| CLAYTON COUNTY Water AUTHORITY<br>1600 Battle Creek Road, Morrow, GA 30260 | **Bid Title** | |
|---|---|---|
| | **ADDENDUM # 2** | |
| | DATE | **Monday, June 15, 2020** |
| | BID NUMBER | **2020-GS-08 Walnut Creek Lift Station** |
| | PRE-BID MEETING DATE | **Wednesday, June 10, 2020 at 2:00 p.m. local time** |
| | BID OPENING DATE | **Wednesday, July 8, 2020 at 2:00 p.m. local time** |
| **ADDENDUM MUST BE SIGNED AND INCLUDED IN YOUR RESPONSE TO THE RFB.** | | |

**The following ADDITIONS shall be incorporated into the PROJECT MANUAL for the above-referenced project:**

1. Pre-Bid Conference Meeting Agenda
2. Pre-Bid Conference Attendee List
3. Section 01 43 00, Special Inspections
4. Section 26.28.16.13, Enclosed Circuit Breakers

**The following REVISIONS shall be incorporated into the PROJECT MANUAL for the above-referenced project:**

1. **Section 00 01 10, Table of Contents**, *revised based upon the changes within this Addendum, with the revised section attached.*
2. **Section 00 41 00, Bid Form**, *revised to remove item C1 Soil and Concrete Testing, with the revised section attached.*
3. **Section 01 20 00, Measurement and Payment,** *revised as follows,*
    a. *Part 1.03 B2e, remove item C1 Soil and Concrete Testing*
    b. *Part 1.03 B4c, rename "Graded Aggregaged Base" to "Graded Aggregate Base"*
4. **Section 31 00 01, Earthwork,** *revised as follows,*
    a. *Part 1.01, add the following item: "E. Field quality control tests, unless otherwise stated, will be performed by a materials testing consultant employed by the Owner. However, the Contractor shall be charged for the cost of any additional tests and investigation on work performed which does not meet the Specifications."*
    b. *Part 1.07, delete item A and replace with: "A. Use of explosives for excavation shall not be allowed."*
    c. *Part 3.02 B, delete item.*
5. **Section 46 21 13, Multi-Rake Type Mechanical Screen and Screenings Conveyors,** revised as follows:
    a. *Part 2.01 A, add "The screen and screenings conveyor shall be manufactured by the same company." to the end of the paragraph.*

All other terms and conditions of the PROJECT MANUAL remain unchanged.

**The following REVISIONS shall be incorporated into the DRAWINGS for the above-referenced project:**

1. **Sheet C002, Site Civil Site Layout**, remove note that states, "ALTERNATIVE BID ITEM; SEE DRAWING M001".
2. **Sheet M001, Site Mechanical Yard Piping**, Note 6, remove reference to "Bid Form Alternative 1". The scope of work described within this note is a part of the Base Bid.

| CLAYTON COUNTY Water AUTHORITY<br>1600 Battle Creek Road, Morrow, GA 30260 | **Bid Title** | |
|---|---|---|
| | **ADDENDUM # 2** | |
| | DATE | **Monday, June 15, 2020** |
| | BID NUMBER | **2020-GS-08 Walnut Creek Lift Station** |
| | PRE-BID MEETING DATE | **Wednesday, June 10, 2020 at 2:00 p.m. local time** |
| | BID OPENING DATE | **Wednesday, July 8, 2020 at 2:00 p.m. local time** |
| **ADDENDUM MUST BE SIGNED AND INCLUDED IN YOUR RESPONSE TO THE RFB.** | | |

All other terms and conditions of the DRAWINGS remain unchanged.

**The following QUESTIONS and ANSWERS shall be incorporated into the PROJECT MANUAL for the above-referenced project:**

Q1: How to find out about CCWA's SLBE program?
A1: Information on CCWA's SLBE program can be found at https://www.ccwa.us/smalllocal-business-program/ or by reaching out to Jikeva Moore at (770) 960-5800 or ccwa_slbe_program@ccwa.us

Q2: What is the project budget?
A2: An engineer's estimate is not available for this project.

Q3: How do I access a copy of the Geotechnical Report?
A3: Send a request to Brian Jones bjones@hazenandsawyer.com

Q4: Section 31 00 01 Earthwork references Section 31 23 16 Excavation by Blasting. The Blasting section is not in the Project Manual. Please provide.
A4: Excavation by blasting will not be allowed for this project.

| ***Acknowledgment of receipt of this addendum must be signed and included in your bid response.*** | |
|---|---|
| COMPANY NAME | |
| SIGNATURE | |
| DATE | |

| CLAYTON COUNTY Water AUTHORITY<br>1600 Battle Creek Road, Morrow, GA 30260 | **Bid Title** | |
|---|---|---|
| | **ADDENDUM # 2** | |
| | DATE | **Monday, June 15, 2020** |
| | BID NUMBER | **2020-GS-08 Walnut Creek Lift Station** |
| | PRE-BID MEETING DATE | **Wednesday, June 10, 2020 at 2:00 p.m. local time** |
| | BID OPENING DATE | **Wednesday, July 8, 2020 at 2:00 p.m. local time** |
| **ADDENDUM MUST BE SIGNED AND INCLUDED IN YOUR RESPONSE TO THE RFB.** | | |

## ATTACHMENTS

1. Pre-Bid Conference Meeting Agenda
2. Pre-Bid Conference Attendee List
3. 00 01 10 – Table of Contents [Add 2]
4. 00 41 00 – Bid Form [Add 2]
5. 01 43 00 – Special Inspections
6. 26 28 16.13 – Enclosed Circuit Breakers

Hazen *Agenda*

CLAYTON COUNTY Water AUTHORITY

June 10, 2020

Location: **Microsoft Teams Meeting**

or

Phone number: +1 470-443-0872

Conference ID: 341 353 510#

Time: 2:00 PM

**Subject:** **Non-Mandatory Pre-Bid Meeting**
**2020-GS-08 Walnut Creek Lift Station**

## Introductions [Hazen]

## Disclaimer [Hazen]

Any statements expressed in this meeting are non-binding. Any questions a proposer may have shall be answered by reviewing the Request for Bid documents or by submitting the questions in writing via email to Brian Jones BJones@hazenandsawyer.com by "Deadline for Questions" time listed in the Bid Schedule below. Any and all responses to bidder's questions will be issued in the form of an Addendum.

## Addendums [Hazen]

- CCWA and Hazen will provide responses to all questions via an addendum.
- Addendums will be posted on CCWA Procurement website (www.ccwa.us/procurement/) and sent via email to the email addresses provided by persons who have requested bid documents to Brian Jones BJones@hazenandsawyer.com.
- Addendums are to be acknowledged on Section 00 41 00 Bid Form
- All addenda issued shall become part of the Bid Documents.

## Project Overview [Hazen]

The Project consists of constructing a replacement lift station at Walnut Creek. The Work to be performed under this Contract includes, but is not limited to, the following:

- Construction of a screening structure with mechanical bar screen and conveyor, a submersible pump station in a 12-foot diameter wet well, valve vault, force main piping to connect to an existing force

main, an electrical building that will house electrical and control components, and a standby generator.

- The lift station will have two new submersible pumps with provision to add a third future pump.
- Electrical work includes a new pre-cast concrete building to house all the electrical distribution equipment and control panels, outdoor racks for junction boxes and disconnect switches and buried conduit from mechanical equipment to electrical building.
- Approximately 100 LF of gravity sewer and associated manholes to connect to the existing gravity sewer system.
- Demolition of the existing screening structure, wet well, pump station, and other miscellaneous items.

In addition to the work at Walnut Creek LS, the project includes approximately 450 SY of concrete driving paving as shown on Sheet C006.

## Bid Documents [Hazen]

- Volume 1 – Procurement, Contracting, and General Requirements
    - Section 00 21 13, Part 1.07 & Section 00 45 13 Bidders Qualifications Project Information Forms
    - Section 00 31 00 Bid Form – Lump Sum
    - Section 01 11 11, Part 1.15 Salvage of Equipment and Materials
    - Section 01 20 00 Measurement and Payment
    - Section 01 57 40 Bypass Pumping Performance Requirements
    - Section 01 79 00 Training Requirements
- Volume 2 – Technical Specifications
    - Section 40 61 13, Part 1.04 – I&C Subcontractor MR Systems
    - Section 43 25 13 Pump Performance Requirements
    - Section 46 21 13 Screening Performance Requirements
- Volume 3 – Drawings

## Bid Schedule [Hazen]

| Milestone | Date |
|---|---|
| **Bid Documents Issued** | Wednesday, May 20, 2020 |
| **NON-MANDATORY Pre-Bid Meeting** | Wednesday, June 10, 2020 (2:00 PM) |
| **Deadline for Questions** | Tuesday, June 23, 2020 (2:00 PM) |
| **Issue Last Addendum** | Wednesday, July 1, 2020 (2:00 PM) |
| **Bid Opening** | Wednesday, July 8, 2020 (2:00 PM) |
| **Estimated Approval of Selected Contractor at CCWA Monthly Board Meeting** | Thursday, August 6, 2020 (1:30 PM) |

## Procurement [CCWA]

### Submittal Requirements

Per Section 00 21 13 Part 1.16, Bidders shall complete and submit the following attachments with its Bid:

- Section 00 41 00 Bid Form
- Section 00 43 13 Georgia Bid Bond
- Section 00 45 13 Bidders Qualifications
- Section 00 45 19 Statement of Noncollusion
- Section 00 45 75 Georgia Security and Immigration Compliance Act of 2006 forms for both the Prime Contractor and for Subcontractors
- Section 00 21 13 SLBE Forms 1-4 including Checklist of Good Faith Effort and documentation attached to this Section.

In addition to the above, the following items are required to be included as a part of the bid submittal:

- Copies of all license(s) required to perform the work.
- Addendums
- W-9 Form
- Any other items as required in this RFB, including but not limited to the items contained in Section 00 21 13 Instruction to Bidders

Failure to include any of these items may result in the bid being deemed non-responsive.

### Contract Requirements

- Section 00 73 00, Exhibit A – Insurance Requirements

### Bid Evaluation

- The bid will be awarded to the lowest responsive responsible bidder whose bid conforms to the RFB specifications and will be the most advantageous to the CCWA.
- An evaluation will also be performed to ensure bidder complies with the required submittals. Determination of best responsive responsible bidder will be the sole judgment of the CCWA.

### Small Local Business Enterprise

- This procurement has a Small Local Business Enterprise (SLBE) goal of 10 percent.
- The bidder needs to make a Good Faith Effort in meeting this SLBE goal.
- SLBE Forms 1-4 including Checklist of Good Faith Effort and documentation must be included in the bid submittal.
- CCWA list of certified SLBE can be found on the CCWA website. Two certifications levels - General and Provisional – Provisional certification is available for GADOT DBE, City of Atlanta, Dekalb County and Clayton County.
- Please refer to Section 00 21 13 Instructions to Bidders, Part 1.12 for more details.

## Questions & Answers

# Hazen *Attendees*

June 10, 2020

Location: Microsoft Teams Meeting

or

Phone number: +1 470-443-0872

Conference ID: 341 353 510#

Time: 2:00 PM

**Subject: Non-Mandatory Pre-Bid Meeting**
**2020-GS-08 Walnut Creek Lift Station**

The below list of names is based upon the verbal rollcall within the conference call. The names may not be fully accurate. Contact information based upon what was available on-hand and is not to be considered complete.

| Name | Organization | Contact |
|---|---|---|
| Kelly Taylor | CCWA PME | kelly.taylor@ccwa.us |
| Nathan Meade | CCWA PME | nathan.meade@ccwa.us |
| Brent Taylor | CCWA General Services | brent.taylor@ccwa.us |
| Karen Riser | CCWA Risk | karen.riser@ccwa.us |
| Hilda Flores | CCWA Procurement | hilda.flores@ccwa.us |
| Marcia Jones | CCWA Procurement | marcia.jones@ccwa.us |
| Jakeva Moore | CCWA Procurement | ccwa_slbe_program@ccwa.us |
| Alan Bowling | Hazen | ABowling@hazenandsawyer.com |
| Brian Jones | Hazen | BJones@hazenandsawyer.com |
| Mike Joseph | MB Kahn | mjoseph2@mbkahn.com |

| Name | Organization | Contact |
|---|---|---|
| Alan Gravel | Willow | kmoore@wilocon.com |
| Mike Powers | Crowder | MPowers@crowderusa.com |
| Britany Hancock | R2T | britany.hancock@r2tinc.com |
| Jerry Eubank | PF Moon | jeanie@pfmoon.com |
| Jeremy Cox | Reynolds | jeremy.cox@reynoldscon.com |
| Thomas Grinson | Haren | (423) 263-5561 |
| Lori Moore | Sol | lmoore@solconstructionllc.com |
| Mike Rittenberry | Kiewitt | (770) 487-2300 |
| Andy Bramlett | Goforth Williamson | (770) 467-0303 |
| Walt Erndt | Pump & Process Equipment | walt@pumpandprocess.net |

**VOLUME 1 OF 3**
**PROCUREMENT, CONTRACTING, AND GENERAL REQUIREMENTS**

**VOLUME 2 OF 3**
**TECHNICAL SPECIFICATIONS**

**END OF SECTION**

THIS PAGE

INTENTIONALLY

LEFT BLANK

A. BIDDER

Bid of _____
(hereinafter "Bidder"), organized and existing under the laws of the State of _____, doing business as _____ (insert "a corporation," "a partnership," or "an individual" or such other business entity designation as is applicable). Submitted to the Clayton County Water Authority (hereinafter "Owner").

B. TOTAL LUMP SUM WORK

Bidder agrees to accept as full payment for the Lump Sum Work proposed within the Bidding Documents, based upon the undersigned's own estimate of quantities and costs and including taxes, overhead, and profit, the following lump sum of:

TOTAL LUMP SUM WORK: $_____

C. CASH ALLOWANCES

Bidder agrees that the following allowance, as further described in Measurement and Payment for additional work, will be furnished and paid for on a cash allowance basis.

| Item | Description | Cash Allowance |
|---|---|---|
| ~~C1~~ | ~~Soil and Concrete Testing~~ | ~~$30,000~~ [Add No. 2] |
| C2 | Asbestos Testing and Abatement | $10,000 |

D. CONTINGENCY ALLOWANCES

Bidder agrees that the following allowance, as further described in Measurement and Payment for additional work, will be furnished and paid for on a contingency allowance basis.

| Item | Description | Contingency Allowance |
|---|---|---|
| D1 | Unforeseen Work Elements | $200,000 |

E. UNIT PRICE WORK

Bidder further proposes to accept as full payment for the Unit Price Work proposed herein the amounts computed under the provisions of the Bidding Documents and based on the following unit price amounts, it being expressly understood that the unit prices are independent of the exact quantities involved.

Bidder agrees that the unit prices represent a true measure of the labor, materials, and services required to furnish and install the items, including all overhead and profit for each type and unit of Work called for in these Bidding Documents.

Bidder acknowledges that unit prices have been computed in accordance with paragraph 13.03 of the General Conditions and Section 01 29 76, Progress Payment Procedures.

Bidder further acknowledges that quantities are not guaranteed, and final payment will be based on actual quantities.

| Unit Price Bid Schedule – For Additional Work if Approved by the Owner | | | | | |
|---|---|---|---|---|---|
| **Item No.** | **Description** | **Unit** | **Estimated Quantity** | **Bid Unit Price** | **Bid Amount** |
| E1 | Select Fill | CY | 100 | $ | $ |
| E2 | Additional Graded Aggregate Base | TON | 2 | $ | $ |
| E3 | Bollards | EA | 5 | $ | $ |
| E4 | Additional Fencing | LF | 50 | $ | $ |
| **Total of All Unit Price Bid Items** | | | | | $ |

Bidder acknowledges that the total of the amounts shown above are estimated amounts to be included in the Base Bid, and that final payment will be based on actual costs as determined in conformance with the Bidding Documents and as authorized by Change Order.

F. TOTAL BASE BID PRICE

**TOTAL BASE BID PRICE (Sum of Items B, C, D, and E):**

**$_____**

TOTAL BASE BID WRITTEN IN WORDS

_____ Dollars

and _____ Cents

G. SELECTED EQUIPMENT MANUFACTURERS

The Bidder shall provide identification of the equipment manufacturer being supplied for each component listed below. See specifications for approved manufacturers for each component.

| Item | Component | Specification Section | Selected Manufacturer |
|---|---|---|---|
| 1 | Low Voltage Motor Control Center | 26 24 19 | 1. Eaton<br>2. Square D<br>3. Allen-Bradley<br>4. General Electric<br>No Substitutes |

| Item | Component | Specification Section | Selected Manufacturer |
|---|---|---|---|
| 2 | Engine Generator | 26 32 13 | 1. Cummins<br>2. Caterpillar<br>No Substitutes |
| 3 | Automatic Transfer Switch | 26 36 23 | 1. Eaton<br>2. ASCO<br>3. Russelectric<br>No Substitutes |
| 4 | Mechanical Screen and Conveyor | 46 21 13 | 1. Headworks International<br>2. Huber Technology<br>3. JWC<br>4. Duperon<br>Or Equal:<br>_____ |
| 5 | Submersible Pumps | 43 25 13 | 1. Flygt<br>2. Sultzer/ABS<br>3. KSB<br>4. Homa<br>Or Equal:<br>_____ |

H. BIDDER ACKNOWLEDGEMENTS AND CERTIFICATIONS

In compliance with your Advertisement for Competitive Sealed Bid, Bidder hereby proposes to perform all Work for the **Walnut Creek Lift Station** in strict accordance with the Contract Documents as enumerated in the Advertisement for Competitive Sealed Bid, within the time set forth therein, and at the prices stated below.

By submission of this Bid, Bidder certifies, and in the case of joint Bid each party thereto certifies as to the party's own organization that this Bid has been arrived at independently, without consultation, communication, or agreement as to any matter relating to this Bid with any other Bidder or with any competitor. Bidder also certifies compliance with the Instructions to Bidders.

In submitting this Bid, Bidder acknowledges and accepts Contractor's representations as more fully set forth in the Agreement Form.

In submitting this Bid, Bidder certifies Bidder is qualified to do business in the state where the Project is located as required by laws, rules, and regulations or, if allowed by statute, covenants to obtain such qualification prior to contract award.

In submitting this Bid, Bidder accepts all terms and conditions of the Bidding Documents. Contract Execution: The undersigned Bidder agrees, if this Bid is accepted, to enter into an Agreement with Owner on the form included in the Bidding Documents to perform and furnish Work as specified or indicated in the Bidding Documents for the Contract Price derived from the Bid and within the Contract Times indicated in the Agreement and in accordance with the other terms and conditions of the Bidding documents.

Insurance: Bidder further agrees that the Bid amount(s) stated herein includes specific consideration for the specified insurance coverages.

Liquidated Damages: Bidder accepts the provisions in the Agreement form as to liquidated damages.

Sales and Use Taxes: Bidder agrees to cooperate with Owner in accordance with the provisions in Section 00 73 00 Supplementary Conditions paragraph 7.10E.

Addenda: The Bidder hereby acknowledges that he has received the following Addenda to these Specifications (Bidder shall insert No. of each Addendum received) and agrees that all addenda issued are hereby made part of the Contract Documents, and the Bidder further agrees that his Bid includes all impacts resulting from said Addenda.

| **Addendum No.** | **Date** |
|---|---|
| | |
| | |
| | |

I. SURETY:

If Bidder is awarded a construction contract from this Bid, the surety who provides the Performance and Payment Bonds shall be:

_____ whose address is

_____

Street City State Zip

J. BIDDER INFORMATION

Georgia Utility Contractors License No.: _____
(Successful Bidder will be required to hold a valid Georgia Utility Contractors License)

Submitted by:

_____
(Name of Bidder)

By: _____
(Signature)

_____
(Name Printed)

_____
(Title)

_____
(Date)

_____ (SEAL)
(Attest)

_____
(Date)

_____
(Address)

_____
(Bidder's E-Mail Address)

_____
(Bidder's Website Address)

**END OF SECTION**

THIS PAGE

INTENTIONALLY

LEFT BLANK

## SECTION 01 43 00

## SPECIAL INSPECTIONS

### PART 1 – GENERAL

### 1.01 THE REQUIREMENT

A. This section defines the requirements for Special Inspections as required by Section 1704 of the International Building Code (IBC) and any State or local amendments.

B. The Engineer will prepare a Statement of Special Inspections, which identifies the type and extent of required Special Inspections. The Owner will retain one or more Special Inspections Agencies to perform Special Inspection services. These Agencies shall be independent from the Contractor and approved by the Building Official.

C. The Contractor shall plan and conduct his operations as to schedule and allow Special Inspections, providing adequate time and safe access for inspections. The Contractor shall coordinate requirements for Special Inspections with the Special Inspections Agency.

D. Special Inspections shall be in addition to inspections performed by Building Officials that are specified in IBC Section 110.

E. Special Inspections shall be in addition to any Structural Observations required by IBC Section 1704.

F. Special Inspections do not supersede other inspections and testing required by the Contract Documents to satisfy the Contractor's quality control responsibility. Contractor shall be responsible for all costs associated with quality control requirements as required by other sections of the Specifications.

G. Special Inspections shall not relieve Contractor's obligation to perform and complete work in accordance with Contract Documents. Results of Special Inspections activities, including any discrepancies that are noted or not noted, shall never constitute an acceptance of work that is not in accordance with the Contract Documents.

H. This section does not apply to construction equipment, shoring, earth retention systems, and temporary structures used by the Contractor in construction and not detailed in the Contract Documents. The Contractor shall be solely responsible for means, methods, techniques, sequences, or procedures of construction and any associated building code requirements.

### 1.02 RELATED WORK SPECIFIED ELSEWHERE

A. Special Inspections requirements apply to work detailed in other sections of the Specifications. Special Inspections requirements shall be in addition to any other inspection or quality control requirements detailed in other sections of the Specifications. See individual specification sections for type of work in question.

032513BR

## 1.03 DEFINITIONS

A. Periodic Special Inspections: The part-time or intermittent observation of work requiring Special Inspection by a Special Inspector who is present in the area where the work has been or is being performed and at the completion of the work.

B. Continuous Special Inspections: The full-time observation of work requiring Special Inspection by a Special Inspector who is present in the area where the work is being performed.

C. Engineer: The Registered Design Professional in Responsible Charge of each building system. These systems include structural, mechanical, electrical, and architectural components.

D. Special Inspections Agency: An established and recognized agency regularly engaged in conducting tests or furnishing inspection services, which has been approved by the Building Official and is retained by the Owner.

E. Special Inspector: Individual employed by or retained by the Special Inspections Agency who is qualified in inspection of a particular type of construction and conducts inspection activities in that type of construction, as required by this section.

F. Statement of Special Inspections: Document prepared by the Engineer and submitted to the Building Official which identifies the type and extent of required Special Inspections.

G. Approved Fabricator: Fabricator who has been registered and approved by the Building Official to perform a particular type of work without Special Inspections.

## 1.04 REFERENCE SPECIFICATIONS, CODES, AND STANDARDS

A. Without limiting the generality of the other requirements of the specifications, all work herein shall conform to the applicable requirements of the following documents and all other documents referenced in the specifications. All referenced specifications, codes, and standards refer to the most current issue available at the time of Bid.

| | | |
|---|---|---|
| 1. | International Building Code | |
| 2. | ACI 318 | Building Code Requirements for Structural Concrete |
| 3. | ACI 530.1/ASCE 6 | Specifications for Masonry Structures |
| 4. | AISC | "Code of Standard Practice." |
| 5. | AISC | "Specification for Structural Steel Buildings". |
| 6. | AISC 348 | "The 2009 RCSC Specification for Structural Joints”. |
| 7. | AWS | "Structural Welding Code". |
| 8. | Aluminum Association | Specifications for Aluminum Structures |

## 1.05 SUBMITTALS

A. The Contractor shall submit the following in accordance with Section 01300, Submittals.

1. The Contractor shall submit a written statement of responsibility to the Building Official and Engineer using the attached form entitled “Contractor’s Statement of Responsibility” prior to beginning work. A statement is required from each Contractor who has responsibility for construction or fabrication of a main wind- or seismic-force-resisting system, designated seismic system, or a wind- or seismic-resisting-component listed in the Statement of Special Inspections.

2. The Contractor shall submit qualifications of any fabricators they intend to use that may qualify as Approved Fabricators to the Special Inspections Agency for review.

B. The Special Inspections Agency shall submit the following in accordance with Section 01 33 00, Submittal Procedures.

1. The Special Inspections Agency shall provide a statement of qualifications showing relative experience, training, and certification(s) for each Special Inspector to the Building Official, if requested.

2. The Special Inspections Agency shall review fabricator qualifications and submit them to the Building Official for approval as an Approved Fabricator if requested.

3. Special Inspectors shall keep detailed inspection records, including all inspections, tests, similar services, and any discrepancies and corrections. Any discrepancies and corrections shall be reported to the Building Official and the Engineer in all required reports, unless otherwise required by the Building Official.

4. The Special Inspections Agency shall submit Interim Reports to the Building Official and the Engineer documenting required Special Inspections and correction of any discrepancies using the attached form entitled “Interim Report of Special Inspections” at the frequency specified in the Statement of Special Inspections.

5. The Special Inspections Agency shall submit to the Building Official and the Engineer a Final Report documenting required Special Inspections and correction of any discrepancies using the attached form entitled “Final Report of Special Inspections.” The Final Report shall be submitted at a point in time agreed upon by the Owner and the Building Official at the Pre-inspection Meeting.

6. Where work is done by Approved Fabricators, the Special Inspections Agency shall coordinate the submittal of a certificate of compliance to the Building Official and Engineer using the attached form entitled “Fabricator’s Certificate of Compliance.”

## 1.06 SPECIAL INSPECTOR QUALIFICATIONS

Special Inspectors shall meet minimum qualifications established by the Building Official and shall be approved by the Building Official.

## 1.07 OFF-SITE FABRICATIONS

A. When structural elements or assemblies are fabricated off site, Special Inspections are required to be performed in the fabricator's shop unless the fabricator is an Approved Fabricator. Special Inspections are not required if work is done on the premises of an Approved Fabricator.

B. Fabricators shall maintain detailed fabrication and quality control procedures to ensure workmanship and conformance with Contract Documents and reference standards. The Special Inspections Agency shall review the fabricator's quality control procedures and coordinate required Special Inspections with the fabricator and the Contractor.

C. The Contractor shall submit qualifications of fabricators seeking Approved Fabricator status to the Special Inspections Agency for review. Approval as an Approved Fabricator shall be given by the Building Official upon the recommendation of the Special Inspections Agency or upon review of the fabricator's written procedural and quality control manuals and periodic auditing of fabrication practices.

# PART 2 – PRODUCTS (Not Used)

# PART 3 – EXECUTION

## 3.01 PRE-INSPECTION MEETING

At least two weeks prior to beginning work, a Pre-inspection Meeting shall be held to discuss the Special Inspection procedures and submittals. The following parties shall participate: the Engineer, a Special Inspections Agency representative, the Contractor, Subcontractors, Testing Agencies, and the Building Official. The type of meeting (in-person or teleconference) and location of meeting shall be determined by the Building Official.

## 3.02 STATEMENT AND SCHEDULE OF SPECIAL INSPECTIONS

The Special Inspections Agency and all Special Inspectors are required to comply with all requirements of the Statement of Special Inspections and the Schedule of Special Inspections. Together, these documents identify materials, systems, components, and work that are required to have Special Inspections, the type and extent of Special Inspections, and whether they will be continuous or periodic.

## 3.03 SPECIAL INSPECTIONS AGENCY REQUIREMENTS AND RESPONSIBILITIES

A. The Special Inspections Agency shall be an established and recognized agency regularly engaged in conducting tests or furnishing inspection services, which has been approved by the Building Official and is retained by the Owner. The Agency shall demonstrate competence, to the satisfaction of the Building Official, for the inspection of the particular type of construction or operation requiring Special Inspection.

B. The Special Inspections Agency shall maintain detailed inspection records, including a copy at the jobsite, and all records shall be available upon request by the Engineer or the Building Official. The Agency shall submit all required reports to the Engineer and Building Official. Where Engineer approval is required for corrections, the Special Inspector shall maintain copies of all related correspondence and submit with all required reports. The Agency shall coordinate all required Special Inspection activities with the Special Inspectors, the Contractor, and any fabricators and shall coordinate designation of fabricators as Approved Fabricators when requested.

## 3.04 SPECIAL INSPECTORS' REQUIREMENTS AND RESPONSIBILITIES

A. All Special Inspectors shall meet the qualification requirements determined by the Building Official for the particular type of inspection services they will be providing and shall be approved by the Building Official. Special Inspectors shall submit written documentation demonstrating their competence and experience or training to the Building Official for approval of their qualifications.

B. Special Inspections shall be performed in accordance with all requirements of the Statement of Special Inspections, the Schedule of Special Inspections, the IBC, and any State or local amendments. Special Inspectors shall maintain detailed inspection records, including a copy at the jobsite, and all records shall be available upon request by the Engineer or the Building Official. Special Inspectors shall submit all required reports to the Engineer and the Building Official. Where Engineer approval is required for corrections, the Special Inspector shall maintain copies of all related correspondence and submit with all required reports. Special Inspectors shall coordinate inspection requirements and timing with the Contractor.

C. Any discrepancies in work noted by the Special Inspector shall be brought to the immediate attention of the Contractor for correction. Special Inspectors shall coordinate correction of discrepancies with the Contractor. Any corrections of discrepancies that result in changes to the work as shown on the Contract Documents shall be approved by the Engineer. If noted discrepancies are not corrected, the Special Inspector shall notify the Contractor, the Engineer, and the Building Official. All noted discrepancies and corrections shall be documented in all inspection records and all required reports.

## 3.05 CONTRACTOR RESPONSIBILITIES

A. Each Contractor responsible for the construction or fabrication of a main wind- or seismic-force-resisting system, designated seismic system, or a wind- or seismic-resisting-component listed in the Statement of Special Inspections shall submit a Statement of Responsibility to the Building Official and Engineer prior to the commencement of work. The Statement of Responsibility shall contain acknowledgement of the special requirements contained in the Statement of Special Inspections.

B. The Contractor shall coordinate requirements of Special Inspections with the Special Inspections Agency and the Special Inspectors and shall provide adequate time and access to conduct inspections. The Contractor is solely responsible for providing safe access and any necessary safety equipment required to conduct inspections. The Special Inspector shall not supervise, direct, control, or have authority over or be responsible for the Contractor's means, methods, techniques, sequences, or procedures

of construction, or the safety precautions and programs incident thereto, or for any failure of the Contractor to comply with Laws and Regulations applicable to the performance of the Work.

C. Special Inspections shall not relieve the Contractor's obligation to perform and complete work in accordance with the Contract Documents. Results of Special Inspections activities, including any discrepancies that are noted or not noted, shall never constitute an acceptance of work that is not in accordance with the Contract Documents.

D. The Contractor shall provide advance notice of work to be conducted that will require Special Inspections. If the Special Inspector is delayed in inspecting the work due to inadequate notice or completion of the work, the Contractor shall reimburse the Owner for the cost of additional subsequent Special Inspections.

E. The Contractor shall promptly correct any discrepancies noted by the Special Inspectors. Any corrections of discrepancies that result in changes to the work as shown on the Contract Documents shall be approved by the Engineer. Where Engineer approval is required, the Contractor shall report the discrepancy to the Engineer in accordance with provisions of the General Conditions. The Engineer will authorize any changes to the Contract Documents required for the correction in accordance with provisions of the General Conditions. Copies of all correspondence related to the correction shall be submitted concurrently to the Special Inspections Agency.

## 3.06 BUILDING OFFICIAL OR AUTHORITY RESPONSIBILITIES

The Building Official will approve qualifications of the Special Inspections Agency, all Special Inspectors, and any Approved Fabricators. The Building Official will approve all forms submitted by the Contractor, any Approved Fabricators, the Engineer, the Special Inspections Agency, and the Special Inspectors. The Building Official and the Special Inspections Agency shall agree to the frequency of Interim Reports and the submittal deadline for the Final Report.

## 3.07 ENGINEER RESPONSIBILITIES

The Engineer shall complete the Statement of Special Inspections and the Schedule of Special Inspections. The Engineer shall respond to discrepancies noted by the Special Inspector, if required.

## 3.08 OWNER RESPONSIBILITES

The Owner will retain a Special Inspections Agency to perform Special Inspections during construction.

## 3.09 MINIMUM INSPECTION REQUIREMENTS

Detailed requirements for Special Inspections are shown in the Statement of Special Inspections and the Schedule of Special Inspections, which references the IBC, applicable code standards, and any State or local amendments. Special Inspections shall be performed in accordance with all requirements of the Statement of Special Inspections, the Schedule of Special Inspections, the IBC, and any State or local amendments. Additional requirements for specific materials listed in other sections of

these specifications shall also be satisfied. The frequency of inspections shall be continuous or periodic as indicated in the Schedule of Special Inspections and in accordance with applicable building codes.

## 3.10 DISCREPANCIES AND CORRECTIVE MEASURES

A. The Special Inspector shall bring any discrepancies to the immediate attention of the Contractor for correction. The Contractor shall promptly correct any discrepancies noted by the Special Inspectors. Special Inspectors shall coordinate correction of discrepancies with the Contractor. Discrepancies and their correction shall be noted in inspection records and in all required reports. Any corrections that result in changes to the work as shown on the Contract Documents shall be approved by the Engineer. Where Engineer approval is required, the Contractor shall report the discrepancy to the Engineer in accordance with provisions of the General Conditions. The Engineer will authorize any changes to the Contract Documents required for the correction in accordance with provisions of the General Conditions. Copies of all correspondence related to the correction shall be submitted concurrently to the Special Inspections Agency.

B. If discrepancies are not corrected promptly, the Special Inspector shall notify the Contractor, the Engineer, and the Building Official using the attached form “Notification of Failure to Correct Discrepancies.”

## 3.11 REPORTS

Special Inspectors shall maintain detailed inspection records, including a copy at the jobsite, and all records shall be available upon request by the Engineer or the Building Official. The Special Inspections Agency shall submit all required reports to the Building Official and Engineer as agreed upon with the Building Official. Reports shall indicate the inspections and testing performed and whether work inspected was or was not completed in conformance to Contract Documents and any corrective measures taken. Where Engineer approval is required for corrections, the Agency shall maintain copies of all related correspondence and submit with all required reports.

# STATEMENT OF SPECIAL INSPECTIONS

**PROJECT:** Walnut Creek Lift Station

**LOCATION:** SLR Boulevard, Lovejoy, GA

**PERMIT APPLICANT:** Clayton County Water Authority

**APPLICANT'S ADDRESS:** 1600 Battle Creek Road, Morrow, GA

**ARCHITECT OF RECORD:** N/A

**STRUCTURAL ENGINEER OF RECORD:** Frederick Powell, PE (GA 029283)

**MECHANICAL ENGINEER OF RECORD:** Brian Jones, PE (GA 035647)

**ELECTRICAL ENGINEER OF RECORD:** Nicholas Meyer, PE (GA021063)

**REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE:** Frederick Powell, PE (GA 029283)

This Statement of Special Inspections is submitted in accordance with Section 1704.3 of the 2018 International Building Code. It includes a *Schedule of Special Inspection Services* applicable to the above-referenced Project as well as the identity of the individuals, agencies, or firms intended to be retained for conducting these inspections. If applicable, it includes *Special Inspections for Seismic Resistance* and/or *Special Inspections for Wind Resistance*.

| | | |
|---|---|---|
| Are *Special Inspections for Seismic Resistance* included in the *Statement of Special Inspections*? | ☐ Yes | ☒ No |
| Are *Special Inspections for Wind Resistance* included in the *Statement of Special Inspections*? | ☐ Yes | ☒ No |

The Special Inspector(s) shall keep records of all inspections and shall furnish interim inspection reports to the Building Official and to the Registered Design Professional in Responsible Charge at a frequency agreed upon by the Design Professional and the Building Official prior to the start of work. Discrepancies shall be brought to the immediate attention of the Contractor for correction. If the discrepancies are not corrected, the discrepancies shall be brought to the attention of the Building Official and the Registered Design Professional in Responsible Charge prior to completion of that phase of work. A *Final Report of Special Inspections* documenting required special inspections and corrections of any discrepancies noted in the inspections shall be submitted to the Building Official and the Registered Design Professional in Responsible Charge at the conclusion of the project.

Frequency of interim report submittals to the Registered Design Professional in Responsible Charge:

__Weekly __Bi-Weekly x__Monthly Other; specify: _____

The Special Inspection program does not relieve the Contractor of the responsibility to comply with the Contract Documents. Jobsite safety and means and methods of construction are solely the responsibility of the Contractor.

Statement of Special Inspections Prepared by:

Frederick Powell
Type or print name

Signature 5/29/2020
Date

Preparer's Seal


Building Official's Acceptance:

Signature Date

Permit Number:

Frequency of interim report submittals to the Building Official:

__Monthly __Bi- Monthly _X_Upon Completion Other; specify:_____

INTERIM REPORT OF SPECIAL INSPECTIONS

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| City/County of: | | | | | | | |
| Project Name/Address: | | | Inspection Type(s) Coverage: | | | | |
| | | | ☐ Continuous | | | ☐ Periodic | |
| Describe Inspections Made, Including Locations: | | | | | | | |
| Tests Made: | | | | | | | |
| Total Inspection Time Each Day | Date: | | | | | | |
| | Hours: | | | | | | |

**List items requiring Special Inspection, and any discrepancies and corrections. If Engineer approval is required for any corrections, note this, and indicate that approval was obtained. Attach copies of all related correspondence.**

**Comments**:

To the best of my knowledge, work inspected was in accordance with the Contract Documents and applicable standards except as noted above.

Signed: _____ Date: _____

Print Full Name: _____ I.D. _____

Phone Number: _____

**This report is to be submitted to the Building Official and the Engineer. A copy shall be maintained at the jobsite.**

## FINAL REPORT OF SPECIAL INSPECTIONS

**PROJECT:** _____
**LOCATION:** _____
**PERMIT APPLICANT:** _____
**APPLICANT'S ADDRESS:** _____

_____
**ARCHITECT OF RECORD:** _____
**STRUCTURAL ENGINEER OF RECORD:** _____
**MECHANICAL ENGINEER OF RECORD:** _____
**ELECTRICAL ENGINEER OF RECORD:** _____
**REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE:** _____

To the best of my information, knowledge, and belief, Special Inspections required for this Project in accordance with Section 1704 of the 2018 International Building Code and any State or local amendments have been performed, and all work has been completed in accordance with the Contract Documents and all applicable standards, except as indicated.

The Special Inspection program does not relieve the Contractor of the obligation to comply with the Contract Documents. Jobsite safety and means and methods of construction are solely the responsibility of the Contractor.

This Final Report includes information submitted in previous Interim Reports numbered to ____, as well as any Special Inspections, discrepancies, and corrections occurring since the last Interim Report, dated ____.

All items requiring Special Inspection are listed below. All inspections, tests, and similar services that were performed are listed and any discrepancies and corrections are indicated. If Engineer approval was required for any corrections, this is noted, and copies of all related correspondence are attached.

_____
_____
_____
_____
_____

*(Attach 8 ½"x11" continuation sheet(s) if required to complete the description of corrections)*

Special Inspector's Seal

**Prepared By:**

_____
Special Inspection Agency

_____
Type or print name

_____
Signature Date

## CONTRACTOR'S STATEMENT OF RESPONSIBILITY

Each Contractor responsible for the construction or fabrication of a main-wind- or seismic-force-resisting system, designated seismic system, or a wind- or seismic-resisting-component listed in the Statement of Special Inspections must submit this Statement of Responsibility prior to commencement of work on the system or component.

**Project:** _____

**Contractor's Name:** _____

**Address:** _____

**License No.:** _____

**Description of building systems and components included in Statement of Responsibility:**

_____
_____
_____
_____
_____
_____
_____

**Contractor's Acknowledgement of Special Requirements**

*I hereby acknowledge that I have received, read, and understand the Statement of Special Inspections and its requirements.*

_____
Name and Title (type or print)

_____ _____
Signature Date

## FABRICATOR'S CERTIFICATE OF COMPLIANCE

Each approved fabricator that is exempt from Special Inspection of shop fabrication and implementation procedures per section 1704.2.5 of the 2018 International Building Code must submit this Fabricator's Certificate of Compliance at the completion of fabrication.

**Project:** _____

**Fabricator's Name:** _____

**Address:** _____

**Description of structural members and assemblies that have been fabricated:**

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

*I hereby certify that items described above were fabricated on my premises in strict accordance with the Contract Documents and applicable standards.*

_____
Name and Title (type or print)

_____ _____
Signature Date

*Attach copy of Building Official's approval of fabricator as an Approved Fabricator.*

## NOTIFICATION OF FAILURE TO CORRECT DISCREPANCY

| |
|---|
| City/County of: |
| Project name/Address: |
| **List discrepancies, proposed correction, and Contractor response. If Engineer approval is required for any corrections, note this, and indicate whether approval was obtained. Attach copies of all related correspondence.** |
| **Comments**: |

Signed: _____ Date: _____

Print Full Name: _____ I.D. _____

Phone Number: _____

**This report is to be submitted to the Building Official, the Contractor, and the Engineer.**

| SCHEDULE OF SPECIAL INSPECTIONS SERVICES | | | | | |
|---|---|---|---|---|---|
| **PROJECT** | **CCWA Walnut Creek Lift Station, Lovejoy, GA** | | | | |
| | | **APPLICABLE TO THIS PROJECT** | | | |
| **MATERIAL / ACTIVITY** | **SERVICE** | **Y/N** | **EXTENT** | **AGENT*** | **DATE COMPLETED** |
| **1705.1.1 Special Cases** (work unusual in nature, including but not limited to alternative materials and systems, unusual design applications, materials and systems with special manufacturer's requirements - add additional rows as needed.) | Submittal review, shop (3) and/or field inspection | | | | |
| 1. Inspection of anchors post-installed in solid grouted masonry: Per research reports including verification of anchor type, anchor dimensions, hole dimensions, hole cleaning procedures, anchor spacing, edge distances, masonry unit, grout, masonry compressive strength, anchor embedment and tightening torque | Field inspection | N | Periodic or as required by the research report issued by an approved source | | |
| 2. Aggregate Pier Inspection: The special inspector's responsibilities include, but are not limited to, review of the aggregate pier designer's use of soil parameters as presented in the project soils report, and during construction, verification of aggregate properties, type and number of lifts of aggregate, hole size and depths and top elevations of the pier elements, and applied energy. Additionally, results of qualitative tests on production aggregate pier elements such as modulus load testing, uplift pull-out testing, bottom stabilization tests and dynamic cone penetration tests, shall be reviewed to verify compliance with design specifications. | Field inspection | N | Periodic or as required by the research report issued by an approved source | | |
| **1705.2.1 Structural Steel Construction** | | | | | |
| 1. Fabricator and erector documents (Verify reports and certificates as listed in AISC 360, Section N 3.2 for compliance with construction documents) | Submittal Review | N | Each submittal | | |
| 2. Material verification of structural steel | Shop (3) and field inspection | N | Periodic | | |
| 3. Structural steel welding: | | | | | |
| a. Inspection tasks Prior to Welding (Observe, or perform for each welded joint or member, the QA tasks listed in AISC 360, Table N5.4-1) | Shop (3) and field inspection | N | Observe or Perform as noted (4) | | |
| b. Inspection tasks During Welding (Observe, or perform for each welded joint or member, the QA tasks listed in AISC 360, Table N5.4-2) | Shop (3) and field inspection | N | Observe (4) | | |
| c. Inspection tasks After Welding (Observe, or perform for each welded joint or member, the QA tasks listed in AISC 360, Table N5.4-3) | Shop (3) and field inspection | N | Observe or Perform as noted (4) | | |
| d. Nondestructive testing (NDT) of welded joints: *see Commentary* | | N | | | |
| 1) Complete penetration groove welds 5/16" or greater in *risk category* III or IV | Shop (3) or field ultrasonic testing - 100% | N | Periodic | | |
| 2) Complete penetration groove welds 5/16" or greater in *risk category* II | Shop (3) or field ultrasonic testing - 10% of welds minimum | N | Periodic | | |
| 3) Welded joints subject to fatigue when required by AISC 360, Appendix 3, Table A-3.1 | Shop (3) or field radiographic or Ultrasonic testing | N | Periodic | | |

| SCHEDULE OF SPECIAL INSPECTIONS SERVICES | | | | | |
|---|---|---|---|---|---|
| **PROJECT** | **CCWA Walnut Creek Lift Station, Lovejoy, GA** | | | | |
| | | **APPLICABLE TO THIS PROJECT** | | | |
| **MATERIAL / ACTIVITY** | **SERVICE** | **Y/N** | **EXTENT** | **AGENT*** | **DATE COMPLETED** |
| 4) Fabricator's NDT reports when fabricator performs NDT | Verify reports | N | Each submittal (5) | | |
| 4. Structural steel bolting: | Shop (3) and field inspection | | | | |
| a. Inspection tasks Prior to Bolting (Observe, or perform tasks for each bolted connection, in accordance with QA tasks listed in AISC 360, Table N5.6-1) | | N | Observe or Perform as noted (4) | | |
| b. Inspection tasks During Bolting (Observe the QA tasks listed in AISC 360, Table N5.6-2) | | N | Observe (4) | | |
| 1) Pre-tensioned and slip-critical joints | | N | | | |
| a) Turn-of-nut with matching markings | | N | Periodic | | |
| b) Direct tension indicator | | N | Periodic | | |
| c) Twist-off type tension control bolt | | N | Periodic | | |
| d) Turn-of-nut without matching markings | | N | Continuous | | |
| e) Calibrated wrench | | N | Continuous | | |
| 2) Snug-tight joints | | N | Periodic | | |
| c. Inspection tasks After Bolting (Perform tasks for each bolted connection in accordance with QA tasks listed in AISC 360, Table N5.6-3) | | N | Perform (4) | | |
| 5. Visual inspection of exposed cut surfaces of galvanized structural steel main members and exposed corners of the rectangular HSS for cracks subsequent to galvanizing | Shop (3) or field inspection | N | Periodic | | |
| 6. Embedments (Verify diameter, grade, type, length, embedment. See 1705.3 for anchors) | Field inspection | N | Periodic | | |
| 7. Verify member locations, braces, stiffeners, and application of joint details at each connection comply with construction documents | Field inspection | N | Periodic | | |
| **1705.2.2 Cold-Formed Steel Deck** | | | | | |
| 1. Manufacturer documents (Verify reports and certificates as listed in SDI QA/QC, Section 2, Paragraphs 2.1 and 2.2 for compliance with construction documents) | Submittal Review | N | Each submittal | | |
| 2. Material verification of steel deck, mechanical fasteners and welding materials | Shop (3) and field inspection | N | Periodic | | |
| 3. Cold-formed steel deck placement: | Shop (3) and field inspection | N | | | |
| a. Inspection tasks Prior to Deck Placement (Perform the QA tasks listed in SDI QA/QC, Appendix 1 Table 1.1) | | N | Perform (4) | | |
| b. Inspection tasks After Deck Placement (Perform the QA tasks listed in SDI QA/QC, Appendix 1 Table 1.2) | | N | Perform (4) | | |
| 4. Cold-formed steel deck welding: | Shop (3) and field inspection | N | | | |
| a. Inspection tasks Prior to Welding (Observe the QA tasks listed in SDI QA/QC, Appendix 1 Table 1.3) | | N | Observe (4) | | |
| b. Inspection tasks During Welding (Observe the QA tasks listed in SDI QA/QC, Appendix 1 Table 1.4) | | N | Observe (4) | | |
| c. Inspection tasks After Welding (Perform the QA tasks listed in SDI QA/QC, Appendix 1 Table 1.5) | | N | Perform (4) | | |
| 5. Cold-formed steel deck mechanical fastening: | Shop (3) and field inspection | N | | | |

| SCHEDULE OF SPECIAL INSPECTIONS SERVICES | | | | | |
|---|---|---|---|---|---|
| **PROJECT** | **CCWA Walnut Creek Lift Station, Lovejoy, GA** | | | | |
| | | **APPLICABLE TO THIS PROJECT** | | | |
| **MATERIAL / ACTIVITY** | **SERVICE** | **Y/N** | **EXTENT** | **AGENT*** | **DATE COMPLETED** |
| a. Inspection tasks Prior to Mechanical Fastening (Observe the QA tasks listed in SDI QA/QC, Appendix 1 Table 1.6) | | N | Observe (4) | | |
| b. Inspection tasks During Mechanical Fastening (Observe the QA tasks listed in SDI QA/QC, Appendix 1 Table 1.7) | | N | Observe (4) | | |
| c. Inspection tasks After Mechanical Fastening (Perform the QA tasks listed in SDI QA/QC, Appendix 1 Table 1.8) | | N | Perform (4) | | |
| **1705.2.3. Open-Web Steel Joists and Joist Girders** | | | | | |
| 1. Installation of open-web steel joists and joist girders. | | N | | | |
| a. End connections - welding or bolted. | per SJI CJ or SJI 100 | N | Periodic | | |
| b.. Bridging - horizontal or diagonal. | | N | | | |
| 1) Standard bridging. | per SJI CJ or SJI 100 | N | Periodic | | |
| 2) Bridging that differs from the specifications listed in SJI CJ or SJI 100. | | N | Periodic | | |
| **1705.2.4. Cold-Formed Steel Trusses Spanning 60 feet or Greater** | | | | | |
| Verify temporary and permanent restraint/bracing are installed in accordance with the approved truss submittal package | Field inspection | N | Periodic | | |
| **1705.3 Concrete Construction** | | | | | |
| 1. Inspection and placement verification of reinforcing steel and prestressing tendons. | Shop (3) and field inspection | **Y** | Periodic | **TBD** | |
| 2. Reinforcing bar welding: | | N | | | |
| a. Verification of weldability of bars other than ASTM A706. | | N | Periodic | | |
| b. Inspection of single-pass fillet welds 5/16 or less in size. | | N | Periodic | | |
| c. Inspection of all other welds. | | N | Continuous | | |
| 3. Inspection of anchors cast in concrete. | Shop (3) and field inspection | **Y** | Periodic | **TBD** | |
| 4. Inspection of anchors post-installed in hardened concrete members per research reports, or, if no specific requirements are provided, requirements shall be provided by the registered design professional and approved by the building official, including verification of anchor type, anchor dimensions, hole dimensions, hole cleaning procedures, anchor spacing, edge distances, concrete minimum thickness, anchor embedment and tightening torque | Field inspection | **Y** | Periodic or as required by the research report issued by an approved source | **TBD** | |
| a. Adhesive anchors installed in horizontal or upward-inclined orientation that resist sustained tension loads. | | **Y** | Continuous | **TBD** | |
| b. Mechanical and adhesive anchors note defined in 4a. | | **Y** | Periodic | **TBD** | |
| 5. Verify use of approved design mix | Shop (3) and field inspection | **Y** | Periodic | **TBD** | |
| 6. Prior to placement, fresh concrete sampling, perform slump and air content tests and determine temperature of concrete and perform any other tests as specified in construction documents. | Shop (3) and field inspection | **Y** | Continuous | **TBD** | |
| 7. Inspection of concrete and shotcrete placement for proper application techniques | Shop (3) and field inspection | **Y** | Continuous | **TBD** | |
| 8. Verify maintenance of specified curing temperature and techniques | Shop (3) and field inspection | **Y** | Periodic | **TBD** | |

# SCHEDULE OF SPECIAL INSPECTIONS SERVICES

| PROJECT | CCWA Walnut Creek Lift Station, Lovejoy, GA | | | | |
|---|---|---|---|---|---|
| | | APPLICABLE TO THIS PROJECT | | | |
| MATERIAL / ACTIVITY | SERVICE | Y/N | EXTENT | AGENT* | DATE COMPLETED |
| 9. Inspection of prestressed concrete: | Shop (3) and field inspection | Y | | TBD | |
| a. Application of prestressing force | | Y | Continuous | TBD | |
| b. Grouting of bonded prestressing tendons | | Y | Continuous | TBD | |
| 10. Inspect erection of precast concrete members | | Y | Periodic | TBD | |
| 11. Verification of in-situ concrete strength, prior to stressing of tendons in post tensioned concrete and prior to removal of shores and forms from beams and structural slabs | Review field testing and laboratory reports | Y | Periodic | TBD | |
| 12. Inspection of formwork for shape, lines, location and dimensions | Field inspection | Y | Periodic | TBD | |
| 13. Concrete strength testing and verification of compliance with construction documents | Field testing and review of laboratory reports | Y | Periodic | TBD | |
| **1705.4 Masonry Construction** | | | | | |
| **MINIMUM VERIFICATION REQUIREMENTS** | | | | | |
| **(A) Level 1, 2 and 3 Quality Assurance:** | | | | | |
| 1. Prior to construction, verification of compliance of submittals | Submittal Review | N | Prior to Construction | | |
| **(B) Level 2 & 3 Quality Assurance:** | | | | | |
| 1. Prior to construction verification of f'm and $f'_{AAC}$ except where specifically required by the code | Testing by unit strength method or prism test method | N | Prior to Construction | | |
| 2. During construction, verification of Slump Flow and Visual Stability Index (VSI) when self-consolidating grout is delivered to project site. | Testing by unit strength method or prism test method | N | Periodic | | |
| **(C) Level 3 Quality Assurance:** | | | | | |
| 1. During construction, verification of f'm and $f'_{AAC}$ for every 5,000 SF | Testing by unit strength method or prism test method | N | Periodic | | |
| 2. During construction, verification of proportions of materials as delivered to the project site for premixed or preblended mortar, prestressing grout, and grout other than self-consolidating grout. | Field inspection | N | Periodic | | |
| **MINIMUM SPECIAL INSPECTION REQUIREMENTS** | | | | | |
| **(D) Levels 2 and 3 Quality Assurance:** | | | | | |
| **1. As masonry construction begins, verify that the following are in** | | | | | |
| a. Proportions of the site-prepared mortar | Field inspection | N | Periodic | | |
| b. Grade and size of prestressing tendons and anchorages | Field Inspection | N | Periodic | | |
| c. Grade, type, and size of reinforcement, anchor bolts, and prestressing tendons and anchorages | Field Inspection | N | Periodic | | |
| d. Prestressing technique | Field Inspection | N | Periodic | | |
| e. Properties of thin-bed mortar for AAC masonry<br>(b) Required for the first 5,000 square feet (c) Required after the first 5,000 square feet | Field Inspection | N | Level 2 - Continuous[(b)] Level 2 - Periodic[(c)] | | |
| | | N | Level 3 - Continuous | | |
| f. Sample panel construction | Field Inspection | N | Level 2 - Periodic | | |
| | | N | Level 3 - Continuous | | |
| **2. Prior to grouting, verify that the following are in compliance:** | | | | | |
| a. Grout space | Field Inspection | N | Level 2 - Periodic | | |
| | | N | Level 3 - Continuous | | |
| b. Placement of prestressing tendons and anchorages | Field Inspection | N | Periodic | | |
| c. Placement of reinforcement, connectors, and anchor bolts | Field inspection | N | Level 2 - Periodic | | |
| | | N | Level 3 - Continuous | | |

| SCHEDULE OF SPECIAL INSPECTIONS SERVICES | | | | | |
|---|---|---|---|---|---|
| **PROJECT** | **CCWA Walnut Creek Lift Station, Lovejoy, GA** | | | | |
| | | **APPLICABLE TO THIS PROJECT** | | | |
| **MATERIAL / ACTIVITY** | **SERVICE** | **Y/N** | **EXTENT** | **AGENT*** | **DATE COMPLETED** |
| d. Proportions of site-prepared grout and prestresssing grout for bonded tendons | Field Inspection | N | Periodic | | |
| **3. Verify compliance of the following during construction:** | | | | | |
| a. Materials and procedures with the approved submittals | Field inspection | N | Periodic | | |
| b. Placement of masonry units and mortar joint construction | Field Inspection | N | Periodic | | |
| c. Size and location of structural members | Field inspection | N | Periodic | | |
| d. Type, size, location of anchors, including other details of anchorage of masonry to | Field inspection | N | Level 2 - Periodic | | |
| | | N | Level 3 - Continuous | | |
| e. Welding of reinforcement | Field inspection | N | Continuous | | |
| f. Preparation, construction, and protection of masonry during cold weather (temperature | Field inspection | N | Periodic | | |
| g. Application and measurement of prestressing force | Field testing | N | Continuous | | |
| h. Placement of grout and prestressing grout for bonded tendons is in compliance | Field inspection | N | Continuous | | |
| i. Placement of AAC masonry units and construction of thin-bed mortar joints<br>(b) Required for the first 5,000 square feet (c) Required after the first 5,000 square feet | Field inspection | N | Level 2 - Continuous[(b)]<br>Level 2 - Periodic[(c)] | | |
| | | N | Level 3 - Continuous | | |
| 4. Observe preparation of grout specimens, mortar specimens, and/or prisms | Field inspection | N | Level 2 - Periodic | | |
| | | N | Level 3 - Continuous | | |
| **1705.5 Wood Construction** | | | | | |
| 1. For prefabricated wood structural elements, inspection of the fabrication process and assemblies in accordance with Section 1704.2.5. | In-plant review (3) | N | Periodic | | |
| 2. For high-load diaphragms, verify grade and thickness of structural panel sheathing agree with approved building plans. | Field inspection | N | Periodic | | |
| 3. For high-load diaphragms, verify nominal size of framing members at adjoining panel edges, nail or staple diameter and length, number of fastener lines, and that spacing between fasteners in each line and at edge margins agree with approved building plans | Field inspection | N | Periodic | | |
| 4. Metal-plate-connected wood trusses: | | N | | | |
| a. Verification that permanent individual truss member restraint/bracing has been installed in accordance with the approved truss submittal package when the truss height is greater than or equal to 60". | Field inspection | N | Periodic | | |
| b. For trusses spanning 60 feet or greater: verify temporary and permanent restraint/bracing are installed in accordance with the approved truss submittal package | Field inspection | N | Periodic | | |
| **1705.6 Soils** | | | | | |
| 1. Verify materials below shallow foundations are adequate to achieve the design bearing capacity. | Field inspection | **Y** | Periodic | **TBD** | |
| 2. Verify excavations are extended to proper depth and have reached proper material. | Field inspection | **Y** | Periodic | **TBD** | |
| 3. Perform classification and testing of compacted fill materials. | Field inspection | **Y** | Periodic | **TBD** | |
| 4. Verify use of proper materials, densities, and lift thicknesses during placement and compaction of controlled fill | Field inspection | **Y** | Continuous | **TBD** | |

| SCHEDULE OF SPECIAL INSPECTIONS SERVICES | | | | | |
|---|---|---|---|---|---|
| **PROJECT** | **CCWA Walnut Creek Lift Station, Lovejoy, GA** | | | | |
| | | **APPLICABLE TO THIS PROJECT** | | | |
| **MATERIAL / ACTIVITY** | **SERVICE** | **Y/N** | **EXTENT** | **AGENT*** | **DATE COMPLETED** |
| 5. Prior to placement of controlled fill, inspect subgrade and verify that site has been prepared properly | Field inspection | **Y** | Periodic | **TBD** | |
| **1705.7 Driven Deep Foundations** | | | | | |
| 1. Verify element materials, sizes and lengths comply with requirements | Field inspection | N | Continuous | | |
| 2. Determine capacities of test elements and conduct additional load tests, as required | Field inspection | N | Continuous | | |
| 3. Inspect driving operations and maintain complete and accurate records for each element | Field inspection | N | Continuous | | |
| 4. Verify placement locations and plumbness, confirm type and size of hammer, record number of blows per foot of penetration, determine required penetrations to achieve design capacity, record tip and butt elevations and document any damage to foundation element | Field inspection | N | Continuous | | |
| 5. For steel elements, perform additional inspections per Section 1705.2 | See Section 1705.2 | N | See Section 1705.2 | | |
| 6. For concrete elements and concrete-filled elements, perform tests and additional inspections per Section 1705.3 | See Section 1705.3 | N | See Section 1705.3 | | |
| 7. For specialty elements, perform additional inspections as determined by the registered design professional in responsible charge | Field inspection | N | In accordance with construction documents | | |
| **1705.8 Cast-in-Place Deep Foundations** | | | | | |
| 1.Inspect drilling operations and maintain complete and accurate records for each element | Field inspection | N | Continuous | | |
| 2. Verify placement locations and plumbness, confirm element diameters, bell diameters (if applicable), lengths, embedment into bedrock (if applicable) and adequate end-bearing strata capacity. Record concrete or grout volumes | Field inspection | N | Continuous | | |
| 3. For concrete elements, perform tests and additional inspections in accordance with Section 1705.3 | See Section 1705.3 | N | See Section 1705.3 | | |
| **1705.9 Helical Pile Foundations** | | | | | |
| Verify installation equipment, pile dimensions, tip elevations, final depth, final installation torque and other installation data as required by construction documents. | Field inspection | N | Continuous | | |
| **1705.10 Fabricated items** | | | | | |
| 1. List of fabricated items requiring special inspection during fabrication: | Shop inspection | N | As noted in each applicable shop activity | | |
| | | | | | |
| | | | | | |
| 2. List of fabricated items to be fabricated on the premises of a fabricator approved to perform such work without special inspection (including name of approved agency providing periodic auditing): | | N | | | |
| | | | | | |
| | | | | | |
| **1705.11.1 Structural Wood Special Inspections For Wind Resistance** | | | | | |
| 1. Inspection of field gluing operations of elements of the main windforce-resisting system | Field inspection | N | Continuous | | |

| SCHEDULE OF SPECIAL INSPECTIONS SERVICES | | | | | |
|---|---|---|---|---|---|
| **PROJECT** | **CCWA Walnut Creek Lift Station, Lovejoy, GA** | | | | |
| | | **APPLICABLE TO THIS PROJECT** | | | |
| **MATERIAL / ACTIVITY** | **SERVICE** | **Y/N** | **EXTENT** | **AGENT*** | **DATE COMPLETED** |
| 2. Inspection of nailing, bolting, anchoring and other fastening of components within the main windforce-resisting system, including wood shear walls, wood diaphragms, drag struts, braces and hold-downs. | Shop (3) and field inspection | N | Periodic | | |
| **1705.11.2 Cold-formed Steel Special Inspections For Wind Resistance** | | | | | |
| 1.Inspection during welding operations of elements of the main windforce-resisting system | Shop (3) and field inspection | N | Periodic | | |
| 2. Inspection of screw attachment, bolting, anchoring and other fastening of components within the main windforce-resisting system, including shear walls, braces, diaphragms, collectors (drag struts) and hold-downs. | Shop (3) and field inspection | N | Periodic | | |
| **1705.11.3 Wind-resisting Components** | | | | | |
| 1. Roof covering, roof deck and roof framing connections. | Shop (3) and field inspection | N | Periodic | | |
| 2. Exterior wall covering and wall connections to roof and floor diaphragms. | Shop (3) and field inspection | N | Periodic | | |
| **1705.12.1 Structural Steel Special Inspections for Seismic Resistance** | | | | | |
| 1. Seismic force-resisting systems in SDC B, C, D, E, or F. | Shop (3) and field inspection | N | In accordance with AISC 341 | | |
| 2. Structural steel elements in SDC B, C, D, E, or F other than those in Item 1. including struts, collectors, chords and foundation elements. | Shop (3) and field inspection | N | In accordance with AISC 341 | | |
| **1705.12.2 Structural Wood Special Inspections for Seismic Resistance** | | | | | |
| 1. Field gluing operations of elements of the seismic-force resisting system for SDC C, D, E or F. | Field inspection | N | Continuous | | |
| 2. Nailing, bolting, anchoring and other fastening of components within the seismic-force-resisting system including wood shear walls, wood diaphragms, drag struts, shear panels and hold-downs for SDC C, D, E or F. | Shop (3) and field inspection | N | Periodic | | |
| **1705.12.3 Cold-formed Steel Light-Frame Construction Special Inspections for Seismic Resistance** | | | | | |
| 1. During welding operations of elements of the seismic-force-resisting system for SDC C, D, E or F. | Shop (3) and field inspection | N | Periodic | | |
| 2. Screw attachment, bolting, anchoring and other fastening of components within the seismic-force-resisting system including shear walls, braces, diaphragms, collectors (drag struts) and hold-downs for SDC C, D, E or F. | Shop (3) and field inspection | N | Periodic | | |
| **1705.12.4 Designated Seismic Systems Verification Special Inspections for Seismic Resistance** | | | | | |
| For SDC C, D, E or F, inspect and verify that that the component label, anchorage or mounting conforms to the certificate of compliance in accordance with ASCE 7 Section 13.2.2. | Field inspection | N | Periodic | | |
| **1705.12.5 Architectural Components Special Inspections for Seismic Resistance** | | | | | |
| 1. For SDC D, E or F, inspection during the erection and fastening of exterior cladding and interior or exterior veneer more than 30 feet above grade or walking surface and weighing more than 5 psf. | Field inspection | N | Periodic | | |
| 2. For SDC D, E or F, inspection during the erection and fastening of interior nonbearing walls more than 30 feet above grade or walking surface and weighing more than 15 psf. | Field inspection | N | Periodic | | |

| SCHEDULE OF SPECIAL INSPECTIONS SERVICES | | | | | |
|---|---|---|---|---|---|
| **PROJECT** | **CCWA Walnut Creek Lift Station, Lovejoy, GA** | | | | |
| | | **APPLICABLE TO THIS PROJECT** | | | |
| **MATERIAL / ACTIVITY** | **SERVICE** | **Y/N** | **EXTENT** | **AGENT*** | **DATE COMPLETED** |
| 3. For SDC D, E or F, inspection during the erection and fastening of exterior nonbearing walls more than 30 feet above grade or walking surface. | | N | | | |
| 4. For SDC D, E or F, inspection during anchorage of access floors | Field inspection | N | Periodic | | |
| **1705.12.6 Plumbing, Mechanical and Electrical Components Special Inspections for Seismic Resistance** | | | | | |
| 1. Inspection during the anchorage of electrical equipment for emergency or standby power systems in SDC C, D, E or F | Field inspection | N | Periodic | | |
| 2. Inspection during the anchorage of other electrical equipment in SDC E or F | Field inspection | N | Periodic | | |
| 3. Inspection during installation and anchorage of piping systems designed to carry hazardous materials, and their associated mechanical units in SDC C, D, E or F | Field inspection | N | Periodic | | |
| 4. Inspection during the installation and anchorage of HVAC ductwork designed to contain hazardous materials in SDC C, D, E or F | Field inspection | N | Periodic | | |
| 5. Inspection during the installation and anchorage of vibration isolation systems in SDC C, D, E or F where nominal clearance of 1/4 inch or less is required by the approved construction documents | Field inspection | N | Periodic | | |
| 6. Inspection during installation of mechanical and electrical equipment, including duct work, piping systems and their structural supports, where automatic fire sprinkler systems are installed in structures assigned to SDC C, D, E, or F to verify one of the following unless flexible sprinkler hose fittings are used: | | N | | | |
| a. ASCE/SEI 7, Section 13.2.3 minimum required clearances have been provided. | Field inspection | N | Periodic | | |
| b. A three inch or greater nominal clearance has been provided between fire protection sprinkler system drops and sprigs and: structural members not used collectively or independently to support the sprinklers; equipment attached to the building structure; and other systems' piping. | Field inspection | N | Periodic | | |
| **1705.12.7 Storage Racks Special Inspections for Seismic Resistance** | | | | | |
| Inspection during the anchorage of storage racks 8 feet or greater in height in structures assigned to SDC D, E or F. | Field inspection | N | Periodic | | |
| **1705.12.8 Seismic Isolation Systems** | | | | | |
| Inspection during the fabrication and installation of isolator units and energy dissipation devices used as part of the seismic isolation system in structures assigned to SDC B, C, D, E or F. | Shop and field inspection | N | Periodic | | |
| **1705.12.9 Cold-formed Steel Special Bolted Moment Frames** | | | | | |
| Inspection of installation of cold-formed steel special bolted moment frames in the seismic force-resisting systems in structures assigned to SDC D, E or F. | Field inspection | N | Periodic | | |
| **1705.13.1 Structural Steel Testing for Seismic Resistance** | | | | | |
| 1. Nondestructive testing of structural steel in the seismic force-resisting systems in accordance with AISC 341 in structures assigned to SDC B, C, D, E or F. | Field test | N | Periodic | | |

## SCHEDULE OF SPECIAL INSPECTIONS SERVICES

| PROJECT | CCWA Walnut Creek Lift Station, Lovejoy, GA | | | | |
|---|---|---|---|---|---|
| | | APPLICABLE TO THIS PROJECT | | | |
| MATERIAL / ACTIVITY | SERVICE | Y/N | EXTENT | AGENT* | DATE COMPLETED |
| 2. Nondestructive testing of structural steel elements in the seismic force-resisting systems not covered in 1 above including struts, collectors, chords and foundation elements in accordance with AISC 341 in structures assigned to SDC B, C, D, E or F. | Field test | N | Periodic | | |
| **1705.13.2 Seismic Certification of Nonstructural Components** | | | | | |
| Review certificate of compliance for designated seismic system components in structures assigned to SDC B, C, D, E or F. | Certificate of compliance review | N | Each submittal | | |
| **1705.13.3 Seismic Certification of Designated Seismic Systems** | | | | | |
| Review certificate of compliance for designated seismic system components in structures assigned to SDC C, D, E or F | Certificate of compliance review | N | Each submittal | | |
| **1705.13.4 Seismic Isolation Systems** | | | | | |
| Test seismic isolation system in accordance with ASCE 7 Section 17.8 in structures assigned to SDC B, C, D, E or F. | Prototype testing | N | Per ASCE 7 | | |
| **1705.14 Sprayed Fire-resistant Materials** | | | | | |
| 1. Verify surface condition preparation of structural members | Field inspection | N | Periodic | | |
| 2. Verify minimum thickness of sprayed fire-resistant materials applied to structural members | Field inspection | N | Periodic | | |
| 3. Verify density of the sprayed fire-resistant material complies with approved fire-resistant design | Field inspection and testing | N | Per IBC Section 1705.14.5 | | |
| 4. Verify the cohesive/adhesive bond strength of the cured sprayed fire-resistant material | Field inspection and testing | N | Per IBC Section 1705.14.6 | | |
| 5. Condition of finished application | Field inspection | | Periodic | | |
| **1705.15 Mastic and Intumescent Fire-Resistant Coatings** | | | | | |
| Inspect and test mastic and intumescent fire-resistant coatings applied to structural elements and decks per AWCI 12-B | Field inspection and testing | N | Periodic | | |
| **1705.16 Exterior Insulation and Finish Systems (EIFS)** | | | | | |
| Inspection of water-resistive barrier over sheathing substrate | Field inspection | N | Periodic | | |
| **1705.17 Fire-Resistant Penetrations and Joints** | | | | | |
| 1. Inspect penetration firestop systems | Field testing | N | Per ASTM E2174 | | |
| 2. Inspect fire-resistant joint systems | Field testing | N | Per ASTM E2393 | | |
| **1705.18 Smoke Control Systems** | | | | | |
| 1. Leakage testing and recording of device locations prior to concealment | Field testing | N | Periodic | | |
| 2. Prior to occupancy and after sufficient completion, pressure difference testing, flow measurements, and detection and control verification | Field testing | N | Periodic | | |

*** INSPECTION AGENTS**

| FIRM | ADDRESS | TELEPHONE NO. |
|---|---|---|
| 1. Hazen and Sawyer | 5775 Peachtree Dunwoody Road, Suite D-520, Atlanta, GA 30342 | (404) 459-6363 |
| 2. Soils Testing Firm: TBD - will be submitted to Building Official prior to commencement of project field work | | |
| 3. | | |
| 4. | | |

*Notes: 1. The inspection and testing agent(s) shall be engaged by the Owner or the Owner's Agent, and not by the Contractor or Subcontractor whose work is to be inspected or tested. Any conflict of interest must be disclosed to the Building Official prior to commencing work. The qualifications of the Special Inspector(s) and/or testing agencies may be subject to the approval of the Building Official and/or the Design Professional.*

*2. The list of Special Inspectors may be submitted as a separate document, if noted so above.*

*3. Shop Inspections of fabricated items are not required where the fabricator is approved in accordance with IBC Section 1704.2.5.1 and listed in activity 1709.2.*

*4. Observe: Observe on a random basis, operations need not be delayed pending these inspections. Perform: These tasks shall be performed for each welded*

| SCHEDULE OF SPECIAL INSPECTIONS SERVICES | | | | | |
|---|---|---|---|---|---|
| **PROJECT** | **CCWA Walnut Creek Lift Station, Lovejoy, GA** | | | | |
| | | **APPLICABLE TO THIS PROJECT** | | | |
| **MATERIAL / ACTIVITY** | **SERVICE** | **Y/N** | **EXTENT** | **AGENT*** | **DATE COMPLETED** |

*joint, bolted connection, or steel element.*

*5. NDT of welds completed in an approved fabricator's shop may be performed by that fabricator when approved by the AHJ. Refer to AISC 360, N6.*

Are *Special Inspections for Seismic Resistance* included in the *Statement of Special Inspections*? **No**

Are *Special Inspections for Wind Resistance* included in the *Statement of Special Inspections*? **No**

DATE: 5/26/2020

# SECTION 26 28 16.13
# ENCLOSED CIRCUIT BREAKERS

## PART 1 – GENERAL

### 1.01 THE REQUIREMENT

A. The Contractor shall furnish and install enclosed circuit breakers of voltage and current ratings as specified herein and indicated on the Drawings.

B. This specification is intended to apply to circuit breakers separately-mounted from other equipment in an individual enclosure. This Section does not apply to circuit breakers as part of an equipment assembly such as motor control centers, panelboards, switchboards, etc.

C. Reference Section 26 05 00 – Basic Electrical Requirements and Section 26 43 13 – Surge Protective Devices.

### 1.02 CODES AND STANDARDS

A. Enclosed circuit breakers shall comply with the following codes and standards:

1. UL 489 – Molded Case Circuit Breakers, Molded Case Switches, and Circuit Breaker Enclosures

2. NEMA 250 – Enclosures for Electrical Equipment

3. National Electrical Code

### 1.03 SUBMITTALS

A. In accordance with the procedures and requirements set forth in the General Conditions and Section 01 33 00 – Submittal Procedures, the Contractor shall obtain from the equipment manufacturer and submit the following:

1. Shop Drawings.

2. Spare Parts List.

3. Operation and Maintenance Manuals.

B. Each submittal shall be identified by the applicable Specification Section.

## 1.04 SHOP DRAWINGS

A. Each submittal shall be complete in all respects, incorporating all information and data listed herein and all additional information required for evaluation of the proposed equipment's compliance with the Contract Documents.

B. Partial, incomplete, or illegible submittals will be returned to the Contractor without review for resubmittal.

C. Shop drawings shall include but not be limited to:

1. Product data sheets.

2. Complete assembly, layout, and installation drawings with clearly marked dimensions for each enclosed circuit breaker.

## 1.05 SPARE PARTS

A. For each enclosed circuit breaker, the Contractor shall furnish to the Owner all spare parts as recommended by the equipment manufacturer.

## 1.06 IDENTIFICATION

A. Each enclosed circuit breaker shall be identified with the identification name and/or number indicated on the Drawings. A nameplate shall be securely affixed in a conspicuous place on the front of each enclosed circuit breaker. Nameplates shall be as specified in Section 26 05 53 – Identification for Electrical Systems.

# PART 2 – PRODUCTS

## 2.01 MANUFACTURERS

A. The Equipment shall be designed, constructed and installed in accordance with the best practices of the trade, and shall operate satisfactorily when installed as shown on the Drawings.

B. Enclosed circuit breakers shall be manufactured by Eaton, the General Electric Company, or the Square D Company.

## 2.02 ENCLOSED CIRCUIT BREAKERS

A. Provide circuit breakers with trip and frame ratings as indicated on the Drawings.

B. Circuit breakers shall be molded case type, rated 480 VAC, 2 or 3 pole and have 100 ampere or larger frames. Unless otherwise indicated, circuit breakers shall be manually operable and shall provide thermal-magnetic, inverse-time-limit overload, and

121919

instantaneous short-circuit protection. Overload protection shall be provided on all poles with trip settings as indicated on the Drawings. Breakers of 225-ampere frames and larger shall have interchangeable trip units and adjustable magnetic trip elements

C. Provide electronic trip unit where indicated on the Drawings, with adjustable instantaneous, long-time pick-up and delay, short-time pick-up and delay, ground fault pick-up and delay, and trip indicator, minimum.

D. Where indicated on the Drawings provide circuit breakers with an energy reduction maintenance switch (ERMS).

E. Circuit breakers shall have an interrupting rating of 35,000 amperes symmetrical at 480 VAC, unless otherwise indicated on the Drawings.

F. Enclosed circuit breakers in non-hazardous locations shall be UL 489 Listed. Circuit breakers in hazardous locations shall be UL 1203 Listed.

G. In non-hazardous locations, enclosed circuit breakers shall be furnished with the following enclosure type and material of construction, dependent upon the designation of the area in which they are to be installed. Area designations are indicated on the Drawings.

| **Area Designation** | **Enclosure Type and Material** |
|---|---|
| Indoor Wet Process Area | NEMA 4X, Type 304 Stainless Steel |
| Indoor Dry Process Area | NEMA 12, Painted Steel |
| Indoor Dry Non-Process Area | NEMA 1, Painted Steel |
| All Outdoor Areas | NEMA 4X, Type 304 Stainless Steel |

H. Enclosed circuit breakers shall be quick-make, quick-break and with an interlocked cover which cannot be opened when the breaker is in the “ON” position and capable of being locked in the “OPEN” position.

I. An Underwriter's Laboratories, Inc. inspection label shall appear on the interior of the enclosure.

J. Enclosed circuit breakers shall be suitable for use as service entrance equipment where indicated on the Drawings and so labeled to suit the application.

K. Where indicated on the Drawings, enclosed circuit breakers shall be 100% rated.

L. Surge Protective Devices

1. Surge protective devices (SPD) shall be provided as a separate unit external to the circuit breaker enclosure. See Section 26 43 13 – Surge Protective Devices for SPD requirements.

## PART 3 – EXECUTION

### 3.01 INSTALLATION

A. The enclosed circuit breaker shall be furnished and installed as shown on the Drawings and as recommended by the equipment manufacturer.

B. Enclosed circuit breakers shall be set true and plumb in locations as shown on the Drawings. The top of enclosure shall not exceed six (6) feet above finished floor elevation.

C. Enclosed circuit breakers shall be provided in the enclosure type and material of construction required for the area in which it is installed. Reference the requirements in Part 2 herein, and the area designations indicated on the Drawings.

### 3.02 TESTING

A. All tests shall be performed in accordance with the requirements of the General Conditions and Division 01. The following tests are required:

1. Witnessed Shop Tests

a. None required

2. Field Tests

a. Field testing shall be done in accordance with the requirements specified in the General Conditions, Division 01, and NETA Acceptance Testing Specifications, latest edition.

**END OF SECTION**