, and the Occupational Safety and Health Administration (OSHA). If the above laws, codes, or ordinances conflict with this Specification, then the laws, codes or ordinances shall govern, except in such cases where the Specification exceeds them in quality of materials or labor, then the Specifications shall be followed.

#### 1.7 SCHEDULING

- A. The Construction Project Schedule shall be prepared using the Critical Path Method (CPM) of network calculations. The Schedule Manager shall provide the schedule in either the Precedence Diagram Method (PDM) or the Arrow Diagram Method (ADM). A bar chart Construction Project Schedule listing all work activities and durations may be provided if approved in advance by the Owner.
- B. The Construction Project Schedule shall include a detail program for construction, purchasing of critical materials, and for submission of shop drawings and samples. All construction activities must show work phasing requirements. The schedule must be signed by an official of the firm. It must be realistic as its faithful execution will be considered a commitment, not an estimate
- C. Within 7 days after Notice of Award, submit the Construction Project Schedule within the requirement items below.
- D. Work Hours and Site Restrictions
  - 1. Normal working hours are 7:00 AM to 3:30 PM, Monday through Friday. Work is also permitted and encouraged for some efforts after closure of adjacent buildings and businesses, from 10:30 PM to 8:00 AM, Sunday/Monday through Thursday/Friday.
  - 2. Work requested by the Contractor to be performed outside of normal working hours must be approved and coordinated through the Owner. Provide the Owner a minimum of 4 working days' notice prior to the requested time to perform work outside normal working hours. Such request shall include type of work to be performed and expected duration.
  - 3. Work performed outside of normal business/working hours shall be performed at no additional cost to the Owner. Additional cost incurred for testing and inspection, including services of the Engineer or Owner's representative shall be solely borne in full by the Contractor.
  - 4. Change order work that is to be performed on a time and materials basis shall be billed as if performed during normal work hours. In the event that work is required to

be performed outside normal work hours due to schedule or site restrictions, the Contractor shall be compensated at their standard overtime rate.

5. Odor or fume producing work performed in the vicinity of fresh air intakes (or similar occupied building access points) must be performed at night after the shutdown of fresh air intakes. At the Contractor's option, and if approved in advance by the Owner, work may begin prior to air intake shutdown. If work is elected to begin prior to intake shutdown, the Contractor shall at their expense, employ measures to draw fresh air from areas beyond the work activities that produce odors/fumes. All methods or procedures must be approved by, and meet, the satisfaction of the Owner.
6. When work is performed which may create a hazard to persons or property above, below or in the proximity of the work, those areas shall be blocked or otherwise protected to eliminate the hazard.
7. All work at entry/exits is to be performed in such a manner to allow traffic flow in and out without significantly constricting the accessibility.
8. The Contractor is responsible for securing work area for performance of the Work.

E. Work Phasing

1. Arrange the Construction Progress Schedule to show each work area of construction for each type of work.
2. All activities shall be identified in the Construction Progress Schedule by the work area in which the activity occurs. Activities shall not be allowed to cover more than one work area.
3. Work Phasing requirements are listed below:
  - a. The main entrance/exit ramp shall remain open. Contractor to provide traffic control as needed.
  - b. Coordinate closure of one stair at a time with the City of Charleston in Parking Garage 3 and Parking Garage 4 for repairs.
  - c. A maximum of parking spaces may be closed during repair work as outlined below:
    - 1) Parking Garage 1 – 150 parking spaces.
    - 2) Parking Garage 2 – 50 parking spaces.
    - 3) Parking Garage 3 – 100 parking spaces.
    - 4) Parking Garage 4 – 75 parking spaces.
    - 5) Parking Garage 5 – 50 parking spaces.
    - 6) Parking Garage 6 – 75 parking spaces.

F. Milestones and Contract Completion

1. The time for Substantial Completion is 210 Calendar Days from the date of mobilization.
2. Substantial Completion is defined as the project is sufficiently complete, in accordance with the construction contract documents, so that the owner may use or occupy the structure for its intended purpose without affecting daily operation.
3. The time for Contract Completion is 28 Calendar Days beyond Substantial Completion date.
4. The Contractor shall mobilize and begin work not later than 14 Calendar Days from receiving a formal Notice to Proceed or executed Contract.
5. The Contractor shall deliver submittals to the Engineer at least 7 Calendar Days prior to mobilizing. Submittals shall include but not limited to technical data information, shop drawings, certification letters, and the schedule of values.
6. Should the Contractor fall behind the approved or adjusted schedule in the performance of his Work and, in the judgment of the Owner, it appears that the Contractor cannot complete his Work within the time established by the Contract, then the Contractor shall work overtime, additional shifts or adopt such other procedures with the Owner's approval, as may be necessary to restore adherence to the schedule while maintaining the required level of quality control, testing and inspection. The full cost of such work or procedures shall be borne by the Contractor, including the cost of additional services of the Owner or Owner's representative.
7. Work rejected by the Owner as not meeting the intent or requirements of the Contract Documents shall be replaced by the Contractor and shall not result in additional costs to the Owner. Rejected work will not be cause for an extension to the Contract Time.

G. Adverse Weather

1. Adverse Weather Day occurs when weather parameters (precipitation or temperature) create conditions that inhibit the ability of the contractor to work productively on all scope items outlined in the contract documents.
2. The Contractor shall assume three (3) Adverse Weather Days per month which shall be built into the overall Construction Progress Schedule.
3. Contractor should notify Owner when Adverse Weather Days are encountered, and work cannot continue on a given day.
4. The Contractor shall provide a written weekly summary of Adverse Weather Days for review.
5. An Adverse Weather Day is defined by temperature and precipitation requirements per the technical specifications.



#### H. Periodic Schedule Updates

1. The project schedule shall be updated every 30 days. The update shall show recommendations for adjusting the Construction Progress Schedule to meet milestone completion and Contract completion dates. Include Adverse Weather Delays for review by the Owner for possible adjustment to the milestones and Contract completion dates. No changes to the to the milestones and Contract completion dates unless modified via a change order to the project.
2. The Contract shall provide a two-week Look Ahead Schedule for review at the Progress Meeting. The Look Ahead Schedule will be based on the most recent monthly update and will show only those activities that are scheduled to begin or are in progress during the week before and for two weeks after.

#### 1.8 PROJECT CONDITIONS

- A. No equipment exceeding 4000 lbs. per axle, including transportation and removal equipment shall be allowed on a supported structural level.
- B. Existing emergency access routes must be maintained at all times on each level of the structure where work is being performed.

#### 1.9 LIQUIDATED DAMAGES

- A. All required work shall be completed within the specified time period. If the Work is not completed for any reason, Liquidated Damages may be charged to the Contractor per the following schedule:
  1. Lump sum of \$750.00 per day until substantial completion is reached.
  2. For lost parking spaces in excess of 30 total, an additional sum of \$10 per lost parking space per day until substantial completion is reached.
  3. At Final Completion, all punch list issues shall be fully addressed to the satisfaction of the Owner, and all required project close-out documents, including final pay requests and all warranties, as-built drawings and maintenance manuals, shall be submitted to the Owner. Liquidated Damages equal to the Engineer's costs to administer the project beyond the Final Completion date will be assessed via a reduction in the retainage payment to the Contractor.

#### 1.10 SAFETY

- A. The Contractor is responsible for all safety issues regarding performance of the Work.
- B. The Contractor must submit to the Owner a copy of the contractor's safety program prior to the start of work.
- C. The Contractor shall have weekly Tool Box Safety Meetings which must be attended by all Contractor and subcontractor personnel on-site.
- D. Fire extinguishers shall be provided at all contractor furnished gasoline operated equipment, contractor storage area, at membrane application areas and membrane mixing areas, and at each area of other work efforts with flammable components.

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Extinguishers to be 10 lb. A, B, C Class.

PART 2 PRODUCTS – NOT USED.

PART 3 EXECUTIONS – NOT USED.

END OF SECTION

DIVISION 01 - GENERAL REQUIREMENTS

SECTION 012200

UNIT PRICES

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes

1. Base Bid Unit Prices.

B. Related Sections

1. Section 015600: Barriers.
2. Section 012900: Payment Procedures.
3. Section 030100: Concrete Repairs.
4. Section 033810: Post Tensioned Garage Cable Repairs
5. Section 036423: Epoxy Injection Repairs.
6. Section 051200: Structural Steel.
7. Section 071800: Vehicular Traffic Membrane.
8. Section 079200: Sealants.
9. Section 087100: Door Hardware.
10. Section 221400: Drains and Piping.

1.2 UNIT PRICES

A. General

1. Unit Prices include all labor, material, tools, equipment, supervision transportation, handling, storage, overhead and profit, and all other costs associated with performance of work.
2. Additions to a quantity as listed in this Section will be paid by the Owner at the unit price established in Section 012900: Payment Procedures.
3. Deletions from a quantity as listed in this Section will be credited to the Owner at the unit price established in Section 012900: Payment Procedures.

B. Base Bid Unit Price Items

1. The Contractor shall include the total cost for all Base Bid Unit Price items listed on Section 004100: Bid Form.

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PART 2 PRODUCTS - NOT USED.

PART 3 EXECUTIONS - NOT USED.

END OF SECTION

DIVISION 01 - GENERAL REQUIREMENTS

SECTION 012300

ALTERNATES

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes

1. Add Alternate Bid Summary.

B. Related Sections

1. Section 011000: Summary of Work.
2. Section 012900: Payment Procedures.
3. Section 015600: Barriers.
4. Section 079200: Sealants.
5. Section 099100: High Performance Coatings.

1.2 ALTERNATES

A. General

1. Cost for Alternates shall be complete, including all labor materials, tools, equipment, supervision, transportation, handling storage, overhead and profit and performance and material bonds.
2. The Owner may choose any or all Alternates in any order unless otherwise indicated.
3. The Owner reserves the right to reject any or all Alternates.
4. Failure to provide a cost for each requested Alternate on the Bid Form may be cause for rejection of bid by the Owner.
5. Alternates that are submitted by the Contractor at zero cost change must be indicated on the Bid Form by writing "No change in cost".

B. Provide a cost in the spaces provided in Section 004100: Bid Form for the following Alternates. Refer to Drawings for additional information.

1. Alternate No. 1: PS3 and PS4 Exterior Stair Storefronts Sealant and Wall Panel Joints Repairs.

PART 2 PRODUCTS – NOT USED.

PART 3 EXECUTIONS – NOT USED.

END OF SECTION

DIVISION 01 - GENERAL REQUIREMENTS

SECTION 012600

CONTRACT MODIFICATION PROCEDURES

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes

1. Change of Work Procedures.

1.2 CONTRACT MODIFICATIONS

A. Minor Changes in the Work

1. Interpretation of Contract Documents or minor changes in the Work not involving changes in Contract Price or Time shall be issued by the Owner in writing and shall be executed promptly by the Contractor.

B. Contract Modifications

1. Changes to the Contract that affect the cost/time shall be processed as follows:

- a. Contractor shall submit a written proposal, with a complete itemized breakdown, showing quantities and unit costs of the major items of materials, labor hours, labor costs per hour, overhead and profit, and time modifications to the Owner for review and acceptance.
- b. The Owner will review the proposal and respond with one of the following:
  - i. Reject the proposal in writing.
  - ii. Issue a Construction Change Directive.
  - iii. Issue a Change Order.

C. Change Orders

1. Cost for change orders shall be calculated as the sum of hourly wages, materials, overhead and profit.
2. The percentage to be used for General Contractor overhead and profit shall be 15 percent for self-performed labor, 10 percent for subcontractors and 10 percent for materials and equipment.
3. The percentages to be used for Sub-Contractor overhead and profit shall not exceed 10 percent for labor and 10 percent for materials and equipment.

The City of Charleston  
2025 Garage Repairs  
THP #24137.00  
June 2025 – Bid Set

PART 2 PRODUCTS - NOT USED.

PART 3 EXECUTIONS - NOT USED.

END OF SECTION

DIVISION 01 - GENERAL REQUIREMENTS

SECTION 012900

PAYMENT PROCEDURES

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes

1. Unit Prices.
2. Measurement Procedures for Unit Prices.

B. Related Sections

1. Section 012200: Unit Prices.
2. Section 015600: Barriers.
3. Section 012900: Payment Procedures.
4. Section 030100: Concrete Repairs.
5. Section 033810: Post Tensioned Garage Cable Repairs
6. Section 036423: Epoxy Injection Repairs.
7. Section 051200: Structural Steel.
8. Section 071800: Vehicular Traffic Membrane.
9. Section 079200: Sealants.
10. Section 087100: Door Hardware.
11. Section 221400: Drains and Piping.

C. Unit Prices

1. Unit prices shall apply for both additions to and deletions from the Work.
2. Unit prices shall be complete including all labor, materials, tools, equipment, supervision, transportation, handling, storage, overhead and profit, and all other costs associated with the work.
3. No monetary variance of unit prices for additive and deductive quantities will be accepted and will be cause for rejection of Bid.
4. The Owner reserves the right to accept or reject any or all unit prices.
5. All unit price items on the Bid Form must be completed. If unit price is zero, then it must be indicated as such in the space provided.
6. Failure to provide unit prices as required on the Form of Proposal may be cause for rejection of Bid.

D. Measurement & Payment Procedures



1. Prior to the start of work in each work area or phase, the Contractor and the Owner will inspect the area and document locations and quantities of all unit price items. The Contractor shall notify the Owner at least 3 days in advance of required inspection. Refer to Section 012200.
2. Unit price items will be recorded and the date of the inspection and the persons performing the inspections will be recorded on each item sheet.
3. The Owner's representative will measure and count the unit price items. The Contractor will record the results.
4. At the completion of each item inspection, both the Owner and Contractor will sign the record sheets.
5. The Owner will copy the sheets and provide a copy of all sheets to the Contractor within 3 working days from the date of inspection.
6. These inspection sheets will be the only basis for determining final quantities of all unit price items.
7. Measurements will be recorded to the nearest inch.
8. For each application of payment submitted by the Contractor, a summation of all unit price items shall be sent for verification.
9. Differences in sum totals between the Owner and Contractor will be resolved by comparing quantity sheets to determine exact final quantities. Quantities NOT measured AND confirmed shall not be approved for payment.
10. The difference between an actual quantity and a specified quantity will be multiplied by the unit cost for that item to establish a dollar value. The dollar value for quantities above the unit price quantity will be added to the contract amount. The dollar value for quantities below the unit price quantity will be subtracted from the contract amount.
11. Adjustments to the contract amount will be made by approved change order.

PART 2 PRODUCTS - NOT USED.

PART 3 EXECUTIONS - NOT USED.

END OF SECTION

## DIVISION 01 - GENERAL REQUIREMENTS

### SECTION 013300

#### SUBMITTALS PROCEDURES

#### PART 1 GENERAL

##### 1.1 SUMMARY

###### A. Section Includes

1. Procedural requirements for non-administrative submittals, including shop drawings, product data, samples, and other miscellaneous work-related submittals. Shop drawings, product data, samples, and other work-related submittals are required to amplify, expand, and coordinate the information contained in the Contract Documents.
2. Shop drawings are technical drawings and data that have been specifically prepared for this project, including but not limited to:
  - a. Fabrication and installation drawings.
  - b. Setting diagrams.
  - c. Shop work manufacturing instructions.
  - d. Coordination drawings (for use on-site).
  - e. Schedules.
  - f. Concrete Mix Designs.
3. Standard information prepared without specific reference to a project is not considered to be shop drawings.
4. Product data includes standard printed information on manufactured products that has not been specifically prepared for this project, including but not limited to the following items:
  - a. Manufacturer's product specifications and installation instructions.
  - b. Standard color charts.
  - c. Catalog cuts.
  - d. Printed performance curves, independent technical analysis of performance, or similar.
  - e. Operational range diagrams.
  - f. Standard product operating and maintenance manuals.
  - g. Mill reports.
  - h. Safety data sheets (SDS) on all material provided or used in execution of the Work.
5. Samples are physical examples of work, including, but not limited to the following items:

- a. Partial sections of manufactured or fabricated work.
- b. Small cuts or containers of materials.
- c. Complete units of repetitively-used materials.
- d. Swatches showing color, texture, and pattern.
- e. Color range sets.
- f. Units of work to be used for independent inspection and testing.

## 1.2 SUBMITTALS

### A. General

1. Promptly after the Contract has been signed, the Contractor shall submit complete and detailed shop drawings to the Owner or its representative for the work of the various trades, and the Owner or its representative shall approve or reject them with reasonable promptness.
2. The Contractor, prior to submitting the shop drawings, shall review all shop drawings, check all conditions, check, and verify all field measurements, and mark all corrections, sign, and date each set.
3. No shop drawings will be reviewed without the signature of Contractor, which will signify that he has checked drawings.
4. No faxed copies to the Engineer for approval will be accepted.

### B. Coordination of Submittal Times

1. Prepare and transmit each submittal sufficiently in advance of the scheduled performance of related work and other applicable activities.
2. Transmit different kinds of submittals for the same unit of work so that processing will not be delayed by the need to review submittals concurrently for coordination.
3. The Owner will endeavor to complete his review of submittals within 7 calendar days of receipt. Submittals shall be returned noted: "No exceptions noted", or "Exceptions noted", or "Exceptions noted: revise and resubmit". Fabrication of material before the receipt of shop drawings for that material noted "No exceptions noted" shall be at the Contractor's risk.

### C. No extension of time will be authorized because of the Contractor's failure to transmit submittals sufficiently in advance of the work.

### D. Submittal Preparation

1. Mark each submittal with a permanent label for identification. Provide the following information on the label for proper processing and recording of action taken.
  - a. Project name.
  - b. Date.

- c. Name and address of Owner.
  - d. Name and address of Contractor.
  - e. Name and address of subcontractor.
  - f. Name and address of supplier.
  - g. Name of manufacturer.
  - h. Number and title of appropriate Specification Section.
  - i. Drawing number and detail references, as appropriate.
  - j. Similar definitive information, as necessary.
2. Provide a space on the label for the Contractor's review and approval markings, and a space for the Owner's "Action" marking.

### 1.3 SPECIFIC SUBMITTAL REQUIREMENTS

#### A. General

1. Specific submittal requirements for individual units of Work are specified in the applicable Specification Section.
2. Except as otherwise indicated in the individual Specification Sections, comply with the requirements specified herein for each type of submittal.

#### B. Shop Drawings

1. Information required on shop drawings shall include dimensions, identification of specific products and materials which are included in the Work, information showing compliance with specified standards, and notations of coordination requirements with other work.
2. Provide special notation of dimensions that have been established by field measurement.
3. Highlight, encircle or otherwise indicate deviations from the Contract Documents on the shop drawings.
4. Coordination Drawings
  - a. Provide coordination drawings where required for the integration of the Work, including Work first shown in detail on shop drawings or product data.
  - b. Show sequencing and relationship of separate units of Work which must interface in a restricted manner to fit in the space provided or function as indicated.
  - c. Coordination drawings are considered shop drawings and must be definitive in nature.
5. Do not permit shop drawings copies without an appropriate final "Action" marking to be used in connection with the Work.
6. Do not reproduce Contract Documents or copy standard printed information as the

basis of shop drawings.

7. Initial Submittal

- a. Provide an electronic version of each submittal. An electronic version will be returned. The Contractor should maintain a printed copy on site during the project.

8. Final Submittal

- a. Provide an electronic version of each revised submittal after the Initial Submittal review. The Contractor should maintain a printed copy on site during the project.

C. Product Data

1. General information required specifically as product data includes manufacturer's standard printed recommendations for application and use, compliance with recognized standards of trade associations and testing agencies, and the application of their labels and seals (if any), special notation of dimensions which have been verified by way of field measurement, special coordination requirements for interfacing the material, product or system with other work, and material safety data sheets.

2. Preparation

- a. Collect an electronic version of the required product data.
- b. Mark the electronic version to show which choices and options are applicable to the project.

3. Submittals

- a. Product data submittal is required for information and record and to determine that the products, materials, and systems comply with the provisions of the Contract Documents.
- b. The initial submittal is also the final submittal, except where it is observed that there is non-compliance with the provisions of the Contract Documents and the submittal promptly returned to the Contractor marked with the appropriate "Action."

4. Final Distribution

- a. An electronic version of the submittals will be returned to the Contractor.
- b. Furnish copies of product data to subcontractors, suppliers, fabricators, manufacturers, installers, governing authorities, and others as required for proper performance of the Work.
- c. Show distribution on transmittal forms.

5. Installation Copy

- a. Do not proceed with installation of materials, products, and systems until a copy of product data applicable to the installation is in the possession of the installer.
- b. Do not permit the use of unmarked copies of product data in connection with the performance of the Work.

D. Samples

1. Submit a minimum of two samples for visual review of general generic kind, color, pattern, and texture, and with other related elements of the Work.
2. Samples are also submitted for quality control comparison of these characteristics between the final sample submittal and the actual work as it is delivered and installed.
3. Refer to individual Work Sections of these Specifications for additional sample requirements which may be intended for examination or testing of additional characteristics.
4. Compliance with other required characteristics is the exclusive responsibility of the Contractor; such compliance is not considered in the Owner's review and "Action" indication on sample submittals.
5. Documentation required specifically for sample submittals includes a generic description of the sample, the sample source or the product name or manufacturer, compliance with governing regulations and recognized standards. Indicate limitations in terms of availability, sizes, delivery time and similar limiting characteristics.

E. Miscellaneous Submittals

1. Inspection and Test Reports
  - a. Classify each inspection and test report as being either "shop drawings" or "product data," depending on whether the report is specially prepared for the project or a standard publication of workmanship control testing at the point of production.
  - b. Process inspection and tests reports accordingly.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTIONS - NOT USED.

END OF SECTION

## DIVISION 01 - GENERAL REQUIREMENTS

### SECTION 014000

#### QUALITY REQUIREMENTS

##### PART 1 GENERAL

###### 1.1 SUMMARY

###### A. SECTION INCLUDES

1. General: Required inspection and testing services are intended to assist in the determination of probable compliance of the Work with requirements specified or indicated. These required services do not relieve the Contractor of responsibility for compliance with these requirements or for compliance with requirements of the Contract Documents.
2. Definitions: Quality control services include inspections, tests, and related actions, including reports, performed by independent agencies and governing authorities, as well as directly by the Contractor. These services do not include Contract enforcement activities performed directly by the Owner.
3. Specific quality control requirements for individual units of Work are specified in the Sections of these Specifications that specify the individual element of the Work. These requirements, including inspections and tests, cover both production of standard products and fabrication of customized work. These requirements also cover quality control of the installation procedures.
4. Inspections, tests, and related actions specified in this Section and elsewhere in the Contract Documents are not intended to limit the Contractor's own quality control procedures which facilitate overall compliance with requirements of the Contract Documents.
5. Requirements for the Contractor to provide quality control services as required by the Owner, governing authorities or other authorized entities are not limited by the provisions of this Section.

###### 1.2 RESPONSIBILITIES

- A. Contractor Responsibilities: Except where they are specifically indicated as being the Owner's responsibility, or where they are to be provided by another identified entity approved by the Owner, all inspections, tests and similar quality control services are the Contractor's responsibility - these services also include those specified to be performed by an independent agency and not directly by the Contractor. Costs for these services shall be included in the Contract Sum. The Contractor shall employ and pay an independent agency, testing laboratory or other qualified firm approved by the Owner to perform quality control services specified.
- B. Owner Responsibilities: The Contractor will employ and pay for the services of an

independent agency, testing laboratory or other qualified firm to perform services which are the Owner's responsibility. Such services shall be coordinated by the Contractor as required.

- C. Retest Responsibility: Where results of required inspections, tests or similar services prove unsatisfactory and do not indicate compliance of related Work with the requirements of the Contract Documents, then retests are the responsibility of the Contractor, regardless of whether the original tests were the Contractor's responsibility. Retesting of Work revised or replaced by the Contractor is the Contractor's responsibility, where required tests were performed on original Work.
- D. Responsibility for Associated Services: The Contractor is required to cooperate with the independent agencies performing required inspections, tests and similar services. Provide such auxiliary services as are reasonably requested. Notify the testing agency sufficiently in advance of operations to permit assignment of personnel. These auxiliary services include, but are not necessarily limited to the following:
  - 1. Providing access to the Work.
  - 2. Taking samples or assistance with taking samples.
  - 3. Delivery of samples of test laboratories.
  - 4. Security and protection of samples and test equipment at the Project site.
- E. Limitations of Authority of Testing Service Agency: The agency is not authorized to release, revoke, alter or enlarge the Contract Documents. The agency shall not approve or accept any portion of the Work. The agency shall not perform any duties of the Contractor.
- F. Coordination: The Contractor and each independent agency engaged to perform inspections, tests and similar services for the Project shall coordinate the sequence of their activities so as to accommodate required services with a minimum of delay in the progress of the Work. In addition, the Contractor and each independent testing agency shall coordinate their work so as to avoid the necessity of removing and replacing work to accommodate inspections and tests. The Contractor is responsible for scheduling times for inspections, tests, taking of samples and similar activities.
- G. If the laws, ordinances, rules, regulations or orders of any public authority having jurisdiction require any work to be inspected, tested or approved, the Contractor shall give the Owner timely notice of its readiness and of the date arranged so the Owner may observe such inspection, testing or approval.
- H. Special Tests: The Owner may on occasion request the Contractor to perform a special test on materials or equipment installed to verify conformance to the Specifications. The Owner will pay for all such tests if the materials or equipment meet or exceed specified requirements. However, if the items tested fail to meet these requirements, then the Contractor shall pay all costs of such tests and shall rectify at no cost to the Owner.

### 1.3 SUBMITTALS



- A. General: Refer to Section 013300: Submittal Procedures, for submittal requirements.
- B. Submit a certified report of each inspection, test or similar service performed by the Testing Laboratory directly to the parties below.
  - 1. Contractor.
  - 2. Engineer.
  - 3. Owner's representative.
  - 4. Owner.
  - 5. Project governing authority when the authority so directs.
- C. Report Data: Written reports of each inspection, test or similar service shall include, but not be limited to the following:
  - 1. Name of testing agency or test laboratory.
  - 2. Dates and locations of samples and tests or inspections.
  - 3. Names of individuals making the inspection or test.
  - 4. Designation of the Work and test method.
  - 5. Complete inspection or test data.
  - 6. Test results.
  - 7. Interpretations of test results.
  - 8. Notation of significant ambient conditions at the time of sample taking and testing.
  - 9. Comments or professional opinion as to whether inspected or test work complies with requirements of the Contract Documents.
  - 10. Recommendations on retesting, if applicable.

#### 1.4 QUALITY ASSURANCE

- A. Qualification for Service Agencies: Except as otherwise indicated, engage inspection and test service agencies, including independent testing laboratories, which are pre-qualified as complying with "Recommended Requirements for Independent Laboratory Qualification" by the American Council of Independent Laboratories, and which are recognized in the industry as specialized in the types of inspections and tests to be performed. Owner must approve Contractor's designated testing agency.
- B. Codes and Standards: Testing, when required, shall be in accordance with all pertinent codes and regulations and with selected standards indicated in the various Sections of these Specifications under the Article entitled QUALITY ASSURANCE.
- C. The Contractor shall comply with all Federal, State and Municipal laws, codes, ordinances and regulations applicable to the Work in this Contract and also with all requirements of the National Fire Protection Association, the National Electric Code, and the Occupational Safety and Health Administration (OSHA). If the above laws, codes, or ordinances conflict

with this Specification, then the laws, codes or ordinances shall govern, except in such cases where the Specification exceeds them in quality of materials or labor, then the Specifications shall be followed.

1.5 REPAIR AND PROTECTION

- A. General: Upon completion of inspection, testing, sample taking, and similar services performed on the Work, repair damaged Work and restore substrates and finishes to eliminate deficiencies, including deficiencies in the visual qualities of exposed finishes. Protect Work exposed by or for quality control service activities and protect repaired Work. Repair and protection is the Contractor's responsibility, regardless of the assignment of responsibility for inspection, testing or similar services.

PART 2 PRODUCTS – NOT USED.

PART 3 EXECUTIONS – NOT USED.

END OF SECTION

## DIVISION 01 - GENERAL REQUIREMENTS

### SECTION 014216

#### DEFINITIONS AND STANDARDS

#### PART 1 GENERAL

##### 1.1 DESCRIPTION OF REQUIREMENTS

- A. General: This Section specifies procedural and administrative requirements for compliance with governing regulations and the codes and standards imposed upon the Work. These requirements include the obtaining of permits, licenses, inspections, releases, and similar documentation, as well as payments, statements and similar requirements associated with regulations, codes, and standards.

1. "Regulations" is defined to include laws, statutes, ordinances, and lawful orders issued by governing authorities, as well as those rules, conventions and agreements within the construction industry which effectively control the performance of the Work regardless of whether they are lawfully imposed by governing authority or not.

##### 1.2 DEFINITIONS

- A. Owner: The City of Charleston, West Virginia and their properly authorized agents including the Engineer and other consultants serving as Owner's Representatives reviewing work.
- B. Engineer: THP Limited, Inc., Cincinnati, Ohio.
- C. Owner's Representative: THP Limited, Inc., or another authorized agent as designated by the Owner.
- D. General Explanation: A substantial amount of specification language consists of definitions for terms found in other Contract Documents, including the Drawings. (Drawings must be recognized as diagrammatic in nature and not completely descriptive of the requirements indicated thereon). Certain terms used in Contract Documents are defined in this Article. Definitions and explanations contained in this Section are not necessarily either complete or exclusive but are general for the Work to the extent that they are not stated more explicitly in another element of the Contract Documents.
- E. General Requirements: The provisions or requirements of Division 01 Sections apply to entire work of Contract and, where so indicated, to other elements which are included in the Project.
- F. Indicated: The term "indicated" is a cross reference to graphic representations, notes or schedules on Drawings, to other paragraphs or schedules in the Specifications, and to similar means of recording requirements in Contract Documents. Where terms such as "shown", "noted", "scheduled", and "specified" are used in lieu of "indicated", it is for the purpose of helping reader locate cross reference, and no limitation of location is intended except as specifically noted.

- G. Directed, Requested, Etc.: Where not otherwise explained, terms such as "directed", "requested", authorized, "selected", "approved", "required", "accepted", and "permitted" mean "directed by Owner or Engineer", "requested by Owner or Engineer", and similar phrases. However, no such implied meaning will be interpreted to extend the Owner's, Engineer's or Owner's representative's responsibility into the Contractor's area of construction supervision.
- H. Project Site: The term "project site" is defined as the space available to the Contractor for performance of the Work, either exclusively or in conjunction with others performing other work as part of the project. The extent of the project site is shown on the Drawings.
- I. Furnish: Except as otherwise defined in greater detail, term "furnish" is used to mean supply and deliver to project site, ready for unloading, unpacking, assembly, installation, etc., as applicable in each instance.
- J. Install: Except as otherwise defined in greater detail, term "install" is used to describe operations at project site, including unloading, unpacking, assembly, erection, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning and similar operations, as applicable in each instance.
- K. Provide: Except as otherwise defined in greater detail, term "provide" means furnish and install, complete and ready for intended use, as applicable in each instance.
- L. Installer: The term "installer" is defined as the entity (person or firm) engaged by the Contractor, its subcontractor or sub-subcontractor for performance of a particular unit of work at the project site, including installation, erection, application and similar required operations. It is a general requirement that such entities (installers) be expert in the operations they are engaged to perform.
- M. Final Completion: The term "Final Completion" refers to the degree of completion at which time the Project as a whole is turned over for full use to the Owner and all Work is completed in compliance with the Contract Documents.
- N. Entrance: The term "entrance" is defined as a pedestrian doorway, stair, walkway, passageway, landing, elevator, or other type of connector which connects or allows access from one structure to another structure.

### 1.3 INDUSTRY STANDARDS

- A. General Applicability of Standards: Except to the extent that more explicit or more stringent requirements are written directly into the Contract Documents, applicable standards of the construction industry have the same force and effect (and are made a part of the Contract Documents by reference) as if copied directly into the Contract Documents, or as if public copies were bound herewith. Refer to other Contract Documents for resolution of overlapping and conflicting requirements which result from the application of several different industry standards to the same unit of work. Refer to individual unit of work Sections for indications of which specialized codes and standards the Contractor must keep at the project site, available for reference.

1. Referenced standards (referenced directly in Contract Documents or by governing regulations) have precedence over non-referenced standards which are recognized in industry for applicability to the Work.
  2. Non-referenced standards recognized in the construction industry are hereby defined, except as otherwise limited in the Contract Documents as having direct applicability to the Work and will be so enforced for the performance of the Work. The decision as to whether an industry code or standard is applicable to the Work, or as to which of several standards are applicable, is the sole responsibility of the Engineer.
- B. Publication Dates: Except as otherwise indicated, where compliance with an industry standard is required, comply with standard in effect as of date of Contract Documents.
- C. Copies of Standards: The Contract Documents require that each entity performing work be experienced in that part of the Work being performed. Each entity is also required to be familiar with recognized industry standards applicable to that part of the Work. Copies of applicable standards are not bound with the Contract Documents.
- D. Where copies of standards are needed for proper performance of the Work, the Contractor is required to obtain such copies directly from the publication source.
- E. In case of conflict between the published standard and Project Specifications, the more stringent shall govern.
- F. References to known standard specifications shall mean the latest edition of such specifications adopted and published at date of execution of the Contract.
- G. No claim by Contractor for additional compensation will be entertained on account of his failure to be fully informed as to requirements of any referenced standard.
- 1.4 REGULATORY REQUIREMENTS
- A. Adherence to Codes and Regulations
1. Before proceeding with the Work, the Contractor shall thoroughly review the Drawings and Specifications to assure the design to be in accordance with all laws, ordinances, rules and regulations, and he shall assume full responsibility therefore and shall bear all costs attributable thereto UNLESS notice is given to the Owner in writing of the discrepancy BEFORE proceeding with the Work.

PART 2 PRODUCTS - NOT USED.

PART 3 EXECUTIONS - NOT USED.

END OF SECTION

DIVISION 01 - GENERAL REQUIREMENTS

SECTION 015000

TEMPORARY FACILITIES AND CONTROLS

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes

1. Administrative and procedural requirements for temporary services and facilities, including such items as temporary utility services, temporary construction and support facilities, and project security and protection.

1.2 OWNER OPERATION, MAINTENANCE OF OPERATION AND SAFETY

- A. The structure is currently in use by the Owner. Areas of the structure outside the limits of a particular construction area shall remain functional throughout the construction period.
- B. All construction operations shall be carefully coordinated with the Owner so as to minimize the overall inconvenience to the Owner, maintain the use of all means of egress at all specified times and to expedite job progress.
- C. All fumes and dust arising from construction operations shall be controlled so as to not adversely affect persons using the structure and all adjacent facilities.
- D. The Contractor shall protect his Work and equipment from damage by the public and other entities occupying the structure during the construction period.
- E. The Contractor shall take all necessary precautions for all Work Areas to prevent debris from falling and causing damage outside the work area, including damage to existing mechanical/electrical fixtures. The Contractor shall be held liable for all damage caused by excavation, patching, drilling, coring, cutting, sandblasting, dust and debris. The Contractor shall be held liable for all damage to mechanical/electrical fixtures systems due to construction related activities. Contractor shall be responsible for all injury to people and property, including motor vehicles, caused by any construction related activity. The Owner will endeavor to field complaints and forward same to Contractor. Contractor is responsible for contacting people or property owner and resolving complaints.
- F. When Work is performed which may create a hazard to persons or property above, below or in the proximity of Work, affected areas shall be blocked or otherwise protected to eliminate the hazard. Coordinate this activity with the Owner a minimum of 4 working days prior to the requested time for performance of such work.
- G. Access to all emergency egress routes outside the limits of an individual construction area shall be continuously and safely maintained. Emergency egress routes shall not be impaired due to construction activities.
- H. Coordinate Work Areas with the Owner to minimize interference with normal operations.

- I. The Contractor shall comply with all Federal, State and Municipal laws, codes, ordinances and regulations applicable to the Work in this Contract and also with all requirements of the National Fire Protection Association, the National Electric Code, and the Occupational Safety and Health Administration (OSHA). If the above laws, codes or ordinances conflict with this Specification, then the laws, codes or ordinances shall govern, except in such cases where the Specification exceeds them in quality of materials or labor, then the Specifications shall be followed.

### 1.3 WORK AREAS

- A. The Work is divided into sections termed Work Areas. Work outside the closed Work Area is not allowed, except work permitted by the Construction Documents or authorized by the Owner.
- B. The Construction limit lines are defined as the extent of the Work Areas designated on the Drawings. Areas outside the construction limits may not be used by the Contractor for staging, storage of materials, or any other purpose, except as indicated in the Construction Documents.

### 1.4 MATERIAL AND EQUIPMENT STORAGE AND DELIVERY

- A. An area of the structure will be made available to the Contractor for material and equipment storage, staging and other facilities deemed necessary by the Contractor.
- B. Deliveries shall not block entrance or exit to the facility by patrons or other services. Deliveries are to be scheduled between 9:00 am and 3:00 pm.

### 1.5 PROTECTION OF THE SURROUNDING AREA

- A. All construction operations shall be conducted such as to protect the surrounding areas and adjacent buildings.
- B. Fumes and dust shall also be controlled so as to prevent harmful or undesirable effects in the surrounding areas. All potential avenues for penetration of fumes or dust into occupied spaces adjacent to the work area must be located and sealed by the Contractor in a manner acceptable to the Owner prior to the start of the work in the affected area.
- C. Areas below regions of construction activity may remain open for portions of that activity. However, the Contractor is totally responsible for damage as a result of the Work.

### 1.6 PROTECTION OF EXISTING CONDITIONS

- A. All portions of the existing structure, all utilities and all other building contents not part of the work damaged, moved or altered in any way during construction shall be replaced or repaired to the Owner's satisfaction at the Contractor's expense.
- B. Contractor and Owner shall conduct a preconstruction inspection of all finish materials and equipment located within the Work area to record in writing existing damaged finish materials and/or equipment not directly involved with this Contract. The Contractor shall be deemed responsible for damaged finish material and/or equipment not recorded during the preconstruction inspection. Contractor shall replace or repair to the Owner's

satisfaction damaged finish material and/or equipment. It is the Contractor's responsibility to schedule and coordinate this preconstruction walk-through with the Owner. Provide a minimum of 5 calendar days notice prior to the requested walk-through time.

- C. Accidental interruptions caused by the Contractor to services outside of the work area shall be reported to the Owner at once, and immediate, emergency efforts to restore the service shall be made at the expense of the Contractor.
- D. When performing work adjacent to building and structures, protect buildings and structures from dirt, dust and debris.
- E. Protect drain openings during construction from construction debris entering drainage system. Provide filter cloth over openings to prevent debris from entering pipes, but still allowing water to enter. Clean debris from drains as necessary to maintain water removal. Remove drain protection during non-working hours and reinstall prior to commencing work.

#### 1.7 TEMPORARY FACILITIES

- A. Contractor to provide electric and water service
- B. The Contractor shall provide temporary toilet facilities for use by its employees and subcontractors. Locate in an area approved by the Owner. Use of Owner facilities is not allowed.
- C. Job signs are not allowed unless authorized by the Owner.
- D. The Contractor shall furnish temporary lighting or heat required so that work may proceed to meet the Contract schedule.
- E. The Contractor shall arrange and establish a location satisfactory to the Owner where workmen may eat; provide a rubbish container, and clean and remove all debris at the end of each work day.
- F. At all times when work is being performed, the Contractor's foreman shall be on-site. Both the foreman and the superintendent shall have a mobile phone or beeper with him/her at all times while on the job site. Provide the Owner with the telephone number.
- G. A job site office/trailer is not required.

#### 1.8 PARKING

- A. Parking for Contractor vehicles associated with the production of the work will be provided. Contractor employee parking will not be permitted within Work Areas.

#### 1.9 USE OF FACILITY

- A. Contractor employees are not permitted to use Owner and tenant facilities except as previously noted. Failure to comply with this restriction can result in the dismissal of the offending employee from the construction site.
- B. Elevators may not be used by the Contractor.



- C. Except for materials being used during a work shift, store all materials in approved storage area.
- D. Materials being used for work shall be uniformly distributed throughout the work area so as to not overload or otherwise distress the supported structural system.

#### 1.10 TRAFFIC CONTROL

- A. Provide lighting, signage, barricades, traffic cones, signals, and traffic direction personnel required to clearly and safely re-route traffic in non-work areas. Coordinate with the Owner a minimum of 7 days in advance of when an area is scheduled to be closed.
- B. Erect barricades to prevent unauthorized entry of pedestrian or vehicular traffic into, on or under the Work Area. Post appropriate signs to warn against entry. Construct barricades to prevent unauthorized entry during non-work hours.
- C. Perform temporary traffic marking and striping that may be required during construction.
- D. Provide signage to safely route pedestrians to the nearest stairwell and exit.

#### 1.11 USE OF STREETS AND WALKS

- A. All use of streets and walks must be in accordance with local authorities having jurisdiction. The Contractor must coordinate such use directly with the local authorities.
- B. The Contractor shall provide and maintain control device necessary for the protection of his Work, and areas which the local authorities may consider hazardous, including necessary lighting. Further, should conditions arise which necessitate the use of flagman and/or the services of the local police, the Contractor shall supply this type of control at no expense to the Owner.
- C. Maintain traffic in accordance with local authority's requirements.
- D. The Contractor shall provide and maintain signage, barricades, warning devices, etc. that may be necessary or required by local authorities or the Owner for the protection of pedestrians and vehicles while performing the work.

#### 1.12 CLEANUP

- A. Each Contractor or Subcontractor, upon completion of his division of the work, shall collect and remove all rubbish, surplus material, tools and scaffolding pertaining to his work, and shall keep the work area neat and orderly by periodic removal and cleanup. Crates and cartons in which materials or equipment are received shall be removed daily. Contractor shall leave each phase of the work broom-clean upon completion of that phase.
- B. Each Contractor shall be responsible for daily collection and disposal of rubbish created by his materials, men and work. If this is not done, the Owner may direct that cleanup be done and the cost of same shall be deducted from the Contractor's contract.
- C. Contractor shall clean surfaces of all lights, control panels, overhead piping, duct work, etc., after construction is complete, to the same level of cleanliness as surfaces were before construction.

- D. Protect from damage during subsequent construction activities all new work and existing construction cleaned upon the completion of any one phase.
- E. Contractor shall legally dispose of all debris (including concrete) off the site.

#### 1.13 FIRE PROTECTION

- A. It shall be the responsibility of the Contractor to take the proper precautions to prevent fires when welding or while other fire-hazardous work is being performed.
- B. Gasoline and other flammable liquids shall be kept in approved safety cans at all times.

#### 1.14 WATCHMEN

- A. The services of a watchman will not be provided by the Owner.
- B. The Contractor shall assume full responsibility for protection and safety of material and equipment stored at the job site both within and outside of the work areas or storage areas.

#### 1.15 ADDITIONAL REQUIREMENTS

- A. During the term of this Contract, the employees of the Contractor shall not consume or be under the influence of alcohol while on the premises of the Owner. The use of nonprescription, over the counter drugs and medications (i.e., Contact, Actifed, etc.) is discouraged, but if used, manufacturer's guidelines must be followed. Drugs considered illegal by federal, state, and local authorities are strictly prohibited.
- B. Owner reserves the right with or without cause and at its sole discretion, provided that such right is lawful, to have the Contractor temporarily or permanently remove any of the Contractor's employees from the Project.
- C. Shutting down of existing apparatus and service lines shall be done only at times prescribed and approved by the Owner. Apparatus and service lines shall not be left out of service overnight, during non-working periods or during scheduled events.
- D. Notice of temporary service interruption (or potential interruption) shall be given to the Owner and his designated representative not less than (5) working days prior to required interruption to allow adequate preparation to be made.
- E. Provide the Owner with emergency telephone numbers to be able to contact the Contractor's superintendent or project manager 24 hours a day.

PART 2 PRODUCTS – NOT USED.

PART 3 EXECUTION – NOT USED.

END OF SECTION

DIVISION 01 - GENERAL REQUIREMENTS

SECTION 015600

BARRIERS

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes

1. Full height rigid and movable construction area enclosures.
2. Dust barriers.
3. Partial height construction barriers.
4. Vehicle barriers.
5. Temporary pedestrian walkways through partially completed work areas.
6. Miscellaneous barriers and efforts, including construction fencing, caution tape and signage.

B. Related Sections

1. Section 015000: Temporary Facilities and Controls
2. Section 024119: Selective Structure Demolition
3. Section 030100: Concrete Repairs.
4. Section 033810: Post Tensioned Garage Cable Repairs
5. Section 036423: Epoxy Injection Repairs.
6. Section 051200: Structural Steel.
7. Section 071800: Vehicular Traffic Membrane.
8. Section 079000: Expansion Joints.
9. Section 079200: Sealants.
10. Section 087100: Door Hardware.
11. Section 090100: Façade Cleaning.
12. Section 099100: High Performance Coatings.
13. Section 221400: Drains and Piping.
14. Section 321723: Pavement Markings.

1.2 SUBMITTALS

- A. Submittals are not required unless Owner or Engineer raise questions or concerns regarding the quality or construction of barriers or enclosures. Potential submittals, if requested, could include the following:

1. Fire-retardant treatment for dimensional lumber and plywood.
2. Fire-resistant visqueen sheeting.
3. Plastic Safety Fencing.
4. Caution Barrier Tape.
5. Enclosure construction details.

## PART 2 PRODUCTS

### 2.1 MATERIALS

#### A. Lumber

1. Dimensional lumber
  - a. Minimum 2 x 4 dimensional lumber.
  - b. Fire-retardant treated (non-com) with treatment stamp visible.
2. Plywood
  - a. Minimum 1/2-inch thick.
  - b. Fire-retardant treated (non-com) with treatment stamp visible.

#### B. Visqueen Sheeting

1. Approved Products:
  - a. Griffolin fire-retardant type 55-FR.
  - b. Midco vinyl fire-resistant reinforced polyfilm.

#### C. High Visibility Safety Fencing

1. High density polyethylene material.
2. Diamond mesh with 1-1/2" openings.
3. Minimum 4 feet high.
4. Bright orange color.
5. Minimum 2200 lbs. break load capacity.

#### D. Chain Link Fencing with Mesh Screen.

1. Minimum 6'-0" feet tall with mesh screen.
2. Minimum 9 gauge galvanized with 2"x2" pattern configuration.
3. Fence to be panelized system, surface set with ballasted based.
4. Drilled posts are not permitted.

#### E. Caution Tape

1. 3" wide.
2. Minimum 4 mil thick plastic.
3. Safety yellow tape with black "CAUTION" lettering, minimum 1-1/2" high.

## PART 3 EXECUTIONS

### 3.1 GENERAL

- A. Work shall not proceed until dust barriers, barricades, construction fencing, or partial or full height barriers or enclosures are in place and secure.
- B. Provide barricades to isolate areas directly under work areas for protection of persons or property.
- C. Remove barricades at entrances during non-working hours which will obstruct or hinder the use of the entrance.
- D. Installation and removal of barricades or barriers shall not damage existing surfaces.
- E. The use of anchors which penetrate the existing surface are prohibited, unless approved in advance by Engineer.
- F. Remove all evidence of barriers installation upon removal.
- G. Contractor is responsible for erection, maintaining, moving and removal of barricades, fencing and barriers from the job site.

### 3.2 BARRICADES

- A. Where barricades are required for vehicular traffic control and to secure work areas, provide chain link fencing to divert traffic around work area. Construct and provide barricades that are permanent for the period when the barricade is required. Weight or otherwise secure the barricades to keep unauthorized personnel from moving them.
- B. Provide full height barriers to secure stair towers with ongoing work.
- C. Provide full height dust barriers as required to prevent access to work areas and dust from leaving work areas.
- D. When any portion of the Work is directly over or near a sidewalk or entrance/exit, provide a covered walkway for pedestrians to safely pass through the area. Covered walkway shall extend beyond the end of the Work Area.
  1. The covered walkway shall meet the City of Charleston requirements with the following minimum requirements:
    - a. Walkway to be constructed with metal walk-through scaffolding with nominal 2-inch-thick dimensional lumber on the upper surface covered with 3/4 inch plywood.
    - b. Provide lighting within the enclosed walkway so that pedestrians may safely use passage at all hours.

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- E. Partial height water filled plastic or concrete jersey barriers, positioned on-grade at street level entrances as required to close areas of the garages.
- F. Use of sawhorses, barrels and yellow caution tape are permitted only with advance approval by Owner.

END OF SECTION

## DIVISION 01 - GENERAL REQUIREMENTS

### SECTION 017700

#### CLOSEOUT PROCEDURES

##### PART 1 GENERAL

###### 1.1 SUMMARY

###### A. Section Includes

1. Requirements for Close-Out of Contract.
2. Specific requirements for individual units of work may be included in the appropriate Sections.

###### 1.2 DEFINITIONS

- ###### A.
- Contract Closeout is the term used to describe certain collective project requirements, indicating completion of the Work that are to be fulfilled near the end of the Contract time in preparation for final acceptance and occupancy of the Work by the Owner, as well as final payment to the Contractor and the normal termination of the Contract.

###### 1.3 PREREQUISITES TO SUBSTANTIAL COMPLETION

- ###### A.
- General: Complete the following before requesting the Owner's inspection for certification of substantial completion, either for the entire Work or for portions of the Work. List known exceptions in the request.
1. In the progress payment request that coincides with, or is the first request following, the date substantial completion is claimed, show either 100% completion for the portion of the Work claimed as "substantially complete," or list incomplete items, the value of incomplete Work, and reasons for the Work being incomplete. Include supporting documentation for completion as indicated in these Contract Documents.
  2. Submit a statement showing an accounting of changes to the Contract Sum.
  3. Advise Owner of pending insurance change over requirements.
  4. Submit specific warranties, workmanship/maintenance bonds, maintenance agreements, final certifications, and similar documents.
  5. Obtain and submit releases enabling the Owner's full, unrestricted use of the Work and access to services and utilities. Where required, include occupancy permits, operating certificates and similar releases.
  6. Submit record drawings, maintenance manuals, final project photographs, damage survey and similar final record information.
  7. Discontinue or change over and remove temporary facilities and services from the project site, along with construction tools and facilities, mock-ups and similar elements.
  8. Complete final cleaning-up requirements, including touch-up painting of marred

surfaces. Touch up and otherwise repair and restore marred exposed finishes.

- B. Inspection Procedures: Upon receipt of the Contractor's request for inspection, the Owner will either proceed with inspection or advise the Contractor of unfilled prerequisites.
  - 1. Following the initial inspection, the Owner will either prepare the certificate of substantial completion or will advise the Contractor of work which must be performed before the certificate will be issued. The Owner will repeat the inspection when requested and when assured that the Work has been substantially completed.
  - 2. Results of the completed inspection will form the initial "punch list" for final acceptance.

#### 1.4 PREREQUISITES TO FINAL ACCEPTANCE

- A. General: Complete the following before requesting the Owner's final inspection for certificate of final acceptance and final payment as required by the General Conditions. List known exceptions, if any, in the request.
  - 1. Submit the final payment request with final releases, affidavits and supporting documentation not previously submitted and accepted. Include certificates of insurance for products and completed operations where required.
  - 2. Submit an updated final statement accounting for final additional changes to the Contract Sum.
  - 3. Submit a certified copy of the Owner's final punch list of itemized Work to be completed or corrected, stating that each item has been completed or otherwise resolved for acceptance.
  - 4. Submit consent of Surety.
  - 5. Submit evidence of final, continuing insurance coverage complying with insurance requirements per General and Supplementary Conditions in these Specifications.
  - 6. Submit a certificate clearly indicating that all outstanding bills for materials, services and labor, and all subcontractors have been paid in full.
- B. Re-inspection Procedure: The Owner will re-inspect the Work upon receipt of the Contractor's notice that the Work, including punch list items resulting from earlier inspections, has been completed except for these items whose completion has been delayed because of circumstances that are acceptable to the Owner.
  - 1. Upon completion of re-inspection, the Owner will either approve the final payment request, or will advise the Contractor of Work that is incomplete or of obligations that have not been fulfilled but are required for final release of final payment.
  - 2. If necessary, the re-inspection procedure will be repeated.
- C. Schedule with the Owner a close-out meeting. Coordinate this meeting with the Owner. Provide a minimum of 3 working days' notice prior to the requested time for the meeting.

#### 1.5 PROJECT RECORD DOCUMENTS



- A. The Contractor shall be responsible to maintain at the job site one copy of:
  - 1. Record contract drawings.
  - 2. Record project manual.
  - 3. Addenda.
  - 4. Reviewed shop drawings.
  - 5. Change orders.
  - 6. Other modifications to Contract.
- B. Maintain documents in clean, dry, legible condition.
- C. Do not use project Record Documents for construction purposes.
- D. Failure to maintain documents up-to-date will be cause for withholding payments to Contractor.
- E. Obtain one complete set of Contract Documents, including:
  - 1. Project Manual with all addenda.
  - 2. One complete set of black-line or blue-line prints of all drawings not bound in project manual.
  - 3. One complete set of sepia prints of all drawings not bound in project manual.
- F. Keep Record Documents current.
- G. Contract Drawings: Contractor may, at his option, enter required information on a "working set" and then at completion of project transfer the information to final submitted "Project Record" set. All notations on the "Project Record" set shall be in red ink made in a neat and legible manner, with additional explanatory drawings or sketches as required. The Project Record Drawings shall have marked the correct location of Work items and equipment where it differs from the location shown on the drawings, and any other information pertinent or useful in nature.
- H. Project Manual and Addenda: Contractor shall legibly mark up each section to record:
  - 1. Manufacturer, trade name, catalog number and supplier of each product and item of equipment actually installed.
  - 2. Changes made by change order or field order.
  - 3. Other items not originally specified.
- I. At completion of Project, deliver 3 copies of the Project Record Documents to the Owner prior to request for final payment. Accompany submittal with transmittal letter containing:
  - 1. Date.
  - 2. Project title and number.
  - 3. Contractor's name and address.

4. Title and number of each Record Document.
5. Certification that each document as submitted is complete and accurate.
6. Signature of Contractor or his authorized representative.

1.6 WARRANTY

- A. The Contractor shall provide a general one-year warranty for all work performed.
- B. As required by individual Specification Sections, provide extended warranties on parts of the Work as specified.
- C. Provide the Owner with electronic copies of all required and executed warranties.
- D. Deliver to the Owner all required warranties prior to the application for Final Payment.
- E. Delivery of required warranties does not relieve the Contractor of obligations assumed under provisions of the Contract.
- F. Warranties provided directly by contractor are to be written using company letterhead documents.
- G. A warranty may require multiple signatures if specified to be a joint warranty. Refer to individual warranty requirements in the appropriate Specification Section.

H. The warranty format shall be as follows:

Name of Project

Scope of Work

We warrant the Work to be in accordance with the Contract Documents. We shall provide all labor, material, tools, and equipment necessary to correct work not in conformance with the Contract Documents or that becomes or is found to be defective within        years after the Date of Substantial Completion. We will bear the cost of making good any damage caused by the defective work, including damage caused by its correction or removal, to the Owner's property or to property for which the Owner is liable. This warranty shall not apply to work which has been abused, neglected, or altered by others or to work for which the Owner has previously given the Contractor a written acceptance of the defect. The warranty period shall begin at Noon on the date of Substantial Completion.

Company

Signature

Date

Title

1.7 OPERATIONS AND MAINTENANCE DATA

- A. The Contractor shall deliver to the Owner at the final inspection all operations and maintenance data as required elsewhere in this Specification. This data shall be provided in loose-leaf binders.

1.8 SPARE PARTS AND MAINTENANCE MATERIALS

- A. The Contractor shall deliver all spare parts and maintenance materials as required elsewhere in this Specification to the Owner at the final inspection.

1.9 CLOSEOUT PROCEDURES

- A. Removal of Protection: Except as otherwise indicated or requested by the Owner, remove temporary protection devices and facilities which were installed during the course of the Work to protect existing or previously completed Work during the remainder of the construction period.
- B. Compliance: Comply with safety standards and governing regulations for cleaning operations. Do not discharge volatile or other harmful or dangerous materials into drainage systems. Remove waste materials from the site and dispose of in a lawful manner. Where extra materials of value remaining after completion of associated work have become the Owner's property, dispose of these materials to the Owner's best advantage as directed.

PART 2 PRODUCTS – NOT USED.

PART 3 EXECUTIONS – NOT USED.

end of section

DIVISION 02 – EXISTING CONDITIONS

SECTION 024119

SELECTIVE STRUCTURE DEMOLITION

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes

1. All labor, material, equipment, special tools, and services required to complete the work required for the project as indicated on the Drawings and in the Specifications, including but not limited to:
  - a. Demolition of selected portions of the structure as indicated in the Contract Documents.
  - b. Demolition and removal from the job site of miscellaneous features as indicated in the Contract Drawings.
  - c. Removal from the job site and legal disposal of existing debris and accessories as shown on the Drawings.
  - d. Supply and maintenance of dumpsters to accommodate debris removals.
  - e. Maintenance of drains to accommodate storm water during demolition.
2. Materials Ownership
  - a. Except for items or materials indicated to be reused, salvaged, reinstalled, or otherwise indicated to remain the Owner's property, demolished materials shall become the Contractor's property and shall be removed from the site with further disposition at the Contractor's option.
  - b. Storage or sale of removed items or materials on-site will not be permitted.

1.2 REFERENCES AND REGULATORY REQUIREMENTS

- A. Conform to applicable laws, ordinances, and the State Building Code for demolition of structures, safety of adjacent structures, dust control, runoff control, and disposal.
- B. Comply with ANSI A10.6.
- C. Comply with applicable requirements of NFPA Standard No. 241.75: Safeguarding Building Construction & Demolition Operations.
- D. Obtain required permits from authorities.
- E. Do not close or obstruct roadways, sidewalks, and hydrants without permits.
- F. Do not close or obstruct egress width to any entrance or exit.
- G. Do not disable or disrupt fire or life safety systems without three days prior written notice to the Owner.

- H. Conform to applicable regulatory procedures when discovering hazardous or contaminated materials.

### 1.3 SUBMITTALS

- A. Schedule of selective demolition activities indicating the following:
  - 1. Detailed sequence of selective demolition and removal work, with starting and ending dates for each activity.
  - 2. Detailed sequence of selective demolition and removal work to ensure uninterrupted progress.
  - 3. Coordination of Owner's continuing occupancy.
- B. Inventory: After demolition is complete, submit a list of items that have been removed and salvaged for Owner.
- C. Pre-demolition Photographs or Videotape: Show existing conditions of adjoining construction and site improvements, including finish surfaces, which might be misconstrued as damage caused by demolition operations. This submittal should be delivered before Work begins.

### 1.4 QUALITY CONTROL

- A. Demolition Firm Qualifications: An experienced firm that has specialized in demolition work similar in material and extent to that indicated for this Project. The firm shall have successfully performed at least three verifiable projects, similar to this project, within the last seven years.
- B. Work in this Section shall be under the immediate control of a person (Contractor's superintendent or other designated person) experienced in this type of work. The person identified with immediate control of the work shall have supervised three verifiable projects of similar magnitude and type. Supervising person shall be present during all operations.
- C. Pre-Demolition Conference: Review methods and procedures related to selective demolition including, but not limited to, the following:
  - 1. Inspect and discuss condition of construction to be selectively demolished.
  - 2. Review and finalize selective demolition schedule; verify availability of all materials, demolition personnel, equipment, and facilities needed to maintain the schedule.
  - 3. Review requirements of work performed by other trades that rely on substrates exposed by selective demolition operations.
  - 4. Review areas where existing construction is to remain and requires protection.
- D. The Contractor shall comply with all Federal, State and Municipal laws, codes, ordinances and regulations applicable to the Work in this Contract and also with all requirements of the National Fire Protection Association, the National Electric Code, and the Occupational Safety and Health Administration (OSHA). If the above laws, codes or ordinances conflict with this Specification, then the laws, codes or ordinances shall govern, except in such

cases where the Specification exceeds them in quality of materials or labor, then the Specifications shall be followed.

#### 1.5 DELIVERY, STORAGE, AND HANDLING

- A. Store materials under cover and keep them dry and protected against damage from weather, direct sunlight, surface contamination, corrosion, construction traffic, and other causes.

#### 1.6 PROJECT CONDITIONS

- A. Contractor shall coordinate with the Owner for the required access and staging areas needed to accommodate demolition operations at grade areas.
- B. The Owner will continue to occupy portions of the structure immediately beneath the selective demolition area. Conduct selective demolition so that the Owner's operations will not be disrupted. Provide not less than 72 hours' notice to the Owner of activities that will temporarily affect the Owner's operations.
- C. Demolition Efforts
  - 1. The Contractor shall collect all debris generated by the demolition process and legally dispose of off the Owner's property. Do not stockpile debris. Remove dumpsters containing debris upon filling to capacity or completion of the work.
  - 2. The Owner assumes no responsibility for actual condition of features and components to be selectively demolished.
    - a. Conditions existing at time of inspection for bidding purpose will be maintained by the Owner as far as practical.
  - 3. Maximum loaded wheel load of 250 lbs per axle on the existing roof deck.
  - 4. No motorized equipment will be allowed on the roof.
  - 5. Only air filled, rubber tired dollies will be allowed on the roof surface. Wheel spacing shall be a minimum of 3' c/c. Axel spacing shall be a minimum of 6' c/c.
  - 6. Movement of debris shall be limited to protected areas of the roof.
- D. Utility Services
  - 1. Maintain existing utilities required to remain, keep in service, and protect against damage during demolition operations.
  - 2. Do not interrupt existing utilities serving occupied or used facilities, except when authorized in writing by authorities having jurisdiction and the Owner. Provide temporary services during interruptions to existing utilities, as acceptable to the governing authorities and Owner.
  - 3. Disconnect, seal, and remove utilities or services in selective demolition area before starting selective demolition operations.
- E. Damages: Promptly repair damages to adjacent construction, on or off site, caused by

demolition operations at no cost to the Owner.

- F. Prevent insect and rodent infiltration. If necessary, employ an exterminator and treat entire structure in accordance with governing health regulations for rodent and insect control.

- G. Hazardous Materials

- 1. Notify the Owner if asbestos-containing materials are encountered during demolition.

## PART 2 PRODUCTS – NOT USED

## PART 3 EXECUTION

### 3.1 EXAMINATION

- A. Examine areas intended for demolition and note conditions or defects that will adversely affect the execution and/or quality of the work.
- B. Notify Owner in writing of any such conditions or defects. Do not begin work until unsatisfactory conditions are corrected. Failure to notify Owner prior to beginning work constitutes acceptance by Contractor of the surfaces and conditions under which the work is to be performed, and acceptance by Contractor for the performance of the work.
- C. Inventory and record the condition of items to be removed and salvaged.
- D. Engage a professional demolition engineer to perform an engineering survey of existing conditions of structure to determine whether removing any element might result in structural deficiency or unplanned collapse of any portion of structure or adjacent structures during selective demolition operations.
- E. Verify that hazardous materials have been remedied before proceeding with selective demolition operations.

### 3.2 PREPARATION

- A. Protection

- 1. Provide temporary protection during the course of the work to prevent water entry into the structure and walls and to maintain the structure in a weather tight condition. Ensure that protection is in place and water tight before ending day's work.
  - 2. Be prepared for unexpected weather changes so that temporary protection can be quickly installed.
  - 3. Provide, erect, and maintain temporary barriers and security devices. Prevent spread of dust, odors, and noise to permit continued Owner's occupancy. Refer to Specification Section 015600.
  - 4. Provide protection on existing surfaces and features to remain. Secure protection to prevent wind events from shifting or moving temporary protection. Securement methods shall not penetrate the surfaces or features. Protection shall define the path over which demolished material will be transported.



5. Conduct demolition operations and remove debris to ensure minimum interference with the interior of the structure, roads, streets, walks, adjacent structures, and utilities.
6. Conduct operations with minimum interference to public or private accesses. Maintain protected egress and access at all times.
7. Protect existing landscaping materials, structures, and utilities which are not to be demolished.

### 3.3 DEMOLITION REQUIREMENTS

- A. Coordinate regular removal and replacement of filled dumpsters from the job site during off hours only, unless pre-approved by the Owner in advance.
- B. Do not remove any part of the work that will leave the remaining work unstable, until adequate temporary bracing and shoring have been provided, or until permanent bracing or construction is in place. Cease operations immediately if adjacent structures appear to be in danger. Notify Owner and authority having jurisdiction. Do not resume operations until directed.
- C. If deteriorated materials, not intended for removal, are encountered during demolition, stop all work in that area and notify the Owner immediately.
- D. Demolish and remove existing construction to the extent required and as indicated. Use methods required to complete work within limitations of governing regulations and as follows:
  1. Where required, neatly cut materials to be removed. Use cutting methods least likely to damage construction to remain or adjoining construction. To minimize disturbance of adjacent surfaces, use hand or small power tools designed for sawing or grinding, not hammering, and chopping. Temporarily cover openings to remain.
  2. Remove temporary work.
- E. Explosives: The use of explosives will not be permitted.

### 3.4 DISPOSAL OF DEMOLISHED MATERIALS

- A. General: except for items to be salvaged, etc, remove demolished materials from project site and legally dispose of them in an EPA approved landfill.
  1. Do not allow demolished materials to accumulate on-site.
  2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
- B. Separate recyclable demolished materials from other demolished materials to the maximum extent possible. Separate recyclable materials by type.
  1. Provide containers or other storage method for controlling recyclable materials until they are removed from Project site.
  2. Stockpile processed materials on site without intermixing with other materials. Place,

- grade, and shape stockpiles to drain surface water. Cover to prevent windblown dust.
3. Stockpile materials away from demolition area. Do not store within the drip lines of remaining trees.
  4. Store components off the ground and protect from the weather.
  5. Transport materials off Owner's property and legally dispose of them.
- C. Remove from site and legally dispose of debris, rubbish, and other materials resulting from demolition operations.
- D. Burning of removed materials will not be permitted on the site.
- 3.5 PATCHING AND RESTORATION
- A. Neatly patch and finish disturbed existing surfaces damaged by demolition.
  - B. Verify all patch locations, methods, and procedures with Engineer prior to beginning repairs.
- 3.6 STORM DRAINAGE MAINTENANCE
- A. Maintain all drains during construction. Keep free and clear of debris to allow for proper drainage. Construction and construction barriers should not impede normal site drainage.
- 3.7 CLEANING
- A. Clean adjacent floor and wall surfaces to remove dust, dirt, debris, sludge, etc., regardless of existing conditions prior to demolition.

END OF SECTION

DIVISION 03 – CONCRETE

SECTION 030100

CONCRETE REPAIRS

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes

1. All labor, material, equipment, special tools, and services required to complete the work required for the project as indicated on the Drawings and in the Specifications, including but not limited to:
  - a. Slab-on-grade concrete repairs.
  - b. Double tee slab concrete repairs.
  - c. Pour strip concrete repairs.
  - d. Concrete topping slab repairs.
  - e. Full depth double tee slab concrete repairs.
  - f. Vertical surface concrete repairs.
  - g. Overhead concrete repairs.
  - h. Miscellaneous concrete repairs indicated on the Drawings.

B. Related Sections

1. Section 012200: Unit Prices.
2. Section 012900: Payment Procedures.
3. Section 015600: Barriers.
4. Section 024119: Selective Structure Demolition.
5. Section 071800: Vehicular Traffic Membrane.
6. Section 079200: Sealants.
7. Section 099100: High Performance Coatings.

C. Unit Prices

1. Unit prices are taken for the work items listed in Section 012200, for the quantity measurements listed in Section 012900.
2. Include in the lump sum bid the quantities in Section 012200.
3. Final adjustment to the contract amount will depend on actual quantities of repair performed.
4. Repair quantities will be determined by measurements made jointly by the owner or its representative and the contractor. The contractor will record the measurements with

both parties signing the record to attest to its accuracy.

## 1.2 REFERENCES

### A. American Concrete Institute (ACI)

1. ACI 301 - Specification for Structural Concrete for Buildings.
2. ACI 305R - Hot Weather Concreting.
3. ACI 306R - Cold Weather Concreting.
4. ACI 318 - Building Code Requirements for Reinforced Concrete.

### B. American Society for Testing and Materials (ASTM)

1. ASTM A185 - Specification for Steel Welded Wire, Fabric, Plain, for Concrete Reinforcement.
2. ASTM A615 - Specification for Deformed and Plain-Billet Steel Bars for Concrete Reinforcement.
3. ASTM A775 - Standard Specification for Epoxy-Coated Reinforcing Steel Bars.
4. ASTM C31 - Method of Making and Curing Concrete Specimens in the Fields.
5. ASTM C33 - Concrete Aggregates.
6. ASTM C39 - Test Method for Compressive Strength of Cylindrical Concrete Specimens.
7. ASTM C94 - Specification for Ready-Mixed Concrete.
8. ASTM C143 - Standard Test Method for Slump of Portland Cement Concrete.
9. ASTM C150 - Specification for Portland Cement Concrete.
10. ASTM C260 - Specification for Air-entraining Admixtures for Concrete.
11. ASTM C494 - Specification for Chemical Admixtures for Concrete.

### C. Structural Steel Painting Council (SSPC)

1. Surface Preparation Specification No. 3 (SP3) - Wire Wheel Cleaning.
2. Surface Preparation Specification No. 6 (SP6) - Commercial Blast Cleaning.

### D. American Association of State Highway and Transportation Officials (AASHTO)

1. AASHTO M182 - Specifications for Burlap Cloth Made from Jute or Kenaf.

### E. Keep a copy of the referenced specifications cited in this section in the on-site field office.

## 1.3 SUBMITTALS

- A. Submit literature for manufactured products, including manufacturer's specifications, test data and installation instructions.
- B. Letter stating this Contractor and supplier are familiar with the referenced standards.
- C. Submit mix designs and test results conforming to the requirements of Section 4 of ACI

301. Submit request for approval to use admixtures, if any. A complete mix design submittal must be furnished at least three weeks before the planned use of that mix. The Contractor is cautioned to undertake mix design preparation and submittal procedures immediately after authorization to proceed with the project.

1. Submitted mix design shall address weather conditions which are expected to occur during the concrete repair phases. Concrete mixes shall not only be designed for average temperature and humidity conditions, but also for adverse conditions (hot and cold weather), as applicable to this project.

D. Provide the following in accordance with ACI 301

1. Mill test for cement.
2. Admixture certification.
3. Aggregate certification.
4. Procedure for adding water to ready-mix at site, including method of measuring water.
5. Method of adding admixtures.
6. Materials and methods for curing.
7. Ready-Mix delivery tickets.
8. Certificate of Conformance for concrete production facilities by NRMCA (National Ready-Mix Contractors Association).
9. Field and laboratory tests that are the Contractor's responsibility.

- E. The Owner's review of details and construction operations shall not relieve this Contractor of his responsibility for completing the work successfully in accordance with the Contract Documents.

1.4 QUALITY ASSURANCE

- A. The Contractor shall comply with all Federal, State and Municipal laws, codes, ordinances and regulations applicable to the Work in this Contract and also with all requirements of the National Fire Protection Association, the National Electric Code, and the Occupational Safety and Health Administration (OSHA). If the above laws, codes or ordinances conflict with this Specification, then the laws, codes or ordinances shall govern, except in such cases where the Specification exceeds them in quality of materials or labor, then the Specifications shall be followed.
- B. Concrete that does not conform to the specified requirements, including bond to substrate, strength, finish and tolerances shall be subject to removal and replacement, including necessary preparatory work, at no additional cost to the Owner and without extension to the Contract Time.
- C. Contractor shall be responsible for restoration of other components of the Work damaged during placement of concrete or damaged during removal of unsatisfactory concrete.

- D. ACI 301, ACI 305R and ACI 306R are a part of the Contract Documents, are incorporated herein as fully as if here set forth and are referred to as General Concreting Requirements.
- E. Chloride Ion Limitations: Maximum acid-soluble chloride ion concentration, in hardened concrete shall not exceed .10% by weight of cement.
- F. Concrete testing and certification shall be as described in ACI 301, Chapter 16.

#### 1.5 PROJECT CONDITIONS

##### A. Shoring

- 1. Shoring for concrete repairs is incidental to the project. The contractor shall provide thirty (30), 10,000 pound post shores to be utilized throughout the project in the parking garages as directed by the engineer.
- 2. Shores must be on-site prior to beginning any concrete demolition work.

#### 1.6 WARRANTY

- A. A warranty period of two (2) years shall be provided for concrete work performed under this Section against defects, as determined by the Owner, including but not limited to debonding, excessive cracking and surface scaling.

#### 1.7 MATERIALS

##### A. General

- 1. Ready mixed materials used for concrete shall be furnished from the same source throughout the project unless otherwise approved by the Owner.

##### B. Cement

- 1. Use ASTM C150, Type I or Type II, or ASTM C595, Type IL cement unless noted otherwise. Air-entrained cement shall not be used. Air requirements shall be met by separate admixtures.

##### C. Admixtures

- 1. Air-entraining admixtures meeting the requirements of ASTM C260.
- 2. High range water reducer meeting the requirements of ASTM C494.
- 3. Calcium chloride, calcium nitrate and thiocyanates are not permitted. Admixtures containing more than 0.05% chloride ions are not permitted.
- 4. Use approved admixtures in accordance with manufacturer's recommendations.

##### D. Fine and Coarse Aggregates

- 1. Meeting requirements of ASTM C-33.

##### E. Water

- 1. Mixing water shall be potable meeting requirements of ASTM C-94.

##### F. Pre-packed Concrete Materials

1. Horizontal Application: Typical Repair Areas (Patch Material Type A)
    - a. Plainitop 11 SCC by Mapei.
    - b. SikaEmaco 100 CI by Sika Corp.
    - c. Deck Mix AE by US Concrete Products
  2. Vertical and Overhead Repair Areas: Trowel Grade (Patch Material Type B.1)
    - a. SikaEmaco 488CI by Sika Corp.
    - b. SikaEmaco 425 Gel Patch by Sika Corp.
    - c. Planitop XS by Mapei
    - d. US Thin Patch V/O by US Concrete Products
  3. Vertical and Overhead Repair Areas: Form-and-Pour (Patch Material Type B.2)
    - a. SikaEmaco440 by Sika Corp.
    - b. Planitop 15 by Mapei
    - c. Deck Mix FP by US Concrete Products
- G. Bar Coating
1. Sikadur 32, Hi-Mod LPL by Sika, Inc.
- H. Welded Wire Reinforcement
1. Conforming to ASTM A185.
  2. All steel to be epoxy coated unless specifically noted otherwise on the drawings.
- I. Reinforcing Steel
1. All reinforcing steel shall have a minimum Fy of 60 ksi.
  2. All steel to be epoxy coated unless specifically noted otherwise on the drawings.
- J. Curing Materials
1. 10 oz. burlap meeting the requirements of AASHTO M-182.
  2. Visqueen: 6 mil polyethylene (white).
- K. Curing Compound
1. VOCOMP-25 by W.R. Meadows.
  2. Sikagard 1315 KNS by Sika Corp.
  3. Liquid membrane forming curing compound shall conform to the requirements of ASTM C1315, Type 1, Class A and have data from an independent laboratory indicating a maximum moisture loss of 0.40 grams per square cm. when applied at a coverage rate of 300 square feet per gallon.
- L. Form Lumber

1. New fire-retardant material, grade and size to adequately form, support and brace concrete and to provide finishes that match adjacent surfaces.

M. Epoxy Grout

1. Sikadur 32, Hi-Mod LPL epoxy mixed with silica sand.

N. Patch Anchors

1. Stainless steel mushroom head spikes by DeWalt.

1.8 MIXES

A. General

1. Ready Mix Producer, General Contractor, and those responsible for placing and finishing concrete shall review mix designs and agree on modifications to the proposed mixes listed below required to facilitate placing and achieve the desired results. No modifications reducing the cement content, increasing the chloride content or the W/C ratio will be acceptable. Both the General Contractor and Ready-Mix Producer are responsible for design and production of concrete mix.

B. Concrete Mix: (Patch Material Type C)

- |   |                |
|---|----------------|
| 1. Strength at 28 days:                                       | 5000 psi.      |
| 2. Minimum Portland cement content:                           | 611 lbs./C.Y.  |
| 3. Maximum percent of chloride by weight of cement:           | 0.10           |
| 4. Maximum water/(cement plus silica fume) ratio:             | 0.40           |
| 5. Percent of air entrainment (tested at point of placement): | 5 to 7 percent |
| 6. Maximum aggregate size:                                    | 3/4 inch       |

C. Slump

1. Produce the concrete to have a maximum slump of 4 inches as delivered to the site. The maximum slump may not be exceeded except by the job site addition of High Range Water Reducer (Superplasticizer).
2. When superplasticizer is used, the maximum superplasticized slump shall be 8". Superplasticizer may not be added to a batch of concrete after initial slump adjustments are made and discharge has started.
3. Method of measuring and adding superplasticizers to the truck mixer at the site shall be approved by the Engineer.
4. Mix designs incorporating superplasticizer must be accompanied by test results from cylinders made from previous field test data in which the superplasticizer was added to a 6 c.y. (min.) batch in a truck mixer.

1.9 PRODUCTION OF CONCRETE

- A. Furnish to the Project Superintendent 2 delivery tickets for each load of Ready-Mixed



concrete. Tickets shall contain the following information:

1. Date.
2. Producer and plant.
3. Job.
4. Contractor.
5. Truck No. and time dispatched.
6. Concrete designation and cement type.
7. Admixtures description and content.
8. Time discharge started and completed.
9. Amount of concrete in load.
10. Amount of water in mix at plant.
11. Amount of material(s) added at the site and authorized signature.

B. Site-mixed concrete is prohibited.

C. High Range Water Reducers (Superplasticizers) shall be premeasured and added at the site in accordance with the manufacturer's written instructions and specifications, using truck-mounted power injection equipment capable of rapidly and uniformly distributing the admixture to the concrete. Alternatively, the superplasticizer may be added manually to the back of the truck by a trained technician, if this procedure is confirmed by historical data to yield a uniform and acceptable product. Mix the concrete a minimum of six minutes after addition of the superplasticizer and before discharge.

D. Re-tempering with superplasticizer is prohibited.

E. When concrete arrives at the project with slump below that suitable for placing and below the slump specified, water may be added only if neither the maximum specified water/cement ratio nor the maximum slump is exceeded, provided that:

1. The approved mix design has allowed for on-site addition of water.
2. The amount of water added at the site is accurately measured to  $\pm 1$  gallons of the desired added amount.
3. That water addition is followed by 3 minutes of mixing at mixing speed prior to discharge.
4. Standard cylinder samples as required by these Specifications are taken after addition of water.
5. The person authorized to add water shall be mutually approved by Engineer, Contractor, and Ready-Mix Producer.

F. All concrete arriving at the site above the maximum slump will be rejected.

G. Addition of cement at the site is prohibited.

- H. Discharge concrete from mixer within 1-1/2 hours after the introduction of mixing water to the cement and aggregates.
  - 1. During hot weather or under conditions contributing to rapid setting of concrete, a shorter mixing time than specified in ASTM C94 may be required. When air temperature is between 85°F (30°C) and 90°F (32°C), reduce mixing and delivery time from 1-1/2 hours to 75 minutes, and when air temperature is above 90°F (32°C), reduce mixing and delivery time to 60 minutes.
  - 2. Maximum temperature of concrete mixes delivered to site: 85°F

## PART 2 EXECUTION

### 2.1 GENERAL

- A. Prior to the start of work, the Contractor shall survey areas to receive repair concrete to determine locations and approximate quantity of material.
- B. Prior to start of excavations, perform an on-site review of the work areas with the Owner. Provide a minimum of 2 working days' notice prior to the requested review day.
- C. Prior to performing operations such as jack hammer work, the Contractor shall make a careful and thorough survey of the underside of the level on which he intends to work and shall remove all loose soffit concrete which may fall as a result of those operations. The Contractor shall also be responsible for posting all signs and erecting all barricades as necessary to prevent pedestrians and vehicles from entering the area below hazardous work.
- D. During concrete removal work, Contractor shall not damage existing mild steel reinforcement. Mild steel reinforcement that is damaged by the Contractor, as determined by the Owner, shall have a new reinforcing bar the same size as the damaged bar lapped to each side of the damaged area. Lap lengths shall be determined by ACI 318. Cost of new reinforcing bar, concrete removal and patching for lap length shall be borne by the Contractor.
- E. It is intended that the existing reinforcement steel exposed during the work shall remain in place (unless noted on Drawing for removal) and undamaged during removal of the unsatisfactory concrete. Tie loose reinforcement bars in place in an approved manner prior to placing patch mix. If the reinforcement is deteriorated, as determined by the Owner, the Owner may direct that it be replaced and spliced in accordance with ACI splice and development requirements for reinforcement bars. Additional concrete removal may be required to expose undamaged reinforcing. If required, compensation will be made in accordance with the established Unit Prices.
- F. Concrete placement for patches or overlays on sloping surfaces shall begin on the low elevation end and proceed upwards to the high elevation end.
- G. Control joints to be either tooled or sawed into concrete slab. Confirm control joint pattern with Owner prior a minimum of 24 hours prior to placement of concrete. Tooled joints are

to be cut while concrete is wet. Sawed joints to be cut within 6 hours of slab placement before slab begins to crack.

## 2.2 PREPARATION

### A. Protection

1. Contractor shall protect all open excavations, and reinforcing therein, from damage due to mechanical disturbance, weather conditions or other causes.
2. Contractor shall protect occupied areas below the work area during all phases of the work including removal, preparation and placement of materials.
3. Provide barricades to close areas immediately below the work area. Coordinate the time closing of required areas with the Owner.

## 2.3 CONCRETE FLOOR REPAIR PROCEDURE

- A. Refer to the Drawings for repair details. Contractor shall sound the concrete deck using chain drag method and hammer survey to identify the limits of deteriorated concrete within the Work Area. Mark with paint each area to be repaired. Location of paint marks must be approved by the Owner's representative.
- B. Before removal of floor concrete within a Work Area, the Contractor and the Owner's representative will record the area bounded by the paint marks. Take measurements to the nearest inch in such a way that results in a total plan area at each location.
- C. Contractor and Owner's representative shall affix their signatures to each measurement sheet completed, attesting to the agreed-upon accuracy of the measurements. Furnish copies of measurement sheets to both parties for their records.
- D. Sum and calculate the total repair area to yield total square feet. Measurements are the sole basis for calculation of final payment, based upon the item's unit price. Refer to Section 012200 and Section 012900. Base unit price on the area of the repair and the depths indicated on the repair details.
- E. Remove floor concrete within the Work Area by conventional chipping methods.
- F. Conventional Chipping Method
  1. Sawcut the concrete deck surface along the perimeter of the paint marks which define the removal area. Do not cut existing reinforcement. Depth of sawcuts shall be 3/4 inch. Cut perimeter of removal area before beginning chipping hammer work. Do not over cut corners of patch area.
  2. In pre-tensioned precast structures, Contractor shall take caution to not cut or damage existing pre-tensioning tendons or wires. Damage shall be repaired as directed by the Engineer at no cost to the Owner.
  3. Perform concrete removal with no larger than 18 pound chipping hammers.
  4. Begin concrete removal at the center of the removal area and work towards the sawcut perimeter. Maintain vertical sawcut edge at perimeter. Re-saw if necessary, to

maintain required edge.

5. Contractor shall use due diligence to perform concrete chipping operation in a manner to avoid punching through slab. Means such as utilizing wide chipping blades and performing chipping procedures on a low angle are recommended.
- G. The surface of the sound, exposed concrete shall be relatively flat with 1/4" amplitude over the repair area for new concrete patches and overlays. Contractor is responsible for ensuring that the final concrete repair area is sound.
- H. Within 24 hours of concrete repair material placement, media blast the excavation and the immediately adjacent surface. Reinforcing steel shall be cleaned to a SSPC-SP6 condition unless otherwise indicated.
- I. After completion of all cleaning operations, blow-out excavations with oil-free and water-free compressed air. Previously cleaned excavations that are subjected to contamination must be re-cleaned.
- J. The Owner will inspect excavations prior to coating reinforcing steel. Final touch-up of excavations and reinforcing steel shall be performed before proceeding.
- K. Within 8 hours after cleaning, coat all surfaces of exposed steel with one coat of bar coating. Allow coating to become tack free before proceeding with second coat.
- L. Apply second coat of bar coating to previously coated steel. Do not apply coating to substrate or allow coating to puddle in low areas of excavation.
- M. Thoroughly saturate all concrete surfaces to be in contact with new concrete as necessary to provide a saturated surface dry condition.
- N. Just prior to concrete placement blow-down area with oil-free compressed air to remove standing and puddled water.
- O. Place Patch Material Type A or Type C in the excavations. Vibrate new patch material to ensure consolidation in maximum-depth areas and at the excavation's perimeter. Screed material flush with adjacent surfaces and finish with a float or light trowel.
- P. After finishing, fog concrete surfaces with water using approved fog spray device (hose not permitted) to prevent surface drying prior to start of curing.
- Q. Cure Patch Material Type A in accordance with manufacturer's written instructions.
- R. Cure Patch Material Type C with a 7 day wet cure:
  1. As soon after finishing as possible without marking concrete, cover with wet, clean burlap followed by a minimum 6 mil polyethylene sheet (free of holes) which overlaps existing concrete on all sides.
  2. Weight curing material to hold in place.
  3. Maintain burlap in a wet condition during the wet curing period.

## 2.4 OVERHEAD AND VERTICAL REPAIR PROCEDURE

- A. Refer to the Drawings for repair details. Contractor shall sound overhead and vertical concrete surfaces using hammer sounding techniques to identify the limits of deteriorated concrete within the Work Area. Mark with paint each area to be repaired. Location of paint marks must be approved by the Owner's representative.
- B. Before removal of overhead or vertical concrete within a Work Area, the Contractor and the Owner's representative will record the area bounded by the paint marks. Take measurements to the nearest inch in such a way that results in a total plan area at each location.
- C. Contractor and Owner's representative shall affix their signatures to each measurement sheet completed, attesting to the agreed-upon accuracy of the measurements. Furnish copies of measurement sheets to both parties for their records.
- D. Calculate and sum the total repair area to yield total square feet. Measurements are the sole basis for calculation of final payment, based upon the item's unit price. Refer to Section 012200 and Section 012900. Base unit price on the area of the repair and the depths indicated on the repair details.
- E. Remove concrete within the Work Area by conventional chipping methods.
- F. Conventional Chipping Method:
  - 1. Saw cut the concrete surface along the perimeter of the paint marks which define the removal area. Do not cut existing reinforcement. Depth of saw cuts shall be 1/2 inch. Cut perimeter of removal area before beginning chipping hammer work. Do not over cut corners of patch area.
  - 2. In pre-tensioned precast structures, Contractor shall take caution to not cut or damage existing pre-tensioning tendons or wires. Damage shall be repaired as directed by the Engineer at no cost to the Owner.
  - 3. Perform concrete removal with no larger than 18-pound chipping hammers.
  - 4. Begin concrete removal at the center of the removal area and work towards the saw cut perimeter. Maintain vertical saw cut edge at perimeter. Resaw if necessary, to maintain required edge.
  - 5. Contractor shall use due diligence to perform concrete chipping operation in a manner to avoid punching through a slab. Means such as utilizing wide chipping blades and performing chipping procedures on a low angle are recommended.
- G. The surface of sound, exposed concrete shall be relatively flat with a 1/4" amplitude over the repair area. Contractor is responsible for ensuring that the final concrete repair area is sound.
- H. Within 24 hours of concrete repair material placement, media blast the excavation and the immediately adjacent surface. Reinforcing steel shall be cleaned to a SSPC-SP6 condition unless otherwise indicated.
- I. After completion of all cleaning operations, blow-out excavations with oil-free and water-

free compressed air. Previously cleaned excavations that are subjected to contamination must be re-cleaned.

- J. The Owner will inspect excavations prior to coating reinforcing steel. Final touch-up of excavations and reinforcing steel shall be performed before proceeding.
- K. Within 8 hours after cleaning, coat all surfaces of exposed steel with one coat of bar coating. Allow coating to become tack free before proceeding with second coat.
- L. Apply second coat of bar coating to previously coated steel. Do not apply coating to substrate.
- M. Maintain all concrete surfaces of repair areas in a wet condition to provide a surface saturated dry condition.
- N. Just prior to material placement, blow-down area with oil-free compressed air to remove any standing water near vertical repair locations.
- O. Place Patch Material Type B in the excavations per manufacturer's written instructions. Vibrate new patch material at vertical repairs to ensure consolidation in maximum-depth areas. Screed material flush with adjacent surfaces and finish with a light trowel.
- P. After finishing, fog concrete surfaces with water using approved fog spray device (hose not permitted) to prevent surface drying prior to start of curing.
- Q. Cure Patch Material Type B in accordance with manufacturer's written instructions.

## 2.5 FIELD QUALITY CONTROL

- A. All excavations shall be inspected and approved prior to placing concrete. The Contractor shall notify the Owner 2 working days in advance of required inspection.
- B. Notify the Owner at least 2 working days prior to placing concrete.
- C. Site Tests for Ready Mixed Concrete
  - 1. The Contractor will provide and pay for a testing agency to prepare and secure cylinders for off-site testing and perform on-site slump and air tests for concrete specified to be air entrained to ensure compliance with Specifications.
  - 2. The Contractor shall coordinate and arrange for the Owner's testing agency to perform all testing as specified for concrete overlay materials.
  - 3. Age of concrete for testing for acceptance shall be 28 days.
  - 4. Determine the slump (ASTM C143) for each batch of concrete to which superplasticizer is being added. This slump testing shall be by the Owner's testing agency.
  - 5. Compression, slump and air content tests (for air-entrained concrete) shall be made on the first load of concrete delivered each day. Also, anytime during progress of the work where the Owner may request such a test due to the change in consistency or appearance of the concrete. The slump test for mixes in which superplasticizers are

being added shall include two slump tests, one before and one after the addition of the superplasticizer.

6. Testing agency shall make compression tests as follows:
  - a. Mold four (4) specimens (cylinders) for each sample in accordance with ASTM C31-84 "Standard Method of Making and Curing Concrete Specimens in the Field." Lab cure all cylinders.
  - b. Make tests of lab cured cylinders, one (1) specimen at seven (7) days, two (2) at twenty-eight (28) days and one (1) for reserve. Tests shall comply with ASTM C39 "Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens."
  - c. Report in writing all test results to Owner, and the Contractor on same day tests are made. Report by phone results of early break cylinders to both the Contractor and Owner, and report to the Owner via phone results less than the required strength. Written reports of tests shall contain the name of the project, date of placement, location of concrete placement, breaking strength and type of break, size of aggregates, unit weight per cu. ft. type of cement, types of admixtures, percentage of entrained air, slump and required strength.
  - d. If concrete strength test results do not exceed required 28-day strength, the Owner's acceptance of the affected area shall be in accordance with Paragraph 3.06 of ACI 301.
7. Air content tests shall be taken from each truck at the point of placement in addition to standard tests at the point of discharge.
8. Unless better definition of the placement location of the concrete is provided, the location in the work represented by a test or series of test shall be defined as the entire concrete placement for the work shift in question.

D. Acceptance of Structure

1. Acceptance of Structure shall be in accordance with ACI 301 Chapter 18.
2. Contractor shall bear all costs of correcting rejected work, including the cost of Owner's services thereby made necessary.

2.6 CLEANING

- A. Empty containers shall be removed from the structure at the end of each working day. Cloths soiled with adhesive materials that might constitute a fire hazard shall be placed in suitable metal safety containers or shall be removed from the structure at the end of each working day. Special care shall be taken in storage of disposal of flammable materials. Comply with health, fire and environmental regulations.
- B. All spilled materials shall be completely removed from hardware, adjacent floor areas, metal work, etc. Remove spilled coating by approved methods.

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- C. Repaint in matching color all curbs, columns, walls, etc., where existing paint was removed during preparation of adhesive materials installations.
- D. All hardware, adjacent floor areas, metal work, etc., and the general premises shall be left clean and free of all construction dust, dirt and debris.

END OF SECTION



DIVISION 03 – CONCRETE

SECTION 033810

POST-TENSIONED GARAGE CABLE REPAIRS

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes:

1. All labor, materials, equipment, special tools and services to repair the barrier cable system.

1.2 RELATED SECTIONS

- A. Section 012200: Unit Prices.
- B. Section 012900: Payment Procedure.
- C. Section 015600: Barriers.

1.3 REFERENCES

- A. ACI 318: Building Code Requirements for Structural Concrete.
- B. ASTM A416: Standard Specification for Steel Strand, Uncoated Seven-Wire for Prestressed Concrete.
- C. Post-Tensioning Institute (PTI): Specification for Un-bonded Single Strand Tendons, Second Edition.
- D. Post-Tensioning Institute (PTI): Field Procedures Manual for Un-bonded Single-Strand Tendons, Third Edition.

1.4 SUBMITTALS

- A. Submit shop drawings showing complete details of vehicular barrier system, including anchorage devices, live end anchor locations, sequence of tensioning, and repair procedures.
- B. Submit tendon sample including wires and tensioning anchorages.
- C. Submit calibration certificates for every jack and gauge used on the Project.
- D. Submit experience records of post-tension system installer. Records to include list of project experience of installer's superintendent. Refer to paragraph 1.5.A below.

- E. Submit written certification that the plant manufacturing the post-tensioned material complies with the PTI Certification Program.
- F. Submit copies of certified mill test reports for each coil or pack of strand used for the Project in accordance with PTI Specification for Seven Wire Steel Strand Barrier Cable Applications.
- G. Engineer's review of details and construction operations shall not relieve Contractor of his responsibility for completing the work successfully in accordance with these Specifications and within Contract time.
- H. Submit stressing log of tendons and back-stressing of anchors at completion of work.

#### 1.5 QUALITY ASSURANCE

- A. All pre-stressed reinforcing work shall be under the immediate control of the PT Contractor's superintendent, who shall have supervised at least three (3) prior projects of similar magnitude. PT superintendent shall exercise rigid control of all operations as necessary for full compliance with Contract Document requirements.
- B. Post-tensioning system and its manufacturer shall be pre-qualified. Refer to Article 2.1 below.
- C. Plant Certification:
  - 1. Post-tension cable system shall be manufactured in a plant certified to comply with the PTI Program for Certification of Plants Producing Un-bonded Single Strand Tendons.

#### 1.6 DELIVERY, STORAGE, AND HANDLING

- A. Protect tendons from moisture and rust from time of initial fabrication until installation. Store tendons above ground at all times.
- B. Deliver, store and handle post-tensioning materials in accordance with PTI's Field Procedures Manual.
- C. Use nylon straps during loading, unloading and handling of materials.

#### 1.7 WARRANTY

- A. A warranty period of two (2) years shall be provided for barrier cable repairs performed under this Section against defects, as determined by the Owner.

### PART 2 PRODUCTS

#### 2.1 MANUFACTURERS

- A. Prequalified Post-Tensioning System Manufacturers:
  - 1. Amsysco, Inc.

2. Continental Concrete Structures, Inc.
3. Dywidag Systems International, USA, Inc.
4. Post-Tensioning Systems International (PTSI)
5. Suncoast Post-Tension, L. P.
6. VStructural LLC (VSL)

## 2.2 NON ENCAPSULATED SYSTEMS – BARRIER CABLE REPAIRS

- A. The barrier cable post-tensioning repair system shall be a hot dip galvanized system.

## 2.3 POST-TENSIONING STEEL

- A. Typical post-tensioning tendons shall be 0.5" diameter strands. End anchorage sizes shall be selected by PT Subcontractor and submitted to Architect/Engineer for review.
- B. Strands:
  1. Conform to ASTM A416 Standard Specification for Steel Strand, Uncoated Seven-Wire for Prestressed Concrete.
  2. Strand to be low-relaxation type and have a minimum ultimate tensile strength of 270,000 psi.
- C. Required effective working forces are indicated on the Drawings. Maximum stress in tendons at anchorages and couplers shall not exceed seventy (70) percent of the minimum ultimate tensile strength of the strand.
- D. Temporary stress shall not exceed eighty (80) percent of the minimum ultimate tensile strength of the strand.
- E. Maximum allowable anchor slip is 1/8".
- F. Broken strands, and strands showing severe fabrication defects, shall be removed and replaced.
- G. Prestressing steel within every group or in the same member shall be of the same heat where practical. Steel shall be assigned a heat number and tagged accordingly.

## 2.4 ANCHORAGES AND COUPLERS

- A. Anchorages and couplers shall comply with PTI Specification for Unbonded Single Strand Tendons and ACI 318. Anchors shall be designed for transfer at 2,500 psi concrete strength.
- B. Size bearing plates of anchorages to satisfy requirements of ACI 318 and PTI Specification for Unbonded Single Strand Tendons unless certified test reports are submitted providing acceptable deviation.
- C. Anchorages and couplers shall be capable of developing at least 95% of the actual breaking strength of the prestressing steel without excessive deformation. Total elongation of the tendon under ultimate load shall not be less than 2% measured in a minimum gauge length of three feet.

- D. For encapsulated systems, anchorages shall include design features that provide a watertight connection of the sheathing to the anchorages and a watertight closing of the wedge cavity at both stressing and nonstressing (fixed) anchorages. Intermediate stressing anchorages shall provide a complete watertight encapsulation of the prestressing steel. The tendon anchorage blocks shall be epoxy-coated or encapsulated in plastic.
- E. Caps over the wedge cavity at stressing end anchorages to be supplied pre-greased.
- F. The anchorage casting and wedges shall be supplied by the same manufacturer.

## 2.5 SPECIAL TOOLS

- A. Post-tensioning system supplier shall provide special tools required to seat sheathing trumpets onto anchorages.

## 2.6 EPOXY GROUT

- A. Refer to Specification Section 030100.

# PART 3 EXECUTION

## 3.1 REPAIR OF BARRIER CABLES

- A. As directed by the Engineer, remove existing damaged or previously repaired barrier cable and anchors.
- B. Install new cable through existing hole in column. Enlarge hole as required to 1/8" diameter larger than the barrier cable diameter, including coating material.
- C. Set anchor plate flush to column surface and temporarily secure to column as required with concrete screws. Install epoxy grout around anchor plate in existing column box-out hole to fill existing voids from the barrel anchor. Epoxy grout shall cure for 3 days prior to tensioning tendons.
- D. Stress all barrier cables to a force noted on the Drawings.
- E. All fixed and stressing anchorages shall be back-stressed. Back-stressing is performed after cable is stressed. Place jack on the opposite side of bearing member, stress cable to a force equal to 80% of the strands minimum ultimate tensile strength. Use a slotted bearing plate to prevent damage to the backside of the member by the jack nose.
- F. Jack chucks shall be checked for uneven wear before each use and shall be replaced if such wear is evident.
- G. Within one working day after tendon tails are cut, coat exposed strand and wedge areas with tendon coating material and apply watertight cap over the coated area.

END OF SECTION

DIVISION 03 – CONCRETE  
SECTION 036423  
EPOXY INJECTION REPAIRS

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes

1. All labor, material, equipment, special tools, and services required to complete the work required for the project as indicated on the Drawings and in the Specifications, including but not limited to:
  - a. Inspection of concrete surfaces to receive epoxy injection.
  - b. Epoxy injection of concrete surfaces.
  - c. Cleaning of concrete surface after completion of epoxy injection.

B. Related Sections

1. Section 012200: Unit Prices.
2. Section 012900: Payment Procedures.
3. Section 015600: Barriers.

1.2 QUALITY ASSURANCE

A. Qualifications

1. The injection contractor shall be approved by the epoxy injection resin manufacturer.
2. The injection contractor shall certify that lead personnel (Field Superintendent and Foreman) in charge of the work have a minimum of three (3) years' experience in supervising injection work. This experience shall include the supervision of at least three (3) injection projects of similar size and type as this project.
3. The Contractor shall furnish to the Engineer upon request, the names of reference projects for which lead personnel held supervisory positions.
4. The Owner reserves the right to request different lead personnel if, in the Owner's opinion, those assigned to the project are not qualified by way of experience or ability to perform the work. Contractor shall comply with Owner's request at no cost to the Owner.
5. Provide material samples taken from the mixing head to verify mixing ratio and resin cure time. Sample equipment daily and record time, date, and location of repair where sample was taken on the sample container. Turn samples over to Engineer at regular intervals. Sample containers shall be clean, dry, and acceptable to the Engineer. Sample shall be no more than 1/8-inch-thick in its least dimension.
6. The minimum concrete surface temperature for epoxy injection work shall be 40° F.

When conditions warrant, Contractor shall monitor the concrete surface temperature of the areas to be injected on the affected days. When concrete surface temperatures are 40° F or lower, perform no injection work. Surface seal work is allowed if the sealer is suitable for work at those temperatures.

7. The Contractor shall comply with all Federal, State and Municipal laws, codes, ordinances, and regulations applicable to the Work in this Contract and also with all requirements of the National Fire Protection Association, the National Electric Code, and the Occupational Safety and Health Administration (OSHA). If the above laws, codes, or ordinances conflict with this Specification, then the laws, codes or ordinances shall govern, except in such cases where the Specification exceeds them in quality of materials or labor, then the Specifications shall be followed.

### 1.3 DELIVERY, STORAGE, AND HANDLING

#### A. Packing, Shipping, Handling and Unloading

1. Deliver materials to job site in sealed, undamaged containers/packaging.

#### B. Storage and Protection

1. Protect materials in a dry place, off ground and under cover to protect them from moisture and other damage.
2. Do not use materials showing evidence of water or other damage.
3. Storage and handling of materials shall conform to the requirements of the applicable safety regulatory agencies.
4. Storage areas shall be heated or cooled as required to maintain the temperatures within the range recommended by the manufacturer.

### 1.4 PROJECT CONDITIONS

#### A. Environmental Requirements

1. Install epoxy injection materials in strict accordance with all safety and weather conditions required by product literature or as modified by applicable rules and regulations of Local, State and Federal authorities having jurisdiction.
2. Fumes and dust shall be controlled to prevent harmful or undesirable effects in surrounding areas. Do not allow fumes, dirt, dust, or debris to enter building.
3. When toxic or flammable solvents are used, the Contractor shall take all necessary precautions as recommended by the manufacturer. In all cases, the handling and use of toxic or flammable solvents, including adequate ventilation and personal protective equipment, shall conform to the requirements of the applicable safety regulatory agencies.

### 1.5 WARRANTY

- A. Completed installation shall be warranted for a period of 2 years against debonding or cracking or injection material.

## PART 2 PRODUCTS

### 2.1 MATERIALS

- A. Epoxy Injection Resin, approved manufacturers:
  - 1. Prime Rez 1100 High Mod LV by Prime Resins.
  - 2. Sikadur 52 by Sika Corporation.
  - 3. Denepox I-300, by DeNeef Construction Chemical Inc.

### 2.2 EQUIPMENT

- A. The equipment used to inject the resin shall be capable of the following:
  - 1. Automatic proportioning of the materials within the maximum ratio tolerances set by the manufacturers of the resin.
  - 2. Delivery of components, resin, and hardener, from separate reservoirs to a mixing discharge head.
  - 3. Complete and uniform mixing of components at the discharge head.
  - 4. Equipment shall be rated for injection of resin materials at constant pressures up to 200 psi.

## PART 3 EXECUTION

### 3.1 GENERAL

- A. The minimum concrete surface temperature for injection work shall be 40° F. When conditions warrant, Contractor shall monitor the concrete surface temperature of the areas to be injected on the affected days. When concrete surface temperatures are 40° F or lower, perform no injection work.

### 3.2 PREPARATION

- A. Before repair work begins, clean cracks free of loose matter, dirt, laitance, oil, grease, salt, and other contaminants which would inhibit bond of the injection resin.
- B. Before injection of the crack, apply a surface seal material to the face of the crack. The surface seal material shall be a quick setting epoxy gel or a thermoplastic and must have adequate strength and adhesion to confine the injection resin until the resin is cured.
- C. Place entry ports in the surface seal along the crack. The distance between entry ports shall not be less than the thickness of the concrete member being repaired.

### 3.3 INSTALLATION

- A. Begin injection at a pressure of 10 psi and increase gradually as needed to allow the injection resin to flow into crack and rise to the next port. Injection pressures shall not exceed 75 psi without the approval of the Engineer.
- B. Begin injection of the resin into each crack at the lowest entry port or at the extreme end of a horizontal crack. The appearance of resin at the next port will be considered evidence

of adequate filling of the crack, at which the injection procedures shall be moved incrementally to the next port, capping the previous ports. Carefully monitor the injection pressure and resin flow to avoid damage to the delaminated concrete. Concrete damaged by the injection procedure shall be repaired or replaced as directed by the Engineer at no cost to the Owner.

- C. After curing of injection resin, remove excess resin from exposed wall and floor surfaces with sharp-sided tool such as a putty knife or trowel. Leave exposed wall surface in a clean, flat condition. Cured resin may be sanded if necessary.

### 3.4 FIELD QUALITY CONTROL

- A. Provide material samples taken from the mixing head to verify mixing ratio and resin cure time. Sample equipment daily and record time, date, and location of repair where sample was taken on the sample container. Turn samples over to the Owner at regular intervals. Sample containers shall be clean, dry, and acceptable to the Owner. Sample shall be approximately 1 inch thick in its least dimension. Samples to be taken in small cup. Interior of cup to be dampened with clean water prior to taking resin sample.
- B. During the work the contractor shall keep daily records. Record on a set of prints at each repair location:
  - 1. The date of injection.
  - 2. Injection material type.
  - 3. Surface temperature when 45° F or lower
  - 4. Width of crack prior to injection.
- C. Turn records over to Owner at completion of injection work.

### 3.5 CLEAN-UP

- A. Upon completion of work, remove all excess materials, dust, debris, and rubbish created by this work from the job site.

END OF SECTION



DIVISION 04 MASONRY

SECTION 040100

MASONRY REPAIR

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes

1. All labor, material, equipment, special tools, and services required to complete the work required for the project as indicated on the Drawings and in the Specifications, including but not limited to:
  - a. Brick patching as indicated by the drawings.
  - b. Repointing of mortar joints as designated by the Engineer.

B. Related Sections

1. Section 015600: Barriers.
2. Section 024119: Selective Structural Demolitions.
3. Section 090100: Façade Cleaning.

1.2 REFERENCES

A. The Masonry Society (TMS)

1. TMS 402 – Building Code Requirements for Masonry Structures, current edition.
2. TMS 602– Specifications for Masonry Structures, current edition.

B. American Society for Testing and Materials (ASTM)

1. ASTM C91 – Standard Specification for Masonry Cement.
2. ASTM C144 – Standard Specification for Aggregate for Masonry Mortar.
3. ASTM C150 – Standard Specification for Portland Cement.
4. ASTM C207 – Standard Specification for Hydrated Lime for Masonry Mortar.
5. ASTM C270 – Standard Specifications for Mortar in Unit Masonry.
6. ASTM C780 – Standard Test Method for Preconstruction and Construction Evaluation of Mortars for Plain and Reinforced Unit Masonry.

C. Brick Institute of America (BIA)

1. Technical Note 20 – Cleaning Brick Masonry.
2. Technical Note 46 – Maintenance of Brick Masonry.

1.3 DEFINITIONS

- A. “Damaged brick” as used herein means masonry units that are loose, cracked, split, or spalled, except isolated bricks with hair line cracks.

- B. "Defective mortar" as used herein means mortar joints that are loose, crack, split, spalled, delaminated, soft, or missing.
- C. "Salvaged brick" as used herein means existing masonry units that are removed, cleaned, and reused or returned to the Owner.
- D. "Hairline crack" as used herein means cracks measuring less than 1/32 inch limited to the surface of the masonry unit.
- E. "Tight crack" as used herein means cracks measuring less than 1/16 inch limited to the surface area of the masonry unit.
- F. "Masonry foreman" as used herein means technically competent employee identified as supervising all masonry work included in this Specifications section and the Drawings.
- G. "Brick" or "Unit" as used herein means all clay fired masonry units included in this Specifications section and the Drawings.

#### 1.4 SUBMITTALS

##### A. Product

- 1. Submit manufacturer's standard literature for all manufactured products specified herein or on Drawings.
- 2. Submit color charts or samples for all specified materials that are available in a range of colors. Obtain color selection from Owner prior to ordering materials.
- 3. Submit mix design for masonry mortar.

##### B. Mason

- 1. Resume of Mason's foreman.

##### C. Closeout

- 1. Upon completion of the Work and prior to final payment, provide fully executed warranties.

#### 1.5 QUALITY ASSURANCE

- A. The Contractor shall comply with all Federal, State and Municipal laws, codes, ordinances, and regulations applicable to the Work in this Contract and also with all requirements of the National Fire Protection Association, the National Electric Code, and the Occupational Safety and Health Administration (OSHA). If the above laws, codes, or ordinances conflict with this Specification, then the laws, codes or ordinances shall govern, except in such cases where the Specification exceeds them in quality of materials or labor, then the Specifications shall be followed.

##### B. Bidder's Qualifications

- 1. Contractor shall have at least 5 years' experience doing work of scope and size specified herein and indicated on Drawings.
- 2. Mason's foreman shall have supervised at least three prior projects of similar

magnitude and type.

C. Regulatory Requirements

1. Comply with applicable laws, ordinances, and the West Virginia Building Code.
2. Comply with the referenced standards above.

D. Installation

1. Mason's foreman shall be on site during 90% of all masonry work. Masonry work identified as not being installed under the direct supervision of Mason's foreman shall be subject to removal and replacement, at the direction of the Owner.

E. Mock-up

1. Mason's foreman and crew assigned to project to complete all mock-ups. All masons working on the job are to review the approved mock-ups prior to beginning work on the project.
2. Brick Patch
  - a. Provide mock-up of brick patch 2'-0" x 2'-0". Patches to be located on the structure and coordinated with the Owner.
  - b. Mock-up to demonstrate removal of existing brick, installation and blending of new brick with salvaged brick, and cleaning.
  - c. Approved patch to be maintained as reference.
3. Repointing
  - a. Provide mock-up of repointing in an area 3'-0" x 3'-0". Owner to locate mock-up area.
  - b. Mock-up to demonstrate cleaning of joint, installation of new mortar, and mortar color and texture.
  - c. Approved mock-up to be maintained as reference.

F. Single-Source Responsibility for Masonry Units: Obtain exposed masonry units of a uniform texture and color, or a uniform blend within the ranges accepted for these characteristics, from one source and by a single manufacturer for each different product required.

G. Single-Source Responsibility for Mortar Materials: Obtain mortar ingredients of a uniform quality, including color for exposed masonry, from one manufacturer for each cementitious component and from one source or producer for each aggregate.

H. Contractor will provide access to all work areas during normal working hours for the Owner and the Engineer to review the progress and quality of work.

## 1.6 DELIVERY, STORAGE, AND HANDLING

A. Packing, Shipping, Handling and Unloading

1. Deliver materials to job site in sealed, undamaged containers/packaging.

B. Storage and Protection

1. Protect materials in a dry place, off ground and under cover to protect them from wetting, staining, chipping, and other damage.
2. Do not use materials showing evidence of water or other damage.

1.7 PROJECT CONDITIONS

A. Environmental Requirements

1. Repoint mortar joints and repair masonry only when air temperature is between 40 and 80 degrees F and is predicted to remain so for at least 72 hours after completion of work.
2. Cold weather requirements: The temperature of the masonry wall must be above 32 degrees F.
  - a. Mortar should be heated and maintained above freezing temperatures until at least 72 hours after completion of the work.
  - b. Enclosure requirements for installation are temperature-based as follows:
    - 1) Below 20 degrees F: Provide enclosure for work area and heat source to maintain temperature above 32 degrees F.
    - 2) 20-25 degrees F: Provide heat source and windbreaks on both sides of masonry under construction
  - c. Enclosure requirements for protection of completed masonry are as follows:
    - 1) Below 20 degrees F: Provide enclosure and supplemental heat to maintain masonry temperature above 32 degrees F for 72 hours after construction.
    - 2) 20-25 degrees F: Protect completed masonry with insulating cover for 72 hours after construction.
    - 3) 25-32 degrees F: Completely enclose masonry with cover for 72 hours after construction.
    - 4) 32 to 40 degrees F: Protect completed masonry with cover for 72 hours after construction.
3. Hot weather requirements: Protect masonry repair and mortar-joint pointing when temperature and humidity conditions produce excessive evaporation of water from mortar and repair materials. The temperature of the masonry wall must be below 90 degrees F before pointing or patching can be installed. Provide artificial shade and wind breaks and use cooled materials as required.
4. Conform to manufacturer's specific requirements.

## 1.8 WARRANTY

- A. Provide two (2) year warranty on all workmanship and materials unless otherwise specified.

## PART 2 PRODUCTS

### 2.1 MATERIALS

#### A. Brick Masonry Units

##### 1. New Units

- a. Units conforming to ASTM C216, Grade SW.
- b. Size, color, blend, and texture to match existing as selected by Owner.

#### B. Mortar

##### 1. Prepackaged Mortar: ASTM C270 and ASTM C1329, type N.

##### a. Acceptable Manufactures

- 1) Cemex USA, Houston, TX .
- 2) Fairborn Cement, Xenia, OH.
- 3) WORKRITE Cements, York, PA.

##### 2. Mortar Aggregate: ASTM C144, standard masonry type.

##### 3. Water: Clean and potable.

##### 4. Mortar Color: As selected by Owner from manufacturer's standard colors to match existing.

##### 5. Masonry cements are prohibited.

#### C. Water: Clean and potable.

### 2.2 ACCESSORIES

#### A. Wall Ties

##### 1. Exterior Brick Repair

- a. Adjustable 304 Stainless steel 3/16" diameter triangle wire ties with 14 gage screw-on plates. Attach with tapcon screws.
- b. Basis of Design: Heckmann Building Products, Inc.
  - 1) No. 315 Screw-On Anchor Plate 1-1/4" wide by 6" long with two 1/4" dia. holes.
  - 2) No. 316 Triangle Ties.

##### 2. Supplemental Wall Ties

- a. Helix type friction pin, stainless steel anchor. Length to be determined by contractor, minimum embedment 4" into concrete masonry block.
  - 1) Basis of Design: Spira-Lock by Hohman & Barnard.

2) Acceptable Manufactures:

- (a) Stitch-Tie by Prosoco.
- (b) Heckmann.
- (c) Helifix.

B. Anchors for Attachment of Veneer Brick Ties and Termination Bars to:

- 1. Masonry: Hilti HIT anchor – ¼” by 1 ¼” long with stainless steel drive pin.
- 2. Steel: Kwik-Pro Self-Drilling Screw by Hilti. 12-14 HWH #5 with Kwik-Cote finish.

C. Weep Cords: 3/8-inch diameter cotton blend woven cord without plastic jacket or core. Minimum 60% cotton content.

D. Reinforcing bar: #4 Bar. All reinforcing steel shall have a minimum of Fy of 60 ksi.

E. Rolled Steel Plates, Shapes and Bars: ASTM A36.

2.3 MIXES

A. Mortar

- 1. Batch Control: Measure and batch materials either by volume or weight, such that the required proportions for mortar can be accurately controlled and maintained. Measurement of sand materials by shovel will not be permitted.
- 2. Mix mortars with the maximum amount of water consistent with workability to provide maximum tensile bond strength within the capacity of the mortar.
- 3. Do not use mortar that has begun to set, or if more than 2 hours has elapsed since initial mixing. Retemper mortar during 2-hour period as required to restore workability.
- 4. Do not lower freezing point of mortar by use of admixtures or anti-freezing agents.
- 5. Chloride containing additives are prohibited.
- 6. Air content shall not exceed 12 percent.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Prior to the start of work, examine surfaces intended to receive the specified work and note conditions or defects that will adversely affect the execution and/or quality of the work.
- B. Notify Owner in writing of any such conditions or defects. Do not begin work until unsatisfactory conditions are corrected. Failure to notify Owner prior to beginning work constitutes acceptance by Contractor of the surfaces and conditions under which the work is to be performed, and acceptance by Contractor for the performance of the work.
- C. Prior to the start of all masonry repairs within a work area, clean all brick and mortar surfaces with general cleaner to remove existing dirt and stains from facade.

### 3.2 PREPARATION

#### A. Protection

1. Provide temporary protection during the course of the work to prevent water entry into the structure and walls and to maintain the structure in a weather tight condition. Ensure that protection is in place and watertight before ending day's work.
2. Be prepared for unexpected weather changes so that temporary protection can be quickly installed.
3. Protect all existing adjacent surfaces that are to remain and are not included in the work of this Section.
4. Provide safeguards from work of this Section for pedestrian traffic and adjacent property. Do not permit drift of dust or liquids.
5. Use safeguards recommended by manufacturers of products specified herein for personnel handling and applying said materials.
6. Protect surrounding areas from construction activities, dirt, dust, and debris.

### 3.3 MASONRY WORK

#### A. General

1. Cut masonry units with motor-driven saw designed to cut masonry with clean, sharp, unchipped edges. Cut units as required to provide pattern shown and to fit adjoining work neatly. Use full unit without cutting wherever possible. Use dry cutting saws to cut concrete masonry units.
2. Lay out walls in advance for accurate spacing of surface running bond patterns with uniform joint widths and to properly locate openings, movement type joints, returns and offsets.
3. Wet clay bricks that have ASTM C67 initial rates of absorption (suction) of more than 0.71 gm/square inch per minute.
4. During construction, cover top of work with waterproof sheeting at end of each day's work. Extend cover down face of work and hold securely in place.
5. Prevent mortar or soil from staining face of masonry to be left exposed. Immediately remove mortar in contact with such masonry. Protect base of walls from mortar splatter by means of coverings spread on and over wall surface. Protect sills, ledges and projections from mortar droppings.
6. Tolerances
  - a. Maximum Variation from Plumb: 1/8 inch maximum.
  - b. Maximum Variation from Level Coursing: 1/8 inch in 3 ft. and ¼ inch in 10 ft; ½ inch in 30 ft.
  - c. Maximum Variation of Joint Thickness: 1/8 inch in 3 ft.

- d. Maximum Variation from Cross Sectional Thickness of Walls: ¼ inch.
- 7. Coursing
  - a. Establish lines, levels, and coursing indicated. Protect from displacement.
  - b. Maintain masonry courses to uniform dimension. Form vertical and horizontal joints of uniform thickness.
  - c. Brick Masonry Units
    - 1) Coursing: Match existing
    - 2) Exposed Mortar Joints: Concave.
- B. Mortar Mixing
  - 1. Mix mortar in accordance with manufacturer's instructions.
  - 2. Maintain sand uniformly damp immediately before mixing process.
  - 3. Add admixtures in accordance with manufacturer's instructions. Provide uniformity of mix and coloration.
- C. Mortar Bedding and Jointing
  - 1. Lay masonry units with completely filled bed and head joints. Butter ends with sufficient mortar to fill head joints and shove into place. Do not slush head joints.
  - 2. Remove excess mortar as work progresses.
  - 3. Interlock intersections and external corners unless otherwise indicated.
  - 4. Do not shift or tap masonry units after mortar has achieved initial set. Where adjustment must be made, remove mortar and replace.
  - 5. Rack back ½ unit length in each course; do not tooth unless otherwise shown on Drawings.
  - 6. Keep cavity between brick and substrate clean and free of debris, mortar fins and droppings.
  - 7. Keep vertical control and expansion joints clear of mortar and debris.
- 3.4 BRICK PATCHING
  - A. Brick Unit Repair
    - 1. Brick unit repair for to include less than eight (8) brick in one (1) repair area.
    - 2. Remove damaged masonry units in a manner that does not damage adjacent masonry units or substrate.
    - 3. If necessary, remove adjacent undamaged bricks to complete repair. The undamaged bricks are to be carefully removed, salvaged, and reset with repair. Brick units removed to gain access to identified deteriorated brick will not be included in unit cost quantities unless approved by Engineer prior to the start of work.



4. Provide anchors as required.
5. Provide new units to match adjoining units and install in fresh mortar, pointed to eliminate evidence of patching.

**B. Brick Square Foot Repair**

1. Brick square foot repair for repair areas greater than 7 brick.
2. Remove damaged masonry units in a manner that does not damage adjacent masonry units or substrate.
3. If necessary, remove adjacent undamaged bricks to complete repair. The undamaged bricks are to be carefully removed, salvaged, and reset with repair. Brick units removed to gain access to identified deteriorated brick will not be included in unit cost quantities unless approved by Engineer prior to the start of work.
4. Tooth in bricks into repair area.
  - a. Priority of brick placement:
    - 1) Small patches - blend of salvage brick.
    - 2) Large patches (infill for door/window openings) – blend of salvage brick. If a blend of salvage brick is not available blend new bricks.
5. Provide anchors as required.
6. Provide new units to match adjoining units and install in fresh mortar, pointed to eliminate evidence of patching.

**3.5 MASONRY REPOINTING**

- A. During the repointing of joints, enlarge any voids or holes, except weep holes, and completely fill with mortar.
- B. Remove mortar in joints to a minimum depth per detail, but not less than that required to reach sound existing mortar. Do not remove mortar to a depth of more than half the thickness of the stone. The back reveal of the joint shall be square, and mortar shall be fully removed from the face of the joint. Remove mortar with hammer and chisel or with grinders equipped with integral dust extraction system. Dust and debris created by mortar removal must be contained and collected. Do not damage or spall edges of adjacent brick or stones or widen joints.
- C. When mortar removal is complete, hand wire bush joint and remove remaining residual dust and loose material by vacuuming.
- D. Premoisten joint and install new mortar. Pack tightly in two, 3/8-inch layers. Where depth of new mortar exceeds one inch, install in maximum 3/8-inch layers.
- E. When mortar is thumbprint hard, cut any excess mortar from the edge of the joint with a trowel or raking tool. Finish to a smooth, compact, joint to match existing joint textures.
- F. Remove excess mortar and mortar smears as work progresses. Dry brush at the end of

each day's work. Do not allow excess mortar or mortar smears to dry on the face of new or existing brick.

- G. Hairline cracking within the mortar or mortar separation at edge of a joint is unacceptable. Completely remove such mortar and repoint.

### 3.6 CLEANING

#### A. General

1. Refer to Specification Section 090100 for additional requirements.
2. Prior to cleaning review with manufacturer's representative masonry substrate condition. Notify Engineer immediately if conditions exist that may be detrimental to the success of the cleaning and possible damage to substrate.
3. Clean all face brick with cleaning solution per manufacturer's recommendations and instructions.
  - a. Comply with BIA Technical Note 20 for cleaning of brick.
  - b. Provide a general and masonry repair cleaning.
4. Protect structure surfaces and landscaping below during cleaning.
5. Provide adequate protection of all surrounding surfaces not intended to be cleaned from damage (surface blemish, staining, etching, etc.) due to preparation and cleaning procedures. Repair damage at no cost to the Owner.
6. Provide adequate protection of adjacent brick not being cleaned during a specific cleaning operation. Repair damage at no cost to the Owner.

#### B. Façade Masonry Cleaning

1. General cleaning to remove all surface contamination such as dirt, foreign matter, rust, rust stains, mold, mildew, and efflorescence. Cleaned surface to meet or exceed mock-up area.

#### C. Masonry Repair Cleaning

1. Unless noted otherwise, clean all brick surfaces with repointing cleaner to remove excess mortar, mortar smears and stains after completion of repointing and repair work. Refer to specification section 090100 for materials and products.
2. Use non-metallic tools in cleaning operations. Remove large pieces of mortar using wood paddles and scrappers.
3. Clean areas of new mortar no earlier than 14 days nor later than 28 days after completion of work.
4. Clean ground area of masonry materials, rubble, and debris.

END OF SECTION

DIVISION 05 – METALS  
SECTION 051200  
STRUCTURAL STEEL

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes all labor, materials, equipment, special tools and services to complete Structural Steel and Other Steel work required for the Project, as herein specified, and as indicated on the Drawings, including but not limited to:
  - 1. All Structural Steel indicated, including design of connections not shown on the Drawings.
  - 2. All accessories, attachments, anchors and rough hardware for structural steel work. Accessories include anchor bolts, embed plates, deck support angles, etc.
  - 3. Galvanizing and finish painting where indicated on the Drawings.
  - 4. Quality control, testing and inspection specified to be performed by the Contractor.
  - 5. Coordination with related and adjacent work shown on the Drawings.
- B. The Contract Documents do not differentiate between fabrication and erection work. Should fabrication and erection be performed by separate contractors, the fabricator is responsible for the scope of work of erector and is responsible for resolution of any disputes that may arise.

1.3 REFERENCES

- A. Comply with the provisions of the following codes, specifications and standards; use the latest edition unless date is indicated. Modifications in this specification, when in conflict with the referenced codes, specifications and standards, shall take precedence.
  - 1. West Virginia Building Code.
  - 2. American Institute of Steel Construction (AISC) ANSI/AISC 303-22: "Code of Standard Practice for Steel Buildings and Bridges," May 9, 2022, as modified by the project drawings and this specification; and modifications in Part 4 at the end of this section.
  - 3. ANSI/AISC 360-22: "Specification for Structural Steel Buildings" and including the "Commentary on the Specification for Structural Steel Buildings", August 1, 2022.
  - 4. Research Council on Structural Connections (RCSC): "Specification for Structural Joints using High-Strength Bolts", June 11, 2020.
  - 5. ASTM International (ASTM) Specifications and references as noted in this Section.

6. ANSI/AISC 341-22: "Seismic Provisions for Structural Steel Buildings", September 26, 2022.
7. AISC 207-20: "Standard for Certification Programs", October 2, 2020.
8. American Welding Society (AWS) D1.1/D1.1M-2020: "Structural Welding Code – Steel."
9. ASTM A6/A6M-21: "Standard Specification for General Requirements for Rolled Structural Steel Bars, Plates, Shapes, and Sheet Piling".
10. International Code Council Evaluation Service (ICC-ES) AC193: "Acceptance Criteria for Mechanical Anchors in Concrete Elements".
11. ICC-ES AC308: "Acceptance Criteria for Post-Installed Adhesive Anchors in Concrete Elements".
12. Society for Protective Coatings (SSPC) Steel Structures Painting Council: "SSPC Painting Manual, Volume I, Good Painting Practice" and "SSPC Painting Manual, Volume II, Systems and Specifications".
13. American Galvanizer's Association (AGA) Recommendations and Suggested Specifications for Hot-Dip Galvanizing.
14. OSHA Regulations, current edition.

#### 1.4 QUALIFICATIONS

- A. Contractor must have a minimum of 5 years of successful experience in the type of work required and submit with his Bid evidence of qualifications required herein.
- B. Steel Fabricator:
  1. 10 years of successful experience in the fabrication of structural steel.
  2. Completion of 10 projects of similar size and complexity within the last 5 years. Submit a list of projects and their locations. Each project listed is to have at least 70 percent of the steel quantity of the work being bid.
  3. The steel fabricator must be certified under the AISC Standard for Certification Programs as a Certified Building Fabricator (BU). Evidence of current auditing by an independent, approved inspection agency that the fabricator has established quality control procedures comparable to the AISC program may be considered in lieu of AISC certification.
  4. Steel fabricator must have an established in-house quality control program for shop drawing production, material tracking, material inspection, welder certification, weld quality, and fabrication accuracy. Fabricator shall be registered and approved per Section 1704.2.5 of the Building Code, and submit required certificate of compliance. Failure to meet these qualifications will require additional inspections prescribed in Building Code Chapter 17 to be performed by the Owner's inspection agency at the Contractor's expense.
- C. Steel Erector:
  1. 5 years of successful experience in the erection of structural steel.
  2. Submit a list of 6 similar completed projects; include key personnel, and equipment.
  3. The steel erector must be certified under the AISC Standard for Certification Programs as a Certified Erector (CSE) with Metal Deck Endorsement. Evidence by an independent, approved inspection agency that the erector has established

quality control procedures, including weld testing, comparable to the AISC program may be considered in lieu of AISC certification.

## 1.5 SUBMITTALS

- A. The Contractor shall review submittals for compliance with the Contract Documents, accuracy, dimensions, fit-up, construct-ability, and coordination with other work. The structural engineer's review will be for general intent of strength and serviceability only.
- B. Submit for record with Bid evidence of Contractor's, Fabricator's and Erector's qualifications.
- C. Submit for record evidence of Steel Fabricator's and Erector's quality control programs, procedures and certifications showing conformance with Chapter 17 of the Building Code.
- D. Prior to preparing shop drawings, submit for record calculations of connections designed by the contractor, prepared, signed and sealed by a Professional Engineer registered in the state in which this project is located.
- E. Submit detailed drawings, include:
  - 1. Complete details and schedules for fabrication and shop assembly of all members.
  - 2. Complete details, schedules, procedures and diagrams for field erection.
  - 3. Temporary bracing and shoring, including calculations.
  - 4. Limits of prime painted surfaces vs. bare steel, show also on overall plans.
  - 5. Evidence that shop drawings (piece and erection drawings) have been reviewed by the Fabricator's Professional Engineer prior to submittal.
  - 6. Layout and installation drawings for all anchor bolts and other items to be embedded in concrete or masonry work by others. Drawings shall dimension the locations of all embedded items noting pertinent tolerances for the installation.
- F. Prior to fabrication, submit for record two copies of producer's or manufacturer's specifications and installation instructions for the following items. Include laboratory test reports and other data for evidence as required to show compliance with these specifications (including specified standards). Indicate by transmittal form that copies of each applicable instruction have been distributed to fabricators, installers and erectors.
  - 1. Structural steel: Submit the mill report for each heat of steel used prior to the start of fabrication. Mill reports shall show chemical analysis to include C, Mn, Cr, Mo, V, Ni, Cu and full mechanical properties of the structural steel provided. For unsatisfactory mill test report, retest or reject steel.
  - 2. High-strength bolts, including nuts and washers: Submit certification of inspection test report for each production lot indicating proof load, tensile strength and hardness of high strength bolts. For unsatisfactory test reports, retest or reject bolts.
  - 3. Welding materials and procedures: Submit written welding procedures for all welding on the project, both shop and field. Procedures for complete penetration welds shall include test records to verify the heat-affected zone and show that parent metal for the test meets the grade specified for the project. Welding

- sequence and procedures are to minimize the effect of weld shrinkage, residual stresses, and to maintain erection tolerances.
4. Mechanical and adhesive anchors, include manufacturer's evaluation reports (ESR) and specific project locations and conditions where proposed for use.
  5. Primer paint and surface preparation procedures.
  6. Hot-dip galvanizing and surface preparation procedures
- G. During fabrication and construction, Contractor shall submit quality control, inspection and test reports immediately to the Owner's representative and inspector, with a copy to the structural engineer within one week. Include:
1. Welder certification for shop and field welders.
  2. Welding, fabrication and erection inspection reports.
  3. Welding verification inspection and test reports for all shop and field welds.
  4. Bolt and anchor tests and installation reports.
  5. Contractor's weekly inspection report summary.
- H. Submit record drawings of the erected steel members to the Owner's representative.
- I. Submittals for record, informational submittals, compliance reports and inspection reports will not be reviewed or returned.

## 1.6 QUALITY CONTROL

- A. Personnel performing the work shall have experience relevant to anticipated conditions, materials, installation requirements and all special techniques involved. Contractor shall have an experienced foreman or superintendent who will be present while work is performed.
- B. The Contractor is responsible for and shall perform quality control, testing and inspection of all work as required by the Contract Documents, referenced codes, specifications and standards. Contractor shall employ qualified inspectors to perform inspections, tests and quality control daily. Submit reports weekly.
- C. The Contractor shall reject and replace work that is not in conformance.
- D. Qualify welding processes and welding operators in accordance with AWS "Standard Qualification Procedure". All welding shall be performed by operators who are qualified for the types of welds used. Verify each operator's qualifications with Owner's inspector prior to using in production.
1. Welders shall retake qualification test if, as determined by the Owner's representative, there is a reasonable doubt as to the proficiency of the welder. If the welder does not requalify he/she shall not perform welding on this project.
  2. The Contractor shall pay all costs associated with welder qualification.
- E. Qualify mechanical fasteners, mechanical anchors, adhesive anchors and installation processes in accordance with manufacturer's engineering reports and code recognized approval procedure. Installers shall be certified by the manufacturer or an independent organization. Verify each installer's qualifications with the Owner's inspector prior to using in production.

- F. Source quality control: All materials shall be Identifiable. Unidentifiable materials shall be tested or rejected.
1. Materials delivered with certificate are classified as Identifiable; those without certificates are classified as Unidentifiable.
  2. Test material not identifiable by heat number and mill test, or another acceptable manufacturer's identification per ASTM A370. Testing to be performed by Contractor's testing agency as follows:
    - a. Shear connectors: Each lot of 100 studs; tensile tests on 3 finished studs per AWS.
    - b. Structural shapes and plates: From coupons taken from material; one tensile test and one bend test per 5 tons of each shape.
    - c. High strength bolts: Each lot of 100 bolts; tensile tests on 2 bolts in full size and one tensile test on a 1/2" diameter machined specimen.
    - d. Other materials: Test as directed.
- G. The Contractor shall arrange for review by the Owner's inspection agency. The Contractor shall not rely on the Owner's inspector for the Contractor's quality control. Contractor shall furnish Owner's inspector with the following:
1. One complete set of fabrication and erection drawings.
  2. Material bills and mill test reports.
  3. Information regarding time, place of rolling and shipment of materials to shop.
  4. If requested, representative sample pieces for testing.
  5. Full and ample means and assistance for testing materials.
  6. Complete set of welding procedures.
  7. Welder qualifications.
  8. All manufacturers' installation instructions.
  9. Anchor installer qualifications.
  10. AISC fabricator certification documents QA/QC manual and most recent AISC audit.
  11. AISC erector certification documents QA/QC manual and most recent AISC audit.
  12. Qualifications for Contractor's quality control personnel and independent testing agency.
  13. Reports for all quality control, tests and inspection by Contractor.
- H. Structural inspections required by Chapter 17 of the Building Code shall be performed by an approved inspector retained by the Owner.

#### 1.7 DELIVERY, STORAGE, AND HANDLING

- A. Material storage: Protect structural steel members and packaged materials from corrosion and deterioration. Store off ground and pitch to drain off water.
- B. Do not store materials on the structure in a manner that might cause distortion or damage to the members or the supporting structures. Repair or replace damaged materials or structures as directed.

- C. Deliver welding electrodes to job in unbroken packages bearing name of manufacturer. Special handling for electrodes is required per AWS. Provide and use an oven for electrodes requiring continuous drying prior to use.

## PART 2 PRODUCTS

### 2.1 MATERIALS

#### A. Structural steel:

1. Wide flange and channel shapes: ASTM A992 (Fy 50ksi).
2. Hollow structural sections (HSS): ASTM A500, Grade C (Fy 50ksi).
3. Steel pipes: ASTM A53, Type E or S, Grade B (Fy 35ksi). Spiral Pipe is not permitted.
4. Other rolled shapes, angles, plates and bars: ASTM A572 Grade 50 (Fy 50ksi).
5. All steel to be welded shall conform to chemical and metallurgical limitations specified in AWS D1.1 and D1.3.

#### B. Threaded fasteners:

1. Anchor rods: ASTM F1554, Fy 55ksi, with supplement S1, weldable. Supply all anchor rods with two heavy-hex nuts, one nut to be used for base plate leveling, unless otherwise shown.
2. Structural bolts: ASTM F3125, grade F1852, type 1, 120 ksi, quenched and tempered medium-carbon steel, 3/4" min. diameter, tension control assemblies with heavy-hex nuts and hardened washers. Use tension control assemblies conforming to ASTM F1852 everywhere access permits. For all bolts unless noted otherwise.
3. Where access prevents the use of a tension control bolt, use load indicator washer conforming to ASTM F959, in accordance with "Specification for Structural Joints Using High-Strength Bolts" (6-11-2020), paragraph 8.2.4, and mark bolt(s) for inspection. Load indicator washers shall be self-indicating to allow visual observation, and provided with 1 or more additional flat washers, based on hole type, as required by the manufacturer. Install with grade A325 (or A490 where indicated) heavy-hex structural bolts, A563 heavy-hex nuts and F436 hardened washers.
4. Galvanize bolts assemblies connecting galvanized members per ASTM A153, Class C, F2329 or ASTM B695, Class 55 as compatible with bolt assembly. For A490 bolts use a zinc aluminum coating meeting ASTM F3393.
5. Bolt assemblies shall be lubricated by the manufacturer and protected on site per the RCSC bolt specification.

#### C. Welding electrodes:

1. Use electrodes as required by AISC "Specification for Structural Steel Buildings" and the AWS Code. As minimum use E70 XX electrodes, low hydrogen.

#### D. Mechanical and adhesive anchors: ICC-ES approved with current ESR for cracked concrete, zinc coat unless noted otherwise, galvanize or use stainless steel where exposed to weather. Type and embedment depth into concrete as indicated on the



drawings, if not shown embed 8 x diameter, but never less than the manufacturer's recommended standard embedment. Manufacturers may include:

1. Hilti, Inc.
  2. Powers Fasteners, Inc.
  3. Simpson Strong-Tie Company, Inc.
- E. Galvanizing: ASTM A123. Galvanize hardware connecting galvanized members per ASTM A153, Class C, or as required by the assembly. Touch up with galvanizing repair compound.
- F. Galvanizing repair: Zinc rich galvanize repair compound containing 90% minimum zinc by weight in the dried film. Comply with DOD-P-21035 or The Society for Protective Coatings, Paint Specifications No. 20 (SSPC-PS 20).
- G. Structural steel primer paint: Refer to Specification Section 099100 High Performance Coatings.

## 2.2 FABRICATION

- A. The fabricator shall track materials, assemble, inspect, and test the work under supervision of qualified quality control personnel, who shall ensure conformance with established written procedures to meet the design requirements. Inspector shall make written daily reports of progress, deviations, deficiencies, and corrections, and confirm work is satisfactory. Submit reports weekly.
- B. General:
1. Fabricate items of structural steel in accordance with this specification, the referenced codes and standards, the contract design drawings, and the final reviewed shop drawings.
  2. Detail and fabricate steel to allow for erection in compliance with OSHA regulations. Complete detailing for compliance, including modification of details shown on the contract drawings where required.
  3. Properly mark and match-mark materials for field assembly. Fabricate for delivery sequence that will expedite erection and minimize field handling of materials.
  4. Where finishing is required, complete the assembly, including connections and welding of units, before start of finishing operations.
  5. Furnish main steel members in one piece without splicing unless otherwise shown or approved.
  6. All exterior hollow steel members shall be completely sealed air tight with welded plates.
  7. Provide holes for drainage in any exterior members that will collect and hold water, either during construction or in final structure.
- C. Connections:
1. Provide welded shop connections unless otherwise shown.
  2. Provide bolted field connections unless otherwise shown.
  3. Provide high-strength bolts for all bolted connections.

4. Cut, drill, or punch holes perpendicular to metal surfaces. Do not flame cut holes or enlarge holes by burning. Drill holes in bearing plates.
  5. Comply with AWS D1.1 Code for procedures, preheat, appearance and quality of welds, including methods used in correcting welding work. Assemble and weld built-up sections by methods that will produce true alignment of axis without warp.
- D. Provisions: Provide holes, weld nuts, welded studs, etc., required for securing other work to structural steel and for the passage of other work through steel framing members as required.

## 2.3 FINISHING

- A. Galvanize structural steel where indicated on the Drawings, including all exterior plates and shapes, mechanical support frames, ledge angles, lintels, and lintel plates.
1. Clean steel to be galvanized of foreign substances per ASTM A385. Power tool clean all welds and adjacent areas to remove flux and splatter before galvanizing.
  2. Provide 2.3-oz./sf zinc coating per ASTM A123.
- B. Overcoat galvanized stair materials per Specification Section 099100 High Performance Coatings.

## PART 3 EXECUTION

### 3.1 EXAMINATION

- A. Establish permanent benchmarks, in addition to those provided, as needed for accurate erection of structural steel.
- B. Field survey and measure all existing conditions prior to preparation of shop drawings. Employ a licensed land surveyor for all steel erection work.
- C. Check elevations of concrete bearing surfaces and locations of anchor bolts and similar devices before fabrication work and report dimensional discrepancies to the Owner's representative. Do not proceed with fabrication until corrections have been made or until compensating adjustments to structural steel have been approved by the Owner's structural engineer.
- D. Furnish templates and detailed setting drawings as needed to ensure accurate positions of anchors.
- E. Verify positions of anchor bolts before fabrication of steel. Report deviations from design locations and submit written recommendations for corrections.
- F. Notify the Owner's representative in writing of conditions that would hinder proper and timely installation, or impair performance of finished work.

### 3.2 INSPECTION BY CONTRACTOR

- A. Quality control, testing and inspection by Contractor for fabrication and erection shall conform to requirements of the Contract Documents, referenced codes, specifications and standards; and the following:
  - 1. Inspection by Contractor shall be at Contractor's expense, by a testing agency or qualified inspector other than that employed by Owner, and shall be performed before Owner's inspection of material involved.
  - 2. Contractor shall submit weekly written inspection report summaries to the Owner's representative, inspector, and structural engineer. In general, these reports shall:
    - a. Verify that welders are certified.
    - b. Confirm use of qualified welding procedures and:
      - 1) Welding equipment is used per manufacturer's recommendations.
      - 2) Proper use of drying oven and preheating.
      - 3) Fit-up and structural steel compliance with the specified dimensional standard.
      - 4) Proper use of run-out plates.
    - c. Inspect every weld for quality and conformance. Systematically record welds, include:
      - 1) Location and type of weld.
      - 2) Weather conditions during welding.
      - 3) Identification marks of welders.
    - d. Include bolts, anchors and other items.
    - e. Report all defects and deficiencies.
    - f. Report and describe how corrections were made.
  - 3. Acceptance criteria used for the inspection of welds shall be as specified in AWS D1.1.
- B. Visually inspect all material for defects before and after cleaning. Material with visible defects shall be rejected.
- C. Penetration welds: Inspect all (100%) complete and partial penetration welds visually. Inspect all (100%) complete penetration welds by ultrasonic or radiographic tests for entire length of weld. All inspections to occur a minimum of 24 hours after completion of welding.
  - 1. Material that fails testing shall be corrected and re-tested over the entire length of weld until satisfactory results are achieved.
  - 2. Ultrasonic testing shall be performed by a specially trained, qualified technician to operate equipment, examine welds, and maintain a record of welds examined, defects found, and dispositions of defects.
  - 3. When ultrasonic indications arising from weld root can be interpreted as either a weld defect or backing strip, the backing strip shall be removed, and the weld shall be re-tested.
  - 4. Ultrasonic instrumentation shall be calibrated by technician to evaluate the quality of welds per AWS D1.1.

5. Other methods of inspection, for example, x-ray, gamma ray, magnetic particle, or dye penetrant, may be used on welds if acceptable to the Owner's structural engineer.
- D. Fillet welds: Inspect all (100%) shop and field fillet welds visually for proper size, quality of weld and placement per reviewed shop drawings. Inspect 5% of a mix of field and shop welds by magnetic particle method, ASTM 109.
- E. High strength bolted connections: At beginning of bolting operations, verify bolt installation techniques and test bolts in field conditions for proper pretension per manufacturer's requirements. Retest when changes in bolt lots, lubrication and weather exposure conditions occur. Inspect all bolted connections for bolt size, quantity, type, and tension.
- F. Mechanical and adhesive anchors: Verify installers are certified and materials are used in conformance with manufacturer's recommendations. Observe hole preparation and installation technique at all anchors as work progresses. Proof test 5% of all anchors in each condition, distributed throughout the project, and at least 1 anchor in each steel framing connection. Amount of testing shall be increased if failures occur.

### 3.3 INSPECTION BY OWNER

- A. The Owner will engage an independent inspection agency to perform shop and field verification inspection services in accordance with referenced standards. The Contractor shall schedule and coordinate inspections.
  1. The Owner will pay costs of initial inspection.
  2. Material that fails inspection shall be corrected by Contractor and re-inspected until satisfactory results are achieved.
  3. The Contractor shall pay costs incurred by Owner's inspection agency, architect, and/or engineer for re-inspection of corrections made because of failed initial tests.
  4. Inspection may be performed in shop or field.
  5. Contractor shall perform all necessary preparatory work for inspection such as cleaning, marking and removal of back-up bars, if needed, without additional costs.
  6. Acceptance criteria used for the inspection of welds shall be as specified in AWS D1.1.
- B. Inspections do not relieve Contractor of responsibility for contract compliance. The Owner's representative shall have the right to inspect or test work and reject faulty materials of workmanship at any time before final acceptance.
- C. General:
  1. Review Contractor's quality control program.
  2. Review Contractor's fabrication and erection inspection reports for compliance with the requirements of AWS D1.1 and Inspection by Contractor, above.
  3. Verify welder's certifications.
  4. Provide required verification inspections.

5. Record types and locations of all defects discovered, report such discoveries to Contractor, and record corrections performed. Reports will be made not less than weekly to the Owner's representative.
- D. Penetration welds: All (100%) complete and partial penetration welds shall be visually inspected. Twenty percent (20%) of complete penetration welds shall be inspected ultrasonically for the entire length of weld. Columns, beams and plate material perpendicular in connections with penetration welds will be checked for lamellar tears. Further inspection may be required if unacceptable welds or material are found. Contractor shall pay cost of such additional inspection. Rejection of any portion of a weld shall require re-inspection of 100% of that weld after repair.
- E. Fillet welds: Twenty percent (20%) of the field-placed fillet welds shall be visually inspected. Five percent (5%) of shop-placed welds shall be visually inspected to verify fabrication quality control. Inspector is to verify placement of welds per reviewed shop drawings, as well as proper size and quality of weld.
- F. High strength bolted connections:
  1. Observe Contractor's testing and installation techniques meet manufacturer requirements.
  2. Visually inspect all bolted connections for bolt size, quantity, type, and tension. Inspection shall also confirm that bolts' threads are not in the shear plane where required.
- G. Mechanical and adhesive anchors: Verify installer certification. As work progresses, observe installation for conformance with manufacturer's recommendations and witness Contractor's proof testing.
- H. Remedies: Defective material shall be removed and replaced by the Contractor unless corrective procedures are permitted by the engineer. Corrections shall be tested at Contractor's expense until satisfactory results are achieved.

### 3.4 OXYGEN (FLAME) CUTTING

- A. Manual oxygen cutting shall be done in the shop only and only with a mechanically guided torch. Alternatively, an unguided torch may be used provided the cut is not within 0.5 inches, of the finished dimension and the final removal is completed by chipping or grinding to produce a surface quality equal to that of the base metal at cut edges.
- B. Control process to prevent excessive hardening of edges of steel where material is to be welded or is subject to axial tension.
- C. Clean and repair all cut edges by welding and/or grinding to remove all gouges, cuts, burrs, and jags to meet the requirements of AWS D1.1.
- D. Re-entrant cuts shall have as large a radius as possible without over cutting.

- E. The use of oxygen-cut holes for bolted connections is not permitted under any circumstances. Violation will be cause for the rejection of any pieces in which oxygen cut bolt holes exist.
- F. Oxygen cutting of structural steel in the field is not allowed except with the written consent and approval of the Owner's structural engineer.

### 3.5 BASE PLATES AND ANCHORS

- A. Furnish anchor rods, and other items built into cast-in-place concrete or unit masonry to appropriate installer, together with template and detailed setting drawings required to assure accurate positioning of the items.
- B. Templates, furnished by the Contractor for all anchor rods, shall be used to set the anchors. Templates shall be fabricated from steel plate, minimum thickness 1/8". The installer is to check carefully the setting of the bolts to the proper position prior to placement of concrete. Anchor bolts shall have nuts and washers. Damaged threads shall be repaired or re-cut to permit full tightening of nuts.
- C. Anchors, embed plates and other items shall not be welded to reinforcing steel.
- D. Base plates supported on concrete, whether shop attached or shipped loose, shall be furnished with and set upon leveling nuts. Base plates shall have holes for bleeding off air during grouting.
- E. Setting base plates:
  - 1. Prior to setting, clean existing and new concrete surfaces and roughen with bush hammer to improve bond. Clean the bottom surface of the base plates. Chip out any areas required to set shear lugs, making sure that the reinforcing steel is not damaged.
  - 2. Tighten anchor bolts after the base plates have been positioned and leveled. Do not remove wedges or shims, but if protruding, cut off flush with the edge of the base plate.

### 3.6 BOLTS

- A. Assemble joint using drifts to obtain correct alignment.
- B. Fit bolts. Use hardened washers under the turned part. Lubricate bolts to prevent nuts seizing on the bolts. Lubricate with a liquid high-pressure lubricant and apply only to the outstanding threads after the bolts have been inserted through the steel work, taking care to prevent lubricant getting between the plies of the joint.
- C. Tighten bolts sufficiently in an appropriate sequence to bring joint surfaces into uniformly close contact.
- D. Pretension all high strength bolts to the appropriate levels using tension control bolts or load indicator washers.

- E. Mark each bolted connection when all bolts in the connection are prestensioned. Do not touch-up paint or cover until bolts have been inspected. The inspector shall mark connections that have been inspected.

### 3.7 MECHANICAL AND ADHESIVE ANCHORS

- A. Post-installed anchors into concrete shall only be used as shown in the structural details, and only as submitted and reviewed. They shall not be used where cast-in-place anchors are required.
- B. Adhesive anchoring shall not be used in overhead or upward conditions. Adhesive anchors in near horizontal positions shall use a hybrid adhesive.
- C. Anchors shall be ICC-ES approved with current ESR for cracked concrete, zinc coat unless noted otherwise, galvanize, sherardized or use stainless steel where exposed to weather.
- D. Anchor size, type, embedment depth into concrete, edge distances and spacing are crucial, and shall be as indicated on the structural drawings. If not shown, embed 8 x diameter, but never less than the manufacturer's recommended standard embedment, with edge distances at least 8 x diameter and spacing at least 12 x diameter.
- E. The Contractor shall arrange for a representative of the manufacturer to provide onsite installation training for their products. Adhesive anchor installers shall also be certified by a recognized program, such as by ACI and CRSI. Submit documentation of training and certification of personnel prior to performing such work. Provide copy to the Owner's inspector.
- F. Holes into concrete must not interfere with reinforcing bars. The Contractor shall review the structural drawings and use ferro-scan, small probe holes or other means to locate reinforcing bars in the area. Space holes to fit around rebar and fabricate fixture to match.
- G. Install in strict accordance with the manufacturer's ESR, written instructions and recommendations. Holes in concrete shall be the proper size and thoroughly cleaned with all dust removed. Drill holes using a hollow bit and functioning vacuum system, then brush and blowout with compressed air.
- H. Install into dry concrete in clean, dust free holes using method and procedure that meets manufacturer's recommendations including temperature range, humidity, installation time and cure time. Follow the manufacturer's printed installation instructions. Instructions must be included in the anchor packaging.
- I. Provide standard size holes in the fastened steel element (1/16" larger than anchor diameter). Mark and drill all holes in the concrete before setting steel. Some anchors may be set after steel is in place to allow some alignment. Do not oversize holes. Use washers beneath nuts.
- J. Contractor shall perform quality control, inspect, and test anchors.

- K. When exposed to view in the final structure, bolts shall be of a length that will extend entirely through but not more than ¼-inch beyond the nuts unless otherwise shown on the drawings.

### 3.8 WELDING (APPLIES TO BOTH SHOP AND FIELD WELDS)

- A. Weld using only qualified and approved AWS procedures. Use drying oven for electrodes and preheat steel per AWS requirements.
- B. Weld in manner to prevent warping or distortion of finished product. Use jigs that will not restrain piece from moving during welding or cooling after welding. Sequence weld passes at a joint to prevent excessive heat build-up or cause shrinkage cracks to form. Adequately peen and brush joint after successive passes to prevent slag inclusions, open pockets, and inadequate fusion.
- C. Provisions shall be made in detailing of lengths of members for dimensional changes as a result of shrinkage stresses so as to provide required finished dimension.
- D. During assembling and welding, hold components with adequate clamps or other means to keep parts straight, accurately aligned and positioned, and in close contact. Plan sequence of field welding to minimize locked-in stresses and distortion.
- E. Provide adequate screening from wind for field welding.
- F. Cut out defective welds or parts of welds with a chisel or air arc, and re-weld.
- G. Tack welds and temporary welds made in material that will be subject to tension or architecturally exposed shall be removed and ground smooth.
- H. Fillet weld sizes shall comply with the minimum requirements of the AWS D1.1 Code regardless of smaller sizes being noted on the contract design drawings.

### 3.9 ERECTION

- A. Comply with this specification, the referenced codes and standards, the contract design drawings, and the final shop drawings. Comply with requirements of governing authorities, including requirements for work above public streets and sidewalks.
- B. Provide all temporary shoring and bracing members as required, with connections of sufficient strength to bear imposed loads, including all construction loads and Building Code wind loads. Comply with FM bulletin I-7:
  - 1. The structural steel framework is "non-self-supporting" and therefore requires temporary support bracing. Do not remove temporary support members and connections until the structure is complete and functioning as the designed unit. The unit is complete when all structural steel and metal deck is completed, and supporting concrete, including walls, floor diaphragms and slabs on metal deck are placed and cured.
  - 2. Members and connections shown and reviewed via the shop drawing process are analyzed only for loads due to the final structure. Loads imposed on the



- connections and members during the erection process, and safety of erection of same, shall be responsibility of the structural steel Contractor.
3. Provide temporary guy lines to achieve proper alignment of the structures as erection proceeds.
- C. Provide temporary planking and working platforms as needed for the work. Provide temporary guards on the steel frame at the perimeter of each floor and all floor and roof openings.
- D. Field assembly:
1. Set structural frames accurately to the lines and elevations indicated. Align and adjust the various members forming a part of a complete frame or structure before permanently fastening. Clean bearing surfaces and other surfaces that will be in permanent contact before assembly. Perform necessary adjustments to compensate for discrepancies in elevations and alignments.
  2. Level and plumb individual members of the structure within specified AISC tolerances, unless more restrictive tolerances are specified on the drawings.
  3. Splice members only where shown or specified.
  4. On exposed welded construction, remove erection bolts, fill holes with plug welds and grind smooth.
  5. Comply with AISC Specifications for bearing, adequacy of temporary connections, alignments and the removal of paint on surfaces adjacent to field welds.
  6. Do not enlarge unfair holes in members by burning or by use of drift pins except in secondary bracing members. Ream holes that must be enlarged to admit bolts. Where a hole is required to be enlarged by more than 3/32-inch ream to and use the next larger bolt size.
  7. Do not use gas cutting torches in the field for correcting fabrication errors, except on secondary members that are not under stress. Finish gas-cut sections equal to a sheared appearance.

### 3.10 CLEANING

- A. Following erection, clean all steel work of mud and dirt accumulated during erection. Thoroughly clean and remove dirt, debris, oil, water, and other foreign material from steel and leave ready for painting or fireproofing.
- B. Field coat all damaged and abraded areas of galvanized steel with galvanizing repair compound applied per manufacturer's instructions.
- C. Field prime paint all welded, damaged and abraded areas and previously unprimed steel at welds, slip critical connections, etc. with same material used for shop painting.

## PART 4 ADDITIONAL REQUIREMENTS

### 4.1 MODIFICATIONS TO THE AISC CODE OF STANDARD PRACTICE

- A. Modifications to the AISC Code of Standard Practice are described throughout the Contract Documents and within this Section. Requirements of the Contract Documents

that modify or conflict with referenced standards shall take precedence over the standard. Where a numbered paragraph is noted below, the requirements of said paragraph in the AISC “Code of Standard Practice for Steel Buildings and Bridges”, May 9, 2022, and its Commentary are deleted and the requirements noted herein shall apply.

- 1.4.1 Contract documents for structural work shall be issued as printed or printable contract documents. Requirements shall be the plain text and drawings printed on the documents. Digital information in any electronic file or model shall not be used in lieu of or for augmentation of the printed contract documents.
- 1.9.1 (a) Steel Contractor shall provide, install, and remove any shoring necessary for the installation of new structural steel.
- 1.9.3 Fabricator shall survey and determine existing dimensions and elevations required for structural steel work or arrange for field verification through the GC or CM, with no additional cost to the Owner.
- 3.2.2.1 When an Alternate Delivery Method is implemented, Construction shall not commence until drawings are issued for construction, any adjustments to the bid is made and written notice to proceed is given by the Owner.
- 3.2.3.1 Connections shall be as indicated in the design documents with engineering design and detailing of all parts, copes, stiffeners, and welds completed by the Fabricator using Option 2 and Option 3.
- 3.2.3.2 Should connection configurations differing from the design documents be needed, Fabricator shall propose and submit details prior to shop drawing preparation. The submittal shall clearly define the location of all connections submitted for review. See Section 4.2.3.
- 3.2.3.3 If additional information or clarifications regarding connections is desired, the Fabricator shall contact the structural engineer of record.
- 3.2.4 (2) Connection design by the fabricator’s engineer shall account for concentrated forces. Even if reinforcement details and quantities are not shown on the design documents, reinforcement may be required by connection design and shall be included in the work and bid.

### **3.3 Architectural, Electrical and Mechanical Design Documents and Specifications**

Architectural, Electrical and Mechanical Documents may be used as a supplement to the Structural Documents to define detail configurations and construction information, including dimensions and locations.

- 3.3.1 Dimensions and elevations for structural steel may require coordination with architectural components, mechanical requirements, and existing conditions and may not be completely shown on the structural drawings.

### **3.6 Revisions to the Design Documents and Specifications**

Revisions are addressed in Section 9.3

- 4.2 (c) Drawings shall be clearly legible and drawn to an identifiable scale that is appropriate to clearly convey the information, but not less than 1/8" to the foot, unless a smaller scale is approved by the Owner's representative.

#### **4.4 Review of Submittals**

Shop drawings and supporting documentation shall be prepared by the Contractor and shall be submitted for review. The architect and engineer will endeavor to complete their review of shop drawing submittals within 14 days of engineer's receipt of submittals for those shop drawings deemed critical; other shop drawings, 28 days. Shop drawings shall be returned noted: "No exceptions noted," or "Exceptions noted," or "Exceptions noted, revise and resubmit." Fabrication of material prior to the receipt of shop drawings for that material noted "No exceptions noted" or "Exceptions noted" shall be at the Contractor's risk.

- 4.4.1 Review of shop drawings does not relieve the Contractor of the responsibility for accuracy of detail dimensions; the general fit-up of parts to be assembled in the field; the ability to erect the material; the adequacy of any members or connections designed by the Contractor; or the Contractor's safety measures.
- 4.4.2 Any review comments or notations made on the submittals or shop drawings, or answers to a Request For Information (RFI) do not authorize additional compensation for the Contractor without the issuance of a formal change order.

#### **4.5 Fabrication and/or Erection Documents Not Furnished by the Fabricator**

Fabrication and erection documents shall be prepared by the Fabricator or his subcontractor and shall be the responsibility of the Fabricator.

- 9.3.1 Revisions to the structural steel requirements are made by issuance of new documents, reissuance of existing documents, answers to RFIs, or by annotation of shop or erection drawings.
- 9.3.2 A revision to the contract price is made by formal change order.

END OF SECTION

DIVISION 07 – THERMAL AND MOISTURE PROTECTION

SECTION 071800

VEHICULAR TRAFFIC MEMBRANE

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes

1. All labor, material, equipment, special tools, and services required to complete the work required for the project as indicated on the Drawings and in the Specifications, including but not limited to:
  - a. Medium duty vehicular traffic membrane system.
  - b. Heavy duty vehicular traffic membrane system.
  - c. Medium duty epoxy/urethane vehicular traffic membrane system (stair membrane).

B. Related Sections

1. Section 011000: Summary of Work.
2. Section 015600: Barriers.
3. Section 030100: Concrete Repairs.
4. Section 051200: Structural Steel.
5. Section 079200: Sealants.
6. Section 321723: Pavement Markings.

1.2 DEFINITIONS

- A. The term "manufacturer's recommendations", or variations thereon it shall mean "manufacturer's recommendations which are found in publications available to and commonly used by the general architectural and consulting professions."

1.3 SUBMITTALS

- A. Joint and Several Warranty Form meeting the requirements of Article 1.6.
- B. Skid Resistance Addenda Form to Joint and Several Warranty meeting the requirements of Articles 1.6 and 3.4.
- C. Bond Test Addenda Form to Joint and Several Warranty meeting the requirements of Articles 1.6 and 3.4.
- D. Literature for all manufactured products, including manufacturer's specifications, test data and installation instructions or applicator's manual.
- E. 12" x 12" samples of each membrane system to be used. Sample shall be applied to plywood or similar rigid material.

- F. 1/4-lb. ( $\pm$ ) sample of aggregate type intended to be used. Provide two (2) samples, one sent to THP for record, and other sample sent to Membrane Manufacturer for laboratory testing and sieve analysis.
- G. Letter from Membrane Manufacturer stating sample aggregate was received, tested, and reviewed, and is approved for use for the specified system and jobsite conditions. Letter shall include the following information:
  - 1. Sieve or particle size analysis.
  - 2. Grain Shape.
  - 3. Hardness (Moh's Scale).
  - 4. Moisture Content (ASTM C-566).
  - 5. Specific Gravity (ASTM C-128).
  - 6. Bulk Density (ASTM C-29).
  - 7. Chemical Analysis.
- H. If requested, copy of letter of approval per Article 1.4.B.
- I. If requested, resume per Article 1.4.C.
- J. Provide letters of Certification per Article 1.4 Paragraphs E, F, and G.
- K. Safety Data Sheets on all materials which are classified as hazardous materials.
- L. Maintenance manuals with the following information:
  - 1. Project name.
  - 2. Project location.
  - 3. Date.
  - 4. Owner's name.
  - 5. Coating system(s).
  - 6. Drawings indicating the coating systems and their location in the structure.
  - 7. Schematic drawing of each membrane type identifying each element of the membrane system by dry film thickness and manufacturer's reference number or name.
  - 8. Recommendations for routine care and maintenance.
  - 9. List of three (3) approved Contractors nearest the project location authorized to perform repairs.
  - 10. Identify common causes of damage and instructions for temporary patching until permanent repair can be made.
  - 11. Upon completion of the Work and prior to final payment, provide a fully executed warranty.

#### 1.4 QUALITY ASSURANCE

##### A. Applicable Codes

1. The Contractor shall comply with all Federal, State and Municipal laws, codes, ordinances, and regulations applicable to the Work in this Contract and also with all requirements of the National Fire Protection Association, the National Electric Code, and the Occupational Safety and Health Administration (OSHA). If the above laws, codes, or ordinances conflict with this Specification, then the laws, codes or ordinances shall govern, except in such cases where the Specification exceeds them in quality of materials or labor, then the Specifications shall be followed.

- B. The membrane applicator shall be approved by the manufacturer and shall have been an approved manufacturer's applicator for the membrane products, as identified on the subcontractor supplemental proposal form, for a minimum of three consecutive years. If requested, the contractor shall provide written confirmation from the manufacturer within three calendar days of the request.

- C. The membrane applicator and its superintendent shall meet the following minimum requirements:

1. Installed the approved membrane materials as identified on the Bid Form in a traffic membrane system in three previous similar projects. Each of the three projects shall have been a minimum of 50,000 square feet in size.
2. Installed the approved membrane materials as identified on the Bid Form in a traffic membrane system currently in use within the last two years.

- D. Conform to the Field Quality Control requirements in Part 3 of this Section.

- E. Membrane manufacturer to certify that aggregate specified is acceptable for use in the membrane system.

- F. Membrane manufacturer to certify that sealants in contact with membrane are compatible with membrane system and are included as part of the warranty.

- G. Membrane manufacturer to certify that substrate surfaces in contact with any component of the vehicular traffic membrane are compatible.

##### H. Field Samples

1. Prior to beginning surface preparation, prepare a sample area in the initial phase work area for the project to be used as the minimum standard of acceptability for cleanliness and surface texture to be achieved throughout the work. The area shall be at least 400 sq. ft. Size and location shall be as directed by the Engineer. The standard shall be jointly reviewed and approved by both the Engineer and the Manufacturer relative to Article 3.2 paragraph B.4 prior to start of full scale surface preparation work. The approved standard shall remain uncoated until all surface preparation work is completed.
2. After approval, the sample area shall be covered with 6 mil thick plastic sheets. Edges

shall be continuously taped, as well as splices, and the perimeter shall be weighted down. The sample area shall be kept covered unless viewing is needed for comparative purposes or until final preparation for membrane application. Contractor shall monitor the area to ensure the integrity of the covering. Neither foot nor vehicular traffic shall be allowed on the covering unless additional protective measures are taken to protect the cleanliness of the sample area.

I. Manufacturer's Representation

1. For installation of membrane materials, a technically competent employee of the membrane manufacturer, approved by the Engineer and not associated with the installation crew, shall be on site before and during the installation of the membrane system during the first Work Area plus one additional Work Area which reflects changing environmental conditions, if requested by the Engineer.
2. Application of the membrane shall not begin until the manufacturer's technician has approved the cleanliness and surface texture of the substrate.
3. The technician shall remain on site for the length of time necessary to observe the installation of the total membrane system.
4. The technician shall review all Contract application techniques and procedures and shall advise the Contractor when, where and as required to obtain Specification compliance.
5. The Contractor and the membrane Manufacturer shall comply with the terms set forth in items 1 through 4 above at no additional cost to the Owner.

J. An employee of the applicator who has been trained by the membrane manufacturer on the installation of the approved membrane system shall be present during all applications of the membrane system.

K. Within twenty-four hours of application of membrane materials submit log required by Article 3.4 Paragraph F to Engineer.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials to job site in sealed, undamaged containers. Each container shall be identified with material's name, date of manufacture and lot number.
- B. Only those materials being used during any one work shift may be stored in the current work area. Materials being used for shift work shall be uniformly distributed throughout the intended work area so as to not overload or otherwise distress the structural system. All other materials, if stored on site, shall be stored at the designated staging area.
- C. Coating materials shall be kept sealed when not in use.
- D. Storage and handling of materials shall conform to the manufacturer's requirements and the requirements of the applicable environmental protection and safety regulatory agencies.

- E. Storage areas shall be heated or cooled as required to maintain the temperatures within the range recommended by the coating manufacturer.
- F. The handling and use of toxic or flammable solvents shall conform to the requirements of the applicable safety regulatory agencies, recommended by the manufacturer.

#### 1.6 WARRANTY

- A. Completed installation shall be warranted jointly and severally on a single document by manufacturer and applicator against defects of materials and workmanship. The length of the warranty period shall not be less than (5) years from the date of substantial completion of the Project.
- B. Manufacturer and installer shall further warrant the skid resistance and bond strength of the installed systems. The test may be measured at any single location and shall meet the specified criteria in Article 3.4. The length of the warranty period shall not be less than five (5) years from the date of substantial completion of the Project.
- C. Warranty documents shall not require the signature of the Owner to be effective, shall not limit the Owner's legal remedies otherwise allowed per the project contract, and shall not limit the venue of any potential legal jurisdiction.

### PART 2 PRODUCTS

#### 2.1 APPROVED MANUFACTURERS

- A. Lymtal International
- B. Neogard Corporation
- C. Sika Corporation

#### 2.2 MATERIALS

- A. Medium Duty Vehicular Traffic Membrane System:
  - 1. Iso-flex 760 Aliphatic System by Lymtal International, comprised of:
    - a. Primer
      - 1) Iso-Flex Primer 750, or Primer 757.
      - 2) Apply at manufacturer's recommended application rate.
    - b. Base Coat
      - 1) Iso-Flex 750 Base Coat.
      - 2) Apply at 40 mils dry film thickness.
    - c. Top Coat
      - 1) Iso-Flex 760 Aliphatic Top Coat.
      - 2) Apply at 18 mils dry film thickness.
      - 3) Aggregate seeded and back rolled to provide slip resistant surface.



- d. Aggregate
  - 1) Unimin 12/20 by US Silica, either Ottawa, MN or Voca, Texas.
  - 2) Install at membrane manufacturer's maximum application rate.
  - 3) Uniformly distributed with no bare spots.
- 2. FC System by Neogard Corporation, comprised of:
  - a. Primer
    - 1) Neogard 7760/7761 VOC.
    - 2) Apply at manufacturer's recommended application rate.
  - b. Base Coat
    - 1) Neogard FC7500/FC7960.
    - 2) Apply at 40 mils dry film thickness.
  - c. Top Coat
    - 1) Neogard FC7530/FC7963.
    - 2) Apply at 18 mils dry film thickness.
    - 3) Aggregate seeded and back rolled to provide slip resistant surface.
  - d. Aggregate
    - 1) 12/20 silica by Carmeuse Industrial Sands, Brady, Texas.
    - 2) Install at membrane manufacturer's maximum application rate.
    - 3) Uniformly distributed with no bare spots.
- 3. Sikalastic Traffic System by Sika Corporation, comprised of:
  - a. Primer
    - 1) Sikalastic FTP Lo-VOC Primer or MT Primer.
    - 2) Apply at manufacturer's recommended application rate.
  - b. Base Coat
    - 1) Sikalastic 720 Base Coat.
    - 2) Apply at 40 mils dry film thickness.
  - c. Top Coat
    - 1) Sikalastic 745 Aliphatic Top Coat.
    - 2) Apply at 18 mils dry film thickness.
    - 3) Aggregate seeded and back rolled to provide slip resistant surface.
  - d. Aggregate
    - 1) Unimin 12/20 by US Silica, either Ottawa, MN or Voca, Texas.

- 2) Install at membrane manufacturer's maximum application rate.
- 3) Uniformly distributed with no bare spots.

B. Heavy Duty Vehicular Traffic Membrane System:

1. Iso-flex 760 Aliphatic System by Lyntal International, comprised of:
  - a. Primer
    - 1) Iso-Flex Primer 750 or Primer 757.
    - 2) Apply at manufacturer's recommended application rate.
  - b. Base Coat
    - 1) Iso-Flex 750 Base Coat.
    - 2) Apply at 40 mils dry film thickness.
  - c. Top Coat
    - 1) Iso-Flex 760 Aliphatic Top Coat.
    - 2) Apply at 18 mils dry film thickness.
    - 3) Aggregate seeded and back rolled to provide slip resistant surface.
  - d. 2nd Top Coat
    - 1) Iso-Flex 760 Aliphatic Top Coat.
    - 2) Apply at 18 mils dry film thickness.
    - 3) Aggregate seeded and back rolled to provide slip resistant surface.
  - e. Aggregate
    - 1) Unimin 12/20 by US Silica, either Ottawa, MN or Voca, Texas.
    - 2) Install at membrane manufacturer's maximum application rate.
    - 3) Uniformly distributed with no bare spots.
2. FC System by Neogard Corporation, comprised of:
  - a. Primer
    - 1) Neogard 7760/7761 VOC.
    - 2) Apply at manufacturer's recommended application rate.
  - b. Base Coat
    - 1) Neogard FC7500/FC7960.
    - 2) Apply at 40 mils dry film thickness.
  - c. Top Coat
    - 1) Neogard FC7530/FC7963.
    - 2) Apply at 18 mils dry film thickness.

- 3) Aggregate seeded and back rolled to provide slip resistant surface.
- d. 2nd Top Coat
  - 1) Neogard FC7530/FC7963.
  - 2) Apply at 18 mils dry film thickness.
  - 3) Aggregate seeded and back rolled to provide slip resistant surface.
- e. Aggregate
  - 1) 12/20 by Carmeuse Industrial Sands, Brady, Texas.
  - 2) Install at membrane manufacturer's maximum application rate.
  - 3) Uniformly distributed with no bare spots.
- 3. Sikalastic Traffic System by Sika Corporation, comprised of:
  - a. Primer
    - 1) Sikalastic FTP Lo-VOC Primer or MT Primer.
    - 2) Apply at manufacturer's recommended application rate.
  - b. Base Coat
    - 1) Sikalastic 720 Base Coat.
    - 2) Apply at 40 mils dry film thickness.
  - c. Top Coat
    - 1) Sikalastic 745 Aliphatic Top Coat.
    - 2) Apply at 18 mils dry film thickness.
    - 3) Aggregate seeded and back rolled to provide slip resistant surface.
  - d. 2nd Top Coat
    - 1) Sikalastic 745 Aliphatic Top Coat.
    - 2) Apply at 18 mils dry film thickness.
    - 3) Aggregate seeded and back rolled to provide slip resistant surface.
  - e. Aggregate
    - 1) Unimin 12/20 by US Silica, either Ottawa, MN or Voca, Texas.
    - 2) Install at membrane manufacturer's maximum application rate.
    - 3) Uniformly distributed with no bare spots.
- C. Medium Duty Epoxy/Urethane Vehicular Traffic Membrane System (stair membrane):
  - 1. Epoxy/Urethane System by Lyntal International, comprised of:
    - a. Primer
      - 1) Iso-Flex Primer 750 or Primer 757.

- 2) Apply at manufacturer's recommended application rate.
  - b. Epoxy Intermediate Coat
    - 1) Isoflex Epoxy 200.
    - 2) Apply at 25 mils dry film thickness.
    - 3) Aggregate broadcast to saturation of wet epoxy; remove excess after full curing.
  - c. Lock Coat
    - 1) Isoflex 760AL.
    - 2) Apply at manufacturer's recommended rate.
  - d. Aggregate
    - 1) Unimin 12/20 by US Silica, either Ottawa, MN or Voca, Texas.
2. Epoxy/Urethane System by Neogard Corporation, comprised of:
  - a. Primer
    - 1) Neogard 7760/7761 VOC.
    - 2) Apply at manufacturer's recommended application rate.
  - b. Epoxy Intermediate Coat
    - 1) Neogard 70714/15.
    - 2) Apply at 25 mils dry film thickness.
    - 3) Aggregate broadcast to saturation of wet epoxy; remove excess after full curing.
  - c. Lock Coat
    - 1) FC7540/FC7964.
    - 2) Apply at manufacturer's recommended rate.
  - d. Aggregate
    - 1) 12/20 by Carmeuse Industrial Sands, Brady, Texas.
3. Epoxy/Urethane System by Sika, comprised of:
  - a. Primer
    - 1) Sikalastic FTP Lo-VOC Primer or MT Primer.
    - 2) Apply at manufacturer's recommended application rate.
  - b. Intermediate Coat
    - 1) Sikadur 22 Lo-Mod Epoxy.
    - 2) Apply at 25 mils dry film thickness.

- 3) Aggregate broadcast to saturation of wet epoxy; remove excess after full curing.
  - c. Lock Coat
    - 1) Sikalastic 745AL.
    - 2) Apply at manufacturer's recommended rate.
  - d. Aggregate
    - 1) Unimin 12/20 by US Silica, either Ottawa, MN or Voca, Texas.
- D. Localized Leveling Repairs
  - 1. Lymtal Systems
    - a. Primer
      - 1) Per Article 2.2 Paragraph A.1.a.
    - b. Leveling Material
      - 1) Iso-Flex 750 Base Coat.
      - 2) Pre-mix with manufacturer approved aggregate.
      - 3) Install in multiple lifts up to 1" thickness total.
  - 2. Neogard Systems
    - a. Primer
      - 1) Per Article 2.2 Paragraph A.2.a.
    - b. Leveling Material
      - 1) Neogard FC7500 Base Coat.
      - 2) Pre-mix with manufacturer approved aggregate.
      - 3) Install in multiple lifts up to 1" thickness total.
  - 3. Sika Systems
    - a. Primer
      - 1) Per Article 2. 2 Paragraph A.3.a.
    - b. Leveling Material
      - 1) Sikalastic 720 Base Coat.
      - 2) Pre-mix with manufacturer approved aggregate.
      - 3) Install in multiple lifts up to 1" thickness total.
- E. Individual steps of any systems inclusive of greater than 5 percent solvents by either weight or volume calculations shall require monitoring by a licensed industrial hygienist for fumes and odors within work areas, at open air intakes within 200 ft. of work areas, and inside occupied spaces adjacent to work areas. Credentials of licensed hygienist and

a monitoring plan must be approved by the Engineer in advance of the start of any membrane work.

F. Membrane color shall match existing and be approved by the owner, unless otherwise indicated in the Documents.

G. Intermediate coat and lock coat materials shall be U.V. stable.

### PART 3 EXECUTIONS

#### 3.1 EXAMINATION

A. Contractor and membrane manufacturer shall jointly review existing substrates (original concrete, past or new concrete repairs or overlays, past membrane, or coating systems) to ensure compatibility with the specified membrane system. Submit in writing any materials which may cause membrane adhesion to substrate less than normally anticipated or other compatibility or performance difficulties. Failure to review and identify deleterious products/materials, and if failure of the membrane is a result of adhesion difficulties or chemical or physical incompatibilities with substrate materials, the Contractor and Manufacturer shall be responsible for all costs related to correcting the deficient Work. Manufacturer is bound to meet the above noted responsibilities equally with the Contractor regardless of the provisions of other agreements.

B. Inspect deck surface for any visibly distressed concrete. If encountered, chain drag area to determine extent of distressed or delaminated area and repair as directed by engineer.

C. Examine areas for slab cracks to be routed and sealed.

#### 3.2 PREPARATION

##### A. Protection

1. Erect barriers and barricades to protect adjoining areas from dirt, steel shot and debris generated from this work.
2. Cover exposed drain grates during shotblasting/grinding operations. Recoat with approved rust inhibitive or galvanizing paint grates damaged by blasting operations. Similarly protect and recoat if necessary other, in place metal elements. Drains to be functional during non-working hours and during periods of inclement weather.
3. Cover exposed drain grates to protect from membrane material. Drains to be functional during non-working hours and during periods of inclement weather. Do not allow membrane material to enter drain piping system.

##### B. Concrete (General)

1. Preparation and cleaning procedures shall be in strict accordance with this Specification unless more stringent requirements are recommended by the system manufacturer.
2. Surface must be dry. New concrete shall be at least 28 days old and proven dry via mat tests, to be considered for membrane system installation without installation of a

- vapor barrier. Review manufacturer requirements relative to site conditions in advance of performing the work.
3. Surfaces shall be free from all traces of dirt, salt, grease, oil, asphalt, laitance, curing compounds, paint stripes, coatings, and other foreign materials. Use manufacturer approved degreasing agents if necessary.
  4. Concrete surfaces shall be cleaned using shotblast equipment (with integral vacuum process) to achieve standard of cleanliness per Article 1.4. The size of shot and travel speed of the equipment shall be chosen to provide a uniformly clean surface and profile; basis for bid must be two perpendicular normal speed passes, or one slow speed pass.
  5. Areas which cannot be adequately cleaned by shotblasting shall be cleaned by grinding with accompanying vacuum procedures.
  6. Surfaces that become contaminated by dirt or moisture after initial shotblasting or grinding, shall be cleaned again by shotblasting, or grinding to manufacturer's requirements at no additional cost to the Owner.
  7. Minimum standard of acceptability applies to all surfaces intended to receive membrane regardless of surface preparation procedure or process.
  8. The use of acids in surface preparation procedures and techniques is prohibited.
  9. After completion of shotblasting/grinding, and prior to application of membrane materials, repair all scaled, freeze-thaw damaged and loose, pop-out areas, cracks and all damage made apparent by the shotblasting/grinding procedures, in a manner approved by the Engineer. Such repair work shall be part of the Base Bid without unit price adjustment. Areas requiring patching will be subject to re-shotblast or re-grinding where a patch exceeds one (1) square foot in area.
  10. Grind all high spots or transition grind all depressions per details, and clean to manufacturer's requirements.

C. Membrane Removal

1. If existing membrane system scheduled to be removed, the criteria for acceptance are 0% of the existing membrane remaining on horizontal surfaces. 5% of the existing membrane may remain on the vertical curb faces with no area larger than 3 square inches.
2. The membrane removal is to be done with a dry cutting process only.
3. After removal, perform surface preparation the same as for Concrete, Article 3.2 Paragraph B.

3.3 INSTALLATION

A. General

1. Install materials in strict accordance with all safety and weather conditions required by

- product literature and Local, State and Federal regulations.
2. Fumes and dust shall be controlled to prevent harmful or undesirable effects in surrounding areas. All potential avenues for penetration of fumes or dust into surrounding occupied areas shall be sealed prior to the start of the work.
  3. All exposed membrane edges and termination details shall be taped to provide straight, neat edges.
  4. Install base coat membrane materials on concrete surfaces only when concrete temperature has stabilized or is falling. Do not install base coat membrane on concrete surfaces when surface temperature is rising.
  5. Install membrane materials only if the temperature of the surfaces to be coated is 5 degrees or higher than the dew point temperature measured at the job site.

**B. Membrane**

1. Where necessary to locally level surfaces and after approval by Owner, install membrane leveling materials in depressed areas. Refer to Article 2.2.
2. Install detail coat 4" wide by 20 mil thick (dry film thickness) over properly primed cracks, caulked joints, joints between concrete pours, or leveling repairs, junctures and other locations in the membrane area which is a deviation from the nominal membrane plane, except where otherwise indicated by the Specifications or Drawings.
  - a. Detail coat may be omitted at membrane strip installations over tee-to-tee joints on level surfaces. Detail coat is still required for membrane strips over tee-to-tee joints on ramps.
3. The membrane system shall turn up 4" at all vertical surfaces unless shown otherwise on the drawings. Detail coat is required at all turn-ups to vertical surfaces. Detail coat at turn-ups shall be the same as the detail coat required by Article 3.3 Paragraph C.1.
4. Contractor shall ensure the specified/recommended application rates of all components of the membrane system. Base coat(s), intermediate coat, and lock coat of each application of the membrane system shall be distributed onto the deck by calibrated, notched squeegees. Squeegees showing signs of wear shall be discarded.
5. Contractor shall ensure specified/recommended application rates of liquid products on vertical or sloped surfaces by the use of non-sag grade materials or by multiple applications of material over previous applications which are fully cured.
6. Each fluid-applied component of the membrane system shall be back-rolled to properly distribute materials across the deck and eliminate squeegee marks.
7. Use of power rollers either to distribute the membrane system or to back roll squeegee marks shall not be permitted.
8. No vehicular traffic shall be allowed on membrane areas for at least 48 hours after completion of membrane installation. Provide extended cure time with no vehicular



traffic exposure if temperatures fall below 50°F.

### 3.4 FIELD QUALITY CONTROL

#### A. Bond Test

1. Bond tests of the installed membrane systems may be performed by the Engineer during and after the membrane work on this project. Tests shall be conducted using a calibrated instrument which measures in-place bond strength by applying a direct axial pull on a 3 inch diameter steel disk epoxied to the completed membrane top surface.
2. A membrane phase for the purpose of bond testing is an area of base coat installed in a single work shift. If examined, a membrane phase will be tested at (3) locations per phase no sooner than 10 days after completion of the entire membrane system and no sooner than 14 days if temperatures fall below 40°F for two or more days. Contractor shall assume a total of 4 test locations in the Base Bid.
3. The acceptance criteria for initial tests of a Phase shall average bond strength of 200 psi for all locations, with no single location testing below 150 psi. Any Phase failing to meet the initial acceptance criteria may be retested at a later date by the Engineer. Retests of Phase shall include at least 4 separate test locations not sooner than 14 days after the initial tests. The acceptance criteria for retests of a Phase shall average bond strength of 200 psi for all locations, with no single location testing below 175 psi.
4. Any Phase failing to meet the initial test and retest acceptance criteria shall be considered "deficient" and shall be cause for the Contractor to execute or provide one of the following remedies:
  - a. Extend Standard Guarantee to include an additional 5 years (for a total of 10 years) on membrane system intercoat bond and bond to the concrete for the "deficient" areas.
  - b. Removal and replacement of the "deficient" area, including all necessary preparatory work and Engineering costs to coordinate and observe the work, at no additional cost to the Owner.
5. Any additional bond testing requested by the Contractor to limit the extent of the "deficient" area(s) as determined by initial tests and retests as defined above shall be paid for by the Contractor.
6. Contractor shall include as part of his proposal the costs of repairing all test locations.

#### B. Skid Test

1. Prior to any membrane preparation work and after membrane installation, the Engineer may conduct tests to determine values of the static coefficient of friction between the coated and uncoated floor surfaces and the neoprene base of the Engineer's test equipment.
2. Determination of the coefficient of friction will consist of a series of individual tests for each surface type. The initial coefficient of friction is defined as the average of the tests

performed on the concrete surfaces prior to membrane preparatory work. The final coefficient of friction is defined as the averages of the tests performed on each type of completed membrane system surface.

3. The final, average static coefficient of friction shall be a minimum of 0.85 under wet and dry conditions and equal to or greater than 110% of the initial coefficient of friction. No individual test area shall have a coefficient less than 0.80 or 95% of the initial coefficient of friction. Any membrane system that does not conform, as determined by the Engineer, to the specified acceptance criteria shall be subject to rework, upgrading or replacement of the deficient areas, including necessary preparatory work, at no additional cost to the Owner.
  - C. The Engineer may direct the Contractor to make test cuts in the membrane for testing purposes. Tests cuts shall be 2" x 2" and will be in partially-completed or fully-completed membrane. A maximum of 3 total tests per separate installation phase may be made. Contractor shall include as part of his Proposal the costs of taking test cuts as directed and located by the Engineer and the costs of patching test cut areas.
  - D. The Engineer will periodically monitor application rates of the membrane system individual components and will notify job foremen of discrepancies noted.
  - E. The Contractor shall keep at the site and maintain in proper condition an adequate number (at least one per application crew) of wet film thickness gages and shall continuously use such to ensure the specified thickness of each membrane coat is uniformly maintained. The periodic monitoring of application rates per Article 3.4 Paragraph D shall not relieve the Contractor of the responsibility of verifying specified coating thickness.
  - F. Contractor shall provide information required by Article 3.6.
- 3.5 CLEANING
- A. Empty containers shall be removed from the project work areas at the end of each working day. Cloths soiled with coating that might constitute a fire hazard shall be placed in suitable metal safety containers or shall be removed from the structure at the end of each working day. Special care shall be taken in storage or disposal of flammable materials. Comply with health, fire, and environmental regulations.
  - B. All spilled coating material shall be completely removed from hardware, adjacent floor areas, metal work, etc. Remove spilled coating by approved methods.
  - C. Repaint in matching color all curbs, columns, walls, etc., where existing paint was removed during preparation for membrane application.
  - D. All hardware, adjacent floor areas, metal work, etc., and the general premises shall be left clean and free of all construction dirt and debris.

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The City of Charleston  
2025 Garage Repairs  
THP #24137.00  
June 2025 – Bid Set

### 3.6 MEMBRANE APPLICATION LOG FORM EXAMPLE

| DAILY MEMBRANE APPLICATION LOG   |            |  |          |  |     |
|--|------------|--|----------|--|-----|
| Project:   |            |  |          |  |     |
| Date:  | Time Start |  | Time End |  |     |
| Work Area<br>(Give Description)  |            |  |          |  |     |
| Membrane Materials Applied<br>Type and Quantity  |            |  |          |  |     |
| Crew Size  |            | Size of Area Materials Applied<br>(in Square Feet) |          |  |     |
| Temperature Data ( °F)   |            |  |          |  |     |
|  | Start      |  |          |  | End |
| Deck   |            |  |          |  |     |
| Air  |            |  |          |  |     |
| Relative Humidity (%)  |            |  |          |  |     |
| Dewpoint   |            |  |          |  |     |
| Note: Contractor shall estimate quarter points in time between the start and end of membrane application. Record air and deck temperatures at those times. |            |  |          |  |     |
| Superintendent's Signature:  |            |  |          |  |     |

END OF SECTION

DIVISION 07 – THERMAL AND MOISTURE PROTECTION

SECTION 079000

EXPANSION JOINTS

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes

1. All labor, material, equipment, special tools, and services required to complete the work required for the project as indicated on the Drawings and in the Specifications, including but not limited to:
  - a. Compressible joint system (Detail 12/502).
  - b. Compressible expansion joint seal installation (Detail 13/502).
  - c. Existing expansion joint seal repairs.

B. Related Sections

1. Section 012200: Unit Prices.
2. Section 012900: Payment Procedures.
3. Section 030100: Concrete Repairs.
4. Section 071800: Vehicular Traffic Membrane.
5. Section 079200: Sealants.

1.2 SUBMITTALS

- A. Joint and Several Warranty Form.
- B. Letter of inspection approving blackout or noting unacceptable conditions.
- C. Shop drawings of all expansion joint conditions, including typical section, factory manufactured splices and each termination detail.
- D. Literature for manufactured products, including manufacturer's specifications, test data and installation instructions including temperature limitations and joint opening recommendations.
- E. Letter of approval.
- F. Prior project experience.
- G. Joint System Sample.
- H. Name and resume of persons.
- I. Letter from expansion joint manufacturer.

1.3 QUALITY ASSURANCE

- A. Applicable Codes

1. The Contractor shall comply with all Federal, State and Municipal laws, codes, ordinances, and regulations applicable to the Work in this Contract and also with all requirements of the National Fire Protection Association, the National Electric Code, and the Occupational Safety and Health Administration (OSHA). If the above laws, codes or ordinances conflict with this Specification, then the laws, codes or ordinances shall govern, except in such cases where the Specification exceeds them in quality of materials or labor, then the Specifications shall be followed.
  2. If the above laws, codes or ordinances conflict with the Specification, then the laws, codes or ordinances shall govern, except in such cases where the Specification exceeds them in quality of materials or labor, then the Specifications shall be followed.
- B. The expansion joint installer shall be approved by the manufacturer.
- C. All work under this Section shall be performed by Contractors which have successfully performed at least three verifiable years of projects that are similar in magnitude and type to those involved in this Contract and three or more prior projects in a climate similar to that for this project.
- D. All work under this Section shall be under the immediate control of the Contractor's non-working superintendent(s) experienced in this type of work. The person(s) shall have supervised three prior projects of similar magnitude and type and shall be present during all operations. This person(s) shall be approved by the Owner.
- E. The Owner may submit material samples to an independent testing laboratory for verification of material properties and/or conformance to performance standards.
- F. A technically competent employee of the expansion joint manufacturer (not associated with the installation crew or Contractor) shall be present before and during the installation of the initial lengths of the joint system (minimum 50% of total joints) on this project. This person shall be approved by the Owner.
- G. The expansion joint manufacturer and installer must inspect the completed block-outs prior to the start of new joint system installation. Unacceptable conditions must be reported, in writing, to the Owner prior to start of work. Starting installation of the new expansion joints constitutes acceptance of the completed block-out conditions.
- 1.4 PRODUCT DELIVERY, STORAGE AND HANDLING
- A. Deliver all materials to job site in sealed, undamaged containers. Each container shall be identified with materials' name, date of manufacture, lot, and batch number.
- B. Store materials when not in actual use in a place specifically assigned for that purpose which is well ventilated and lighted and not subject to direct sun rays. Materials shall be kept or packaged when not in use. Keep storage area neat and clean and secure from vandalism and theft.
- C. Perform work in strict accordance with all safety and weather conditions required by product literature or as modified by applicable rules and regulations of Local, State and

Federal authorities having jurisdiction.

- D. When toxic or flammable solvents are used, the seal installer shall take all necessary precautions as recommended by the manufacturer. In all cases, the handling and use of toxic or flammable solvents, including adequate ventilation and personal protective equipment, shall conform to the requirements of the applicable safety regulatory agencies.

## 1.5 SEQUENCING

- A. The expansion joint seal manufacturer shall provide a written procedure for installation of new expansion joint seals within 10 days after placement of cementitious material used for the modification of expansion joint block-outs and overlays.

## 1.6 WARRANTY

- A. A warranty of five years shall be provided for all types of new expansion joint seals. The manufacturer and approved installer shall jointly and severally maintain the joint in a safe, waterproof condition for the warranty period at no additional cost to the Owner. The Contractor is responsible for compliance of both the manufacturer and approved installer for the warranty period.
- B. A warranty of two years shall be provided by the contractor for all existing expansion joint system repairs against problems, including debonded repair materials, deterioration of repair materials, and excessive leakage at repair locations.

## PART 2 PRODUCTS

### 2.1 COMPRESSIBLE EXPANSION JOINT SEAL: (DETAIL 12/502)

- A. Physite 380 with H.A.L.S. by Chase Construction Products
  - 1. Seal size: 3" for bidding purposes. Field verify joint size with manufacturer.
- B. Approved equivalent

### 2.2 COMPRESSIBLE EXPANSION JOINT SEAL: (DETAIL 13/502)

- A. DSM seal by Emseal, Inc.
  - 1. Seal size: 3" for bidding purposes. Field verify joint size with manufacturer.
- B. Willseal 250 by Willseal, Inc.
  - 1. Seal size: 3" for bidding purposes. Field verify joint size with manufacturer.

### 2.3 VERTICAL COMPRESSIBLE EXPANSION JOINT SEAL: (DETAIL 13/502)

- A. Colorseal by Emseal, Inc.
  - 1. Seal size: 3" for bidding purposes. Field verify joint size with manufacturer.
- B. Isoflex Precom C or H-PS by Lyntal Internatioal.
  - 1. Seal size: 3" for bidding purposes. Field verify joint size with manufacturer.
- C. Willseal Color Coreseal or Seismic Seal by Willseal, Inc.

1. Seal size: 3" for bidding purposes. Field verify joint size with manufacturer.

## PART 3 EXECUTIONS

### 3.1 GENERAL

- A. Where scheduled for replacement, remove existing expansion joint systems, and perform minor concrete repairs as required to perform the work.
- B. If found, remove styrofoam or any other form of joint filler material in expansion joint openings.
- C. Cure all expansion joint system nosing and adhesive materials in accordance with manufacturer's recommendations. Allow nosing to cure for minimum time period based on temperature conditions required by the manufacturer. Verify nosing and adhesive material is cured, prior to allowing vehicular traffic across the joint. Use traffic plates if necessary, temporarily anchor to the deck side of the joint, to accommodate traffic.
- D. Accelerated curing by heating of nosing and adhesive material is not permitted.
- E. Do not install seals or associated materials over or on wet substrate materials.
- F. Cease installation of seals under adverse weather conditions, or when temperatures (deck or ambient) are outside the allowable temperature limits.
- G. Install seals as soon during the Work as substrate temperatures permit.

### 3.2 NEW COMPRESSIBLE EXPANSION JOINT SYSTEM INSTALLATION

- A. Preparation of Concrete Joint Openings
  1. Where appropriate, perform all necessary repairs to establish consistent joint openings across the entire deck surface. Use manufacturers approved epoxy-based repair materials for minor joint edge or block-out repairs, or alternative concrete repair materials for larger repair areas. Refer to Specification Section 030100.
  2. Rout and seal adjacent construction joints or cracks that intersect the block-out for a length of 8 inches. Refer to Specification Section 079200.
  3. Grind and vacuum clean all concrete surfaces to be in contact with seal system no sooner than 24 hours before seal installation. Contact surfaces shall be clean, dry and sound. Re-grinding is required if contact surfaces become contaminated after the initial blasting. This includes contamination by rainwater runoff. Wet sand blasting followed by adequate drying is approved if conditions warrant, as approved by manufacturer.
  4. Coordinate preparation procedures to avoid damage to vehicles on levels below or adjacent to work area. Remove all dirt and debris from joint opening and adjacent floor areas on both levels immediately after work is complete.
- B. Seal Installation
  1. Install new seal per manufacturer's installation instructions. Perform work during coolest portion of day, typically in the middle of the night. Complete work at least 4

hours prior to anticipated rising deck temperatures. Cease installation of joint system under adverse weather conditions.

2. Install manufacturer's approved adhesive or bonder to compression seal and concrete, nosing or metal surfaces which will be in contact.
3. Install seals per manufacturer's installation instructions.
4. Install the seals in continuous lengths with no splices in the horizontal plane of the seal. Recess seals slightly from adjacent floor surfaces.
5. Turn seals up onto and across curbs and up 4 inches at adjoining vertical wall and column surfaces. Vertical installation to be flush with adjoining wall and column surfaces.
6. As appropriate, provide heat welds or adhesive at direction changes from horizontal to vertical. Execute welds per manufacturer's requirements.
7. Before installation, test splices with a 150-pound axial tension load.
8. Seal splices at end conditions as recommended by the manufacturer if those conditions are not shown on the Drawings.
9. Install any supplemental silicone cap seal materials in the same work shift, or no later than the next day if no inclement weather is predicted.

### 3.3 WINGED COMPRESSION EXPANSION JOINT SEAL REPAIRS

- A. Via visual examination, hammer sounding and observations during rainy weather, locate and paint nosing length of existing joints requiring repair. Confirm repair locations with Owner's representative or Engineer prior to commencement of work. Using electric chipping hammers and hand held tools, carefully remove painted nosing length without damaging the existing gland seal. Extend nosing removal 4 inches beyond end of painted length, in each direction.
- B. Cut wing of gland seal perpendicular to joint length approximately three inches from ends of nosing removal. Without damaging, pull wing up and out of blockout bedding material, using flat hand held tools to aid in breaking bonded interfaces.
- C. Clean exposed blockout surfaces without damaging adjacent seal. Clean and solvent wipe down all blockout and seal surfaces in repair area in conjunction with manufacturer requirements.
- D. Install epoxy bedding repair material per manufacturer's recommendations and lay down seal wing into wet epoxy. Weight seal wing if necessary to assure contact while epoxy is curing.
- E. Install epoxy nosing repair material per manufacturer's recommendations. Strike repair material flush with adjacent concrete surface and gland seal top surface.

### 3.4 CLEAN-UP

- A. During the progress of the Work, remove from the project all discarded materials, rubbish,



cans and rags.

- B. Clean all surfaces of drops or spills of nosing materials with manufacturer approved solvents which are not deleterious to the concrete surface.
- C. All hardware, adjacent floor areas, metal work, etc., and the premises shall be left clean and free of all construction dirt and debris. This includes the removal of debris from pipes, etc., which resulted as part of the construction process.
- D. Empty containers shall be removed from the structure at the end of each working day. All cloths soiled with solvent or other materials that might constitute a fire hazard shall be placed in suitable metal safety containers or shall be removed from the structure at the end of each working day. Special care shall be taken in storage or disposal of flammable materials. Comply with health and fire regulations.

END OF SECTION

DIVISION 07 – THERMAL AND MOISTURE PROTECTION

SECTION 079200

SEALANTS

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes

1. All labor, material, equipment, special tools, and services required to complete the work required for the project as indicated on the Drawings and in the Specifications, including but not limited to:
  - a. Isolation joint sealant.
  - b. Control joint sealants.
  - c. Tee to tee joint sealants.
  - d. Oversized cove joint sealant.
  - e. Cove joint sealant.
  - f. Silicone sealant installation as directed by the drawings.

B. Related Sections

1. Section 012200: Unit Prices.
2. Section 012900: Payment Procedures.
3. Section 030100: Concrete Repairs.
4. Section 040100: Masonry Repairs.
5. Section 051200: Structural Steel.
6. Section 071800: Vehicular Traffic Membrane.
7. Section 221400: Drains and Piping.
8. Section 321723: Pavement Markings.

1.2 DEFINITIONS

- A. Where the term "manufacturer's recommendations," or variations thereon, are found in this Specification, it shall mean "manufacturer's recommendations which are found in publications available to and commonly used by the general architectural and consulting professions."

1.3 SUBMITTALS

- A. Copies of literature for all manufactured products, including manufacturer's specifications, test data and installation instructions or applicator's manual.
- B. Installation Letter per Paragraph 1.4.B.

- C. Resume of contractor superintendent or employee per Paragraph 1.4.D.
- D. Manufacturer's certification per Paragraph 1.4.F.
- E. Proof samples of sealants intended to be installed per Paragraph 1.4.G.
- F. If requested, Field samples of sealants installed on site per Paragraph 1.4.H.
- G. Safety Data Sheets on all materials which are classified as hazardous materials.
- H. Upon completion of the Work and prior to final payment, provide written recommendations for routine care and maintenance. Provide list of three Contractors nearest the project location who are qualified to perform repairs to the sealants. Identify common causes of damage and include instructions for temporary patching until permanent repair can be made by qualified personnel.
- I. Upon completion of the Work and prior to final payment, provide a fully executed warranty.

#### 1.4 QUALITY ASSURANCE

- A. Applicable Codes
  - 1. The Contractor shall comply with all Federal, State and Municipal laws, codes, ordinances, and regulations applicable to the Work in this Contract and also with all requirements of the National Fire Protection Association, the National Electric Code, and the Occupational Safety and Health Administration (OSHA). If the above laws, codes, or ordinances conflict with the Specification, then the laws, codes or ordinances shall govern, except in such cases where the Specification exceeds them in quality of materials or labor, then the Specifications shall be followed.
- B. The sealant installer must be acceptable to the manufacturer. Provide written confirmation that the intended sealant installer is acceptable to the manufacturer.
- C. The Contractor shall review locations where joint sealant work is specified and shall submit in writing existing conditions and newly specified details which would cause sealant material to fail. Failure to review existing conditions or identify details or procedures which will cause failure of sealant material to perform as specified, the Contractor shall become responsible for all costs relating to correcting the deficient work, including all direct and indirect costs to the Owner.
- D. The Contractor's superintendent, or another technically competent employee of the Contractor approved by the Owner and Manufacturer, shall be on site and supervise installation of all sealants on this project. Sealant identified as being installed not under the direct supervision of this person shall be subject to removal and replacement, at the direction of the Owner. This person identified for supervision of the work shall have supervised at least three prior projects of similar magnitude and type.
- E. The Owner may, at his discretion, choose to remove up to a six-inch length of sealant in locations at a time after installation and initial curing of sealant to verify installation as specified. The Contractor shall include in his Bid the costs to repair one such location for each 100 ft. of sealant installation. If inspections of these locations by the Owner reveal

deficient installation of sealant, the Owner may remove additional sealant to further quantify the length of deficient sealant. The Contractor shall repair all deficient locations of sealant found by the Owner at no additional cost and no extension of time for the work.

- F. Sealant materials shall be certified to be compatible by the manufacturer for use with the membrane system and all substrates.
- G. The Owner may, at his discretion, direct the contractor to prepare proof samples of all sealant materials used on the job site in advance of the work, and submit to the Owner for purposes of testing and examination. Samples shall be manufactured with a unit of material from the first batch intended for use on the project. Samples (4 total) shall be at least 2-inch x 2-inch square and 1/2-inch-thick, with troweled top surfaces, identified with manufacturer's batch numbers, date and location of preparation.

#### H. Mock-ups

- 1. Sealant foreman and crew assigned to project to complete all mock-ups listed.
  - a. The Owner may, at his discretion, direct the Contractor to prepare and submit Field Samples of sealant materials used on the job site during the work. Samples shall be manufactured on site, from a unit of material from the same batch in use that day. Samples (2 total) shall be at least 2-inch x 2-inch square and 1/2-inch-thick, with troweled top surfaces, identified with manufacturer's batch numbers, date and location on the project where the sealants represented in the samples were installed. Up to three sets of Field Samples may be requested on this project in the Base Bid.
- 2. Control, Isolation, and Cove Joints
  - a. Demonstrative removal and cleaning technique.
  - b. Demonstrate backer rod installation.
  - c. Demonstrate sealant installation and tooling technique.

#### 1.5 DELIVERY, STORAGE AND HANDLING

- A. Deliver materials to job site in sealed, undamaged containers. Each container shall be identified with material's name, date of manufacture and lot number.
- B. Only those materials being used during any one work shift may be stored in the Work area. Coordinate location of storage area with the Owner.
- C. Sealant materials shall be kept sealed when not in use.
- D. Storage and handling of materials shall conform to the requirements of the applicable safety regulatory agencies.
- E. Storage areas shall be heated or cooled as required for maintaining the product temperatures within the range recommended by the manufacturer.

## 1.6 PROJECT CONDITIONS

- A. Install sealant materials in strict accordance with all safety and weather conditions required by product literature or as modified by applicable rules and regulations of Local, State and Federal authorities having jurisdiction.
- B. Fumes and debris shall be controlled to prevent harmful or undesirable effects in surrounding areas.
- C. When toxic or flammable solvents are used, the Contractor shall take all necessary precautions as recommended by the manufacturer. In all cases, the handling and use of toxic or flammable solvents, including adequate ventilation and personal protective equipment, shall conform to the requirements of the applicable safety regulatory agencies.

## 1.7 SEQUENCING

- A. Install sealants after any required substrate repairs.
- B. Install sealants after adequate cure of all repair materials. Confirm required cure time with sealant manufacturer.
- C. Install all urethane sealants prior to installation of membrane systems.
- D. Install silicone sealants after installation of coating systems.

## 1.8 WARRANTY

- A. New exposed urethane sealant work shall be warranted for a period of five (5) years against defects due to installation or material deficiencies, including but not limited to excessive softness, excessive entrapped air in cured cross sections, disbonding, cohesive failure, leakage, and ultraviolet exposure degradation.
- B. Sealant work under membrane systems shall be warranted as part of and included in the membrane system guarantee.
- C. All required testing and quality assurance operations necessary to furnish the warranty are Contractor and manufacturer's responsibility.

## PART 2 PRODUCTS

### 2.1 CRACK AND JOINT URETHANE SEALANTS

- A. Multi-component, unmodified, non-sag polyurethane. Approved products manufacturers include:
  - 1. Sika 2c NS-EZ with TG additive by Sika Corp.
  - 2. Dymeric 240FC by Tremco, Inc.
  - 3. Isoflex 881 by Lyntal International.
- B. Minimum compression or extension of 25% of the nominal joint width without adhesive or cohesive failure.
- C. Primer(s) as recommended by sealant manufacturer for each substrate.

- D. Cove sealants shall be gun grade (non-sag).
- E. Backer Rod or Bond Breaker Tape: Backer Rod shall be closed-cell, polyethylene in sizes to maintain 25 percent compression. Backer rod shall not be used except at locations indicated on the Drawings or unless approval for each intended application location is obtained from the Owner. Alternative use of bond breaker tape in size appropriate for the width of joint and approved for use by the sealant manufacturer will be allowed on a case-by-case basis.

## 2.2 SILICONE SEALANTS

- A. Approved Silicone Sealants
  - 1. Dowsil 795 silicone perimeter sealant by Dow Corning.
  - 2. Spectrum 3 silicone sealant by Tremco.
  - 3. SilPruf SCS2000 sealant by G.E.
  - 4. Pecora 895 NST.
- B. Primer(s) as recommended by the sealant manufacturer for each substrate.
- C. Backer Rod. Backer Rod shall be bi-cellular polyethylene in sizes to maintain 50 percent compression. Backer rod shall be used except where not indicated on the Drawings or not required by the Manufacturer.
  - 1. Acceptable Manufacturers:
    - a. SOF Rod by NOMACO.
    - b. ITP Soft Type Backer Rod by Industrial Thermo Polymers, Ltd.

## PART 3 EXECUTIONS

### 3.1 GENERAL

- A. Remove existing sealants in joint cavities, coves and other locations and clean surfaces to remove residue. Rout any new joint cavities scheduled for new sealant. Grind and vacuum clean all joint cavities, coves and other locations scheduled for new sealant as required by the sealant manufacturer within 24 hours of sealant installation.
- B. Primer shall be used for all sealant installations regardless of manufacturer's requirements unless a letter from the manufacturer states use of a primer is detrimental. Allow primer to cure per manufacturer's recommendation prior to sealant installation.
- C. Joint substrates that become contaminated by dirt or moisture after initial preparation, shall be cleaned again at no additional cost to the Owner.
- D. Modify the depth of existing joints by additional routing or positioning of backer rod to maintain a width to depth ratio of 2 to 1 unless otherwise noted on the drawings. At no location is the sealant width allowed to exceed 1-1/2".
- E. In areas indicated on the Drawings or otherwise directed by the Owner, remove existing failed and deteriorated sealant, all existing cove sealants, and all existing sealants.

- F. Reinstall new sealant where existing sealant is removed.
- G. Where necessary, square up joint edges and execute repairs with epoxy repair mortar in accordance with manufacturer's recommendations.
- H. Rout cracks per details in surfaces at locations directed by the Owner.
- I. Rout joints per details.

### 3.2 NEW SEALANT

- A. Perform joint substrate preparation requirements.
- B. Clean joint substrates and apply primer as recommended by the sealant manufacturer.
- C. Install backer rod or bond-breaker tape where required. Vary size of backer rod as necessary to maintain proper compression.
- D. Install sealant as indicated in the details on the Drawings.

### 3.3 CLEAN-UP

- A. During the progress of the Work, remove from the project all discarded coating materials, rubbish, cans, and rags.
- B. All sealant material and drops shall be completely removed from hardware, adjacent floor areas, metal work, etc., and the premises shall be left clean and in orderly condition.
- C. All hardware, adjacent floor areas, metal work, etc., and the general premises shall be left clean and free of all construction dirt and debris. This includes removal of all debris from pipes, etc., which resulted from work specified herein.
- D. Repaint in matching color all curbs, columns, walls, etc., where existing paint was removed during preparation for sealant installation.
- E. Empty containers shall be removed from the structure at the end of each working day. All cloths soiled with coating that might constitute a fire hazard shall be placed in suitable metal safety containers or shall be removed from the structure at the end of each working day. Special care shall be taken in storage or disposal of flammable materials. Comply with health and fire regulations.

END OF SECTION

DIVISION 08 OPENINGS

SECTION 087100

DOOR HARDWARE

PART 1 GENERAL

1.1 SUMMARY

- A. Section includes hardware for hollow metal doors.

1.2 REFERENCES

- A. ANSI A117.1: Specification for Making Buildings and Facilities Accessible To and Usable By Physically Handicapped People.
- B. ADA Accessibility Guidelines for Buildings and Facilities.
- C. ANSI/BHMA: A156.13 Series 1000 Grade 1, Mortise Locks and Latches.
- D. ANSI/NFPA 101: Life Safety Code.
- E. UL: Underwriters Laboratories.
- F. ANSI A250.6: Application of Hardware.

1.3 SUBMITTALS

- A. Product Data: Manufacturer's data for each item of door hardware including installation instructions, maintenance of operating parts and finishes, and other information necessary to show compliance with requirements.
- B. Final Hardware Schedule
  - 1. Contents: Organize schedule into hardware sets indicating complete designations of every item required for each door or opening. Include the following information:
    - a. Type, style, function, size, and finish of each hardware item.
    - b. Name and manufacturer of each item.
    - c. Fastenings and other pertinent information.
    - d. Location of each hardware set cross-referenced to floor plans and door and frame schedule.
    - e. Explanation of all abbreviations, symbols, and codes contained in schedule.
    - f. Mounting locations for hardware.
    - g. Door and frame sizes and materials.
  - 2. Submittal Sequence: Submit final schedule at earliest possible date particularly where acceptance of hardware schedule must precede fabrication of other work that is critical in the project construction schedule. Include with the schedule product data, samples, shop drawings of other work affected by door hardware, and other information essential to the coordinated review of schedule.



- C. Templates for doors, frames, and other work specified to be factory prepared for the installation of door hardware. Check shop drawings of other work to confirm that adequate provisions are made for locating and installing door hardware to comply with indicated requirements.
- D. Samples of each door hardware type required, in specified finish. Tag for identification and location. Approved full-size samples may be returned and incorporated into work.

#### 1.4 QUALITY ASSURANCE

- A. Single Source Responsibility: Obtain all items of hardware of each type from same manufacturer.
- B. Supplier Qualifications: Recognized architectural door hardware supplier employing a full-time experienced Architectural Hardware Consultant.
- C. Service: Supplier shall respond immediately for service calls and a 12-month call-back period from contractor and Owner for service, repair, or replacement of faulty hardware which does not function as scheduled or as manufactured.
- D. Regulatory Requirements
  - 1. Comply with Kentucky Building Code and ADA standards.
  - 2. Comply with specifications and testing procedures in Kentucky Building Code for fire-rated openings. Provide door hardware for fire-rated openings that complies with NFPA Standard No. 80 and requirements of authorities having jurisdiction. Provide only items of door hardware that are listed by UL, Warnock Hersey, FM, or other testing and inspecting organization acceptable to authorities having jurisdiction.

#### 1.5 DELIVERY, STORAGE, AND HANDLING

- A. Packaging of door hardware, on a set-by-set basis, is responsibility of supplier.
- B. Provide secure lock-up for door hardware delivered to the project, but not yet installed. Control handling and installation of hardware items that are not immediately replaceable so that completion of the work will not be delayed by hardware losses both before and after installation.

#### 1.6 WARRANTIES

- A. General Warranty: As provided for in other contract document requirements.
- B. Special Warranties
  - 1. Ten (10) years from date of Final Completion: Manual closers, mortise locksets.
  - 2. Five (5) years from date of Final Completion: Exit devices.

#### 1.7 MAINTENANCE

- A. Provide all adjustment and maintenance tools, and maintenance manuals, recommended by hardware manufacturer.

## PART 2 PRODUCTS

### 2.1 MANUFACTURERS

#### A. Standards and Substitutions

1. All catalog numbers listed in hardware sets are from current catalog of manufacturers listed below under “Manufacturer Listed”, and shall be considered as standards. Contractor may at his option provide equivalent products of the other manufacturers listed below under “Other Approved Manufacturers”, except where the comment “No Substitution” is made.

#### B. Manufacturers

| ITEMS            | STANDARD<br>SPECIFIED | APPROVED<br>SUBSTITUTION |
|------------------|-----------------------|--------------------------|
| Butt Hinges      | McKinney              | Hager, Stanley           |
| Mortise Locksets | Sargent               | None (Owner’s Standard)  |
| Exit Devices     | Von Duprin            | None (Owner’s Standard)  |
| Cylinders        | Best                  | None (Owner’s Standard)  |
| Push-Pulls       | Rockwood              | Ives                     |
| Closers          | Sargent               | LCN                      |
| O.H. Holders     | Sargent               | Glynn-Johnson            |
| Stops            | Rockwood              | Ives                     |
| Kickplates       | Rockwood              | Ives, Hager              |
| Door Seals       | National Guard        | Pemko Hager              |
| Weatherstripping | National Guard        | Pemko, Hager             |
| Thresholds       | National Guard        | Pemko, Hager             |

### 2.2 MATERIALS AND FABRICATION

- #### A. Base Metals:
- Produce hardware units of basic metal and forming method indicated using manufacturer’s standard metal alloy, composition, temper, and hardness, but in no case of lesser (commercially recognized) quality than specified for applicable hardware units for finish designations indicated.

#### B. Fasteners

1. Provide hardware manufactured to conform to published templates, generally prepared for machine screw installation. Do not provide hardware that has been prepared for self-tapping sheet metal screws.
2. Furnish screws for installation with each hardware item. Provide Phillips flathead screws except as otherwise indicated.

3. Finish exposed screws to match hardware finish or, if exposed in surfaces of other work, to match finish of this other work as closely as possible including “prepared for paint” surfaces to receive painted finish.
4. Provide concealed fasteners for hardware units that are exposed when door is closed except to the extent no standard units of type specified are available with concealed fasteners.
5. Do not use thru-bolts for installation where bolt head or nut on opposite face is exposed in other work.
6. Provide security-type fasteners where listed in hardware sets.

C. Exit/Panic Devices

1. Provide touch bar type exit device, with stainless steel rail assemblies, and matching lever/lockset trim.
2. UL Listed, complying with ANSI/BHMA A 156.3, Grade 1.
3. Lock Throw: Comply with UL requirements for throw of bolts and latch bolts on rated fire openings.
4. Exit Device Dogging: Except on fire-rated doors where closers are provided on doors equipped with exit devices, equip the units with allen-keyed dogging device to keep the latch bolt retracted, when engaged.

D. Closers

1. ANSI A156.4 Grade One with 10-year warranty. Unless noted otherwise, comply with manufacturer’s recommendations for size of door closer unit depending on size of door, exposure to weather, and anticipated frequency of use.
2. Provide adjustable units complying with NFPA 101 and ADA requirements for door opening force and delayed action closing.
3. Provide parallel arms for all overhead closers, unless noted otherwise.
4. High-impact non-corrosive covers which completely conceal valves to discourage tampering.
5. Finish: As scheduled.

PART 3 EXECUTION

3.1 INSTALLATION

- A. Mount hardware units at heights indicated in the following applicable publications, except as specifically indicated or required to comply with governing regulations and except as noted otherwise.
  1. Door and Hardware Institute “Recommended Locations for Builders Hardware for Standard Steel Doors and Frames.”
- B. Install each hardware item in compliance with the manufacturer’s instructions and

recommendations. Where cutting and fitting is required to install hardware onto or into surfaces that are later to be painted or finished in another way, coordinate removal, storage, and reinstallation or application of surface protection with finishing work specified in Division 08 and 09 Sections. Do not install surface-mounted items until finishes have been completed on the substrates involved.

- C. Set units level, plumb, and true to line and location. Adjust and reinforce the attachment substrate as necessary for proper installation and operation.
- D. Drill and countersink units that are not factory prepared for anchorage fasteners. Space fasteners and anchors in accordance with industry standards.
- E. Install hardware in fire-rated doors in compliance with NFPA 80 and all Local code requirements.
- F. Install hardware in compliance with NFPA 101 and ADA.
- G. Convert construction cores to Owner's permanent cores.

### 3.2 ADJUSTING, CLEANING AND DEMONSTRATING

- A. Adjust and check each operating item of hardware and each door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to operate freely and smoothly or as intended for the application made.
- B. Clean operating items as necessary to restore proper function and finish of hardware and doors.
- C. Adjust door control devices to compensate for final operation of heating and ventilating equipment.
- D. Clean adjacent surfaces soiled by hardware installation.
- E. Instruct Owner's personnel in the proper adjustment and maintenance of door hardware and hardware finishes.

### 3.3 HARDWARE SCHEDULE

- A. General
  - 1. Provide hardware for each door to comply with requirements of this Section, hardware set numbers indicated in door schedule, and in the following schedule of hardware sets.
  - 2. Hardware sets are generic and only indicate basic types of items and lock functions. Refer to this Specification for manufacturer and product designation, required quantities, sizes, capacities, and finish or color, as applicable.
  - 3. Hardware supplier shall furnish all related items, such as arms, brackets, plates, fasteners, etc., required for complete functional installation of scheduled hardware items.

The City of Charleston  
2025 Garage Repairs  
THP #24137.00  
June 2025 – Bid Set

**HARDWARE – Pay Unit per Location.**

|      |                |            |              |
|------|----------------|------------|--------------|
| 1 ea | Exit Device    | Von Duprin | 98/99-series |
| 1 ea | Surface Closer | Sargent    | 36-281-O EN  |

END OF SECTION

DIVISION 9 FINISHES

SECTION 090100

FAÇADE CLEANING

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes

1. All labor, material, equipment, special tools, and services required to complete the work required for the project as indicated on the Drawings and in the Specifications, including but not limited to:
  - a. Removing biological growth from surfaces.
  - b. Cleaning existing limestone surfaces.
  - c. Cleaning rust from concrete.
  - d. Cleaning dirt and hydrocarbon stains from concrete.
  - e. Cleaning dirt from masonry surfaces.
  - f. Cleaning efflorescence from masonry surfaces.
  - g. Cleaning calcium deposits from masonry surfaces.
  - h. Cleaning EIFS surfaces.
  - i. Cleaning areas of tuckpointing.
  - j. Graffiti removal.
  - k. Storm drains protection.
2. Mock-ups of the various cleaning products specified in this section should take place prior to submission of the final selected cleaning products.

B. Related Sections

1. Section 015600: Barriers.
2. Section 024119: Selective Structure Demolition.
3. Section 030100: Concrete Repairs.
4. Section 040120: Masonry Repair.
5. Section 051200: Structural Steel
6. Section 079200: Sealants.
7. Section 099100: High Performance Coatings.

1.2 SUBMITTALS

- A. Submit manufacturer's standard literature for all manufactured products specified herein.

B. Quality Assurance/Control Submittals

1. Design Data, test reports, certificates, manufacturer's instructions, manufacturer's field reports

1.3 QUALITY ASSURANCE

A. Regulatory Requirements

1. The Contractor shall comply with all Federal, State and Municipal laws, codes, ordinances, and regulations applicable to the Work in this Contract and also with all requirements of the National Fire Protection Association, the National Electric Code, and the Occupational Safety and Health Administration (OSHA). If the above laws, codes, or ordinances conflict with this Specification, then the laws, codes or ordinances shall govern, except in such cases where the Specification exceeds them in quality of materials or labor, then the Specifications shall be followed.

B. Mock-up

1. Mock-ups of the various cleaning products specified in this section should take place for each substrate and stain prior to submission of the selected cleaning products. Owner is to review and approve of mockups for level of expected cleanliness prior to contractor starting work.
2. Provide 4' x 4' mock-up of cleaning in an area as selected by Owner for each substrate scheduled to be cleaned.
3. Each mock-up is to demonstrate full cleaning procedure.
4. Approved mock-ups should be maintained as part of the completed work.
5. If mock-up is unacceptable, additional mock-ups will be performed in other locations as selected by the Owner as part of the Base Bid until a mock-up is accepted by the Owner.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Packing, Shipping, Handling and Unloading

1. Deliver materials to job site in sealed, undamaged containers/packaging.

B. Storage and Protection

1. Protect materials in a dry place, off ground and under cover to protect them from moisture and other damage.
2. Do not use materials showing evidence of water or other damage.
3. Storage and handling of materials shall conform to the requirements of the applicable safety regulatory agencies.
4. Storage areas shall be heated or cooled as required to maintain the temperatures within the range recommended by the manufacturer.

C. Do not use materials that are beyond their expiration date.

## 1.5 PROJECT CONDITIONS

### A. Environmental Requirements

1. Install materials in strict accordance with all safety and weather conditions required by product literature or as modified by applicable rules and regulations of Local, State and Federal authorities having jurisdiction.
2. Maintain materials, structure surfaces and surrounding air to a minimum temperature of 40 degrees F. for a period of 48 hours before the start of work and 48 hours after completion of work.
3. Fumes and dust shall be controlled to prevent harmful or undesirable effects in surrounding areas. Do not allow fumes, dirt, dust or debris to enter the structure.
4. When toxic or flammable solvents are used, the Contractor shall take all necessary precautions as recommended by the manufacturer. In all cases, the handling and use of toxic or flammable solvents, including adequate ventilation and personal protective equipment, shall conform to the requirements of the applicable safety regulatory agencies.

## 1.6 SEQUENCING

- A. Perform cleaning of surfaces after installation and curing of new materials.
- B. Coordinate cleaning of surfaces with other work associated with the project.

## 1.7 DEFINITIONS

### A. Crack Sizes

1. Micro-Crack: Cracks less than 1/32 inch.
2. Crack: Cracks between 1/32 and ¼ inch.
3. Large Crack: Cracks larger than ¼ inch.

### B. Displacement: Offset of a stone or portion of a stone due to structural forces.

### C. Spray Pressure

1. Low Pressure Spray: 100 to 400 psi.
2. Medium Pressure Spray: 400 to 800 psi.
3. High Pressure Spray: 800 to 1,200 psi. (Can go up to 2,500 psi for concrete but watch substrate during mock-up for deterioration.)

## PART 2 PRODUCTS

### 2.1 MATERIALS

#### A. Storm Drain Protection

1. PIG Basin Guard by New Pig with oil absorbent socks. (1-800-468-4647)  
[www.newpig.com](http://www.newpig.com)



2. PIG Grate Guard by New Pig with oil absorbent pillows.
- B. Water: Clean and potable.
- C. Biological Cleaners (Removes fungi, algae, bacteria, and moss)
  1. Enviro Klean Revive by Prosoco.
  2. OneRestore by EaCo Chem.
- D. Concrete Cleaners (Metal and mineral oxide stains including rust, lead, and copper)
  1. OneRestore by EaCo Chem.
  2. Light Duty Restoration Cleaner by Prosoco.
  3. Diedrich Technologies
    - a. Diedrich 940 Iron & Manganese Stain.
- E. Concrete Cleaners (Dirt and hydrocarbon)
  1. BioKlean by Prosoco.
  2. OneRestore by EaCo Chem.
- F. Masonry Cleaners (Dirt)
  1. Safrestorer by Prosoco.
  2. Diedrich Technologies - 101G.
- G. Masonry Cleaners (Efflorescence)
  1. NMD 80 by EaCo Chem at a 4:1 dilution. Apply with low pressure applicator.
- H. Masonry Cleaners (Calcium deposits)
  1. EaCo Chem
    - a. Calcite Remover for initial cleaning.
    - b. NMD 80 for final cleaning at a 4:1 dilution. Apply with low pressure applicator.
  2. 930 White Scum Remover by Diedrich Technologies.
- I. Tuckpointing Cleaning
  1. Sure Klean Vana Trol by Prosoco.
  2. 202V Vana-Stop by Diedrich Technologies.
- J. Graffiti Removers
  1. Multi-Strip by Back To Nature Products Co. (1-800-211-5175)
  2. Prosoco
    - a. Enviro Klean Safety Peel 1 (for paint and graffiti).
    - b. Graffiti Wipe (for spray paint and magic marker).
  3. Stripper Cream by EaCo Chem.

4. 505 Special Coatings Stripper by Diedrich Technologies.

## 2.2 MIXES

- A. Dilute cleaner(s) as recommended by manufacturer depending on the results for the surfaces of substrates being cleaned.

## PART 3 EXECUTION

### 3.1 EXAMINATION

- A. Examine surfaces intended to receive the specified work and note conditions or defects that will adversely affect the execution and/or quality of the work.
- B. Notify Owner in writing of any such conditions or defects. Do not begin work until unsatisfactory conditions are corrected. Failure to notify Owner prior to beginning work constitutes acceptance by Contractor of the surfaces and conditions under which the work is to be performed, and acceptance by Contractor for the performance of the work.

### 3.2 PROTECTION

- A. Provide temporary protection during the course of the work to prevent water entry into the structure and wall systems. Maintain the structure in a weather tight condition.
- B. Protect all existing adjacent surfaces that are to remain and are not included in the work of this Section.
- C. Provide safeguards from work of this Section for vehicular and pedestrian traffic, and adjacent property. Do not permit drift of dust or liquids.
- D. Use safeguards recommended by manufacturers of products specified herein for personnel handling and applying said materials.
- E. Protect surrounding areas from construction activities, dirt, dust, debris and overspray.
- F. Protect structure surfaces, sidewalks, streets, and landscaping below during cleaning.

### 3.3 STORM DRAIN BARRIERS

- A. Provide filtration system around existing storm drains to prevent hydrocarbons, oils, and sediments from entering the storm drain system. The filtered water should be able to enter the storm drain system.
- B. Filtration system should include oil-absorbent elements. Replace the oil-absorbent elements as required per manufacturer's specifications.
- C. Filtration system shall be in place during cleaning. Remove protection at the end of each work day.

### 3.4 CLEANING

- A. General Cleaning
  1. Apply cleaning solutions per manufacturer's instructions.
  2. Allow material to remain on surface for a time period as recommended by the

manufacturer. Do not allow surfaces or cleaners to dry.

3. Repeat cleaning process as required per manufacturer's recommendations.
4. Rinse surfaces clean with low pressure water per manufacturer's recommendations.

### 3.5 MASONRY CLEANING

#### A. General

1. Prior to the start of all masonry repairs within a work area, clean all brick surfaces with general cleaner to remove existing dirt and stains from facade.
2. Prior to cleaning, review with manufacturer's representative masonry substrate condition. Notify Engineer immediately if conditions exist that may be detrimental to the success of the cleaning and possible damage to substrate.
3. Cleaning to remove all surface contamination such as dirt, foreign matter, rust, rust stains, mold, mildew, and efflorescence. Cleaned surface to meet or exceed mock-up area.
4. Clean all face brick with cleaning solution per manufacturer's recommendations and instructions.
  - a. Comply with BIA Technical Note 20 for cleaning of brick.
  - b. Provide a general and masonry repair cleaning.
5. Protect structure surfaces and landscaping below during cleaning.
6. Provide adequate protection of all surrounding surfaces not intended to be cleaned from damage (surface blemish, staining, etching, etc.) due to preparation and cleaning procedures. Repair damage at no cost to the Owner.
7. Provide adequate protection of adjacent brick not being cleaned during a specific cleaning operation. Repair damage at no cost to the Owner.

### 3.6 FINAL CLEANING

- A. Clean ground area of materials and debris.
- B. Rinse sidewalks and street surfaces of all cleaning solutions and debris.

END OF SECTION

DIVISION 9 – FINISHES  
SECTION 099100  
HIGH PERFORMANCE COATINGS

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes

1. All labor, material, equipment, special tools, and services required to complete the work required for the project as indicated on the Drawings and in the Specifications, including but not limited to:
  - a. Complete cleaning, surface preparation, primer installation where necessary and new coating on steel and metal surfaces.
  - b. Complete cleaning, including removal of abandoned forms, conduit, and junction boxes of exterior façade concrete surfaces.
  - c. Surface preparation, priming, and coating or finishing of surfaces.
  - d. Temporary protection of doors, windows, roof areas, and interior spaces during work.
  - e. Provide access to work area for Owner representative or Engineer.

B. Related Sections

1. Section 015600: Barriers.
2. Section 024119: Selective Structure Demolition.
3. Section 030100: Concrete Repairs.
4. Section 051200: Structural Steel.
5. Section 055000: Miscellaneous Metals.
6. Section 079200: Sealant.

1.2 REFERENCES

- A. ASTM D 16 – Terminology Related to Paint, Varnish, Lacquer, and Related Products.
- B. The Society for Protective Coatings (SSPC): SSPC-SP 1 – Solvent Cleaning.
- C. The Society for Protective Coatings (SSPC): SSPC-SP 3 – Power Tool Cleaning.
- D. The Society for Protective Coatings (SSPC): SSPC-SP 6/NACE 3 – Commercial Blast Cleaning.

1.3 DEFINITIONS

- A. "Coating" as used herein means all paint systems materials, including primers, emulsions, enamels, stains, sealers and fillers, and other applied materials whether used as prime, intermediate or finish coats.

- B. "Dry Film Thickness" as used herein means the thickness of a coat in a fully cured state measured in mils (1/1000 inch).
- C. "Well-adhered" as used herein means materials that cannot be removed by lifting with a dull putty knife.

#### 1.4 SUBMITTALS

- A. Submit manufacturer's technical information including coating label analyses and application instructions.
- B. Submit complete line of manufacturer's color samples for each product.
- C. Letter of approval that the contractor is a certified installer by the manufacturer.
- D. Prior required project experience.
- E. Contractor resumes.
- F. Manufacturer's sample warranty.

#### 1.5 QUALITY ASSURANCE

- A. The contractor shall be a certified installer by the manufacturer.
- B. The contractor shall be approved by the manufacturer and shall have no less than (5) years' experience in performance of similar work in size and complexity.
- C. All work under this Section shall be under the immediate control of the Contractor's superintendent(s) experienced in this type of work. The person(s) shall have supervised three prior projects of similar magnitude and type and shall be present during all operations. This person(s) shall be approved by the Owner.
- D. Regulatory Requirements
  - 1. The Contractor shall comply with all Federal, State and Municipal laws, codes, ordinances, and regulations applicable to the Work in this Contract and also with all requirements of the National Fire Protection Association, the National Electric Code, and the Occupational Safety and Health Administration (OSHA). If the above laws, codes, or ordinances conflict with this Specification, then the laws, codes or ordinances shall govern, except in such cases where the Specification exceeds them in quality of materials or labor, then the Specifications shall be followed.
- E. Mock-Up
  - 1. Provide mockup of coating preparation and coating system for review by Owner and Engineer. Maintain approved mock-ups during the job as reference for minimal standard of acceptance and quality of coating application.
- F. Pre-installation meeting.
- G. Provide access to work area for Owner representative or Engineer to inspect quality of work, progress, unit price items and field conditions. Access to be completed during normal working hours. If access requires mechanical equipment (man-lift, swing stage,

etc.), provide necessary operators.

#### 1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver materials to job site in original, new, and unopened packages and containers bearing manufacturer's name and label, and following information:

1. Name or title of material.
2. Fed. Spec. number, if applicable.
3. Manufacturer's stock number and date of manufacture.
4. Manufacturer's name.
5. Contents by volume, for major pigment and vehicle constituents.
6. Thinning instructions.
7. Application instructions.
8. Color name and number.

B. Storage and Protection

1. Protect materials in a dry place, off ground and under cover to protect them from moisture and other damage.
2. Do not use materials showing evidence of water or other damage.
3. Storage and handling of materials shall conform to the requirements of the applicable safety regulatory agencies.
4. Storage areas shall be heated or cooled as required to maintain the temperatures within the range recommended by the manufacturer.

#### 1.7 PROTECTION

- A. Place coating or solvent soaked rags, waste, or other materials which might constitute a fire hazard in metal containers and remove from premises at the close of each day's work.
- B. Protect the work of all other trades against damage, marking or injury by suitable covering during the progress of the coating and finishing work. Repair any damage done.
- C. Protect and filter debris and chemicals from entering storm drains. Direct water runoff from all cleaning processes to the filtration system before allowing it to enter the storm drain system.
- D. During all cleaning operations, coordinate drain protection with the local municipality.

#### 1.8 PROJECT CONDITIONS

A. Environmental Requirements

1. Install coating materials in strict accordance with all safety and weather conditions required by product literature or as modified by applicable rules and regulations of Local, State and Federal authorities having jurisdiction.

2. Fumes and dust shall be controlled to prevent harmful or undesirable effects in surrounding areas. Do not allow fumes, dirt, dust, or debris to enter structure.
3. When toxic or flammable solvents are used, the Contractor shall take all necessary precautions as recommended by the manufacturer. In all cases, the handling and use of toxic or flammable solvents, including adequate ventilation and personal protective equipment, shall conform to the requirements of the applicable safety regulatory agencies.
4. Apply water base coatings only when temperature of surfaces to be coated and surrounding air temperatures are between 50 Deg. F. (10 Deg. C.) and 90 Deg. F. (32 Deg. C.), unless otherwise permitted by coating manufacturer's printed instructions.
5. Apply solvent-thinned coatings only when temperature of surfaces to be coated and surrounding air temperatures are between 45 Deg. F. (7 Deg. C.) and 95 Deg. F. (35 Deg. C.), unless otherwise permitted by coating manufacturer's printed instructions.
6. Do not apply coating in snow, rain, fog, or mist; or when relative humidity exceeds 85 percent or to damp or wet surfaces unless otherwise permitted by coating manufacturer's printed instructions.
7. Apply coating to surfaces that are cured and dry per manufacturer's tolerances.

#### 1.9 SEQUENCE

- A. Prior to beginning coating preparation complete all concrete and sealant repairs including curing periods.

#### 1.10 WARRANTY

##### A. Coating System Warranty

1. The applicator shall furnish a (5) year warranty to the Owner for all types of new coating installed. New coating work shall be warranted against defects due to installation, including but not limited to debonding and inadequate preparation.
  - a. All required testing and quality assurance operations necessary to furnish warranty are Contractor and manufacturer's responsibility.
2. The manufacturer shall furnish a (5) year warranty to the Owner for all types of new coating installed. New coating work shall be warranted against material defects, including but not limited to debonding, cohesive failure, cracking, and ultraviolet exposure degradation.
  - a. All required testing and quality assurance operations necessary to furnish warranty are Contractor and manufacturer's responsibility.

## PART 2 PRODUCTS

### 2.1 MANUFACTURERS

- A. Sherwin Williams.

B. Tnemec Company.

C. PPG Coatings.

## 2.2 MATERIALS

A. No lead-based products are permitted.

B. Use no thinners other than those specified by manufacturer.

C. Use only paints and coatings that are compatible with concrete and previously coated surfaces.

D. Use only primers and undercoats that are suitable for each surface to be covered and that are compatible with finish coating required.

E. Notify Engineer in writing of any anticipated problems in using coating systems specified on existing substrates.

F. Provide cleaners for removal of loose paint, dirt, and pollutants, which are compatible with all primers, intermediate coats, and finish coat. Thoroughly rinse all clean agents before applying primer or finish coats. Pre-approve cleaning agents with paint manufacturer.

G. All products must be provided by a single manufacturer.

## 2.3 MATERIALS AND PROCEDURES

A. General Cleaning Requirements.

1. Refer to Specification Section 090100.

2. All existing area drains shall be clear and protected prior to beginning any work.

3. All biological growth must be removed prior to coating.

4. All efflorescence, lime run, and surface contaminants should be removed prior to application of new coating.

5. If previously coated, existing coating must be adhered to the substrate per the manufacturer's requirements. Manufacturer shall approve the surface preparation and existing conditions before the contractor applies coating to ensure the product warranty will be honored.

B. Exterior/Stair Concrete: materials and procedures are listed in order of process/application. Apply per manufacturers recommendations.

1. Surface Preparation

a. SSPC-SP13/NACE No. 6 – Blasting and scarifying to remove all visible oil, grease, dirt, dust, and paint.

b. Cleaner: Provide cleaners for removal of soot, dirt, and pollutants, which are compatible with all primers, intermediate coats, and finish coat. Thoroughly rinse all clean agents before applying primer or finish coats.

2. Approved manufacturer's systems:



- a. Sherwin Williams
    - 1) Conditioner: Loxon Conditioner.
    - 2) Primer: Loxon Concrete & Masonry Primer – one (1) coat. Application rate recommended by the manufacturer to achieve a total dry film thickness of 4.0-6.0 mils.
    - 3) Finish Color: two (2) coat: Sher-Cryl HPA (high gloss) – 2.5 to 4.0 mils, by Sherwin Williams.
  - b. Tnemec
    - 1) Conditioner: Apply one coat of conditioner per manufacturer's recommendations to previously coated surfaces to adhere minor existing chalk to the substrate before applying primer.
    - 2) Primer: Elastogrip FC 151 – one (1) coat. Application rate recommended by the manufacturer to achieve a total dry film thickness of 4.0-6.0 mils.
    - 3) Finish Color: two (2) coat: Endura-Tone Series 1028-Color – 2.5 to 4.0 mils.
- C. New Galvanized Metal, materials and procedures are listed in order of process/application. Apply per manufacturers recommendations.
- 1. Surface Preparation:
    - a. Chemically etch galvanized metals with the following (or approved equal) per manufacturer's instructions.
      - 1) Great Lakes Laboratories Clean 'n Etch.
      - 2) Henkel's Galvaprep 5.
    - b. SSPC-SP16 Brush Off Blast Cleaning to remove contaminants from galvanizing process.
    - c. SSPC-SP1 Solvent Clean to remove all visible oil, grease, soil, and other contaminants.
  - 2. Approved coating systems:
    - a. PPG:
      - 1) Primer: One (1) Coat: Amercoat 370; 4.0 to 6.0 mils DFT.
      - 2) Polyurethane Finish Coat: Two (2) Coats: PittThane Ultra 95-812 Series; 2.0 to 3.0 mils DFT each.
    - b. Sherwin Williams:
      - 1) Primer: One (1) Coat Macropoxy 646 FC - 4.0 to 6.0 mils DFT.
      - 2) Polyurethane Finish Coat: Two (2) Coats: Acrolon Ultra – 2.0 to 4.0 mils DFT each.
    - c. Tnemec:

- 1) Primer: One (1) Coat: Series 48 Multi-Purpose Epoxy; 4.0 to 6.0 mils DFT.
  - 2) Polyurethane Finish Coat: Two (2) Coats: Series 1095 Endura Shield; 2.0 to 3.0 mils DFT each.
- D. Previously Coated, Rusted Exterior Metal, materials and procedures are listed in order of process/application. Apply per manufacturers recommendations.
1. Surface Preparation:
    - a. SSPC-SP6 Commercial Blast Clean to remove all loose mill scale, loose rust, and other foreign matter.
    - b. SSPC-SP1 Solvent Clean to remove all visible oil, grease, soil, and other contaminants.
  2. Approved coating systems:
    - a. PPG:
      - 1) Penetrating Sealer, to be used at metal connections, seams, and similar conditions: Amerlock Sealer - 1.0 to 2.0 mils DFT
      - 2) Primer: One (1) Coat: Amercoat 370; 4.0 to 6.0 mils DFT.
      - 3) Polyurethane Finish Coat: One (2) Coats: PittThane Ultra 95-812 Series; 2.0 to 3.0 mils DFT each.
    - b. Sherwin Williams:
      - 1) Penetrating Sealer, to be used at metal connections, seams, and similar conditions: Macropoxy 5000 - 1.0 to 1.5 mils DFT.
      - 2) Primer: One (1) Coat Macropoxy 646 FC - 4.0 to 6.0 mils DFT.
      - 3) Polyurethane Finish Coat: Two (2) Coats: Acrolon Ultra – 2.0 to 4.0 mils DFT each.
    - c. Tnemec:
      - 1) Penetrating Sealer, to be used at metal connections, seams, and similar conditions: Probond Series 109 – 1.5 to 2.0 mils DFT.
      - 2) Primer: One (1) Coat: Series 48 Multi-Purpose Epoxy; 4.0 to 6.0 mils DFT.
      - 3) Polyurethane Finish Coat: Two (2) Coats: Series 1095 Endura Shield; 2.0 to 3.0 mils DFT each.
    - d. Equivalent system by other manufacturers as approved during the bidding process.

## PART 3 EXECUTION

### 3.1 EXAMINATION

- A. Examine surfaces intended to receive coatings and note conditions or defects that will adversely affect the execution and/or quality of the work.

- B. Starting of cleaning and coating work will be construed as applicator's acceptance of surfaces and conditions within any particular area.
- C. Notify Owner in writing of any such conditions or defects. Do not begin work until unsatisfactory conditions are corrected. Failure to notify Owner prior to beginning work constitutes acceptance by Contractor of the surfaces and conditions under which the work is to be performed, and acceptance by Contractor for the performance of the work.

### 3.2 PREPARATION

#### A. Protection

1. Provide adequate protection of all surrounding surfaces not intended to receive coating from damage due to preparation, cleaning, or coating procedures. Repair damage at no cost to the Owner.
2. Program coating so that construction dirt, dust, and debris will not fall onto wet, newly coated surfaces.
3. When toxic or flammable solvents are used, the coating contractor shall take all necessary precautions as recommended by the manufacturer. In all cases, the handling and use of toxic or flammable solvents, including adequate ventilation and personal protective equipment, shall conform to the requirements of the applicable safety regulatory agencies.
4. Provide the necessary protection to contain all dust, dirt, debris, and coating chips within work area. Do not allow to migrate into structure interior spaces or storm drain system.
5. Provide "Wet Paint" signs as required to protect newly coated finishes. Remove temporary protective wrappings provided by others for protection of their work, after completion of coating operations.

#### B. Surface Preparation

1. Perform preparation and cleaning procedures in accordance with coating manufacturer's instructions and as herein specified, for each particular substrate condition.
2. Remove all surface contamination such as chalk, loose coating, mill scale dirt, foreign matter, rust, rust stains, mold, mildew, mortar, efflorescence, weld splatter and slag, and sealers from surfaces to be coated.
3. Remove hardware, hardware accessories, machined surfaces, plates, lighting fixtures, and similar items in place and not to be finish-coated or provide surface-applied protection prior to surface preparation and coating operations. Remove, if necessary, for complete coating of items and adjacent surfaces. Following completion of coating of each space or area, reinstall removed items.
4. Prepare hair line cracks (1/64" or less) per manufacturer's instructions. Reference the Details to repair cracks larger than 1/64".

5. Do not field coat the following work:

- a. Sealant Joints.
- b. Prefinished and natural finished items including but not limited to prefinished equipment, acoustic materials, finished mechanical and electrical equipment such as light fixtures and grilles.
- c. Non-ferrous metal surfaces including aluminum, stainless steel, chromium plate, copper, and tern coated stainless steel except as noted coated.
- d. Operating parts and labels.

C. MATERIALS PREPARATION

1. Mix and prepare coating materials in accordance with manufacturer's directions.
2. Stir materials before application to produce a mixture of uniform density and stir as required during application. Do not stir surface film into material. Remove film and, if necessary, strain material before using. Continuously agitate zinc-rich primers.
3. Store materials not in actual use in tightly covered containers. Maintain containers used in storage, mixing and application of coating in a clean condition, free of foreign materials and residue.

3.3 APPLICATION

A. General

1. Apply coating in accordance with manufacturer's directions. Use applicators and techniques best suited for substrate and type of material being applied.
2. Apply additional coats when undercoats, stains, or other conditions show through final coat of coating, until coating film is of uniform finish, color, and appearance. Give special attention to ensure that surfaces, including edges, corners, crevices, welds, and exposed fasteners receive a dry film thickness equivalent to that of flat surfaces.
3. Generally, coating surfaces behind movable equipment same as similar exposed surfaces. Coating surfaces behind permanently-fixed equipment or furniture with prime coat only before final installation of equipment.
4. Do not coat over dirt, rust, scale, grease, moisture, scuffed surfaces, or conditions otherwise detrimental to formation of a durable coating film.

B. Scheduling Coating

1. All caulking and sealants shall be in place and thoroughly cured prior to application of coatings.
2. Apply first-coat material to surfaces that have been cleaned, pretreated, or otherwise prepared for coating as soon as practicable after preparation and before subsequent surface deterioration.
3. Allow sufficient time between successive coatings to permit proper drying. Do not

recoat until coating has dried to where it feels firm, does not deform, or feel sticky under moderate thumb pressure, and application of another coat of coating does not cause lifting or loss of adhesion of the undercoat.

4. Minimum Coating Thickness: Apply materials at not less than manufacturer's recommended spreading rate to establish a total dry film thickness as indicated.

C. Application

1. Apply prime coat of materials which is required to be coated or finished, and which has not been prime coated by others.
2. Recoat primed and sealed surfaces where there is evidence of suction spots or unsealed areas in first coat, to assure a finish coat with no burn-through or other defects due to insufficient sealing.
3. Pigmented (Opaque) Finishes: Complete cover to provide an opaque, smooth surface of uniform finish, color, appearance, and coverage. Cloudiness, spotting, holidays, laps, brush marks, runs, sags, ropiness, or other surface imperfections will not be acceptable.
4. Completed Work: Match approved samples for color, texture, and coverage. Remove, refinish, or recoat work not in compliance with specified requirements.

3.4 CLEANING

- A. During progress of work, remove from site discarded coating materials, rubbish, cans, and rags at end of each work day.
- B. Upon completion of coating work, clean window glass and other coating-spattered surfaces. Remove spattered coating by proper methods of washing and scraping, using care not to scratch or otherwise damage finished surfaces.

3.5 SCHEDULES

- A. Coating colors shall be as indicated below:
  1. Color to be selected by Owner.

END OF SECTION

DIVISION 22 – PLUMBING

SECTION 221400

DRAINS AND PIPING

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes

1. All labor, material, equipment, special tools, and services required to complete the work required for the project as indicated on the Drawings and in the Specifications, including but not limited to:
  - a. Drain Piping Repairs.

B. Related Sections

1. Section 015600: Barriers.
2. Section 030100: Concrete Repairs.

1.2 REFERENCES

A. American Society for Testing and Materials (ASTM)

1. ASTM A74-20: Standard Specification for Cast Iron Soil Pipe and Fittings.
2. ASTM A888-20: Standard Specification for Hubless Cast Iron Soil Pipe for Sanitary and Storm Drain, Waste, and Vent Piping Applications.

1.3 SUBMITTALS

A. Manufacturer product data sheets.

1.4 DELIVERY, STORAGE AND HANDLING

A. Deliver all materials to job site in sealed, undamaged containers.

1.5 QUALITY ASSURANCE

A. Applicable Codes

1. The Contractor shall comply with all Federal, State and Municipal laws, codes, ordinances, and regulations applicable to the Work in this Contract and also with all requirements of the National Fire Protection Association, the National Electric Code, and the Occupational Safety and Health Administration (OSHA). If the above laws, codes, or ordinances conflict with this Specification, then the laws, codes or ordinances shall govern, except in such cases where the Specification exceeds them in quality of materials or labor, then the Specifications shall be followed.

1.6 SEQUENCING

- A. Coordinate location of floor drain assembly with concrete repairs. Refer to Drawings for drain locations.

## PART 2 PRODUCTS

### 2.1 PIPING AND ACCESSORIES

- A. Cast iron pipe and fittings per ASTM A74 – 4" diameter, or alternative galvanized steel pipe and fittings.
- B. Galvanized steel adjustable band pipe hanger.
- C. 3/8" dia. Galvanized hanger rods, threaded both ends. Provide necessary nuts and washers.
- D. Steel beam anchors to be "C" clamp with locknut.
- E. Concrete anchors to be Rawl Pipe Spike by Rawlplug Co., Inc.

### 2.2 EPOXY GROUT

- A. One part epoxy mixed with two parts clean dry coarse sand.
- B. Epoxy to be Sikadur 32, Hi-Mod by Sika Corp., or approved substitution.

## PART 3 EXECUTION

### 3.1 PREPARATION

- A. Protection
  - 1. Contractor shall protect all open excavations from damage due to mechanical disturbance, weather conditions, or other causes.
  - 2. Contractor shall protect occupied areas below the work area during all phases of the work including removal, preparation, and placement of materials.
  - 3. Provide barricades to close area and below. Coordinate the time closing of required areas with the Owner.
  - 4. Locate existing embedded slab reinforcement and conduit via nondestructive methods prior to core drilling of deck for drain installation. Do not damage.
  - 5. Verify that soffit mounted electrical conduit and lighting is not in the vicinity at the core drilling work. Conduit damaged shall be repaired in accordance with the National Electric Code / Local Building Code at no cost to the Owner.

### 3.2 INSTALLATION

- A. Drain Repairs
  - 1. Install suspended pipes as close to the soffit as possible, and maintain prevailing code required clearances throughout the area affected by this Work. Install piping such that it will drain.
  - 2. Attach piping to soffit and beams with specified attachments. Maximum spacing of attachments to be 4'-0" O.C.
  - 3. Do not force piping into position, and do not tighten hangers or affix permanent fasteners until the entire length of piping has been positioned.

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4. Remove all debris generated for this work from the job site.

### 3.3 VERIFICATION

- A. After completion of work, verify proper operation by flooding the area serviced by the new drain with water for 15 minutes, and visually confirm a leak-free condition.

END OF SECTION



DIVISION 32 - SITE WORK

SECTION 321723

PAVEMENT MARKINGS

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes

1. All labor, material, equipment, special tools, and services required to complete the work required for the project as indicated on the Drawings and in the Specifications, including but not limited to:
  - a. Line striping.
  - b. Directional arrows and text.
  - c. Curb paint.

B. Related Sections

1. Section 030100: Concrete Repairs.
2. Section 071800: Vehicular Traffic Membrane.
3. Section 079200: Sealants.

1.2 SUBMITTALS

- A. Manufacturer product data sheets.
- B. Manufacturer produced written verifications of compatibility with substrate.
- C. Shop drawing of pavement markings layout prior to removal.

1.3 QUALITY ASSURANCE

A. Applicable Codes

1. The Contractor shall comply with all Federal, State and Municipal laws, codes, ordinances and regulations applicable to the Work in this Contract and also with all requirements of the National Fire Protection Association, the National Electric Code, and the Occupational Safety and Health Administration (OSHA). If the above laws, codes or ordinances conflict with this Specification, then the laws, codes or ordinances shall govern, except in such cases where the Specification exceeds them in quality of materials or labor, then the Specifications shall be followed.

- B. Pavement marking manufacturer shall verify that the pavement marking media is compatible with the vehicular traffic membrane system-penetrating water repellent.

1.4 DELIVERY, STORAGE AND HANDLING

- A. Deliver materials to job site in sealed, undamaged containers. Each container shall be identified with material name, date of manufacture and batch number.

- B. Only those materials being used during any one work shift may be stored in the Work area. Coordinate location of storage area with the Owner.
- C. Marking materials shall be kept sealed when not in use.
- D. Storage and handling of materials shall conform to the requirements of the applicable safety regulatory agencies.
- E. Storage areas shall be heated or cooled as required maintaining the temperatures within the range recommended by the manufacturer.

#### 1.5 WARRANTY

- A. The Contractor shall warrant the pavement marking media from chipping and peeling for a period of two years.

### PART 2 PRODUCTS

#### 2.1 MATERIALS: PAINT

- A. Fast-Dry Acrylic Waterborne Traffic Marking Paint, by Aexcel Corporation. (bare concrete only)
- B. Set Fast Acrylic Aisle Marking Paint, by Sherwin Williams. (bare concrete only)
- C. Acrylithane HS2 by Neogard (membrane areas).
- D. Isoflex 630 by Lyntal International (membrane areas).
- E. Color to be selected by the Owner.

### PART 3 EXECUTIONS

#### 3.1 EXAMINATION

- A. The Contractor, prior to existing pavement marking removal, shall make drawings, take photographs, establish reference lines or perform other documentation necessary to ensure that existing pavement marking layout is duplicated upon completion of the Work specified in this Section.

#### 3.2 PREPARATION

- A. Protection
  - 1. Contractor shall protect work area during all phases of the work including removal, preparation, and placement of materials.
  - 2. Provide barricades to close work area. Coordinate the time closing of required areas with the Owner.

#### 3.3 APPLICATION

- A. New Pavement Markings
  - 1. All pavement markings disturbed or removed for repairs to be replaced.
  - 2. Paint shall be applied within 36 hours of completion of membrane top coat in

accordance with the manufacturer's specifications and written instructions.

3. The surface to be painted shall be clean and dry, free of dirt, debris and other loose materials.
4. Paint shall be spray applied in 2 solid coats with no thin or bare spots in either coat.
5. New pavement markings shall be straight and neat. Striping shall be geometrically accurate and uniform throughout the structure. Discrepancies shall be corrected at no additional cost to the Owner.
6. Pavement marking work shall be coordinated with membrane and water repellent work. Perform pavement marking on membrane and water repellent systems only after the systems have cured sufficiently as recommended by the system manufacturer.
7. Traffic shall not be permitted on new pavement markings until media has properly cured per manufacturer's requirements.
8. New pavement markings shall line up with existing markings on vertical surfaces; otherwise, Contractor shall remove and replace markings on vertical surfaces.

#### 3.4 CLEAN-UP

- A. After each day's work, remove containers, rubbish and rags.
- B. Remove drips, overspray and spillage of material from all surfaces.

END OF SECTION