

ADDENDUM NO. 04

ORCHARD KNOB PUMP STATION IMPROVEMENTS PROJECT State Revolving Fund Loan Program SRF 2013 - 318 Contract No. W-09-011-201

City of Chattanooga, Tennessee

The following changes and clarifications shall be made to the Contract Documents, Specifications, and Drawings for the Orchard Knob Pump Station Improvements project as prepared by ARCADIS dated November 2015.

1. The attached revised Specification Section 00 42 13, Bid Schedule, shall become part of the Contract Documents. Contractors shall submit bids on this revised schedule.
2. The allotted time for construction has been revised to 371 calendar days.
3. The attached Responses to Requests for Information shall become a part of the Contract Documents.
4. A revised Specification Section 00 72 00, General Conditions showing revisions tracked has been incorporated and is attached to this addendum.
5. The attached Specification Section 00 80 00.14, Wage Rate General Decision, shall become part of the Contract Documents. This updated Section shall replace the existing version in its entirety. Updates include current (2015) Prevailing Wage Rates for Hamilton County, TN., as well as the addition of several trades.
6. The attached Sheets E-2, E-3, E-5, E-6, E-7, E-8, and E-10, shall become part of the Contract Documents. These Plan Sheets reflect darker lines and clearer images of the "As-Built" features.
7. The attached Specification Section 40 05 53, Process Valves Four-Inches Diameter and Larger, in its entirety, shall become part of the Contract Documents.
8. The attached revised Specification Section 01 22 00, Measurement and Payment, shall become part of the Contract Documents.

End of Addendum No. 04

December 11, 2015

Lee Norris, Administrator
City of Chattanooga
Department of Public Works

Specification Section 00 42 13
Bid Schedule

ORCHARD KNOB PUMP STATION IMPROVEMENTS
W-09-011-201

Schedule I – Lump Sum Base Bid

Description

For furnishing all materials, labor, equipment, supervision, and all necessary appurtenances to construct and place into satisfactory operation the sewerage pumping station as shown on the Drawings and called for in these Specifications, including but not limited to, unclassified excavation, grading, wet well structure, pumps, valves and piping system, electrical building, electrical system, gravity pipe, manholes, fencing, proposed water line, hoist system and shed, demolition of existing structure and equipment, asphalt pavement, and pump station accessories and appurtenances.

Lump Sum Bid \$ _____

(dollars and cents)

\$ _____

Schedule II – Lump Sum Allowance Items

Description

For furnishing all materials, labor, services, equipment, supervision, and all necessary appurtenances for the project under fixed lump sum allowances as specified in Section 01 21 00 of the Specifications and as provided for below:

| | |
|--|--------------------|
| Allowance 1 - Independent Testing Laboratory | \$10,000.00 |
| Allowance 2 – Construction Surveying | \$10,000.00 |
| Total Lump Sum Allowance Items | \$20,000.00 |

Schedule III – Extra Work as Ordered by Engineer

Description

Should additional work be required due to scope changes or changes ordered by the Engineer, the undersigned agrees that the supplemental unit prices will be the basis of a change in the contract amount for such changes in the Work. The quantities below may increase or decrease depending upon the actual change of scope items or change orders required. Any unused portions of the following quantities shall be credited to the Owner on the Contractor's final payment request.

| Item No. | Description | Unit | Est. No. of Units | Unit Price | Item Total |
|----------|--|------|-------------------|------------|------------|
| 1 | Concrete in Place, Class A (below grade) | CY | 25 | | |
| 2 | Concrete in Place, Class A (above grade) | CY | 25 | | |

| Schedule III – Extra Work as Ordered by Engineer – cont. | | | | | |
|---|-----------------------------|-------------|-------------|-----------|-----------|
| 3 | Class B Concrete | CY | 25 | | |
| 4 | Rock Excavation | CY | 50 | | |
| 5 | General Backfill, Compacted | CY | 20 | | |
| 6 | Select Backfill, Compacted | CY | 20 | | |
| 7 | Sub-Base Material | CY | 20 | | |
| Total Extra Work Bid | | | | | \$ |
| BID SUMMARY – TOTAL BASE BID | | | | | |
| Schedule 1 – Lump Sum Base Bid | | | \$ | | |
| Schedule 2 – Allowance Items | | | \$20,000.00 | | |
| Schedule 3 – Extra Work As Approved | | | \$ | | |
| Total Base Bid | | | \$ | | |
| \$ | | | | | |
| (dollars and cents) | | | | | |
| <p>Note: Dollar amounts are to be shown in both words and figures. In case of discrepancy, dollar amounts shown in words will govern.</p> | | | | | |
| <p>Contractor certifies that he has reviewed the plans and specifications and that all items of work not specifically listed in the Bid Schedule are included in the prices for the various items listed on the Bid Schedule.</p> | | | | | |
| Bidder _____ | | Date _____ | | | |
| By _____ | | Title _____ | | | |
| Address _____ | | | | | |
| City _____ | | State _____ | | Zip _____ | |
| Phone _____ | | | | | |

ORCHARD KNOB PUMP STATION IMPROVEMENTS
EQUIPMENT BASIS OF BID
W-09-011-201

Bids must identify the specific equipment on which the Bid is submitted by completing the form with a check or asterisk for each item listed below. Should the contractor fail to identify the specific equipment on which his bid is submitted, the Owner will select the equipment of his choice from those specified with no increase in the contract price.

Should Bidder elect to propose alternate deduct equipment, the Owner reserves the right to award contract using the Lump Sum Base Bid in Schedule I based on Base Bid Equipment or by reducing the Lump Sum Base Bid by the amount proposed by alternate deduct equipment, whichever is in the Owner's best interest. Submit sufficient information on alternate deduct equipment with Bid to allow Owner/Engineer to evaluate the acceptability of any alternate equipment.

Alternative deduct equipment will only be considered for those items where an alternate (alt.) is indicated.

This identification of equipment does not waive any requirements for furnishing equipment equal to that specified. The contractor will be required to furnish equipment in full compliance with the specification and at no additional cost to the Owner if the identified equipment is determined not to be equal to that specified.

| SECTION | EQUIPMENT | MANUFACTURER | BASE BID | DEDUCT |
|----------|---|---|--------------------------|----------|
| 13 12 10 | Precast Concrete Building | Alabama Easi Set Industries Concrete Modular Systems Oldcastle Precast _____(alt). | [] [] [] [] | \$ _____ |
| 26 22 14 | Dry Type Low-Voltage Distribution Transformers | Cutler-Hammer/ Eaton Square D/ Schneider General Electric _____(alt). | [] [] [] [] | \$ _____ |
| 26 22 14 | Manual Transfer Switch | Square D/ Schneider General Electric Cutler-Hammer/ Eaton _____(alt). | [] [] [] [] | \$ _____ |
| 26 24 13 | Switchboard | Cutler-Hammer/ Eaton Square D/ Schneider General Electric _____(alt). | [] [] [] [] | \$ _____ |

| SECTION | EQUIPMENT | MANUFACTURER | BASE BID | DEDUCT |
|----------|--|---|---------------------------------|----------|
| 26 24 19 | Motor Control Center | General Electric Cutler-Hammer/ Eaton Square D/ Schneider Allen Bradley, Inc./ Rockwell _____(alt). | [] [] [] [] [] | \$ _____ |
| 26 29 23 | Low-Voltage Variable Frequency Drives | Square D/ Schneider Allen Bradley, Inc. General Electric _____(alt). | [] [] [] [] | \$ _____ |
| 40 60 05 | System Integrator | _____(alt). | [] | \$ _____ |
| 40 60 05 | Programmable Automation Controller (PAC) | GE Intelligent Platform | [] | \$ _____ |
| 40 60 05 | Operator Interface Terminal (OIT) | GE Intelligent Platform | [] | \$ _____ |
| 40 60 05 | Remote Telemetry Unit (RTU) | Motorola | [] | \$ _____ |
| 40 60 05 | Area-Velocity Flowmeter | Hach Flodar _____(alt). | [] [] | \$ _____ |
| 40 60 05 | Level Transmitter – Bubbler System | Rosemount ABB _____(alt). | [] [] [] | \$ _____ |
| 40 60 05 | Level Transmitter – Radar | Rosemount Vega _____(alt). | [] [] [] | \$ _____ |
| 41 22 23 | Monorail Crane with Hoist | Columbus McKinnon American Crane and Hoist _____(alt). | [] [] [] [] | \$ _____ |

| SECTION | EQUIPMENT | MANUFACTURER | BASE BID | DEDUCT |
|----------------------|-------------------------------|---|--------------------------|----------|
| 43 21 39.13 | Submersible End Suction Pumps | ABS Flygt Corporation KSB _____ (alt). | [] [] [] [] | \$ _____ |
| 43 26 23 | Sluice Gates | Rodney Hunt-Fontaine Co. Waterman Industries H Fontaine _____ (alt). | [] [] [] [] | \$ _____ |
| 44 26 23 | Sluice Gate Motor Operators | AUMA EIM Limitorque _____ (alt). | [] [] [] [] | \$ _____ |
| TOTAL DEDUCTS | | | | \$ _____ |

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Responses to Requests For Information (RFI-1)

Project: Orchard Knob Pump Station Improvements

Contract Number: W-09-011-201

Request for Information Number: 1

Date: December 11, 2015

Following are responses to the comments and questions received.

1. Specification Section 00 01 10, Table of Contents, includes a Section 40 05 53, Process Valves Four-Inches Diameter and Larger. This Section appears to be missing from the manual. Please advise.

Response: *Section 40 05 53 shall be included in the Specifications as part Addendum 04.*

2. Specification Section 43 21 39.13, Paragraph 2.04.A.1, Controls, calls for each pump to be supplied with an automatic control center. The pump controls would appear to be provided in Section 40 60 05. Should 2.04.A.1 be deleted from the Specifications?

Response: *Section 43 21 39.13, Submersible End Suction Pumps, delegates responsibility of providing the automatic pump control centers to the pump supplier. Section 40 60 05, Instrumentation and Controls for Process Systems, provides additional requirements for the automatic pump control centers which would fall within the system integration scope of supply.*

3. We request that Danfoss be added to the list of approved manufacturers for the VFD's and filters in Specification Sections 26 29 23, Low-Voltage Variable Frequency Drives, and 26 35 26, Harmonic Filters (subject to Danfoss' capability to comply with the Specifications).

Response: *Danfoss is not approved.*

4. Please confirm if the VFD's and harmonics filter are to be provided by the pump manufacturer or provided as part of the electrical contractor scope. Since they are installed within the MCC cabinet, it would appear they need to be provided by the electrical subcontractor and only pump motor load should be coordinated with the VFD supplier.

Response: *This equipment shall be provided by the electrical subcontractor.*

5. Specification Section 26 05 43.13, Underground Ductbanks for Electrical Systems, appears to indicate all conduits in duct bank are to be Schedule 40 PVC. Section 26 05 33.13, Rigid Conduits, indicates all conduit for PMCS, SCADA, and Communication to be GRC. Please verify the correct requirement.

Response: *Conduits should comply with the requirements of Section 26 05 33.13, Rigid Conduits.*

6. Drawing Sheet E-8: Electrical building lighting plan indicates a light Type W. This type is not indicated on the Light Fixture Schedule on Sheet E-10. Please provide the required light type.

Response: *Provide a type "C" fixture.*

7. Drawing Sheet E-11: Are the panel schedules correct? The schedules are both marked Panel L. Where are the schedules for Panels PL-A and LP-B?

Response: Panel L is existing. The first schedule shows the existing panel configuration and loads. The second schedule shows the new panel configuration and loads to be deleted.

8. Specification Section 26 05 43.13, Underground Ductbanks for Electrical Systems, appears to indicate all conduit in duct bank to be Schedule 40 PVC. Drawing Sheet E-16 detail for handhole indicates conduit to be HDPE. Please verify correct type of conduit.

Response: See response to question #5 above.

9. Drawing Sheet E-4: Should disconnect switches for the pumps 1, 2, 3 and 4 be NEMA 4X? The terminal boxes shown on sheet E-14 are NEMA 4X. Do the disconnect switches mount on the same rack as the terminal boxes?

Response: Provide NEMA 4X type disconnects. Mount to the same rack as the terminal boxes.

10. Drawing Sheet E-4: Should disconnects for the grinder pump, Monorail, A/C and unit heater be NEMA 4X?

Response: Only the grinder pump shall require a NEMA 4X type disconnect.

11. Drawing Sheet E-4: Should the manual transfer switch be NEMA 4X?

Response: No.

12. Drawing Sheet E-8: Should the pull boxes on the exterior be NEMA 4X?

Response: No.

13. Specification Section 26 29 23, lists Allen Bradley, GE and Square D as approved manufacturers for VFD's. The Bid Schedule only lists Square D. Please verify the approved manufacturers.

Response: The bid schedule has been revised to match the Specification Section 26 29 23, Low-Voltage Variable Frequency Drives, and include Allen Bradley, GE, Square D, and an option to provide an alternate.

14. We would like to schedule a follow-up site visit to further inspect the existing electrical room. Thirty minutes is requested. Please advise.

Response: Addendum 3 was issued on November 30, 2015 stating that a second site visit was scheduled for Thursday, December 3, 2015, 1:00 PM to 2:00 PM EDT.

15. Please reference Specification Section 31 23 16.26, Rock Removal. Please confirm that blasting is **NOT** allowed for this project or otherwise provide engineer's intent.

Response: Confirmed.

16. Please consider allowing 15 months (455 days) for construction of this project. There are a number of real project concerns for this project (i.e., no rock blasting, small congested construction site, shored deep excavation, work on existing pump station after new work is completed) which leads us to believe the current allowed time for construction (230 days) will be considerably exceeded.

Response: The revised allotted time for construction has been specified in Addendum 04.

17. Please reference Addendum 1 – Geotechnical Report 7.2 Paragraph 2, which recommends drilling probe holes into the foundation bottom to confirm there are no rock discontinuities. Please confirm this is not a project requirement or otherwise provide engineer's intent.

Response: Confirmed.

18. Re-print the following drawings – I can barely distinguish the “light/existing” features: E-2, E-3, E-5, E-6, E-7, E-8, and E-10.

Response: Please find the attached plan sheets showing clearer images of the as-built plans depicting the existing features.

19. Section 31 23 16.26, Rock Removal - This section seems to contradict itself in places. Will blasting be allowed?

Response: Blasting is not allowed. This specification has been revised.

20. Section 00 52 00, Agreement - The 230 days for construction seems inadequate. 330 seems more realistic. Will you consider revising the contract time?

Response: The revised allotted time for construction has been specified in Addendum 04.

21. From Addendum 1. Site Visit. We were unable to make a site visit during the previously scheduled time. We would like to make a site visit early next week. Is the pump station regularly manned or do we need to schedule a time?

Response: Addendum 3 was issued on November 30, 2015 stating that a second site visit was scheduled for Thursday, December 3, 2015, 1:00 PM to 2:00 PM EDT.

22. We would like to request an appointment to visit the job site on December 3rd of 4th.

Response: Addendum 3 was issued on November 30, 2015 stating that a second site visit was scheduled for Thursday, December 3, 2015, 1:00 PM to 2:00 PM EDT.

23. Can the questions dead line be extended from November 30th to December 7th?

Response: Addendum 2 has been issued extending the deadline to submit RFI's to December 7, 2015.

24. Sheet C-3. Will there be a tap fee associated with the 1" waterline?

Response: Yes. Contractors shall confirm actual fee.

25. Will there be any costs incurred by the contractor associated with a building permit?

Response: Yes. Contractors shall confirm with Building Department.

26. Sheet M-5. Can we get a model number on the required sump pump? The note on Sheet M-5 (replace with similar) makes us think the sump pump may be a vertical turbine sump pump in lieu of a Conventional sump pump?

Response: No model number was found on the existing sump pump. Provide pump to meet performance criteria listed in the notes on Sheet M-5. Existing pump is submersible type.

27. Please reference drawing G-3. This drawing shows three (3) Boring locations. The Geotechnical Report issued with Addendum No.1 only has information from one (1) Boring location. If there is information available for three (3) Borings (which would be very helpful), please provide this information for bidding purposes.

Response: Please disregard references to B-2 and B-3. B-2 and B-3 were not drilled.

28. Please reference drawing G-3 which shows "EXISTING CONCRETE" east of the existing stormwater pumpstation. Is there any structural information available for this "EXISTING CONCRETE" to make sure we accommodate this structure in our excavation. If so, please provide this information for bidding purposes.

Response: All available information has been provided.

29. Please refer to Specification Section 33 01 30.83, Manhole and Wet Well Lining and Rehabilitation; Paragraph 1.01/B (II). We do not have Specification Section 00 72 00. Please provide Section 00 72 00, General Conditions.

Response: Section 00 72 00 was provided in the project manual.

30. Please refer to Specification Section 09 91 00, Painting; Paragraph 1.05.2.C calls for soil testing. I have only seen this requirement for LBP abatement projects; will this be required on this project?

Response: Soil sampling is not required as part of Section 09 91 00. Specification has been revised.

31. Please refer to Specification Section 09 91 00, Painting; Paragraph 2.02 is pretty vague on defining substrates. Can a more definitive finish schedule be issued? To be more specific, can you verify the following schedule for coating:

- New Wetwell.
- Below grade concrete, exterior – usually coated with coal tar epoxy.
- Interior concrete – walls, floor and ceiling coated with H2S resistant coating.
- Piping, equipment and miscellaneous metals.
- Canopy structural steel.
- Existing Wetwell.
- New equipment and piping.
- Concrete surfaces??

Response: Please refer to the painting substrate descriptions provided in Section 09 91 00, Parts 2.02. A, B, and C.

32. Is the Systems Integrator listed in Section 40 60 05 the panel builder for OK-MCP, OK-RTU and OK-Bubbler Control Panel or is the Systems Integrator separate from the Control Panel builder?

Response: The System integrator is the Panel Builder for OK-MCP and OK-Bubbler. OK-RTU components and enclosure are furnished by the System integrator and are installed/configured by others. See spec section 40 60 05 1.01.C for Remote Telemetry Unit Scope.

33. Is Primex approved to bid the Bubbler Control Panel?

Response: Bubbler control panel shall be supplied by the system integrator.

34. Section 41 60 05 listed on Bid Form cannot be found in the Specification set; It is likely that this is Section 40 60 05? Please confirm.

Response: It is Section 40 60 05. The Bid Schedule attached to this addendum has been revised.

35. In Section 40 60 05 clarification is requested to the references made to a MultiSmart. There is no further definition as to what this is or who manufactures it.

Response: References to MultiSmart has been deleted.

36. It our interpretation that the Electrical Contractor is responsible for the Profinet wiring (supply and installation) outside of the OK-MCP panel? Please confirm.

Response: Yes, it is part of the scope of the electrical contractor.

37. It our interpretation that the Electrical Contractor is responsible for the Modbus Serial wiring (supply and installation) outside of the OK-MCP panel? Please confirm.

Response: Yes, it is part of the scope of the electrical contractor.

38. Note that we have been informed by the local Motorola Distributer that the specified RTU (ACE3600) is no longer manufactured/sold. The local Motorola Distributer could not tell me if this unit was replaced by a different product or model. What is the name of supplier of the original equipment/system? I assume they are still supporting the original installation and have a migration path going forward for today's technology. Do you have another model or product to use in place of this product?

Response: That information is incorrect. This unit is still manufactured. See the link below for a brochure of this RTU dated 10/2015.

http://www.motorolasolutions.com/content/dam/msi/docs/products/industrial-internet-of-things/scada/ace3600_remote_terminal_unit_data_sheet.pdf

39. Please reference Bid Schedule (Spec Section 00 42 13) Schedule III – Items 5 (Common Fill, Compacted) and 6 (Structural Fill, Compacted). These two Bid Schedule items do not match up with any specific defined Measurement and Payment items in Specification Section 01 22 00; however they appear to be similar to items mentioned in Paragraphs 1.05.C.2.a & b (Crushed Stone and Suitable Earth Material). Similarly, "Common Fill" and "Structural Fill" are not defined in the Excavation and Fill Specification (Section 31 23 05) but seem similar to items mentioned in Paragraph 2.01.A (Select Fill) and 2.01.B (General Fill). Please further define engineer's intent for products and all work associated with Bid Schedule – Schedule III items 5 and 6.

Response: See revised Section 01 22 00 Measurement and Payment, included with Addendum 04. See revised Section 00 42 13 Bid Schedule, included with Addenda 04. Contractors shall submit bids on this revised schedule.

40. Plan Sheet S-9, side elevation, shows four (4) columns of PEMB setting on the top of the pump station top slab/walls. The remaining two (2) columns are setting on the 6" SOG with the perimeter being thickened to 1'-4". The Cover Plan View on Sheet S-9 and the Site Plan View on Sheet S-5 show dotted lines around the two (2) columns setting on the 6" SOG. Is there a pier/foundation under these two (2) columns? If so, please provide detailed information related to size, depth, and reinforcing requirements these two (2) piers/foundations.

Response: The dotted lines reflect a thickened slab area beneath the columns: 18" by 18" square by 6" thicker than the 6" slab = 12" total thickness.

41. Plan Sheet S-6, Section B, references an 8" curb at the radius of the wetwell. Please provide detailed information related to the 8" curb (height/width, reinforcing steel, chamfer, etc.) required.

Response: The curb is actually the top of the wall...please refer to the site plan on sheet S-5. This is the curb/top of wall at the top of the page that dies into the round pit wall. Section 1 on S-8 shows the detail of its termination.

42. Spec Section 33 01 30, Part 2, states that the lining of the new influent and effluent structures and new manholes shall use the polymer resin-based products. Please verify which manholes and if the entire interior of the pump station requires the lining.

Response: *he lining of the new influent and effluent structures of the wet well (Section A, Sheet M-3), as well as the lining of new and rehabilitated manholes, shall consist of either "Type 1" or "Type 2" of the polymer resin-based products specified in Section 33 01 30.83.*

43. Spec Section 33 01 30, lists Type 1 and Type 2 polymer resin-based lining systems. Is this a contractor's choice on which type to use or are there any requirements as to where Type 1 and Type 2 are to be utilized?

Response: *Either "Type 1" or "Type 2" of the polymer resin-based products specified in Section 33 01 30.83 are acceptable for the lining of the new influent and effluent structures of the wet well, as well as the lining of new and rehabilitated manholes.*

44. The project used the EJCDC C-700, Standard General Conditions of the Construction Contract, and Copyright 2007 (with City of Chattanooga Modifications 07-30-13). It seems there are numerous changes to the Standard C-700, but those changes are all readily apparent. Current EJCDC guidance states "*During the drafting or negotiating process for the document, it is important that the two contracting parties are both aware of any changes that have been made to the Standard EJCDC Text. Thus if a draft of the document purports to be or appears to be an EJCDC document, the user must plainly show all changes to the Standard EJCDC Text, using "Track Changes" (redline/strikeout), highlighting, or other means of clearly indicating additions and deletions*". Please provide a "*track changes*" or highlighted C-700 for this project indicating all additions, deletions, and modifications to the Standard C-700, General Conditions.

Response: *An updated General Conditions Section 00 72 00 is provided in the attached addendum.*

45. The Standard EJCDC C-700, Copyright @2007, requires the Notice to Proceed within 30 days. Why was it increased to 60 days in this contract?

Response: *This revision was made by the City of Chattanooga.*

46. General Conditions 3.2.1. States "*Tentative specifications shall be constructed as current unless otherwise noted*". Please define "*Tentative specifications*".

Response: *No tentative specifications are applicable at this time.*

47. General Conditions 3.2.2. States "*Where obsolete Federal Specifications have been referenced, they shall be superseded by the Federal Specification in effect at the time of opening of Bids (or on the Effective Date of the Agreement if there were no Bids)*". Please identify the obsolete Federal specifications used in this project.

Response: *None are known at this time.*

48. Why was the Standard language in EJCDC C-700, Article 4.3.C. changed:

From: *“The Contract Price or the Contract Times, or both, will be equitably adjusted to the extent that the existence of such differing subsurface or physical condition causes an increase or decrease in Contractor’s cost of, or time required for, performance of the Work; subject, however, to the following.”*

To: *“The Contract Price or the Contract Times, or both, may be equitably adjusted to the extent that the existence of such differing subsurface or physical condition causes an increase or decrease in Contractor’s cost of, or time required for, performance of the Work; subject, however, to the following.” ?*

Response: *This revision was made by the City of Chattanooga.*

49. Why was the Standard language in EJCDC C-700, Article 4.4.C.2, changed:

From: *“If Engineer concludes that a change in the Contract Documents is required, a Field Order, a Work Change Directive or a Change Order will be issued to reflect and document such consequences, An equitable adjustment shall be made in the Contract Price or Contract Times, or both, to the extent that they are attributable to the existence or location of any Underground Facility that caused a change as described in Paragraph A.9 of this Article 4.04.”*

To: *“If Engineer concludes that a change in the Contract Documents is required, a Field Order, a Work Change Directive or a Change Order will be issued to reflect and document such consequences. An equitable adjustment may be made in the Contract Price or Contract Times, or both, to the extent that they are attributable to the existence or location of any Underground Facility that caused a change as described in Paragraph A.9 of this Article 4.04.” ?*

Response: *This revision was made by the City of Chattanooga.*

50. Why were all Owner insurance requirements, as specified in the Standard EJCDC C-700 deleted (General Conditions 5.3.B.) and all insurance responsibilities transferred to the Contractor?

Response: *This revision was made by the City of Chattanooga.*

51. Why was the following language deleted from the Standard C-700, Article 5.7, Waiver of Rights; *“Owner and Contractor waive all rights against each other and their respective officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them for all losses and damages caused by, arising out of or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Subcontractors and Engineer, and all other individuals or entities identified in the Supplementary Conditions as loss payees (and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them) under such policies for losses and damages so caused.” ?*

Response: *This revision was made by the City of Chattanooga.*

52. General Conditions, 6.1. States “Any method of work suggested by the City or Engineer, but not specified, shall be used at the risk and responsibility of the Contractor; and the City and Engineer will assume no responsibility therefore.” Means and methods belong solely to the Contractor; under what conditions can the City or Engineer suggest a work method?

Response: This revision was made by the City of Chattanooga.

53. It appears that General Conditions 6.20. Requires the Contractor to indemnify the Owner and/or Engineer for their acts of omission and negligence. Please clarify.

Response: This revision was made by the City of Chattanooga.

54. Why was the Standard language in EJCDC C-700 concerning Claims and Disputes modified shortening the days to submit a claim from 30 days to 10 days; and submission of supporting claims documentation shortened from 60 days to 20 days?

Response: This revision was made by the City of Chattanooga.

55. Why was the maximum aggregate fee reduced from 27 percent to 26.8 percent in General Conditions 12.1. According to the Standard language in EJCDC C-700?

Response: This revision was made by the City of Chattanooga.

56. The Standard language in EJCDC C-700, Article 14 states that payment is due to the Contractor ten (10) days after presentation of the Application for Payment to then Owner. Why was this changed to 30 days?

Response: This revision was made by the City of Chattanooga.

57. General Conditions Article 15.3, Owner Termination for Convenience, states “Upon seven days written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate or discontinue, in whole or in part, the Contract.” This is a deviation from the EJCDC Standard C-700. Please explain the procedures for terminating “part” of a contract. Furthermore, it appears the General Conditions deleted all references to “fair and reasonable overhead and profit” due to the Contractor upon termination, and replaced “fair and reasonable” with “ten percent” overhead and profit. Please explain why this standard language was deleted from the Contract, and how ten percent was determined to be equitable.

Response: This revision was made by the City of Chattanooga.

58. It appears that all standard language concerning Dispute Resolution was deleted from the General Conditions (Article 16). Please explain the dispute resolution procedures for the project.

Response: This revision was made by the City of Chattanooga.

59. It appears that General Conditions 17.13, Losses from Natural Causes, conflicts with General Conditions 12.3., Delays, concerning delays beyond the control of the Contractor (Force Majeure). Why is the Contractor not entitled to time extensions for “*action of the elements*” beyond his control?

Response: This revision was made by the City of Chattanooga.

60. Specification Section 43.21.33, Page 3, Item B.2, Product Data E – Motor Data #6 (Note: We will be providing the ABS/Sulzer model XFP305J CB2 PE210/8, 870 RPM pump for this application) – Please offer clarification of Dielectric Test requirement?

Response: A dielectric withstand test or "hipot" test is an electrical test performed on a component or product to determine the effectiveness of its insulation. The test may be between mutually insulated sections of a part or energized parts and electrical ground. The test is a means to qualify a device's ability to operate safely during rated electrical conditions. If current through a device under test is less than a specified limit at the required test potential and time duration, the device meets the dielectric withstand requirement. The most common is a high voltage AC dielectric withstand test. The test involves applying an AC voltage to a rotor or stator winding to verify it can withstand a specified AC voltage.

61. Specification Section 43 21 33, Page 6, 2.03 Details of Construction, and Item A #3 - Our standard non-clog design is a semi-open impeller (ContraBlock) with a complete bottom wear plate constructed of cast iron ASTM48 Class 35B. (See attached data sheet and CB impeller sheet). Is the wear plate acceptable in the standard material offering as listed on the data sheet ASTM40 Class 35 B?

Response: Provide a stainless steel wear ring as specified.

62. Specification Section 43.21.39, Page 7, item B.8, Item c – Motor sensor cables shall be provided with electromagnetic compatibility filter in the motor terminal box. What is the purpose of the filter and what exactly is it filtering?

Response: An electromagnetic compatibility filter screens unintentional generation or propagation of electromagnetic energy which may cause unwanted effects such as electromagnetic interference or even physical damage of operational equipment. For example, the pump vibration sensor signal is very susceptible to electromagnetic interference

63. Reference Section 00 21 13-15.01, regarding bid submission requirements. First, I am unaware that a “*separate unbound copy of the Bid Form, Bid Bond Form and the required documents listed below*” has been provided to us – please provide – or is it OK that we copy/assemble the bid package based on instructions in the bidding documents?

Response: The revised Specification Section 00 42 13, Bid Schedule, is attached to Addendum 4 and shall become part of the Contract Documents. Contractors shall submit bids on this revised schedule. All other documents required to be submitted with the bids shall be pulled from the PDF file supplied by Purchasing.

64. Reference Section 00 21 13, regarding the requirement that the Bidder “*submit one original and two copies of all documents in the envelope*”, we ask that the requirement for providing the “*two copies*” be deleted. We believe the Owner is better served and the bid process simplified by eliminating this requirement.

Response: This requirement will remain unchanged.

65. Reference p. 00 42 13-4 regarding the “*base bid*” System Integrator (40 60 05). No “*base bid*” system integrator(s) is/are listed. What system integrator(s) is/are to be considered for use in the “*base bid*”? Please advise.

Response: The contractor can engage any system integrator as long it complies with the requirements of the specifications.

66. Reference 00 52 00-4.02, This section states that the contract time for “*substantial completion*” is 230 days but does not state the contract time for “*final completion*”. What is the time allowed for “*final completion*” (project completed and ready for final payment)? Under a separate email, we have requested additional time for “*substantial completion*” – we believe that 230 days is too ambitious for “*normal*” construction scheduling for this project (**see #77 below**). Please advise.

Response: The revised allotted time for construction has been specified in Addendum 04.

67. Reference 00 80 00.16 regarding the Davis-Bacon Act Wage Determination: First, please confirm that the decision provided in the bidding documents is current and is to be used for this project. Second, there are a number of trades for which no wage rate information is provided – among them: formwork carpenter; rebar tier; concrete finisher; pipefitter; and painter. Please furnish minimum wage rates for these trades if applicable.

Response: An updated wage determination is attached to Addendum 04.

68. Reference 01 43 33-1.06.K/L regarding manufacturer’s training services. Please confirm that both 30-day and 6-month “*follow-up*” training sessions are required for all equipment items which require training sessions be provided. Currently, none of the individual material/equipment spec sections make reference to any “*follow-up*” training sessions.

Response: In Section 01 43 33, page 4, delete Paragraph 1.06 L.

69. Reference 01 43 33-1.07.A regarding professional videotaping of all training sessions (both initial and follow-up). If “*follow-up*” training sessions are required (**see #71 above**), please confirm that they must also be professionally videotaped.

Response: Any “follow-up training sessions” shall be professionally videotaped.

70. Reference 01 50 10-1.08 regarding onsite parking, staging, and/or stockpile locations. Are **ALL** onsite areas/facilities “*off limits*” for use by the contractor for parking, staging, and/or stockpiling? If not, please

advise what onsite areas/facilities can/cannot be temporarily utilized by the GC in connection with performance of the work.

Response: Yes, ALL onsite areas/facilities are “off limits” for use by the contractor for parking, staging, and/or stockpiling.

71. Reference 01 51 43-2.01.A and 43 21 39.13-2.01.B regarding bypass pumping capacity. Why must the bypass pumping system be sized for 25 MGD when the apparent capacity of the new pump station is roughly 15 MGD? Can the bypass pumping system be sized for 15 MGD? Please advise.

Response: Historical hydrograph data indicates flow variations at the site ranging from about 2.5 million gallons per day (MGD) to over 22 MGD (peak hourly wet weather flow – PHWWF). While the existing and proposed pump stations have relief sewer capabilities to pass the peak wet weather flows (>15 MGD) downstream, there may be periods during the construction/staging efforts of the new station where peak flow events are required to be bypassed.

72. Reference 01 56 33-1.02.D regarding employing “as needed” uniformed guard service at site during nonworking hours. If current security fencing locations (or equal) are maintained, must “uniformed guard service” be provided? Or, in other words, please define when this service is “needed”. Please advise.

Response: Section 01 56 33, Paragraph 1.02 has been revised to read as follows: “Employ uniformed guard service to provide watchmen at site during nonworking hours”

73. Reference 01 71 23.13-1.03.C regarding a “Construction Surveying Cash Allowance”. Reference is made to an “allowance” but no provisions are made either on the bid form/schedule or in this spec section for a dollar amount. Please advise if a “Construction Surveying Cash Allowance” is required – and, if required, what the \$\$\$ value of the allowance is. Please clarify.

Response: See revised Section 00 42 13 Bid Schedule, included with Addendum 04 regarding Allowance Items additions.

74. Reference 01 73 16-1.06 regarding the 30-day operating test period. Please confirm that this 30-day operating test period must be completed before “substantial completion” is attained. If this test period is required to attain “substantial completion”, we ask that another 30 days be added to our previous request (15 months for “final” completion – **see #69 above**) for additional contract time(s) for this project – in other words, approximately 15 months (456 calendar days) for “substantial completion” and 16 months (487 calendar days) for “final completion”. Please consider this request.

Response: Confirmed. 30-day operating test period must be completed before “substantial completion” is attained. The revised allotted time for construction has been specified in Addendum 04.

75. Reference 01 43 33-1.07 and 01 79 23-1.01.A.3 regarding videotaping of training sessions. Spec Section 01 43 33 indicates that the Contractor is to perform this service; but Section 01 79 23-1.01.A.3 indicates that the Owner reserves the right to record training sessions. What party is responsible for videotaping training sessions, the Contractor or the Owner? Please clarify.

Response: The contractor is responsible for videotaping all training sessions. 01 79 23-1.01.A.3 has been deleted.

76. Reference 01 79 23-3.02 which references Table 01 79 23-A. This Table is not included in our bidding documents. Please furnish this Table or clarify the training schedule requirements.

Response: Specification 01 79 23-3.02 has been revised to state “contractor shall furnish , at minimum, 24 hours total of on-site training, not including travel time, by the equipment manufacturer’s, in up to 6 separate training sessions. Travel time and expenses are the responsibility of the contractor. Training format and schedule shall be proposed by the contractor and approved by the Engineer/Owner, prior to any training being performed.”

77. Reference 33 01 30.83-1.01 and 33 05 13-1.01.B.4 regarding manhole linings/coatings: There are no references on the drawings to manhole and/or wet well linings/coatings for any of the “new” precast or cast-in-place concrete structures. There is only reference to “rehab and raise top of existing manhole” on C-1 for only 1 manhole. Please clearly define/schedule which manholes and/or wet wells are to be lined/coated and/or rehabbed.

Response: The existing MH shown on C-1 (Point 18) is to be rehabilitated per Note 3 on sheet C-3, and repaired with the cementitious liner specified in Section 33 01 30.83. Additionally, this cementitious lining product is to be used for the construction of benches and inverts of all proposed manholes. The lining of the new influent and effluent structures of the wet well, as well as the lining of new and rehabilitated manholes, shall consist of either “Type 1” or “Type 2” of the polymer resin-based products specified in Section 33 01 30.83.

78. Reference 33 01 30.83-1.01 and 33 05 13-1.01.B.4 regarding manhole linings/coatings: Is the PVC liner (or Sauerisen Sewer Shield 100 coating) referenced in 33 05 13-1.01.B.4 required **in addition to** the lining/coating specified in 33 01 30.83 (if required) or **in lieu of** such lining/coating?

Response: Disregard the reference to PVC liners, and the Sauerisen and Sewer Shield 100 products in Section 33 05 12. The lining of the new influent and effluent structures of the wet well, as well as the lining of new and rehabilitated manholes, shall consist of either “Type 1” or “Type 2” of the polymer resin-based products specified in Section 33 01 30.83.

79. The bid form does not name a System Integrator but has a blank for an alternate deduct. Is the Contractor required to write in a System Integrator?

Response: Yes. The contractor can engage any system integrator as long it complies with the requirements of the specifications.

80. Sheet G-3 includes information pertaining to rock elevations in Borings B-1, B-2, and B-3. The Geotechnical Report included in Addendum #1 includes only Boring B-1. What is the source of the information for Borings B-2 and B-3? Can this information be made available to Bidders?

Response: Please disregard references to B-2 and B-3. B-2 and B-3 were not drilled.

81. Sheet C-7, "Vehicle Gates" Detail, indicates "14'-0" or 20'-0", As Noted on Plans" pertaining to new gates. Sheet C-1, Note 1, states "Replace Main Drive Gate and Additional Drive Gate (not shown)..." Please confirm the width of the gate not shown, and the width of the main drive gate. It measures 24-foot wide.

Response: Provide a 24'-0" chain link gate for the main drive entrance. Provide a 14'-0" chain link gate for the additional drive gate located at north west corner of site, which is not shown on the site plan.

Specification Section 00 72 00
General Conditions

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

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**STANDARD GENERAL CONDITIONS OF THE
CONSTRUCTION CONTRACT**

TABLE OF CONTENTS

| | Page |
|---|-------------|
| Article 1 – Definitions and Terminology | 1 |
| 1.01 Defined Terms..... | 1 |
| 1.02 Terminology | 7 |
| Article 2 – Preliminary Matters | 8 |
| 2.01 Delivery of Bonds and Evidence of Insurance..... | 8 |
| 2.02 Copies of Documents..... | 8 |
| 2.03 Commencement of Contract Times; Notice to Proceed | 8 |
| 2.04 Starting the Work | 9 |
| 2.05 Before Starting Construction | 9 |
| 2.06 Preconstruction Conference; Designation of Authorized Representatives | 9 |
| 2.07 Initial Acceptance of Schedules | 10 |
| Article 3 – Contract Documents; Intent, Amending, Reuse | 10 |
| 3.01 Intent..... | 10 |
| 3.02 Reference Standards..... | 11 |
| 3.03 Reporting and Resolving Discrepancies | 11 |
| 3.04 Amending and Supplementing Contract Documents..... | 13 |
| 3.05 Reuse of Documents | 13 |
| 3.06 Electronic Data..... | 14 |
| 3.07 Contract Times | 14 |
| Article 4 – Availability of Lands; Subsurface and Physical Conditions; Hazardous Environmental Conditions; Reference Points..... | 14 |
| 4.01 Availability of Lands | 14 |
| 4.02 Subsurface and Physical Conditions | 15 |
| 4.03 Differing Subsurface of Physical Conditions..... | 16 |
| 4.04 Underground Facilities | 17 |
| 4.05 Reference Points | 20 |
| 4.06 Hazardous Environmental Condition at Site..... | 21 |
| Article 5 – Bonds and Insurance | 23 |
| 5.01 Performance, Payment, and Other Bonds | 23 |
| 5.02 Licensed Sureties and Insurers | 23 |
| 5.03 Certificates of Insurance | 24 |
| 5.04 Contractor’s Insurance | 24 |
| 5.05 Owner’s Liability Insurance | 26 |
| 5.06 Property Insurance | 26 |

| | | |
|---|---|-----------|
| 5.07 | Waiver of Rights | 27 |
| 5.08 | Receipt and Application of Insurance Proceeds | 28 |
| 5.09 | Acceptance of Bonds and Insurance; Option to Replace..... | 28 |
| 5.10 | Partial Utilization, Acknowledgment of Property Insurer | 29 |
| Article 6 – Contractor’s Responsibilities | | 29 |
| 6.01 | Supervision and Superintendence..... | 29 |
| 6.02 | Labor; Working Hours..... | 30 |
| 6.03 | Services, Materials, and Equipment | 31 |
| 6.04 | Progress Schedule | 32 |
| 6.05 | Substitutes and “Or-Equals” | 33 |
| 6.06 | Concerning Subcontractors, Suppliers, and Others | 36 |
| 6.07 | Patent Fees and Royalties | 37 |
| 6.08 | Permits..... | 38 |
| 6.09 | Laws and Regulations | 38 |
| 6.10 | Taxes | 39 |
| 6.11 | Use of Site and Other Areas | 39 |
| 6.12 | Record Documents..... | 40 |
| 6.13 | Safety and Protection | 40 |
| 6.14 | Safety Representative..... | 42 |
| 6.15 | Hazard Communication Programs | 42 |
| 6.16 | Emergencies | 43 |
| 6.17 | Shop Drawings and Samples | 43 |
| 6.18 | Continuing the Work..... | 45 |
| 6.19 | Contractor’s General Warranty and Guarantee..... | 45 |
| 6.20 | Indemnification | 46 |
| 6.21 | Delegation of Professional Design Services | 47 |
| 6.22 | <u>Project Coordination Meetings.....</u> | <u>48</u> |
| Article 7 – Other Work at the Site..... | | 48 |
| 7.01 | Related Work at Site | 48 |
| 7.02 | Coordination..... | 49 |
| 7.03 | Legal Relationships..... | 49 |
| 7.04 | <u>Claims Between Contractors</u> | <u>49</u> |
| Article 8 – Owner’s Responsibilities | | 50 |
| 8.01 | Communications to contractor..... | 50 |
| 8.02 | Replacement of Engineer..... | 50 |
| 8.03 | Furnish Data | 50 |
| 8.04 | Pay When Due | 50 |
| 8.05 | Lands and Easements; Reports and Tests | 51 |
| 8.06 | Insurance | 51 |
| 8.07 | Change Orders..... | 51 |
| 8.08 | Inspections, Tests, and Approvals | 51 |
| 8.09 | Limitations on Owner’s Responsibilities | 51 |
| 8.10 | Undisclosed Hazardous Environmental Condition..... | 51 |

| | |
|--|-----------|
| 8.11 Evidence of Financial Arrangements | 51 |
| 8.12 Compliance with Safety Program..... | 51 |
| <u>8.12 Testing of Materials and Equipment</u> | <u>52</u> |
| Article 9 – Engineer’s Status During Construction | 52 |
| 9.01 Owner’s Representative | 52 |
| 9.02 Visits to Site | 52 |
| 9.03 Project Representative | 52 |
| 9.04 Authorized Variations in Work | 53 |
| 9.05 Rejecting Defective Work | 53 |
| 9.06 Shop Drawings, Change Orders and Payments | 53 |
| 9.07 Determinations for Unit Price Work | 53 |
| 9.08 Decisions on Requirements of Contract Documents and Acceptability of Work | 54 |
| 9.09 Limitations on Engineer’s Authority and Responsibilities..... | 54 |
| 9.10 Compliance with Safety Program..... | 55 |
| <u>9.11 Authority of the City Engineer</u> | <u>55</u> |
| Article 10 – Changes in the Work; Claims | 55 |
| 10.01 Authorized Changes in the Work | 55 |
| 10.02 Unauthorized Changes in the Work | 56 |
| 10.03 Execution of Change Orders..... | 56 |
| 10.04 Notification to Surety..... | 57 |
| 10.05 Claims <u>and Disputes</u> | 57 |
| Article 11 – Cost of the Work; Allowances; Unit Price Work..... | 58 |
| 11.01 Cost of the Work | 58 |
| 11.02 Allowances | 62 |
| 11.03 Unit Price Work | 63 |
| Article 12 – Change of Contract Price; Change of Contract Times..... | 63 |
| 12.01 Change of Contract Price..... | 63 |
| 12.02 Change of Contract Times | 64 |
| 12.03 Delays..... | 65 |
| Article 13 – Tests and Inspections; Correction, Removal or Acceptance of Defective Work..... | 67 |
| 13.01 Notice of Defects | 67 |
| 13.02 Access to Work | 67 |
| 13.03 Tests and Inspections | 67 |
| 13.04 Uncovering Work..... | 69 |
| 13.05 Owner May Stop the Work..... | 69 |
| 13.06 Correction or Removal of Defective Work..... | 69 |
| 13.07 Correction Period | 70 |
| 13.08 Acceptance of Defective Work..... | 71 |
| 13.09 Owner May Correct Defective Work | 71 |

| | |
|--|-----------|
| Article 14 – Payments to Contractor and Completion..... | 72 |
| 14.01 Schedule of Values | 72 |
| 14.02 Progress Payments | 72 |
| 14.03 Contractor’s Warranty of Title | 77 |
| 14.04 Substantial Completion..... | 77 |
| 14.05 Partial Utilization | 79 |
| 14.06 Final Inspection <u>and Final Acceptance of the Work</u> | 79 |
| 14.07 Final Payment..... | 80 |
| 14.08 Final Completion Delayed..... | 82 |
| 14.09 Waiver of Claims | 82 |
| <u>14.10 Labor and Material.....</u> | <u>82</u> |
| <u>14.11 Scope of Payment</u> | <u>83</u> |
| Article 15 – Suspension of Work and Termination..... | 83 |
| 15.01 Owner May Suspend Work | 83 |
| 15.02 Owner May Terminate for Cause..... | 84 |
| 15.03 Owner May Terminate For Convenience..... | 85 |
| 15.04 Contractor May Stop Work or Terminate | 86 |
| Article 16 – Dispute Resolution | 86 |
| 16.01 Methods and Procedures | 86 |
| Article 17 – Miscellaneous..... | 87 |
| 17.01 Giving Notice | 87 |
| 17.02 Computation of Times | 87 |
| 17.03 Cumulative Remedies | 88 |
| 17.04 Survival of Obligations | 88 |
| 17.05 Controlling Law | 88 |
| 17.06 Headings..... | 88 |
| <u>17.07 Addresses</u> | <u>88</u> |
| <u>17.08 Forms and Record.....</u> | <u>89</u> |
| <u>17.09 Assignment.....</u> | <u>89</u> |
| <u>17.10 Use of Work by City</u> | <u>90</u> |
| <u>17.11 Inspection by Public Agencies</u> | <u>90</u> |
| <u>17.12 Hindrances and Delays</u> | <u>90</u> |
| <u>17.13 Losses from Natural Causes</u> | <u>90</u> |
| <u>17.14 New Job Opportunities</u> | <u>90</u> |
| <u>17.15 No Waiver of Legal Rights.....</u> | <u>90</u> |
| <u>17.16 Sewage, Surface, Subsurface and Flood Flows</u> | <u>91</u> |
| <u>17.17 Maintenance of Existing Traffic.....</u> | <u>91</u> |

ARTICLE 1 – DEFINITIONS AND TERMINOLOGY

1.01 *Defined Terms*

A. Wherever used in the Bidding Requirements or Contract Documents and printed with initial capital letters, the terms listed below will have the meanings indicated which are applicable to both the singular and plural thereof. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.

1. *Addenda*—Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the proposed Contract Documents. After issuance, any addenda shall become a part of the specifications, as much as though fully contained therein.

1.1 Administrator—The Administrator, Director or Department Head of the Department of the City of Chattanooga under whose general administration and observation this contract is being performed.

2. *Agreement*—The written instrument which is evidence of the agreement between Owner and Contractor covering the Work.

3. *Application for Payment*—The form acceptable to Engineer which is to be used by Contractor during the course of the Work in requesting progress or final payments and which is to be accompanied by such supporting documentation as is required by the Contract Documents.

4. *Asbestos*—Any material that contains more than one percent asbestos and is friable or is releasing asbestos fibers into the air above current action levels established by the United States Occupational Safety and Health Administration.

4.1 Award—The formal acceptance of the proposal of the lowest responsible bidder by the City Council, subject to the execution and approval of a satisfactory contract and the required bonds therefor, and following such other conditions as may be specified or otherwise required by law or the purchasing requirements of the City of Chattanooga.

5. *Bid*—The offer or proposal of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.

6. *Bidder*—The individual or entity who submits a Bid directly to Owner.

7. *Bidding Documents*—The Bidding Requirements and the proposed Contract Documents (including all Addenda).

8. *Bidding Requirements*—The advertisement or invitation to bid, Instructions to Bidders, Bid security of acceptable form, if any, and the Bid Form with any supplements.

8.1 Bonds-Bid, Performance and Payment Bonds and other instruments of security to be furnished by the Contractor in accordance with the Contract Documents.

9. *Change Order*—A document recommended by Engineer which is signed by Contractor and Owner and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, issued on or after the Effective Date of the Agreement. The document to be executed shall be a Change Request Form (CRF) as included in these Contract Documents.

9.1 City-The City of Chattanooga, Tennessee.

9.2 City Attorney-The person duly authorized by the City to act in the capacity of City Attorney, his authorized designee, or special counsel to the City, acting severally within the scope of the particular duties entrusted to them.

10. *Claim*—A demand or assertion by Owner or Contractor seeking an adjustment of Contract Price or Contract Times, or both, or other relief with respect to the terms of the Contract. A demand for money or services by a third party is not a Claim.

11. *Contract*—The entire and integrated written agreement between the Owner and Contractor concerning the Work. The Contract supersedes prior negotiations, representations, or agreements, whether written or oral. Whenever, in any portion of the Contract Documents, a requirement of the Contract is stated, it shall be interpreted to mean a requirement of the Contract Documents as defined herein, unless the context indicates the more restricted definition of that portion of the Contract Documents which is captioned "Contract".

12. *Contract Documents*—Those items so designated in the Agreement. Only printed or hard copies of the items listed in the Agreement are Contract Documents. Approved Shop Drawings, other Contractor submittals, and the reports and drawings of subsurface and physical conditions are not Contract Documents. Whenever, in any portion of the Contract Documents, the terms "plans and specifications" or "specifications" or "contract" or words of like import appear, they shall be interpreted to mean "Contract Documents" as defined herein unless the context indicates that a more restrictive designation of a particular portion of the Contract Documents is intended.

13. *Contract Price*—The moneys payable by Owner to Contractor for completion of the Work in accordance with the Contract Documents as stated in the Agreement (subject to the provisions of Paragraph 11.03 in the case of Unit Price Work).

14. *Contract Times*—The number of days or the dates stated in the Agreement to: (i) achieve Milestones, if any; (ii) achieve Substantial Completion; and (iii) complete the Work so that it is ready for final payment as evidenced by Engineer's written recommendation of final payment.

15. *Contractor*—The individual or entity whose proposal is accepted by the Owner with whom Owner has entered into the Agreement; for performance of the work covered by and in conformance with these Contract Documents.

16. *Cost of the Work*—See Paragraph 11.01 for definition.

16.1 Designer - The individual or entity named as such in the Agreement, if a different person or entity from Engineer.

17. *Drawings*—That part of the Contract Documents prepared or approved by Engineer which graphically shows the scope, extent, and character of the Work to be performed by Contractor. Shop Drawings and other Contractor submittals are not Drawings as so defined. The term Drawings shall be considered synonymous with the term Plans.

18. *Effective Date of the Agreement*—The date indicated in the Agreement on which it becomes effective, but if no such date is indicated, it means the date on which the Agreement is signed and delivered by the last of the two parties to sign and deliver.

19. *Engineer*—~~The individual or entity named as such in the Agreement.~~The City Engineer (or when retained by the City, an architect or engineer, with such entity being named in the Agreement) and his duly authorized assistants, observers, inspectors or administrators acting severally within the scope of the particular duties entrusted to them

20. *Field Order*—A written order issued by Engineer which requires minor changes in the Work but which does not involve a change in the Contract Price or the Contract Times.

21. *General Requirements*—Sections of Division 01 of the Specifications. The General Requirements are applicable to all Sections of the Specifications and to the entire Work.

22. *Hazardous Environmental Condition*—The presence at the Site of Asbestos, PCBs, Petroleum, Hazardous Waste, or Radioactive Material in such quantities or circumstances that may present a substantial danger to persons or property exposed thereto.

23. *Hazardous Waste*—The term Hazardous Waste shall have the meaning provided in Section 1004 of the Solid Waste Disposal Act (42 USC Section 6903) as amended from time to time.

23.1 Inspector-An authorized representative of the Engineer assigned to make necessary observations of the work performed by the Contractor.

24. *Laws and Regulations; Laws or Regulations*—Any and all applicable laws, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.

25. *Liens*—Charges, security interests, or encumbrances upon Project funds, real property, or personal property.

25.1 Liquidated Damages – amounts shall be as stipulated elsewhere in the Contract Documents. Liquidated damages shall apply to the Contract Times for the Project. Liquidated Damages shall be both additive and cumulative. Liquidated Damages shall end upon Substantial Completion, Completion of the Work associated with each Milestone Date, and upon final completion of the Work. Liquidated damages are not a penalty, but constitute liquidated damages for loss to the City because of increases in expenses for administration, legal counsel, accounting, engineering, construction supervision, inspection, and any other

expenses incurred directly as a result of the delay of the Contractor in completing the work. This provision for liquidated damages shall be effective between the parties ipso facto without necessity for demand or putting in default by any notice or other means than by the terms of these Contract Documents, the Contractor hereby waiving any such other notice of default and acknowledging that the Contractor shall be deemed to be in default by the mere act of his failure to complete the work within the Contract Time, or within any valid extension of such time hereunder.

26. *Milestone*—A principal event specified in the Contract Documents relating to an intermediate completion date or time prior to Substantial Completion of all the Work.
27. *Notice of Award*—The written notice by Owner to the Successful Bidder stating that upon timely compliance by the Successful Bidder with the conditions precedent listed therein, Owner will sign and deliver the Agreement.
28. *Notice to Proceed*—A written notice given by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work under the Contract Documents.
29. *Owner*—~~The individual or entity with whom Contractor has entered into the Agreement and for whom the Work is to be performed.~~ The City of Chattanooga, Tennessee. The Owner may designate an authorized representative to exercise the authority, in whole or in part, identified in these contract Documents, with such designation being identified in the Supplementary Conditions.
30. *PCBs*—Polychlorinated biphenyls.
31. *Petroleum*—Petroleum, including crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute), such as oil, petroleum, fuel oil, oil sludge, oil refuse, gasoline, kerosene, and oil mixed with other non-Hazardous Waste and crude oils.
31.1 Plan or Plans—All of the drawings pertaining to the contract showing the scope and characteristics of the work or a part thereof, including such supplementary drawings as the Engineer may issue in order to elucidate other drawings or for the purpose of showing the changes in the work or for showing details not shown thereon. The term Plans shall be considered synonymous with the term Drawings.
32. *Progress Schedule*—A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising the Contractor's plan to accomplish the Work within the Contract Times.
33. *Project*—The total construction of which the Work to be performed under the Contract Documents may be the whole, or a part.
34. *Project Manual*—The bound documentary information prepared for bidding and constructing the Work. A listing of the contents of the Project Manual, which may be bound in one or more volumes, is contained in ~~the~~ its table(s) of contents.

35. *Radioactive Material*—Source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954 (42 USC Section 2011 et seq.) as amended from time to time.
36. *Resident Project Representative*—The authorized representative of Engineer who may be assigned to the Site or any part thereof.
37. *Samples*—Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and which establish the standards by which such portion of the Work will be judged.
38. *Schedule of Submittals*—A schedule, prepared and maintained by Contractor, of required submittals and the time requirements to support scheduled performance of related construction activities.
39. *Schedule of Values*—A schedule, prepared and maintained by Contractor, allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.
40. *Shop Drawings*—All drawings, diagrams, illustrations, brochures, schedules, specified design related submittals, and other data or information which are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work will be fabricated or installed. Shop drawings may also mean detail drawings, working drawings, construction drawings, and engineering data.
41. *Site*—Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements for access thereto, and such other lands furnished by Owner which are designated for the use of Contractor.
- 41.1 Special Provisions-The special clauses setting forth conditions or requirements peculiar to the specific Project, supplementing the General Conditions and Supplementary Conditions and taking precedence over any condition or requirements of the General Conditions and Supplementary Conditions with which they are in conflict.
42. *Specifications*—That part of the Contract Documents consisting of written requirements for materials, equipment, systems, standards and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable thereto.
43. *Subcontractor*—An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work at the Site. All Subcontractors shall be deemed to be agents of the Contractor.
44. *Substantial Completion*—The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents to provide the following: (i) the Owner full time, uninterrupted, continuous operation of the work; and (ii) all required functional, performance, and operational or startup testing has been successfully demonstrated for all components, devices, equipment, and systems to the satisfaction of the

Engineer in accordance with the requirements of the Specifications; and (iii) all required inspections and other work necessary for the Engineer to certify “substantially complete” have been completed. , so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms “substantially complete” and “substantially completed” as applied to all or part of the Work refer to Substantial Completion thereof.

44.1 Submittals – All administrative documents, Shop Drawings, Samples, product data, manufacturer’s literature, quality control documents, design related documents, record documents, contract close-out documents, and/or any other specified document prepared or assembled by or for Contractor and submitted by Contractor to the Owner and/or Engineer.

45. *Successful Bidder*—The Bidder submitting a responsive Bid to whom Owner makes an award.

46. *Supplementary Conditions*—That part of the Contract Documents which amends or supplements these General Conditions.

47. *Supplier*—A manufacturer, fabricator, supplier, distributor, materialman, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or Subcontractor.

47.1 Surety or Sureties—The corporate body which is bound by such bonds as are required with and for the contractor, and which engages to be responsible for the entire and satisfactory fulfillment of the contract and for any and all requirements as set out in the specifications, contract or plans.

48. *Underground Facilities*—All underground pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities, including those that convey electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, water, wastewater, storm water, other liquids or chemicals, or traffic or other control systems.

49. *Unit Price Work*—Work to be paid for on the basis of unit prices.

50. *Work*—The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, materials, tools, equipment, incidentals, and documentation necessary to produce such construction, and furnishing, installing, and incorporating all materials and equipment into such construction, all as required by the Contract Documents.

51. *Work Change Directive*—A written statement to Contractor issued on or after the Effective Date of the Agreement and signed by Owner and recommended by Engineer ordering an addition, deletion, or revision in the Work, or responding to differing or unforeseen subsurface or physical conditions under which the Work is to be performed or to emergencies. A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the change ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order

following negotiations by the parties as to its effect, if any, on the Contract Price or Contract Times.

52. Working Day. Any day, other than a City holiday pursuant to Chattanooga City Code or Sunday, on which the approximate normal working forces of the Contractor may proceed with regular work for at least six hours toward completion of the work, unless work be suspended for causes beyond the contractor control.

1.02 Terminology

A. The words and terms discussed in Paragraph 1.02.B through F are not defined but, when used in the Bidding Requirements or Contract Documents, have the indicated meaning.

B. *Intent of Certain Terms or Adjectives:*

1. The Contract Documents include the terms “as allowed,” “as approved,” “as ordered,” “as directed” or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives “reasonable,” “suitable,” “acceptable,” “proper,” “satisfactory,” or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action, or determination will be solely to evaluate, in general, the Work for compliance with the information in the Contract Documents and with the design concept of the Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility contrary to the provisions of Paragraph 9.09 or any other provision of the Contract Documents.

2. Where the word “similar” occurs in the Contract Document, it shall have a general meaning and not be interpreted as being identical, and all details shall be worked out in relation to their location and their connection with other parts of the Work.

C. *Day:*

1. The word “day” means a calendar day of 24 hours measured from midnight to the next midnight.

D. *Defective:*

1. The word “defective,” when modifying the word “Work,” refers to Work that is unsatisfactory, faulty, or deficient in that it:

- does not conform to the Contract Documents; or
- does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents; or

- c. has been damaged prior to Engineer's recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 14.04 or 14.05).

E. *Furnish, Install, Perform, Provide:*

1. The word "furnish," when used in connection with services, materials, or equipment, shall mean to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.
 2. The word "install," when used in connection with services, materials, or equipment, shall mean to put into use or place in final position said services, materials, or equipment complete and ready for intended use.
 3. The words "perform" or "provide," when used in connection with services, materials, or equipment, shall mean to furnish and install said services, materials, or equipment complete and ready for intended use.
 4. When "furnish," "install," "perform," or "provide" is not used in connection with services, materials, or equipment in a context clearly requiring an obligation of Contractor, "provide" is implied.
- F. Unless stated otherwise in the Contract Documents, words or phrases that have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

ARTICLE 2 – PRELIMINARY MATTERS

2.01 *Delivery of Bonds and Evidence of Insurance*

- A. When Contractor delivers the executed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner such bonds as Contractor may be required to furnish.
- B. *Evidence of Insurance:* Before any Work at the Site is started, Contractor ~~and Owner~~ shall ~~each~~ deliver to the ~~Owner~~~~other~~, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance which ~~Owner~~~~either of~~ ~~them~~ or any additional insured may reasonably request) which Contractor ~~is and Owner~~ ~~respectively are~~ required to purchase and maintain in accordance with Article 5.

2.02 *Copies of Documents*

- A. Owner ~~shall~~will furnish to Contractor up to ~~ten~~four printed or hard copies of the ~~Drawings and Project Manual~~Contract Documents and one counterpart of the executed Contract Agreement. Additional copies will be furnished upon request at the cost of reproduction.

2.03 *Commencement of Contract Times; Notice to Proceed*

- A. ~~The~~ Contract Times will commence to run on the ~~thirtieth day after the Effective Date of the Agreement or, if a Notice to Proceed is given, on the day indicated~~ date established in the

Notice to Proceed. A Notice to Proceed may be given at any time within 30-60 days after the Effective Date of the Agreement. ~~In no event will the Contract Times commence to run later than the sixtieth day after the day of Bid opening or the thirtieth day after the Effective Date of the Agreement, whichever date is earlier.~~

2.04 *Starting the Work*

- A. Contractor ~~shall~~ may start to perform the Work on the date when the Contract Times commence to run. The Contractor shall begin the work within ten days of the date of the Notice to Proceed. The Contractor shall notify the City and the Engineer two working days in advance of the date he will begin onsite operations. No Work shall be done at the Site prior to the date on which the Contract Times commence to run.

2.05 *Before Starting Construction*

- A. *Preliminary Schedules:* Within 10 days after the ~~Commencement of the Contract Time~~ Effective Date of the Agreement (unless otherwise specified in Section 01 32 16 – Construction Schedules of the General Requirements), Contractor shall submit to Engineer for timely review:
1. a preliminary Progress Schedule indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract Documents;
 2. a preliminary Schedule of Submittals; which indicates each required Submittal and the dates for submitting, time for reviewing and processing each Submittal (periodic Submittals may be listed by a common monthly date); and
 3. a preliminary Schedule of Values for all of the Work in a format acceptable to the Engineer and in accordance with the requirements specified in Section 01 32 16 – Construction Schedules of the General Requirements. which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

2.06 *Preconstruction Conference; Designation of Authorized Representatives*

- A. Before any Work at the Site is started, a conference attended by Owner, Contractor, Engineer, and others as appropriate will be held to establish a working understanding among the parties as to the Work and to discuss the schedules referred to in Paragraph 2.05.A, procedures for handling Shop Drawings and other submittals, processing Applications for Payment, and maintaining required records.
- B. At this conference Owner and Contractor each shall designate, in writing, a specific individual to act as its authorized representative with respect to the services and responsibilities under the Contract. Such individuals shall have the authority to transmit instructions, receive information, render decisions relative to the Contract, and otherwise act on behalf of each respective party.

2.07 *Initial Acceptance of Schedules*

- A. ~~At least 10 days before submission of the first Application for Payment a~~ Within ten days after the preconstruction conference a conference attended by Contractor, Engineer, and others as appropriate will be held to review for acceptability to Engineer as provided below the schedules submitted in accordance with Paragraph 2.05.A. Contractor shall have an additional 10 days to make corrections and adjustments and to complete and resubmit the schedules. No progress payment shall be made to Contractor until acceptable schedules are submitted to Engineer.
1. The Progress Schedule will be acceptable to Engineer as being the Contractor's schedule for the if it provides an orderly progression of the Work to completion within the Contract Times. Such acceptance will not impose on Engineer responsibility for the Progress Schedule, for sequencing, scheduling, or progress of the Work, nor interfere with or relieve Contractor from Contractor's full responsibility therefor. The Progress Schedule may subsequently be adjusted in accordance with Paragraph 6.04 and applicable provisions of Section 01 32 16 – Construction Schedules of the General Requirements.
 2. Contractor's Schedule of Submittals will be acceptable to Engineer if it provides a workable arrangement for reviewing and processing the required submittals. The Schedule of Submittals may subsequently be adjusted in accordance with Paragraph 6.04 and applicable provisions of Section 01 32 16 – Construction Schedules of the General Requirements.
 3. Contractor's Schedule of Values will be acceptable to the Engineer as to form and substance if it is provided in accordance with the requirements specified in Section 01 32 16 – Construction Schedules of the General Requirements.~~provides a reasonable allocation of the Contract Price to component parts of the Work.~~

ARTICLE 3 – CONTRACT DOCUMENTS; INTENT, AMENDING, REUSE

3.01 *Intent*

- A. The individual components of the Contract Documents are complementary; what is required by one is as binding as if required by all.
- B. It is the intent of the Contract Documents to describe a functionally complete project (or part thereof) to be constructed in accordance with the Contract Documents. Any labor, documentation, services, materials, or equipment that reasonably may be inferred from the Contract Documents or from prevailing custom or trade usage as being required to produce the indicated result will be provided whether or not specifically called for, at no additional cost to Owner.
- C. Clarifications and interpretations of the Contract Documents shall be issued by Engineer as provided in Article 9.
- D. Each and every clause or other provision required by law to be inserted in these Contract Documents shall be deemed to be inserted herein, and they shall be read and enforced as though it were included herein, and if through mistake or otherwise, any such provision is not inserted,

or if not correctly inserted, then upon the application of either party, the Contract Documents shall forthwith be amended to make such insertion.

E. “Imperative” or “Command” type language is used in the Contract Documents. This command language refers to and is directed to the Contractor.

F. Emphasis, such as italics, underlining, bold text or quotes, may have been used throughout the Contract Documents. Use of emphasis shall not change the meaning of the term emphasized.

3.02 *Reference Standards*

A. Standards, Specifications, Codes, Laws, and Regulations

1. Reference to standards, specifications, manuals, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, shall mean the standard, specification, manual, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Agreement if there were no Bids), except as may be otherwise specifically stated in the Contract Documents. Tentative specifications shall be construed as current unless otherwise noted. Where obsolete Federal Specifications have been referenced, they shall be superseded by the Federal Specification in effect at the time of opening of Bids (or on the Effective Date of the Agreement if there were no Bids).

2. No provision of any such standard, specification, manual, or code, or any instruction of a Supplier, shall be effective to change the duties or responsibilities of Owner, Contractor, or Engineer, or any of their subcontractors, consultants, agents, or employees, from those set forth in the Contract Documents. No such provision or instruction shall be effective to assign to Owner, Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility inconsistent with the provisions of the Contract Documents.

3. All sections of governing standard specifications relating to measurement and payment shall not apply to the work specified herein.

3.03 *Reporting and Resolving Discrepancies*

A. *Reporting Discrepancies:*

1. *Contractor’s Review of Contract Documents Before Starting Work:* Before undertaking each part of the Work, Contractor shall carefully study and compare the Contract Documents and check and verify pertinent figures therein and all applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy which Contractor discovers, or has actual knowledge of, and shall obtain a written interpretation or clarification from Engineer before proceeding with any Work affected thereby.

2. *Contractor's Review of Contract Documents During Performance of Work:* If, during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents, or between the Contract Documents and (a) any applicable Law or Regulation, (b) any standard, specification, manual, or code, or (c) any instruction of any Supplier, then Contractor shall promptly report it to Engineer in writing. Contractor shall not proceed with the Work affected thereby (except in an emergency as required by Paragraph 6.16.A) until an amendment or supplement to the Contract Documents has been issued by one of the methods indicated in Paragraph 3.04.
3. Contractor shall not be liable to Owner or Engineer for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless Contractor had actual knowledge or reasonably should have known thereof.

B. *Resolving Discrepancies:*

1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the Contract Documents shall take precedence in resolving any conflict, error, ambiguity, or discrepancy between the provisions of the Contract Documents and:
 - a. the provisions of any standard, specification, manual, or code, or the instruction of any Supplier (whether or not specifically incorporated by reference in the Contract Documents); or
 - b. the provisions of any Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).
2. In resolving inconsistencies within the Contract Documents, precedence shall be given in the following descending order:
 - a. Change Orders
 - b. Work Change Directives
 - c. Field Orders
 - d. Engineer's written interpretations and clarifications
 - e. Notice to Proceed
 - f. Addenda
 - g. Contract Agreement
 - h. Supplementary Conditions
 - i. General Conditions
 - j. Specifications

k. Drawings

1. Schedules on Drawings

2. Notes on Drawings

3. Details on Drawings

4. Large Scale Drawings

5. Small Scale Drawings

6. Dimensions given as Figures

7. Scaled Dimensions

l. Bidding Requirements

3.04 *Amending and Supplementing Contract Documents*

A. The Contract Documents may be amended to provide for additions, deletions, and revisions in the Work or to modify the terms and conditions thereof by either a Change Order or a Work Change Directive.

B. The requirements of the Contract Documents may be supplemented, and minor variations and deviations in the Work may be authorized, by one or more of the following ways:

1. A Field Order; or

~~2. Engineer's approval of a Shop Drawing or Sample (subject to the provisions of Paragraph 6.17.D.3); or~~

~~3.~~ 23. Engineer's written interpretation or clarification.

3.05 *Reuse of Documents*

A. Contractor and any Subcontractor or Supplier shall not:

1. have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of Engineer or its consultants, including electronic media editions; or

2. reuse any such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of Owner and Engineer and specific written verification or adaptation by Engineer.

B. The prohibitions of this Paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein shall preclude Contractor from retaining copies of the Contract Documents for record purposes.

3.06 *Electronic Data*

- A. Unless otherwise stated in the Supplementary Conditions, the data furnished by Owner or Engineer to Contractor, or by Contractor to Owner or Engineer, that may be relied upon are limited to the printed copies (also known as hard copies). Files in electronic media format of text, data, graphics, or other types are furnished only for the convenience of the receiving party. Any conclusion or information obtained or derived from such electronic files will be at the user's sole risk. If there is a discrepancy between the electronic files and the hard copies, the hard copies govern.
- B. Because data stored in electronic media format can deteriorate or be modified inadvertently or otherwise without authorization of the data's creator, the party receiving electronic files agrees that it will perform acceptance tests or procedures within 60 days, after which the receiving party shall be deemed to have accepted the data thus transferred. Any errors detected within the 60-day acceptance period will be corrected by the transferring party.
- C. When transferring documents in electronic media format, the transferring party makes no representations as to long term compatibility, usability, or readability of documents resulting from the use of software application packages, operating systems, or computer hardware differing from those used by the data's creator.

3.07 *Contract Times*

- A. All Contract Times and time limits stated in the Contract Documents are of the essence of the Agreement.
- B. The Contractor shall proceed with the Work at a rate of progress which will ensure completion within the Contract Times.
- C. It is expressly understood and agreed by and between the Contractor and the Owner, that the Contract Times for the Work described herein are reasonable time, taking into consideration the average climatic and economic conditions, and other factors prevailing in the locality of the Work.
- D. If the Contractor shall fail to perform the Work required within the Contract Times, or extended Contract Times if authorized by Change Order, then the Contractor shall pay to the Owner the full amount of liquidated damages specified in the Contract Documents for each calendar day that the Contractor shall be in default after the Contract Times stipulated in the Contract Documents.

ARTICLE 4 – AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS; REFERENCE POINTS

4.01 *Availability of Lands*

- A. Owner shall furnish the Site. Owner shall notify Contractor of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work. Owner will obtain in a timely manner and pay for easements

for permanent structures or permanent changes in existing facilities. If Contractor and Owner are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, as a result of any delay in Owner's furnishing the Site or a part thereof, Contractor may make a Claim therefor as provided in Paragraph 10.05.

- B. Upon reasonable written request, Owner shall furnish Contractor with a current statement of record legal title and legal description of the lands upon which the Work is to be performed and Owner's interest therein as necessary for giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws and Regulations.
- C. Contractor shall provide, at his own expense and without liability to the City, for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

D. Prior to the issuance of the Notice to Proceed, the City will have obtained most of the land and rights-of-way, including easements, necessary for carrying out and for the completion of the work to be performed pursuant to these Contract Documents, unless mutually agreed or specified in the Specifications. In the event all land and rights-of-way have not been obtained as herein contemplated before construction begins, the Contractor shall begin the work upon such land and rights-of-way as the City may have previously acquired, and no claim for damages whatsoever will be allowed by reason of the delay in obtaining the remaining land and rights-of-way. Should the City be prevented or enjoined from proceeding with the work, or from authorizing its prosecution, either before or after the commencement, by reason of any litigation, or by reason of its inability to procure any lands or rights-of-way for the work, the Contractor shall not be entitled to make or assert claim for damage by reason of said delay, or to withdraw from the contract except by consent of the City; but time for completion of the work will be extended to such time as the City determines will compensate for the time lost by such delay, such determination to be set forth in writing.

4.02 *Subsurface and Physical Conditions*

A. *Reports and Drawings:* The Supplementary Conditions identify:

1. those reports ~~known to Owner~~ of explorations and tests of subsurface conditions at or contiguous to the Site that have been utilized by the Engineer in preparing the Contract Documents; and
2. those drawings ~~known to Owner~~ of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities that have been utilized by the Engineer in preparing the Contract Documents).

B. *Limited Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "technical data," Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto; or
2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or
3. any Contractor interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions, or information.

4.03 *Differing Subsurface or Physical Conditions*

A. *Notice:* If Contractor believes that any subsurface or physical condition that is uncovered or revealed either:

1. is of such a nature as to establish that any "technical data" on which Contractor is entitled to rely as provided in Paragraph 4.02 is materially inaccurate; or
2. is of such a nature as to require a change in the Contract Documents; or
3. differs materially from that shown or indicated in the Contract Documents; or
4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then Contractor shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 6.16.A), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except as aforesaid) until receipt of written order to do so.

B. *Engineer's Review:* After receipt of written notice as required by Paragraph 4.03.A, Engineer will promptly review the pertinent condition, determine the necessity of Owner's obtaining additional exploration or tests with respect thereto, and advise Owner in writing (with a copy to Contractor) of Engineer's findings and conclusions.

C. *Possible Price and Times Adjustments:*

1. The Contract Price or the Contract Times, or both, ~~will~~may be equitably adjusted to the extent that the existence of such differing subsurface or physical condition causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:
 - a. such condition must meet any one or more of the categories described in Paragraph 4.03.A; and

- b. with respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraphs 9.07 and 11.03.
2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times if:
 - a. Contractor knew or should have known of the existence of such conditions at the time Contractor made a final commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract; or
 - b. the existence of such condition could reasonably have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such final commitment; or
 - c. Contractor failed to give the written notice as required by Paragraph 4.03.A.
 3. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, a Claim may be made therefor as provided in Paragraph 10.05. However, neither Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors shall be liable to Contractor for any claims, costs, losses, or damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Contractor on or in connection with any other project or anticipated project.

4.04 *Underground Facilities*

A. General

1. The Contractor shall notify the owners of adjacent utilities when the prosecution of the work may affect the utility facilities or operation.
2. The Contractor shall perform and carry on the work so as not to interfere with or damage utility facilities in the vicinity of the work. The Contractor shall take every possible precaution to properly protect and preserve, including temporary supports and bracing where necessary, the utility facilities from damage, injury or displacement. The Contractor shall remedy all damage, injury or loss to any property caused, directly or indirectly, in whole or in part, by the Contractor, any subcontractor or any person directly or indirectly employed or engaged by the Contractor or a subcontractor or any person for whose acts the Contractor or a subcontractor is liable.
3. The City and the Engineer will not be responsible for any delay in performing the work resulting from the existence, removal or adjustment of any utility facilities. Additional costs incurred by the Contractor as a result thereof shall be borne solely by the Contractor.
4. Utility facilities, such as water mains, gas mains, storm sewers, sanitary sewers, telephone lines, power lines and buried facilities and structures in the vicinity of the work are indicated

on the drawings only to the extent such information has been made available to or discovered by the Engineer during the course of preparing the drawings. The actual locations of the utility facilities may vary from the locations shown, and there may be utility facilities existing that are not indicated on the Drawings. It is understood and agreed that there is no guarantee as to the accuracy or completeness of the utility information indicated on the drawings, and all responsibility for the accuracy or completeness thereof is expressly disclaimed. Generally, service connections are not indicated on the Drawings.

5. The Contractor shall be solely responsible for locating all existing underground facilities, including service connections, in advance of excavating, trenching or other work, by contacting the owners of the facilities or prospecting. The Contractor shall use his own information and shall not rely upon the information shown on the Drawings concerning utility facilities.
6. In the event of accidental damage to or disruption of utilities by the Contractor or any of his subcontractors or agents, the Contractor shall immediately take all necessary steps to replace any pieces of damaged equipment and all damaged materials, make all necessary repairs and restore all services to normal. The Contractor shall engage any and all required additional labor, individuals, subcontractors or other outside services which may be deemed necessary, to operate on a continuous "around-the-clock" basis until services are restored. He shall also provide and install all required equipment and materials to maintain temporary emergency services for uninterrupted use of facilities. All costs involved in making the repairs and restoring the disrupted service to normal shall be borne by the Contractor responsible for such disruption of services, and he shall be fully responsible for any and all damage claims resulting from such disruption.
7. Under no circumstances shall the Contractor or any of his subcontractors or agents disrupt or disconnect any type of facility whatsoever without first obtaining the written permission of the utility owner to do so. Request for disruption or disconnection shall state:
 - a. The location of the required disconnect and which utility is concerned.
 - b. The exact date and time at which the disconnect will be required.
 - c. The duration of the proposed disconnect or interruption.
8. Where it is necessary to temporarily interrupt services, the Contractor shall notify the utility owner, both before the interruption and again immediately before service is resumed. Before disconnecting any pipes or cables, the Contractor shall obtain permission from the owners thereof, or shall make suitable arrangements for their disconnection by the owners. Where it is necessary to temporarily interrupt house services, the Contractor shall notify the house owner or occupant, both before the interruption and again immediately before service is resumed. Should underground utilities or structures be encountered that are in minor conflict with the alignment or gradient of the proposed work, the proposed work may be adjusted by the Engineer where such adjustment is feasible and will not interfere with the operation of the proposed system. No payment will be made for these adjustments.

9. Where major conflicts in the proposed work and existing utilities or structures occur and adjustment of the new work is not feasible, then the Engineer may revise the alignment and/or grade to suit these conditions. If, in the opinion of the City, these revisions are necessary and are outside the scope of the bid items, they will be paid for as extra work.

B. *Shown or Indicated:* The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or contiguous to the Site is based on information and data furnished to Owner or Engineer by the owners of such Underground Facilities, including Owner, or by others. Unless it is otherwise expressly provided in the Supplementary Conditions:

1. Owner and Engineer shall not be responsible for the accuracy or completeness of any such information or data provided by others; and
2. the cost of all of the following will be included in the Contract Price, and Contractor shall have full responsibility for:
 - a. reviewing and checking all such information and data;
 - b. locating all Underground Facilities shown or indicated in the Contract Documents;
 - c. coordination of the Work with the owners of such Underground Facilities, including Owner, during construction; and
 - d. the safety and protection of all such Underground Facilities and repairing any damage thereto resulting from the Work.

BC. *Not Shown or Indicated:*

1. If an Underground Facility is uncovered or revealed at or contiguous to the Site which was not shown or indicated, or not shown or indicated with reasonable accuracy in the Contract Documents, Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 6.16.A), identify the owner of such Underground Facility and give written notice to that owner and to Owner and Engineer. Engineer will promptly review the Underground Facility and determine the extent, if any, to which a change is required in the Contract Documents to reflect and document the consequences of the existence or location of the Underground Facility. During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.
2. If Engineer concludes that a change in the Contract Documents is required, a Field Order, a Work Change Directive or a Change Order will be issued to reflect and document such consequences. An equitable adjustment shall be made in the Contract Price or Contract Times, or both, to the extent that they are attributable to the existence or location of any Underground Facility that caused a change as described in Paragraph A.9 of this Article 4.04. was not shown or indicated or not shown or indicated with reasonable accuracy in the Contract Documents and that Contractor did not know of and could not reasonably have been expected to be aware of or to have anticipated. If Owner and Contractor are unable to

agree on entitlement to or on the amount or extent, if any, of any such adjustment in Contract Price or Contract Times, Owner or Contractor may make a Claim therefor as provided in Paragraph 10.05.

- D. The dimensions and descriptions given on the Drawings for adjacent work by others, if any, (including any existing facilities or utilities previously constructed for Owner) are based on the design drawings and not as-built drawings. Prior to commencing the Work, the Contractor shall verify all as-built conditions and information whenever existing facilities or utilities may impact the Work. Failure of Contractor to so verify all as-built conditions prior to commencing the Work shall bar Contractor from later seeking additional compensation for conflicts with existing facilities or utilities.
- E. Prior to the construction or installation of any proposed facility or pipeline, the Contractor shall expose all existing utilities true to their vertical and horizontal location, within the vicinity of the Work. In order to avoid conflicts between existing and proposed facilities or utilities, the Contractor shall either relocate the existing or proposed utility on a temporary or permanent basis, or shall take whatever means necessary to protect the existing facilities or utilities during the installation of proposed utilities, as approved by the Engineer. No additional payment will be made for the relocation of existing utilities or for any work associated with the protection of existing facilities or utilities.

4.05 *Reference Points*

- A. Owner shall provide engineering surveys to establish reference points for construction which in Engineer's judgment are necessary to enable Contractor to proceed with the Work. Contractor shall be responsible for laying out the Work, shall protect and preserve the established reference points and property monuments, and shall make no changes or relocations without the prior written approval of Owner. Contractor shall report to Engineer whenever any reference point or property monument is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points or property monuments by professionally qualified personnel.
- B. Engineer may check the lines, elevations, and reference marks set by Contractor, and Contractor shall correct any errors disclosed by such check. Such a check shall not be considered as approval of Contractor's work and shall not relieve Contractor of the responsibility for accurate construction of the entire Work. Contractor shall furnish personnel to assist Engineer in checking lines and grades.
- C. The Contractor shall review the Contract Documents and the Project site to determine the presence and location of any property or rights-of-way monuments or markers, and to assess the possibility of disruption to these monuments or markers. It will be the Contractor's responsibility to flag, erect guard post, or provide offset references for the protection or the re-monumentation of these property or rights-of-way monuments or markers. In the event these monuments or markers are covered over or disturbed, it will be the Contractor's responsibility to employ a surveyor licensed in the state of that the Project is located to re-establish those monuments or markers of property or rights-of-way, which were present prior to Work on the Project.

D. It shall be the Contractor's responsibility to verify all reference points shown on the Contract Documents prior to beginning Work on the site. This verification shall be conducted by professionally qualified personnel in a manner which will verify the accuracy of the information shown in the Contract Documents. On projects which involve the connection to, or additions to existing structures, the elevations of these existing structures shall also be verified. Any findings which differ from those shown on the Contract Documents shall be submitted in writing to the Engineer for resolution.

E. Additional surveys necessary for the construction staking shall be performed by the Contractor, the cost of which shall be incorporated into the appropriate items of Work. On projects in which payment is classified by depth of cut, the construction staking shall be performed in a manner that will allow for the determination of cut classification.

4.06 *Hazardous Environmental Condition at Site*

- A. *Reports and Drawings:* The Supplementary Conditions identify those reports and drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at the Site.
- B. *Limited Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "technical data," Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors with respect to:
1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures of construction to be employed by Contractor and safety precautions and programs incident thereto; or
 2. other data, interpretations, opinions and information contained in such reports or shown or indicated in such drawings; or
 3. any Contractor interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions or information.
- C. Contractor shall not be responsible for any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work. Contractor shall be responsible for a Hazardous Environmental Condition created with any materials brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible.
- D. If Contractor encounters a Hazardous Environmental Condition or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, Contractor shall immediately: (i) secure or otherwise isolate such condition; (ii) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 6.16.A); and (iii) notify Owner and Engineer (and promptly thereafter confirm such

notice in writing). Owner shall promptly consult with Engineer concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any. Promptly after consulting with Engineer, Owner shall take such actions as are necessary to permit Owner to timely obtain required permits and provide Contractor the written notice required by Paragraph 4.06.E.

- E. Contractor shall not be required to resume Work in connection with such condition or in any affected area until after Owner has obtained any required permits related thereto and delivered written notice to Contractor: (i) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work; or (ii) specifying any special conditions under which such Work may be resumed safely. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, or both, as a result of such Work stoppage or such special conditions under which Work is agreed to be resumed by Contractor, either party may make a Claim therefor as provided in Paragraph 10.05.
- F. If after receipt of such written notice Contractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special conditions, then Owner may issue a Work Change Directive or Change Order as appropriate regarding said condition. ~~order the portion of the Work that is in the area affected by such condition to be deleted from the Work.~~ If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of an adjustment in Contract Price or Contract Times as a result of deleting such portion of the Work, then either party may make a Claim therefor as provided in Paragraph 10.05. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 7.
- G. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition: (i) was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be included within the scope of the Work, and (ii) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06.G shall obligate Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- H. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06.H shall obligate Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

- I. The provisions of Paragraphs 4.02, 4.03, and 4.04 do not apply to a Hazardous Environmental Condition uncovered or revealed at the Site.

ARTICLE 5 – BONDS AND INSURANCE

5.01 *Performance, Payment, and Other Bonds*

- A. Contractor shall furnish performance and payment bonds, each in an amount at least equal to the Contract Price as security for the faithful performance and payment of all of Contractor's obligations under the Contract Documents. These bonds shall remain in effect until one year after the date when final payment ~~becomes due~~ is made by the Owner or until completion of the correction period specified in Paragraph 13.07, whichever is later, except as provided otherwise by Laws or Regulations or by the Contract Documents. Contractor shall also furnish such other bonds as are required by the Contract Documents.
- B. All bonds shall be in the form prescribed by the Contract Documents except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are named in the list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (amended) by the Financial Management Service, Surety Bond Branch, U.S. Department of the Treasury. All bonds signed by an agent or attorney-in-fact must be accompanied by a certified copy of that individual's authority to bind the surety. The evidence of authority shall show that it is effective on the date the agent or attorney-in-fact signed each bond.
- C. If the surety on any bond furnished by Contractor is declared bankrupt or becomes insolvent or its right to do business is terminated in any state where any part of the Project is located or it ceases to meet the requirements of Paragraph 5.01.B, Contractor shall promptly notify Owner and Engineer and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which shall comply with the requirements of Paragraphs 5.01.B and 5.02.

5.02 *Licensed Sureties and Insurers*

- A. All bonds and insurance required by the Contract Documents to be purchased and maintained by Owner or Contractor shall be obtained from surety or insurance companies that are duly licensed or authorized ~~in the jurisdiction in which the Project is located~~ by the State of Tennessee to issue bonds or insurance policies for the limits and coverages so required. Such surety and insurance companies shall also meet such additional requirements and qualifications as ~~may be provided below; in the Supplementary Conditions.~~
1. Surety shall be in good standing with the Tennessee Department of Commerce and Insurance.
 2. Surety and Insurers must have an A.M. Best Financial Strength Rating of A or higher, with a Financial Size Category of X or higher.
 3. The surety shall have an underwriting limitation in Circular 570 in excess of the Contract Amount.

4. No surety will be accepted who is now in default or delinquent on any bond.

5.03 *Certificates of Insurance*

- A. Contractor shall deliver to Owner, with copies to each additional insured and loss payee identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Owner or any other additional insured) which Contractor is required to purchase and maintain.
- B. ~~Owner shall deliver to Contractor, with copies to each additional insured and loss payee identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Contractor or any other additional insured) which Owner is required to purchase and maintain.~~
- C. Failure of Owner to demand such certificates or other evidence of Contractor's full compliance with these insurance requirements or failure of Owner to identify a deficiency in compliance from the evidence provided shall not be construed as a waiver of Contractor's obligation to maintain such insurance.
- D. Owner does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Contractor.
- E. The insurance and insurance limits required herein shall not be deemed as a limitation on Contractor's liability under the indemnities granted to Owner in the Contract Documents.

5.04 *Contractor's Insurance*

- A. Contractor shall purchase and maintain such insurance as is appropriate for the Work being performed and as will provide protection from claims set forth below which may arise out of or result from Contractor's performance of the Work and Contractor's other obligations under the Contract Documents, whether it is to be performed by Contractor, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable:
 - 1. claims under workers' compensation, disability benefits, and other similar employee benefit acts;
 - 2. claims for damages because of bodily injury, occupational sickness or disease, or death of Contractor's employees;
 - 3. claims for damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees;
 - 4. claims for damages insured by ~~reasonably~~ available personal injury liability coverage which are sustained:
 - a. by any person as a result of an offense directly or indirectly related to the employment of such person by Contractor, or

- b. by any other person for any other reason;
- 5. claims for damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom; and
- 6. claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance or use of any motor vehicle.

B. The policies of insurance required by this Paragraph 5.04 shall:

- 1. with respect to insurance required by Paragraphs 5.04.A.3 through 5.04.A.6 inclusive, be written on an occurrence basis, include as additional insureds (subject to any customary exclusion regarding professional liability) Owner and Engineer, and any other individuals or entities identified in the Supplementary Conditions, all of whom shall be listed as additional insureds, and include coverage for the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of all such additional insureds, and the insurance afforded to these additional insureds shall provide primary coverage for all claims covered thereby;
- 2. include at least the specific coverages and be written for not less than the limits of liability provided in the Supplementary Conditions or required by Laws or Regulations, whichever is greater;
- 3. include contractual liability insurance covering Contractor's indemnity obligations under Paragraphs 6.11 and 6.20;
- 4. contain a provision or endorsement that the coverage afforded will not be canceled, materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other additional insured identified in the Supplementary Conditions to whom a certificate of insurance has been issued (and the certificates of insurance furnished by the Contractor pursuant to Paragraph 5.03 will so provide);
- 5. remain in effect at least until final payment and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work in accordance with Paragraph 13.07; and
- 6. include completed operations coverage:
 - a. Such insurance shall remain in effect for two years after final payment.
 - b. Contractor shall furnish Owner and each other additional insured identified in the Supplementary Conditions, to whom a certificate of insurance has been issued, evidence satisfactory to Owner and any such additional insured of continuation of such insurance at final payment and one year thereafter.

5.05 *Owner's Liability Insurance*

- A. In addition to the insurance required to be provided by Contractor under Paragraph 5.04, Owner, at Owner's option, may purchase and maintain at Owner's expense Owner's own liability insurance as will protect Owner against claims which may arise from operations under the Contract Documents.

5.06 *Property Insurance*

- A. Unless otherwise provided in the Supplementary Conditions, ~~Owner~~Contractor shall purchase and maintain property insurance upon the Work at the Site in the amount of the full replacement cost thereof ~~(subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations)~~. This insurance shall:

1. include the interests of Owner, Contractor, Subcontractors, and Engineer, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as a loss payee;
2. be written on a Builder's Risk "all-risk" policy form that shall at least include insurance for physical loss or damage to the Work, temporary buildings, falsework, and materials and equipment in transit, and shall insure against at least the following perils or causes of loss: fire, lightning, extended coverage, theft, vandalism and malicious mischief, earthquake, collapse, debris removal, demolition occasioned by enforcement of Laws and Regulations, water damage (other than that caused by flood), and such other perils or causes of loss as may be specifically required by the Supplementary Conditions.
3. include expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects);
4. cover materials and equipment stored at the Site or at another location that was agreed to in writing by Owner prior to being incorporated in the Work, provided that such materials and equipment have been included in an Application for Payment recommended by Engineer;
5. allow for partial utilization of the Work by Owner;
6. include testing and startup; and
7. be maintained in effect until final payment is made unless otherwise agreed to in writing by Owner, Contractor, and Engineer with 30 days written notice to each other loss payee to whom a certificate of insurance has been issued.

- ~~B. Owner shall purchase and maintain such equipment breakdown insurance or additional property insurance as may be required by the Supplementary Conditions or Laws and Regulations which will include the interests of Owner, Contractor, Subcontractors, and Engineer, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors,~~

~~members, partners, employees, agents, consultants and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as a loss payee.~~

C. All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained in accordance with this Paragraph 5.06 will contain a provision or endorsement that the coverage afforded will not be canceled or materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other loss payee to whom a certificate of insurance has been issued and will contain waiver provisions in accordance with Paragraph 5.07.

~~D. Owner shall not be responsible for purchasing and maintaining any property insurance specified in this Paragraph 5.06 to protect the interests of Contractor, Subcontractors, or others in the Work to the extent of any deductible amounts that are identified in the Supplementary Conditions. The risk of loss within such identified deductible amount will be borne by Contractor, Subcontractors, or others suffering any such loss, and if any of them wishes property insurance coverage within the limits of such amounts, each may purchase and maintain it at the purchaser's own expense.~~

~~E. If Contractor requests in writing that other special insurance be included in the property insurance policies provided under this Paragraph 5.06, Owner shall, if possible, include such insurance, and the cost thereof will be charged to Contractor by appropriate Change Order. Prior to commencement of the Work at the Site, Owner shall in writing advise Contractor whether or not such other insurance has been procured by Owner.~~

5.07 Waiver of Rights

A. Owner and Contractor intend that all policies purchased in accordance with Paragraphs 5.04 and 5.06 by Contractor will protect Owner, Contractor, Subcontractors, and Engineer, and all other individuals or entities identified in the Supplementary Conditions as loss payees (and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them) in such policies and will provide primary coverage for all losses and damages caused by the perils or causes of loss covered thereby. All such policies shall contain provisions to the effect that in the event of payment of any loss or damage the insurers will have no rights of recovery against any of the insureds or loss payees thereunder. ~~Owner and Contractor waive all rights against each other and their respective officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them for all losses and damages caused by, arising out of or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Subcontractors and Engineer, and all other individuals or entities identified in the Supplementary Conditions as loss payees (and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them) under such policies for losses and damages so caused.~~ None of the above waivers shall extend to the rights that any party making such waiver may have to the proceeds of insurance held by Owner/Contractor as trustee or otherwise payable under any policy so issued.

~~B. Owner waives all rights against Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them for:~~

- ~~1. loss due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Work caused by, arising out of, or resulting from fire or other perils whether or not insured by Owner; and~~
 - ~~2. loss or damage to the completed Project or part thereof caused by, arising out of, or resulting from fire or other insured peril or cause of loss covered by any property insurance maintained on the completed Project or part thereof by Owner during partial utilization pursuant to Paragraph 14.05, after Substantial Completion pursuant to Paragraph 14.04, or after final payment pursuant to Paragraph 14.07.~~
- ~~C. Any insurance policy maintained by Owner covering any loss, damage or consequential loss referred to in Paragraph 5.07.B shall contain provisions to the effect that in the event of payment of any such loss, damage, or consequential loss, the insurers will have no rights of recovery against Contractor, Subcontractors, or Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them.~~

5.08 *Receipt and Application of Insurance Proceeds*

- A. Any insured loss under the policies of insurance required by Paragraph 5.06 will be adjusted with Owner and made payable to Owner ~~as fiduciary~~ for the loss payees, as their interests may appear, subject to the requirements of any applicable mortgage clause and of Paragraph 5.08.B. Owner shall deposit in a separate account any money so received and shall distribute it in accordance with such agreement as the parties in interest may reach. If no other special agreement is reached, the damaged Work shall be repaired or replaced, the moneys so received applied on account thereof, and the Work and the cost thereof covered by an appropriate Change Order.
- B. Owner ~~as fiduciary~~ shall have power to adjust and settle any loss with the insurers unless one of the parties in interest shall object in writing within 15 days after the occurrence of loss to Owner's exercise of this power. If such objection be made, Owner ~~as fiduciary~~ shall make settlement with the insurers in accordance with such agreement as the parties in interest may reach. If no such agreement among the parties in interest is reached, Owner ~~as fiduciary~~ shall adjust and settle the loss with the insurers. ~~and, if required in writing by any party in interest, Owner as fiduciary shall give bond for the proper performance of such duties.~~

5.09 *Acceptance of Bonds and Insurance; Option to Replace*

- A. If ~~either Owner or Contractor~~ has any objection to the coverage afforded by or other provisions of the bonds or insurance required to be purchased and maintained by ~~the other party~~ Contractor in accordance with this Article 5 on the basis of non-conformance its not complying with the Contract Documents, ~~the objecting party shall so~~ Owner will notify ~~the other party~~ Contractor in writing thereof within 10 days after receipt of the certificates (or other evidence requested) required by of the date of delivery of such certificate to Owner in accordance with Paragraph 2.01.B. ~~Owner and~~ Contractor shall ~~each~~ provide ~~to the other~~ such additional information in respect of insurance provided by Contractor as ~~the other~~ Owner may reasonably request. ~~If either party does not purchase or maintain all of the bonds and insurance required of such party by the Contract Documents, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required~~

~~coverage. Without prejudice to any other right or remedy, the other party may elect to obtain equivalent bonds or insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and a Change Order shall be issued to adjust the Contract Price accordingly.~~

B. All policies and bonds shall be subject to approval by the City Attorney. Should the City Attorney at any time in his sole discretion determine that the insurance policies and certificate provided may not be sufficient to protect the interests of the City because of the insolvency of the insurance company or otherwise, the Contractor shall replace such policies with policies meeting his approval.

5.10 *Partial Utilization, Acknowledgment of Property Insurer*

A. If Owner ~~chooses~~finds it necessary to occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work as provided in Paragraph 14.05, no such use or occupancy shall commence before the insurers providing the property insurance pursuant to Paragraph 5.06 have acknowledged notice thereof and in writing effected any changes in coverage necessitated thereby. The insurers providing the property insurance shall consent by endorsement on the policy or policies, but the property insurance shall not be canceled or permitted to lapse on account of any such partial use or occupancy.

ARTICLE 6 –CONTRACTOR’S RESPONSIBILITIES

6.01 *Supervision and Superintendence*

A. Contractor shall supervise, provide quality control, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction. Any method of work suggested by the City or Engineer, but not specified, shall be used at the risk and responsibility of the Contractor; and the City and Engineer will assume no responsibility therefore. Contractor shall not be responsible for the negligence of Owner or Engineer in the design or specification of a specific means, method, technique, sequence, or procedure of construction which is shown or indicated in and expressly required by the Contract Documents.

B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who shall not be replaced without written notice to Owner and Engineer except under extraordinary circumstances. Contractor shall also designate, in writing, a representative, hereinafter referred to as Project Manager, assigned to the Project on a full-time basis during execution of the Work who shall have the authority to act on behalf of Contractor, including executing the orders or directions of the Engineer without delay. This Superintendent and/or Project Manager shall have full authority to promptly supply products, tools, plant equipment, and labor as may be required to diligently prosecute the Work. All communications given to or received from the Superintendent and/or the Project Manager shall be binding on Contractor.

- C. If at any time during the Project the Superintendent or Project Manager leaves the Project site while Work is in progress, Engineer shall be notified and provided with the name of Contractor's representative having responsible charge.
- D. Contractor shall also designate the person responsible for Contractor's quality control while Work is in progress. Engineer shall be notified in writing prior to any change in quality control representative assignment.
- E. Prior to the Commencement of the Contract Time, Contractor shall furnish to the Owner and Engineer the names, resumes, 24 hour contact information and other relevant information associated with the Project Manager and the Superintendent that are to be assigned to this project. The Project Manager and Superintendent must be acceptable to the Owner and Engineer.

6.02 Labor; Working Hours

- A. Contractor shall provide competent, skilled, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. Contractor shall at all times maintain good discipline and order at the Site. Contractor shall, upon demand from the Engineer, immediately remove any manager, superintendent, foreman or workman whom the Engineer or Owner may consider incompetent or undesirable.
- B. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site shall be performed during regular working hours. Contractor will not permit the performance of Work on a Saturday, Sunday, or any City holiday pursuant to the Chattanooga City Code legal holiday without Owner's written consent (which will not be unreasonably withheld) given after prior written notice to Engineer.
- C. Regular working hours may be Monday through Friday, excluding holidays, occurring between the hours of 7:00 AM and 6:00 PM, unless restricted otherwise. Contractor shall establish regular scheduled work times, e.g., four 10-hour days, five 8-hour days, or five 10-hour days within the hours and days allowed above. Approval for specific work outside regular scheduled work times shall be requested no less than 48 hours prior to the requested work period. Contractor shall request approval of changes in regular scheduled work times no less than one week prior to the desired change. Occasional unscheduled overtime on weekdays may be permitted provided reasonable notice is given to Engineer. Night work will not be established as a regular procedure, excluding emergencies, except with written permission. Such permission, if granted, shall be upon such terms and conditions deemed appropriate in the Engineer's sole discretion.
- D. Contractor shall pay all extra costs incurred by the Owner associated with work, outside of normal working hours, including additional support services, inspection services, testing services, utilities or other applicable costs. The cost associated with the Owner's inspection overtime will be the amounts as provided in the Supplementary Conditions per hour per individual, depending upon individuals assigned to the Project, the type of work being inspected, and the date of the invoice; i.e., allowing for salary escalation. Contractor will not be

responsible for extra costs associated with inspection overtime for work in excess of 40 hours per week when such overtime work is explicitly required by the Contract Documents.

E. Except in the case of emergencies or other unusual circumstances, no work shall be permitted on the project on Sunday or locally observed national holidays.

F. The Engineer will determine to what extent extraordinary onsite personnel work is required during Contractor's overtime work or working hours outside regular scheduled work hours.

G. During unfavorable weather, wet ground, or other unsuitable construction conditions, the Contractor shall confine his operations to work which will not be affected adversely thereby. No portion of the work shall be constructed under conditions which would affect adversely the quality or efficiency thereof, unless special means or precautions are taken by the Contractor to perform the work in a proper and satisfactory manner.

6.03 *Services, Materials, and Equipment*

A. Unless otherwise specified in the Contract Documents, Contractor shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, quality control, testing, start-up, and completion of the Work.

B. All materials and equipment incorporated into the Work shall be as specified or, ~~and if not specified~~, shall be of good quality, ~~and~~ new ~~and unused~~, except as otherwise provided in the Contract Documents and shall be installed in an undamaged condition. All products provided on this Project shall be products currently manufactured by the manufacturer, i.e., products shall not be discontinued or out-of-date products nor shall they be of the last production run of the product. Contractor shall incorporate the previous sentence in any contract or agreement between Contractor and subcontractor or supplier supplying products provided on this Project. All special warranties and guarantees required by the ~~Specifications~~ Contract Documents shall expressly run to the benefit of Owner. If required by Engineer, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment.

C. All materials and equipment shall be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise may be provided in the Contract Documents.

D. Without limiting the responsibility or liability of the Contractor pursuant to this agreement, all warranties given by manufacturers on materials or equipment incorporated in the work are hereby assigned by the Contractor to the Owner. Such assignment shall be effective upon completion of Contractor's warranty period. If requested, the Contractor shall execute formal assignments of said manufacturer's warranties to the Owner. All such warranties shall be directly enforceable by the Owner. Such assignment shall in no way affect the Contractor's responsibilities and duties during the warranty period.

- E. Wherever a stock size of manufactured item or piece of equipment is specified by its nominal size, it shall be the responsibility of the Contractor to determine the actual space requirements for setting and for entrance to the setting space and to make all necessary allowances and adjustments therefor in his work without additional cost to the City.
- F. Equipment and Construction Plant. All equipment and construction plant shall be suitable to produce the quality of work and materials required for the satisfactory completion of the work within the Contract Time and shall be satisfactory to the Engineer. The Contractor shall provide adequate and suitable equipment and construction plant to meet the requirements of the work as specified in these Contract Documents. The Contractor shall remove unsuitable equipment from the work and add to the construction plant when ordered to do so by the Engineer. The Contractor shall obtain written permission from the City prior to constructing temporary buildings or other structures on land owned or leased by the City. If a permit is granted, said buildings or other structures shall comply with all applicable regulations regarding their construction and maintenance and shall be satisfactory to the City

6.04 *Progress Schedule*

- A. Contractor shall provide all resources, labor, materials, equipment, services, etc. necessary to adhere to the Progress Schedule established in accordance with Paragraph 2.07 and Section 01 32 16 – Construction Schedules of the General Requirements as it may be adjusted from time to time as provided below.
1. Contractor shall submit to Engineer for acceptance (to the extent indicated in Paragraph 2.07) proposed adjustments in and Section 01 32 16 – Construction Schedules of the General Requirements) an updated –the– Progress Schedule that will not result in changing the Contract Times and an updated Schedule of Submittals with each partial payment request, but no less than monthly. Contractor’s failure to provide acceptable updated Progress Schedule and Schedule of Submittals will delay processing of the pay request until receipt of the acceptable updated Progress Schedule and/or an updated Schedule of Submittals. Such adjustments will updates and adjustments shall comply with any provisions of Section 01 32 16 – Construction Schedules of the General Requirements applicable thereto.
 2. Proposed adjustments in the Progress Schedule that will change the Contract Times shall be submitted in accordance with the requirements of Article 12. Adjustments in Contract Times may only be made by a Change Order.
 3. Number of anticipated days associated with weather conditions, as defined in the General Requirements, shall be included on the critical path of Project Schedule.
- B. The Contractor shall implement the detailed schedule of activities to the fullest extent possible between Project Coordination Meetings.
- C. The Contractor shall prepare its daily report by 10:00 a.m. of the day following the report date. This daily report will contain, as a minimum, the weather conditions; number of workers by craft, including supervision and management personnel on site; active and inactive equipment on site; work accomplished by schedule activity item; problems; and visitors to the jobsite.

- D. If a current activity or series of activities on the overall project schedule is behind schedule and if the late status is not due to an excusable delay for which a time extension would be forthcoming, the Contractor shall attempt to reschedule the activity to be consistent with the overall Project schedule so as not to delay any of the Contract milestones. The Contractor agrees that:
1. The Contractor shall attempt to expedite the activity completion so as to have it agree with the overall progress schedule. Such measures as the Contractor may choose shall be made explicit during the Project Coordination Meeting.
 2. If, within two weeks of identification of such behind-schedule activity, the Contractor is not successful in restoring the activity to an on schedule status, the Contractor shall:
 - a. Carry out the activity with the scheduled crew on an overtime basis until the activity is complete or back on schedule.
 - b. Increase the crew size or add shifts so the activity can be completed as scheduled.
 - c. Commit to overtime or increased crew sizes for subsequent activities, or some combination of the above as deemed suitable by the Engineer.
 3. These actions shall be taken at no increase in the Contract amount.
- E. The Contractor shall maintain a current copy of all construction schedules on prominent display in the Contractor's field office at the Project site.
- F. The Contractor shall cooperate with the Owner and Engineer in all aspects of the Project scheduling system. Failure to implement the Project scheduling system or to provide specified schedules, diagrams and reports, or to implement actions to re-establish progress consistent with the overall progress schedule may be causes for withholding of payment.

6.05 *Substitutes and "Or-Equals"*

- A. See Section 01 25 00 – Substitutions and Options of the General Requirements. Whenever — an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the specification or description is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or equal" item or no substitution is permitted, other items of material or equipment or material or equipment of other Suppliers may be submitted to Engineer for review under the circumstances described below:
1. "Or Equal" Items: If in Engineer's sole discretion an item of material or equipment proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, it may be considered by Engineer as an "or equal" item, in which case review and approval of the proposed item may, in Engineer's sole discretion, be accomplished without compliance with some or all of the requirements for approval of proposed substitute items. For the purposes of this Paragraph 6.05.A.1, a proposed item of material or equipment will be considered functionally equal to an item so named if:

~~a. in the exercise of reasonable judgment Engineer determines that:~~

- ~~1) it is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;~~
- ~~2) it will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole; and~~
- ~~3) it has a proven record of performance and availability of responsive service.~~

~~b. Contractor certifies that, if approved and incorporated into the Work:~~

- ~~1) there will be no increase in cost to the Owner or increase in Contract Times; and~~
- ~~2) it will conform substantially to the detailed requirements of the item named in the Contract Documents.~~

~~2. Substitute Items:~~

~~a. If in Engineer's sole discretion an item of material or equipment proposed by Contractor does not qualify as an "or equal" item under Paragraph 6.05.A.1, it will be considered a proposed substitute item.~~

~~b. Contractor shall submit sufficient information as provided below to allow Engineer to determine if the item of material or equipment proposed is essentially equivalent to that named and an acceptable substitute therefor. Requests for review of proposed substitute items of material or equipment will not be accepted by Engineer from anyone other than Contractor.~~

~~c. The requirements for review by Engineer will be as set forth in Paragraph 6.05.A.2.d, as supplemented by the General Requirements, and as Engineer may decide is appropriate under the circumstances.~~

~~d. Contractor shall make written application to Engineer for review of a proposed substitute item of material or equipment that Contractor seeks to furnish or use. The application:~~

~~1) shall certify that the proposed substitute item will:~~

- ~~a) perform adequately the functions and achieve the results called for by the general design,~~
- ~~b) be similar in substance to that specified, and~~
- ~~e) be suited to the same use as that specified;~~

~~2) will state:~~

~~a) the extent, if any, to which the use of the proposed substitute item will prejudice Contractor's achievement of Substantial Completion on time;~~

- ~~b) whether use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for other work on the Project) to adapt the design to the proposed substitute item, and~~
- ~~e) whether incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty;~~
- ~~3) will identify:~~
 - ~~a) all variations of the proposed substitute item from that specified, and~~
 - ~~b) available engineering, sales, maintenance, repair, and replacement services; and~~
 - ~~4) shall contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including costs of redesign and claims of other contractors affected by any resulting change.~~
- ~~B. *Substitute Construction Methods or Procedures:* If a specific means, method, technique, sequence, or procedure of construction is expressly required by the Contract Documents, Contractor may furnish or utilize a substitute means, method, technique, sequence, or procedure of construction approved by Engineer. Contractor shall submit sufficient information to allow Engineer, in Engineer's sole discretion, to determine that the substitute proposed is equivalent to that expressly called for by the Contract Documents. The requirements for review by Engineer will be similar to those provided in Paragraph 6.05.A.2.~~
- ~~C. *Engineer's Evaluation:* Engineer will be allowed a reasonable time within which to evaluate each proposal or submittal made pursuant to Paragraphs 6.05.A and 6.05.B. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No "or equal" or substitute will be ordered, installed or utilized until Engineer's review is complete, which will be evidenced by a Change Order in the case of a substitute and an approved Shop Drawing for an "or equal." Engineer will advise Contractor in writing of any negative determination.~~
- ~~D. *Special Guarantee:* Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.~~
- ~~E. *Engineer's Cost Reimbursement:* Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor pursuant to Paragraphs 6.05.A.2 and 6.05.B. Whether or not Engineer approves a substitute so proposed or submitted by Contractor, Contractor shall reimburse Owner for the reasonable charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the reasonable charges of Engineer for making changes in the Contract Documents (or in the provisions of any other direct contract with Owner) resulting from the acceptance of each proposed substitute.~~
- ~~F. *Contractor's Expense:* Contractor shall provide all data in support of any proposed substitute or "or equal" at Contractor's expense.~~

6.06 *Concerning Subcontractors, Suppliers, and Others*

- A. Contractor shall not employ any Subcontractor, Supplier, or other individual or entity (including those acceptable to Owner as indicated in Paragraph 6.06.B), whether initially or as a replacement, against whom Owner may have reasonable objection. Acceptance of any Subcontractor, other person or organization by Owner shall not constitute a waiver of any right of Owner to reject defective Work. Contractor shall not be required to employ any Subcontractor, ~~Supplier,~~ or other individual or entity to furnish or perform any of the Work against whom Contractor has reasonable objection.
- B. If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers, or other individuals or entities to be submitted to Owner in advance for acceptance by Owner by a specified date prior to the Effective Date of the Agreement, and if Contractor has submitted a list thereof in accordance with the Supplementary Conditions, Owner's acceptance (either in writing or by failing to make written objection thereto by the date indicated for acceptance or objection in the Bidding Documents or the Contract Documents) of any such Subcontractor, Supplier, or other individual or entity so identified may be revoked on the basis of reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor, Supplier, or other individual or entity, ~~and the Contract Price will be adjusted by the difference in the cost occasioned by such replacement, and an appropriate Change Order will be issued.~~ No acceptance by Owner of any such Subcontractor, Supplier, or other individual or entity, whether initially or as a replacement, shall constitute a waiver of any right of Owner or Engineer to reject defective Work.
- C. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of the Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work just as Contractor is responsible for Contractor's own acts and omissions. Nothing in the Contract Documents:
1. shall create for the benefit of any such Subcontractor, Supplier, or other individual or entity any contractual relationship between Owner or Engineer and any such Subcontractor, Supplier or other individual or entity; nor
 2. shall create any obligation on the part of Owner or Engineer to pay or to see to the payment of any moneys due any such Subcontractor, Supplier, or other individual or entity except as may otherwise be required by Laws and Regulations.
- D. Contractor shall be solely responsible for scheduling and coordinating the Work of Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work under a direct or indirect contract with Contractor.
- E. Contractor shall require all Subcontractors, Suppliers, and such other individuals or entities performing or furnishing any of the Work to communicate with Engineer through Contractor.
- F. The divisions and sections of the Specifications and the identifications of any Drawings shall not control Contractor in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade. Such arrangement shall not operate to make the

Engineer or the City an arbitrator to establish subcontract limits between Contractor and Subcontractor.

- G. All Work performed for Contractor by a Subcontractor or Supplier ~~will~~ shall be pursuant to an appropriate agreement between Contractor and the Subcontractor or Supplier which specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of Owner and Engineer. ~~Whenever any such agreement is with a Subcontractor or Supplier who is listed as a loss payee on the property insurance provided in Paragraph 5.06, the agreement between the Contractor and the Subcontractor or Supplier will contain provisions whereby the Subcontractor or Supplier waives all rights against Owner, Contractor, Engineer, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or loss payees (and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them) for all losses and damages caused by, arising out of, relating to, or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work. If the insurers on any such policies require separate waiver forms to be signed by any Subcontractor or Supplier, Contractor will obtain the same.~~
- H. Owner or Engineer may furnish to any Subcontractor, Supplier or other person or organization, to the extent practicable, information about amounts paid on their behalf to Contractor in accordance with Contractor's Applications for Payment.
- I. Specialty Subcontractors: Contractor shall utilize the services of Specialty Subcontractors on those parts of the Work which is declared as specialty work in Specifications and which, under normal contracting practices, is best performed by Specialty Subcontractors, as required by the Engineer in Engineer's sole discretion, at no additional cost to the Owner. If Contractor desires to self-perform specialty work, Contractor shall submit a request to the Owner, accompanied by evidence that Contractor's own organization has successfully performed the type of work in question, is presently competent to perform the type of work, and the performance of the work by Specialty Subcontractors will result in materially increased costs or inordinate delays.
- J. The Contractor shall perform a minimum of 50 percent of the onsite labor with its own employees.

6.07 *Patent Fees and Royalties*

- A. Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If a particular invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if, to the actual knowledge of Owner or Engineer, its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights shall be disclosed by Owner in the Contract Documents.
- B. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, and its officers, directors, members, partners, employees, agents, consultants, and subcontractors from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other

professionals, and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device specified in the Contract Documents, but not identified as being subject to payment of any license fee or royalty to others required by patent rights or copyrights.

- C. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device not specified in the Contract Documents

6.08 *Permits*

- A. Unless otherwise provided in the Supplementary Conditions, Contractor shall obtain and pay for all construction, ~~permits and licenses temporary and permanent permits and licenses, necessary and incidental to the due and lawful prosecution of the work, including all permits on any part of the Work as required by law in connection with the Work.~~ Owner ~~shall~~ will assist Contractor, when ~~required by the permitting agency necessary,~~ in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of opening of Bids, or, if there are no Bids, on the Effective Date of the Agreement. Owner shall pay all charges of utility owners for connections for providing permanent service to the Work.
- B. Railway Crossings. When the work encroaches upon the right-of-way of any railway, the City will secure for the Contractor all the necessary easements or authority to enter upon such right-of-way for the prosecution and completion of the work. Contractor shall, however, take such special precaution for the safety of the work and the traveling public as may be necessary, by sheeting, bracing, and thoroughly supporting the sides of any excavation and supporting and protecting any adjacent structures. Contractor shall be bound by all requirements as stated in Supplemental Agreement between the City and railroad authority, as included in an appendix to these Contract Documents.

6.09 *Laws and Regulations*

- A. Contractor shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.
- B. If Contractor performs any Work knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work. However, it shall not be Contractor's responsibility to make certain that the Specifications and

Drawings are in accordance with Laws and Regulations, but this shall not relieve Contractor of Contractor's obligations under Paragraph 3.03.

C. Changes in Laws or Regulations not known at the time of opening of Bids (or, on the Effective Date of the Agreement if there were no Bids) having an effect on the cost or time of performance of the Work shall be the subject of an adjustment in Contract Price or Contract Times, or both. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

D. It is understood and agreed that the Contractor shall be familiar with and shall observe and comply with, all Federal, State, County, and City laws, codes, ordinances, regulations, orders, and decrees, including air and water pollution and noise abatement regulations, existing, or enacted subsequent to the execution of the Contract, that in any manner affect those engaged or employed in the work, or the materials or equipment used in the work, or which in any way affect the conduct of the work. The Contractor shall strictly observe all applicable laws and regulations as to public safety, health and sanitation. No pleas of misunderstanding or ignorance on the part of the Contractor will in any way serve to modify or mitigate the provisions of these Contract Documents. The Contractor and his Surety shall indemnify and save harmless the City and the Engineer and all their officers, agents, and servants against any claim or liability arising from, or based on the violation of, any such law, code, ordinance, regulation, order or decree, whether by himself, his agents or his employees.

F. Where professional engineering and/or architectural services are required in connection with any of the components required by the Contract, all Bidders and component suppliers must make certain that there is full compliance with all applicable laws of the state in which the Project is located and any other state governing professional engineering and/or architecture. The Owner and Engineer do not warrant that any entity listed as an acceptable manufacturer is or will be in compliance with such laws.

G. Any fines levied against the Owner for failure of Contractor to properly maintain required NPDES erosion and sediment control measures or any other related requirements will be deducted as set-offs from payments due Contractor.

6.10 *Taxes*

A. Contractor shall pay all sales, consumer, use, and other similar taxes required to be paid by Contractor in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the Work.

6.11 *Use of Site and Other Areas*

A. *Limitation on Use of Site and Other Areas:*

1. Contractor shall confine construction equipment, the storage of materials and equipment, and the operations of workers to the Site and other areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and other areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for any damage to

any such land or area, or to the owner or occupant thereof, or of any adjacent land or areas resulting from the performance of the Work.

2. Should any claim be made by any such owner or occupant because of the performance of the Work, Contractor shall promptly settle with such other party by negotiation or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law.
 3. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against Owner, Engineer, or any other party indemnified hereunder to the extent caused by or based upon Contractor's performance of the Work.
- B. *Removal of Debris During Performance of the Work:* During the progress of the Work Contractor shall keep the Site and other areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris shall conform to applicable Laws and Regulations.
- C. *Cleaning:* Prior to Substantial Completion of the Work Contractor shall clean the Site and the Work and make it ready for utilization by Owner. At the completion of the Work Contractor shall remove from the Site all tools, appliances, construction equipment and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.
- D. *Loading Structures:* Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the Work or adjacent property to stresses or pressures that will endanger it.

6.12 *Record Documents*

- A. Contractor shall maintain in a safe place at the Site [Record Documents as specified in the Section 01 78 39 – Record Documents of the General Requirements](#) ~~one record copy of all Drawings, Specifications, Addenda, Change Orders, Work Change Directives, Field Orders, and written interpretations and clarifications in good order and annotated to show changes made during construction. These record documents together with all approved Samples and a counterpart of all approved Shop Drawings will be available to Engineer for reference.~~ Upon completion of the Work, these record documents, Samples, and Shop Drawings ~~will~~ shall be delivered to Engineer for Owner.

6.13 *Safety and Protection*

- A. Contractor shall be solely responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. Such responsibility does not relieve

Subcontractors of their responsibility for the safety of persons or property in the performance of their work, nor for compliance with applicable safety Laws and Regulations. Contractor shall take all ~~necessary~~ precautions for the safety of, and shall provide the ~~necessary~~ protection to prevent pollution of or damage, injury or loss to:

1. all persons on the Site or who may be affected by the Work;
 2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and
 3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.
- B. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection. Contractor shall notify owners of adjacent property and of Underground Facilities and other utility owners when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property.
- C. Contractor shall comply with the applicable requirements of Owner's safety programs, if any. The Supplementary Conditions identify any Owner's safety programs that are applicable to the Work.
- D. Contractor shall inform Owner and Engineer of the specific requirements of Contractor's safety program with which Owner's and Engineer's employees and representatives must comply while at the Site.
- E. All damage, injury, or loss to any property referred to in Paragraph 6.13.A.2 or 6.13.A.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or Engineer or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).
- F. Contractor's duties and responsibilities for safety and for protection of the Work shall continue until such time as all the Work is completed and Engineer has issued a notice to Owner and Contractor in accordance with Paragraph 14.07.B that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).
- G. The property, improvements or facilities at the site shall be replaced or restored to a condition as good as when Contractor entered upon the Site. In case of failure on the part of Contractor to restore such property, or make good such damages or injury, the Owner may, after 48 hours written notice, or sooner in the case of an emergency, proceed to repair, rebuild, or otherwise

restore such property, improvements or facilities as may be deemed necessary. The cost thereof will be deducted from any monies due or which may become due Contractor under this Contract.

H. Reasonable care shall be taken during construction to avoid damage to vegetation. Ornamental shrubbery and tree branches shall be tied back, where appropriate, to minimize damage. Trees which receive damage to branches shall be trimmed of those branches to improve the appearance of the tree. Tree trunks receiving damage from equipment shall be treated with a tree dressing.

I. The Contractor shall give due notice to any controlling person, department, or public service company, prior to adjusting items to grade and shall be held strictly liable to the City if any such items are disturbed, damaged or covered up during the course of the work.

J. Fire hydrants on or adjacent to the work shall be kept accessible to the fire-fighting apparatus at all times, and no material or obstruction shall be placed within 10 feet of any hydrant. Adjacent premises must be given access, as far as practicable, and obstruction of sewer inlets, gutters and ditches will not be permitted.

K. Public Safety and Convenience

1. The Contractor shall conduct his operations in a manner that will offer the least possible obstruction and inconvenience to the public and he shall not have under construction an amount of work greater than he can prosecute properly with due regard to the rights of the public.

2. Construction operations shall be conducted in a manner that will cause as little inconvenience as possible to abutting property owners. Convenient access to driveways, houses, buildings or other facilities in the vicinity of the work shall be maintained and temporary access facilities for public roadways shall be provided and maintained in satisfactory condition.

6.14 *Safety Representative*

A. Contractor shall designate a qualified and experienced safety representative at the Site whose duties and responsibilities shall be the prevention of accidents and the maintaining and supervising of safety precautions and programs.

6.15 *Hazard Communication Programs*

A. Contractor shall be responsible for coordinating any exchange of material safety data sheets or other hazard communication information required to be made available to or exchanged between or among employers at the Site in accordance with Laws or Regulations.

B. The Contractor shall erect and properly maintain at all times, as required by the conditions and progress of the work, all necessary safeguards, including sufficient lights and danger signals on or near the work; he shall erect suitable railings, barricades, covers, or other protective devices about unfinished work, open trenches, holes, embankments or other hazards and obstructions; where hazards to workmen or the public exist. The Contractor shall provide, at all times, all necessary watchmen on the project, for the safety of employees, delivery personnel, and the

general public, and to diligently guard and protect all work and materials, including Owner-furnished equipment. Construction equipment shall be suitably night-marked and lighted as necessary for safety considerations. No separate payment will be made for providing lights on vehicles and equipment, signs, barricades, lights, flags, watchmen and other protective devices, and the costs thereof shall be included in the Contract Price(s).

6.16 *Emergencies*

- A. In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, Contractor is obligated to act to prevent threatened damage, injury, or loss. Contractor shall give Engineer prompt written notice if Contractor believes that any significant changes in the Work or variations from the Contract Documents have been caused thereby or are required as a result thereof. If Engineer determines that a change in the Contract Documents is required because of the action taken by Contractor in response to such an emergency, a Work Change Directive or Change Order will be issued.

6.17 *Shop Drawings, ~~and~~ Samples and Other Submittals*

- A. Contractor shall submit ~~Shop Drawings and Samples~~ Submittals to Engineer for review and approval in accordance with the accepted or adjusted Schedule of Submittals (as required by Paragraph 2.07). Each submittal willshall be identified as Engineer may require.

1. *Shop Drawings:*

- a. Submit number of copies specified in the Section 01 33 23 – Shop Drawings, Product Data and Samples of the General Requirements.
- b. Data shown on the Shop Drawings willshall be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Contractor proposes to provide and to enable Engineer to review the information for the limited purposes required by Paragraph 6.17.D.

2. *Samples:*

- a. Submit number of Samples specified in the Specifications.
- b. Clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer may require to enable Engineer to review the submittal for the limited purposes required by Paragraph 6.17.D.

- B. Where ~~a Shop Drawing or Sample~~ any Submittal is required by the Contract Documents or the Schedule of Submittals, any related Work performed prior to Engineer's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.

C. *Submittal Procedures:*

1. Before submitting each Shop Drawing or Sample, Contractor shall have:

- a. reviewed and coordinated each Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents;
 - b. determined and verified all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto;
 - c. determined and verified the suitability of all materials offered with respect to the indicated application, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work; and
 - d. determined and verified all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto.
2. Each [Shop Drawing and Sample](#) submittal shall bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review and approval of that submittal.
 3. With each submittal, Contractor shall give Engineer specific written notice of any variations that the Shop Drawing or Sample may have from the requirements of the Contract Documents. This notice shall be both a written communication separate from the Shop Drawings or Sample submittal; and, in addition, by a specific notation made on each Shop Drawing or Sample submitted to Engineer for review and approval of each such variation.

D. *Engineer's Review:*

1. Engineer will [return as incomplete or will](#) provide timely review of Shop Drawings and Samples in accordance with the Schedule of Submittals acceptable to Engineer. Engineer's review and approval [or disapproval](#) will be only to determine if the items covered by the submittals will, after installation or incorporation in the Work, conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.
2. Engineer's review and approval [or disapproval](#) will not extend to means, methods, techniques, sequences, or procedures of construction (except where a particular means, method, technique, sequence, or procedure of construction is specifically and expressly called for by the Contract Documents) or to safety precautions or programs incident thereto. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.
3. Engineer's review and approval shall not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 6.17.C.3 and Engineer has given written approval of each such variation by specific written ~~notation~~[Field Order](#) thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer's review and approval shall not relieve Contractor from responsibility for complying with the requirements of Paragraph 6.17.C.1.

4. Review by the City or Engineer of any plan or method of work proposed by the Contractor shall not relieve the Contractor of any responsibility therefor, and such review shall not be considered as an assumption of any risk or liability by the City or Engineer, or any officer, agent, or employee thereof. The Contractor shall have no claim on account of the failure or inefficiency of any plan or method so reviewed.

E. *Resubmittal Procedures:*

1. Contractor shall make corrections required by Engineer and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous submittals.

F. Excessive Submittal Resubmission: Engineer will record time required by Engineer for excessive Submittal review occasioned by Contractor's resubmission, in excess of two resubmissions of any required Submittal, caused by unverified, unchecked or unreviewed, incomplete, inaccurate or erroneous, or nonconforming Submittals. Upon receipt of Engineer's accounting of time and costs, Contractor will reimburse Owner for the charges of Engineer's review for excessive resubmissions through set-offs from the recommended Owner payments to Contractor as established in Paragraph 14.02.D. of these General Conditions.

G. In the event that Contractor provided a submittal for a previously approved item, whether such is as a substitution or in addition to the previously approved item, Contractor shall reimburse Owner for Engineer's charges for such time as may be required to perform all reviews of the substitute item, unless the change is specifically requested by the Owner.

6.18 *Continuing the Work*

- A. Contractor shall carry on the Work and adhere to the Progress Schedule during all disputes or disagreements with Owner. No Work shall be delayed or postponed pending resolution of any disputes or disagreements, except as permitted by Paragraph 15.04 or as Owner and Contractor may otherwise agree in writing.

6.19 *Contractor's General Warranty and Guarantee*

- A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer and its officers, directors, members, partners, employees, agents, consultants, and subcontractors shall be entitled to rely on representation of Contractor's warranty and guarantee.
- B. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:
 1. abuse, modification, or improper maintenance or operation by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or

2. normal wear and tear under normal usage.
- C. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents or a release of Contractor's obligation to perform the Work in accordance with the Contract Documents:
1. observations by Engineer;
 2. recommendation by Engineer or payment by Owner of any progress or final payment;
 3. the issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;
 4. use or occupancy of the Work or any part thereof by Owner;
 5. any review and approval of a ~~Shop Drawing or Sample s~~Submittal or the issuance of a notice of acceptability by Engineer;
 6. any inspection, test, or approval by others; or
 7. any correction of defective Work by Owner.

6.20 *Indemnification and Liability*

- A. It is understood and agreed that the Contractor shall be deemed and considered an independent contractor in respect to the work covered by these Contract Documents, and shall assume all risks and responsibility for casualties of every description in connection with the work, except that he shall not be held liable or responsible for delays or damage to work caused by acts of God, acts of public enemy, quarantine restrictions, general strikes throughout the trade, or freight embargoes not caused or participated in by the Contractor. The Contractor shall have charge and control of the entire work until completion and final acceptance of the work by the City. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the performance of the Work, provided that any such claim, cost, loss, or damage is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom but only to the extent caused by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work or anyone for whose acts any of them may be liable, regardless of whether or not caused in part by any negligence or omission of a person or entity indemnified hereunder or whether liability is imposed upon such indemnified party by Laws and Regulations regardless of the negligence of any such person or entity .

- B. In any and all claims against Owner or Engineer or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 6.20.A shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.
- C. The indemnification obligations of Contractor ~~under Paragraph 6.20.A~~ shall not extend to the liability of Engineer and Engineer's officers, directors, members, partners, employees, agents, consultants and subcontractors arising out of:
1. the negligent preparation or approval of, or the failure to prepare or approve maps, Drawings, opinions, reports, surveys, Change Orders, designs, or Specifications; or
 2. negligently giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage.
- D. Contractor, Subcontractors, Suppliers and others on the Project, or their sureties, shall maintain no direct action against the Engineer, their officers, employees, affiliated corporations, consultants, and subcontractors, for any claim arising out of, in connection with, or resulting from the engineering services performed. Only the Owner will be the beneficiary of any undertaking by the Engineer.
- E. Defense of Suits: In case any action in court is brought against the City or the Engineer, or any officer, agent or employee of any of them, for the failure, omission, or neglect of the Contractor to perform any of the covenants, acts, matters, or things by this contract undertaken; or for injury or damage caused by the alleged negligence of the Contractor or his subcontractors or his or their agents, or in connection with any claim based on lawful demands of subcontractors, workmen, material-men, or suppliers, the Contractor shall indemnify, defend and save harmless the City and the Engineer and their officers, agents and employees, from all losses, damages, costs, expenses (including attorneys' fees), judgments, or decrees arising out of such action.

6.21 *Delegation of Professional Design Services*

- A. Contractor will not be required to provide professional design services unless such services are specifically required by the Contract Documents for a portion of the Work or unless such services are required to carry out Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. Contractor shall not be required to provide professional services in violation of applicable law.
- B. If professional design services or certifications by a design professional related to systems, materials or equipment are specifically required of Contractor by the Contract Documents, Owner and Engineer will specify all performance and design criteria that such services must satisfy. Contractor shall cause such services or certifications to be provided by a properly licensed 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 Engineer.

- C. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy and completeness of the services, certifications or approvals performed by such design professionals, provided Owner and Engineer have specified to Contractor all performance and design criteria that such services must satisfy.
- D. Pursuant to this Paragraph 6.21, Engineer's review and approval of design calculations and design drawings will be only for the limited purpose of checking for conformance with performance and design criteria given and the design concept expressed in the Contract Documents. Engineer's review and approval of Shop Drawings and other submittals (except design calculations and design drawings) will be only for the purpose stated in Paragraph 6.17.D.1.
- E. Contractor shall not be responsible for the adequacy of the performance or design criteria required by the Contract Documents.

6.22 Project Coordination Meetings

- A. The Contractor shall participate in Project Coordination Meetings to be held on the site monthly, or more often if conditions warrant, to establish the current state of completion and revise the schedule as necessary. The Project Coordination Meeting will be conducted by the Owner and/or the Engineer.

ARTICLE 7 – OTHER WORK AT THE SITE

7.01 Related Work at Site

- A. Owner may perform other work related to the Project at the Site with Owner's employees, or through other direct contracts therefor, or have other work performed by utility owners. If such other work is not noted in the Contract Documents, then:
 - 1. written notice thereof will be given to Contractor prior to starting any such other work; and
 - 2. if Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times or both that should be allowed as a result of such other work, a Claim may be made therefor as provided in Paragraph 10.05.
- B. Contractor shall afford each other contractor who is a party to such a direct contract, each utility owner, and Owner, if Owner is performing other work with Owner's employees, proper and safe access to the Site, provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work, and properly coordinate the Work with theirs. Contractor shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate with

such other work. Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering such work; provided, however, that Contractor may cut or alter others' work with the written consent of Engineer and the others whose work will be affected. The duties and responsibilities of Contractor under this Paragraph are for the benefit of such utility owners and other contractors to the extent that there are comparable provisions for the benefit of Contractor in said direct contracts between Owner and such utility owners and other contractors.

- C. If the proper execution or results of any part of Contractor's Work depends upon work performed by others under this Article 7, Contractor shall inspect such other work and promptly report to Engineer in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of Contractor's Work. Contractor's failure to so report will constitute an acceptance of such other work as fit and proper for integration with Contractor's Work except for latent defects and deficiencies in such other work.

7.02 *Coordination*

- A. If Owner ~~intends to contract~~s with others for the performance of other work on the [Project at the Site](#), the following will be set forth in Supplementary Conditions:
1. the individual or entity who will have authority and responsibility for coordination of the activities among the various contractors will be identified;
 2. the specific matters to be covered by such authority and responsibility will be itemized; and
 3. the extent of such authority and responsibilities will be provided.
- B. Unless otherwise provided in the Supplementary Conditions, Owner shall have sole authority and responsibility for such coordination [with other contractors](#).

7.03 *Legal Relationships*

- A. Paragraphs 7.01.A and 7.02 are not applicable for utilities not under the control of Owner.
- B. Each other direct contract of Owner under Paragraph 7.01.A shall provide that the other contractor is liable to Owner and Contractor for the reasonable direct delay and disruption costs incurred by Contractor as a result of the other contractor's wrongful actions or inactions.
- C. Contractor shall be liable to Owner and any other contractor under direct contract to Owner for the reasonable direct delay and disruption costs incurred by such other contractor as a result of Contractor's wrongful action or inactions.

7.04 [Claims Between Contractors](#)

- A. [Should Contractor cause damage to the work or property of any separate contractor at the site, or should any claim arising out of Contractor's performance of the work at the site be made by any separate contractor against Contractor, Owner, Engineer, or any other person, Contractor shall promptly attempt to settle with such other contractor by agreement, or to otherwise resolve the dispute by mediation, arbitration, or at law.](#)

- B. Contractor shall, to the fullest extent permitted by Laws and Regulations, indemnify and hold Owner, Engineer, and the officers, directors, employees, agents, and other consultants of each and any of them harmless from and against all claims, costs, losses and damages, (including, but not limited to, all fees and charges of engineers, architects, attorneys and other professionals and all court or arbitration or other dispute resolution costs) arising directly, indirectly or consequentially out of or resulting from any action, legal or equitable, brought by any separate contractor against Owner, Engineer, or the officers, directors, employees, agents, and other consultants of each and any of them to the extent based on a claim arising out of Contractor's performance of the Work. Should a separate contractor cause damage to the Work or property of Contractor or should the performance of work by any separate contractor at the site give rise to any other claim, Contractor shall not institute any action, legal or equitable, against Owner, Engineer, or the officers, directors, employees, agents, and other consultants of each and any of them or permit any action against any of them to be maintained and continued in its name or for its benefit in any court or before any mediator or arbitrator which seeks to impose liability on or to recover damages from Owner, Engineer, or the officers, directors, employees, agents, or other consultants of each and any of them on account of any such damage or claim.
- C. If Contractor is delayed at any time in performing or furnishing Work by any act or neglect of a separate contractor, and Owner and Contractor are unable to agree as to the extent of any adjustment in Contract Times attributable hereto, Contractor may make a claim for an extension of times in accordance with Article 12. An extension of the Contract Times shall be Contractor's exclusive remedy with respect to Owner, and/or Engineer and the officers, directors, employees, agents, or other consultants of each and any of them for any delay, disruption, interference or hindrance caused by any separate contractor. This Paragraph does not prevent recovery from Owner, Engineer, and/or Designer for activities that are their respective responsibilities.

ARTICLE 8 – OWNER'S RESPONSIBILITIES

8.01 Communications to Contractor

- A. Except as otherwise provided in these General Conditions, Owner shall issue all communications to Contractor through Engineer.

8.02 Replacement of Engineer

- A. In case of termination of the employment of Engineer, Owner shall appoint an engineer ~~to whom Contractor makes no reasonable objection,~~ whose status under the Contract Documents shall be that of the former Engineer.

8.03 Furnish Data

- A. Owner shall promptly furnish the data required of Owner under the Contract Documents.

8.04 Pay When Due

- A. Owner shall make payments to Contractor when they are due as provided in Paragraphs 14.02.C and 14.07.C.

8.05 *Lands and Easements; Reports and Tests*

- A. Owner's duties with respect to providing lands and easements and providing engineering surveys to establish reference points are set forth in Paragraphs 4.01 and 4.05. Paragraph 4.02 refers to Owner's identifying and making available to Contractor copies of reports of explorations and tests of subsurface conditions and drawings of physical conditions relating to existing surface or subsurface structures at the Site.

8.06 *Insurance*

- A. Owner's shall not have any responsibilities, ~~if any~~, with respect to purchasing and maintaining liability and property insurance ~~are set forth in Article 5~~.

8.07 *Change Orders*

- A. Owner is obligated to execute Change Orders as indicated in Paragraph 10.03.

8.08 *Inspections, Tests, and Approvals*

- A. Owner's responsibility with respect to certain inspections, tests, and approvals is set forth in Paragraph 13.03.B.

8.09 *Limitations on Owner's Responsibilities*

- A. The Owner shall not supervise, direct, or have control or authority over, nor be responsible for, Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Owner will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

8.10 *Undisclosed Hazardous Environmental Condition*

- A. Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 4.06.

8.11 *Evidence of Financial Arrangements*

- A. Upon request of Contractor, Owner shall furnish Contractor reasonable evidence that financial arrangements have been made to satisfy Owner's obligations under the Contract Documents.

8.12 *Compliance with Safety Program*

- A. While at the Site, Owner's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Owner has been informed pursuant to Paragraph 6.13.D.

8.13 Testing of Materials and Equipment

- A. The testing of materials shall be made by a competent laboratory or other person selected and paid for by the City. The Contractor shall submit samples of materials for testing as required by the Engineer. The cost of all retests made necessary by the failure of materials to conform to the requirements of these Contract Documents shall be paid by the Contractor.

ARTICLE 9 – ENGINEER’S STATUS DURING CONSTRUCTION

9.01 Owner’s Representative

- A. Engineer will be Owner’s representative during the construction period. The duties and responsibilities and the limitations of authority of Engineer as Owner’s representative during construction are set forth in the Contract Documents.

9.02 Visits to Site

- A. Engineer will make visits to the Site at intervals appropriate to the various stages of construction as Engineer deems necessary in order to observe as an experienced and qualified design professional the progress that has been made and the quality of the various aspects of Contractor’s executed Work. Based on information obtained during such visits and observations, Engineer, for the benefit of Owner, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. Engineer’s efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, Engineer will keep Owner informed of the progress of the Work and will endeavor to guard Owner against defective Work.
- B. Engineer’s visits and observations are subject to all the limitations on Engineer’s authority and responsibility set forth in Paragraph 9.09. Particularly, but without limitation, during or as a result of Engineer’s visits or observations of Contractor’s Work, Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor’s means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work.

9.03 Project Representative

- A. If Owner and Engineer agree, Engineer will furnish a Resident Project Representative to assist Engineer in providing more extensive observation of the Work, but will not be on-site at all hours the Work is in progress. The authority and responsibilities of any such Resident Project Representative and assistants will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in Paragraph 9.09. If Owner designates another representative or agent to represent Owner at the Site who is not Engineer’s consultant, agent or employee, the responsibilities and authority and limitations thereon of such other individual or entity will be as provided in the Supplementary Conditions.

9.04 *Authorized Variations in Work*

- A. Engineer may authorize minor variations in the Work from the requirements of the Contract Documents which do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. These may be accomplished by a Field Order and will be binding on Owner and also on Contractor, who shall perform the Work involved promptly. If Owner or Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, or both, and the parties are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefore as provided in Paragraph 10.05.

9.05 *Rejecting Defective Work*

- A. Engineer will have authority to reject Work which Engineer believes to be defective, or that Engineer believes will not produce a completed Project that conforms to the Contract Documents or that will prejudice the integrity of the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Engineer will also have authority to require special inspection or testing of the Work as provided in Paragraph 13.04, whether or not the Work is fabricated, installed, or completed.

9.06 *Shop Drawings, Change Orders and Payments*

- A. In connection with Engineer's authority, and limitations thereof, as to Shop Drawings and Samples, see Paragraph 6.17.
- B. In connection with Engineer's authority, and limitations thereof, as to design calculations and design drawings submitted in response to a delegation of professional design services, if any, see Paragraph 6.21.
- C. In connection with Engineer's authority as to Change Orders, see Articles 10, 11, and 12.
- D. In connection with Engineer's authority as to Applications for Payment, see Article 14.

9.07 *Determinations for Unit Price Work*

- A. Engineer will have authority to determine the actual quantities and classifications of Unit Price Work performed by Contractor. If Engineer exercises such authority, Engineer will review with Contractor the Engineer's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). Engineer's written decision thereon will be final and binding (except as modified by Engineer to reflect changed factual conditions or more accurate data) upon Owner and Contractor, subject to the provisions of Paragraph 10.05.

9.08 *Decisions on Requirements of Contract Documents and Acceptability of Work*

- A. Engineer will be the initial interpreter of the requirements of the Contract Documents and initial judge of the acceptability of the Work thereunder. All matters in question and other matters between Owner and Contractor arising prior to the date final payment is due relating to the acceptability of the Work, and the interpretation of the requirements of the Contract Documents pertaining to the performance of the Work, will be referred initially to Engineer in writing within 30 days of the event giving rise to the question.
- B. Engineer will, with reasonable promptness, render a written decision on the issue referred. If Owner or Contractor believes that any such decision entitles them to an adjustment in the Contract Price or Contract Times or both, a Claim may be made under Paragraph 10.05. The date of Engineer's decision shall be the date of the event giving rise to the issues referenced for the purposes of Paragraph 10.05.B.
- C. Engineer's written decision on the issue referred will be final and binding on Owner and Contractor, subject to the provisions of Paragraph 10.05.
- D. When functioning as interpreter and judge under this Paragraph 9.08, Engineer will not show partiality to Owner or Contractor and will not be liable in connection with any interpretation or decision rendered in good faith in such capacity.

9.09 *Limitations on Engineer's Authority and Responsibilities*

- A. Neither Engineer's authority or responsibility under this Article 9 or under any other provision of the Contract Documents nor any decision made by Engineer in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer shall create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to Contractor, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.
- B. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Engineer will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.
- C. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.
- D. Engineer's review of the final Application for Payment and accompanying documentation and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Paragraph 14.07.A will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals that the results certified indicate compliance with, the Contract Documents, except that Owner shall determine whether bonds, certificates of insurance and release of liens comply with the Contract Documents.

- E. The limitations upon authority and responsibility set forth in this Paragraph 9.09 shall also apply to the Resident Project Representative, if any, and assistants, if any.

9.10 *Compliance with Safety Program*

- A. While at the Site, Engineer's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Engineer has been informed pursuant to Paragraph 6.13.D.

9.11 Authority of the City Engineer

- A. If the City has retained an engineer to assist the City Engineer in administering the contract, then the authority of the City Engineer shall be as specified herein. If the administration of the contract is performed by the City Engineer without having an engineer, then the authority of the City Engineer shall be as specified in this section and this Article 9.
- B. The general administration and observation of the performance and execution of the work under these Contract Documents is vested in the City Engineer. The detailed administration and observation of the performance and execution of the work is vested in the Engineer as set forth above.
- C. The City Engineer may authorize a person to act as the City Engineer's authorized representative or agent in carrying out the duties specified in these Contract Documents. The instructions of the City Engineer, or authorized representative, shall be strictly and promptly followed in every case.
- D. The City Engineer, or authorized representative, shall have authority to suspend operations at any time, without additional cost to the Owner, when the work, in the City Engineer's opinion, is not being carried out in conformity with the Drawings, Specifications, and other Contract Documents.
- E. The City Engineer, or authorized representative, may appoint Inspectors as are necessary to observe the performance of the work under these Contract Documents and the amount, character, and quality of materials supplied.

ARTICLE 10 – CHANGES IN THE WORK; CLAIMS

10.01 *Authorized Changes in the Work*

- A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work by a Change Order, or a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved which will be performed under the applicable conditions of the Contract Documents (except as otherwise specifically provided).

1. Owner may, in anticipation of possibly ordering an addition, deletion or revision to the Work, request Contractor to prepare a proposal of cost and times to perform Owner's contemplated changes in the Work. Contractor's written proposal shall be transmitted to the Engineer promptly, but not later than fourteen days after Contractor's receipt of Owner's written request and shall remain a firm offer for a period not less than sixty days after receipt by Engineer.
2. Contractor is not authorized to proceed on an Owner contemplated change in the Work prior to Contractor's receipt of a Change Order (or Work Change Directive) incorporating such change into the Work.
3. Owner's request for proposal or Contractor's failure to submit such proposal within the required time period will not justify a claim for an adjustment in Contract Price or Contract Time (or Milestones).
4. The Owner shall not be liable to the Contractor for any costs associated with the preparation of proposal associated with the Owner's contemplated changes in the Work.

- B. If Owner and Contractor are unable to agree on entitlement to, or on the amount or extent, if any, of an adjustment in the Contract Price or Contract Times, or both, that should be allowed as a result of a Work Change Directive, a Claim may be made therefor as provided in Paragraph 10.05.

10.02 *Unauthorized Changes in the Work*

- A. Contractor shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents as amended, modified, or supplemented as provided in Paragraph 3.04, except in the case of an emergency as provided in Paragraph 6.16 or in the case of uncovering Work as provided in Paragraph 13.04.D.

10.03 *Execution of Change Orders*

- A. Owner and Contractor shall execute appropriate Change Orders recommended by Engineer covering:
1. changes in the Work which are: (i) ordered by Owner pursuant to Paragraph 10.01.A, (ii) required because of acceptance of defective Work under Paragraph 13.08.A or Owner's correction of defective Work under Paragraph 13.09, or (iii) agreed to by the parties;
 2. changes in the Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive; and
 3. changes in the Contract Price or Contract Times which embody the substance of any written decision rendered by Engineer pursuant to Paragraph 10.05; provided that, in lieu of

executing any such Change Order, an appeal may be taken from any such decision in accordance with the provisions of the Contract Documents and applicable Laws and Regulations, but during any such appeal, Contractor shall carry on the Work and adhere to the Progress Schedule as provided in Paragraph 6.18.A.

B. In signing a Change Request Form, the Owner and Contractor acknowledge and agree that:

1. The stipulated compensation (Contract Price or Contract Time, or both) set forth in the Change Order includes payment for:
 - a. the Cost of the Work covered by the Change Order,
 - b. Contractor's fee for overhead and profit,
 - c. interruption of Progress Schedules,
 - d. delay and impact, including cumulative impact, on other work under the Contract Documents, and
 - e. extended home office and jobsite overhead;
2. the Change Order constitutes full mutual accord and satisfaction for the change to the Work;
3. No reservation of rights to pursue subsequent claims on the Change Order will be made by either party; and
4. No subsequent claim or amendment of the Contract Documents will arise out of or as a result of the Change Order.

10.04 *Notification to Surety*

- A. If the provisions of any bond require notice to be given to a surety of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Times), the giving of any such notice will be Contractor's responsibility. The amount of each applicable bond will be adjusted to reflect the effect of any such change.

10.05 *Claims and Disputes*

- A. *Engineer's Decision Required:* All Claims, except those waived pursuant to Paragraph 14.09, shall be referred to the Engineer for decision. A decision by Engineer shall be required as a condition precedent to any exercise by Owner or Contractor of any rights or remedies either may otherwise have under the Contract Documents or by Laws and Regulations in respect of such Claims.

- B. *Notice:* Written notice stating the general nature of each Claim shall be delivered by the claimant to Engineer and the other party to the Contract promptly (but in no event later than ~~30-10~~ days) after the start of the event giving rise thereto. The responsibility to substantiate a Claim shall rest with the party making the Claim. Notice of the amount or extent of the Claim, with written supporting data shall be delivered to the Engineer and the other party to the Contract within ~~60~~ 20 days (and monthly thereafter for continuing events) after the start of such event (unless Engineer allows additional time for claimant to submit additional or more accurate data in support of such Claim). A Claim for an adjustment in Contract Price shall be prepared in accordance with the provisions of Paragraph 12.01.B. A Claim for an adjustment in Contract Times shall be prepared in accordance with the provisions of Paragraph 12.02.B. Each Claim shall be accompanied by claimant's written statement that the adjustment claimed is the entire adjustment to which the claimant believes it is entitled as a result of said event. The opposing party shall submit any response to Engineer and the claimant within 30 days after receipt of the claimant's last submittal (unless Engineer allows additional time).
- C. *Engineer's Action:* Engineer will review each Claim and, within 30 days after receipt of the last submittal of the claimant or the last submittal of the opposing party, if any, take one of the following actions in writing:
1. deny the Claim in whole or in part;
 2. approve the Claim; or
 3. notify the parties that the Engineer is unable to resolve the Claim if, in the Engineer's sole discretion, it would be inappropriate for the Engineer to do so. For purposes of further resolution of the Claim, such notice shall be deemed a denial.
- D. In the event that Engineer does not take action on a Claim within said 30 days, the Claim shall be deemed denied.
- E. Engineer's written action under Paragraph 10.05.C or denial pursuant to Paragraphs 10.05.C.3 or 10.05.D will be final and binding upon Owner and Contractor, unless Owner or Contractor invoke the dispute resolution procedure set forth in Article 16 within 30 days of such action or denial.
- F. No Claim for an adjustment in Contract Price or Contract Times will be valid if not submitted in accordance with this Paragraph 10.05.

ARTICLE 11 – COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

11.01 *Cost of the Work*

- A. *Costs Included:* The term Cost of the Work means the sum of all costs, except those excluded in Paragraph 11.01.B, necessarily incurred and paid by Contractor in the proper performance of the Work. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, the costs to be reimbursed to Contractor will be only those additional or incremental costs required because of

the change in the Work or because of the event giving rise to the Claim. Except as otherwise may be agreed to in writing by Owner, such costs shall be in amounts no higher than those prevailing in the locality of the Project, shall not include any of the costs itemized in Paragraph 11.01.B, and shall include only the following items:

1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor. Such employees shall include, without limitation, superintendents, foremen, and other personnel employed full time on the Work. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits, which shall include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, ~~bonuses~~, sick leave, vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, shall be included in the above to the extent authorized by Owner.
2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts shall accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts shall accrue to Owner. All trade discounts, rebates and refunds and returns from sale of surplus materials and equipment shall accrue to Owner, and Contractor shall make provisions so that they may be obtained.
3. Payments made by Contractor to Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from subcontractors acceptable to Owner and Contractor and shall deliver such bids to Owner, who will then determine, with the advice of Engineer, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee shall be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 11.01.
4. Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed for services specifically related to the Work.
5. Supplemental costs including the following:
 - a. The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.
 - b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, and hand tools not owned by the workers, which are consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of Contractor.

c. Rentals of all construction equipment and machinery, and the parts thereof whether rented from Contractor or others in accordance with rental agreements approved by Owner with the advice of Engineer, and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs shall be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts shall cease when the use thereof is no longer necessary for the Work.

1. Full rental cost for rented, leased, and/or owned equipment shall not exceed the rates listed in the Rental Rate Blue Book published by Equipment Watch, a unit of Penton Media, Inc., as adjusted to the regional area of the Project. The most recent published edition in effect at the commencement of the actual equipment use shall be used.
2. Rates shall apply to equipment in good working condition. Equipment not in good condition, or larger than required, may be rejected by Engineer or accepted at reduced rates.
3. Equipment in Use: Actual equipment use time documented by the Engineer shall be the basis that the equipment was on and utilized at the Project site. In addition to the leasing rate above, equipment operational costs shall be paid at the estimated operating cost, payment category (and the table below), and associated rate set forth in the Blue Book if not already included in the lease rate.

The hours of operation shall be based upon actual equipment usage to the nearest full hour, as recorded by the Engineer.

| <u>Actual Usage</u> | <u>Blue Book Payment Category</u> |
|---|-----------------------------------|
| <u>Less than 8 hours</u> | <u>Hourly Rate</u> |
| <u>8 or more hours but less than 7 days</u> | <u>Daily Rate</u> |
| <u>7 or more days but less than 30 days</u> | <u>Weekly Rate</u> |
| <u>30 days or more</u> | <u>Monthly Rate</u> |

4. Equipment when idle (Standby): Idle or standby equipment is equipment on-site or in transit to and from the Work site and necessary to perform the Work under the modification but not in actual use. Idle equipment time, as documented by the Engineer, shall be paid at the leasing rate determined in 11.01.A.5.c., excluding operational costs.
5. Where a breakdown occurs on any piece of equipment, payment shall cease for that equipment and any other equipment idled by the breakdown. If any part of the Work is shutdown by the Owner, standby time will be paid during non-operating hours if

diversion of equipment to other Work is not practicable. Engineer reserves the right to cease standby time payment when an extended shutdown is anticipated.

- d. Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, as imposed by Laws and Regulations.
- e. Deposits lost for causes other than negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.
- f. Losses and damages (and related expenses) caused by damage to any of the Work that has been completed and accepted by the Owner, not compensated by insurance or otherwise, sustained by Contractor in connection with the performance of the Work (except losses and damages within the deductible amounts of property insurance established in accordance with Paragraph 5.06.D.), provided such losses and damages have resulted from causes other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses shall be included in the Cost of the Work for the purpose of determining Contractor's fee. If, however, any such loss or damage to the Work that has been accepted by Owner requires reconstruction and Contractor is placed in charge thereof, Contractor shall be paid for services, a fee proportionate to that stated in Paragraph 12.01.c.
- g. The cost of utilities, fuel, and sanitary facilities at the Site.
- h. Minor expenses such as ~~telegrams~~, long distance telephone calls, telephone service at the Site, express and courier services, and similar petty cash items in connection with the Work.
- i. The costs of premiums for all bonds and insurance Contractor is required by the Contract Documents to purchase and maintain.

B. *Costs Excluded:* The term Cost of the Work shall not include any of the following items:

- 1. Payroll costs and other compensation of Contractor's officers, executives, principals (of partnerships and sole proprietorships), general managers, safety managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 11.01.A.1 or specifically covered by Paragraph 11.01.A.4, all of which are to be considered administrative costs covered by the Contractor's fee.
- 2. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.

3. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.
 4. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.
 5. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraphs 11.01.A.
- C. *Contractor's Fee:* When all the Work is performed on the basis of cost-plus, Contractor's fee shall be determined as set forth in the Agreement. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, Contractor's fee shall be determined as set forth in Paragraph 12.01.C.
- D. *Documentation:* Whenever the Cost of the Work for any purpose is to be determined pursuant to Paragraphs 11.01.A and 11.01.B, Contractor will establish and maintain records thereof in accordance with generally accepted accounting practices and submit in a form acceptable to Engineer an itemized cost breakdown together with supporting data.

11.02 Allowances

- A. It is understood that Contractor has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be performed for such sums and by such persons or entities as may be acceptable to Owner and Engineer.
- B. *Cash Allowances:*
1. Contractor agrees that:
 - a. the cash allowances include the cost to Contractor (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and
 - b. Contractor's costs for unloading and handling on the Site, labor, installation, overhead, profit, and other expenses contemplated for the cash allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment on account of any of the foregoing will be valid.
- C. *Contingency Allowance:*
1. Contractor agrees that a contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.
- D. Prior to final payment, an appropriate Change Order will be issued as recommended by Engineer to reflect actual amounts due Contractor on account of Work covered by allowances, and the Contract Price shall be correspondingly adjusted.

11.03 *Unit Price Work*

- A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement.
- B. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Determinations of the actual quantities and classifications of Unit Price Work performed by Contractor will be made by Engineer subject to the provisions of Paragraph 9.07.
- C. Each unit price will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item.
- ~~D. Owner or Contractor may make a Claim for an adjustment in the Contract Price in accordance with Paragraph 10.05 if:
 - 1. the quantity of any item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement; and
 - 2. there is no corresponding adjustment with respect to any other item of Work; and
 - 3. Contractor believes that Contractor is entitled to an increase in Contract Price as a result of having incurred additional expense or Owner believes that Owner is entitled to a decrease in Contract Price and the parties are unable to agree as to the amount of any such increase or decrease.~~

ARTICLE 12 – CHANGE OF CONTRACT PRICE; CHANGE OF CONTRACT TIMES

12.01 *Change of Contract Price*

- A. The Contract Price may only be changed by a Change Order. Any Claim for an adjustment in the Contract Price shall be based on written notice submitted by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.
- B. The value of any Work covered by a Change Order or of any Claim for an adjustment in the Contract Price will be determined as follows:
 - 1. where the Work involved is covered by unit prices contained in the Contract Documents, by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 11.03); or
 - 2. where the Work involved is not covered by unit prices contained in the Contract Documents, by a ~~mutually agreed~~ lump sum value fixed by the Owner or by unit price values fixed by the Owner (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 12.01.C.2); or

3. where the Work involved is not covered by unit prices contained in the Contract Documents and agreement to a lump sum is not reached where the method under Paragraph 12.01.B.2. is not selected by the Owner, on the basis of the Cost of the Work (determined as provided in Paragraph 11.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 12.01.C).

C. *Contractor's Fee*: The Contractor's fee for overhead and profit shall be determined as follows:

1. a mutually acceptable fixed fee; or
2. if a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:
 - a. for costs incurred under Paragraphs 11.01.A.1 and 11.01.A.2, the Contractor's fee shall be 15 percent;
 - b. for costs incurred under Paragraph 11.01.A.3, the Contractor's fee shall be five percent based on subcontractor's actual Cost of the Work;
 - c. where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraphs 12.01.C.2.a and 12.01.C.2.b is that the Subcontractor who actually performs the Work, at whatever tier, will be paid a fee of 15 percent of the costs incurred by such Subcontractor under Paragraphs 11.01.A.1 and 11.01.A.2 and that any higher tier Subcontractor and Contractor will each be paid a fee of five percent of the amount paid to the next lower tier Subcontractor; except the maximum total allowable cost to Owner shall be the Cost of the Work plus a maximum collective aggregate fee for Contractor and all tiered Subcontractors of 26.8 percent.
 - d. no fee shall be payable on the basis of costs itemized under Paragraphs 11.01.A.4, 11.01.A.5, and 11.01.B;
 - e. the amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in cost will be the amount of the actual net decrease in cost plus a deduction in Contractor's fee by an amount equal to five percent of such net decrease; and
 - f. when both additions and credits are involved in any one change, the adjustment in Contractor's fee shall be computed on the basis of the net change in accordance with Paragraphs 12.01.C.2.a through 12.01.C.2.e, inclusive.

12.02 *Change of Contract Times*

- A. The Contract Times may only be changed by a Change Order. Any Claim for an adjustment in the Contract Times shall be based on written notice submitted by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.

- B. Any adjustment of the Contract Times covered by a Change Order or any Claim for an adjustment in the Contract Times will be determined in accordance with the provisions of this Article 12.

12.03 Delays

- A. Where Contractor is prevented from completing any part of the Work within the Contract Times due to delay beyond the control of Contractor, the Contract Times ~~will~~may be extended in an amount equal to the time lost due to such delay if a Claim is made therefor as provided in Paragraph 12.02.A. Delays beyond the control of Contractor shall include, but not be limited to, acts or neglect by Owner, acts or neglect of utility owners or other contractors performing other work as contemplated by Article 7, fires, floods, epidemics, abnormal weather conditions, quarantine restrictions, strikes, freight embargoes, acts of war (declared or not declared), or acts of God.
- B. If Owner, Engineer, or other contractors or utility owners performing other work for Owner as contemplated by Article 7, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times, or both. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.
- C. If Contractor is delayed in the performance or progress of the Work by fire, flood, epidemic, abnormal weather conditions, acts of God, acts or failures to act of utility owners not under the control of Owner, or other causes not the fault of and beyond control of Owner and Contractor, then Contractor ~~shall~~may be entitled to an equitable adjustment in Contract Times, but not Contract Price, if such adjustment is essential to Contractor's ability to complete the Work within the Contract Times. Such an adjustment shall be Contractor's sole and exclusive remedy for the delays described in this Paragraph 12.03.C.
- D. Owner, Engineer, and their officers, directors, members, partners, employees, agents, consultants, or subcontractors shall not be liable to Contractor for any claims, costs, losses, or damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Contractor on or in connection with any other project or anticipated project.
- E. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delays within the control of Contractor. Delays attributable to and within the control of a Subcontractor or Supplier shall be deemed to be delays within the control of Contractor.
- F. If the Progress Schedule reflects a completion date or milestone date prior to the completion date or milestone date established by the Contract Documents, this shall afford no basis to claim for delay should Contractor not complete the Work prior to the projected completion date. Should a change order be executed with a revised completion date or milestone date, the Progress Schedule shall be revised to reflect the new completion date or milestone date.

G. Abnormal Weather Delays

1. Extensions of Contract Time: If, in accordance with this Paragraph 12.03, the basis exists for an extension of time due to delays caused by abnormal weather, then an extension of time on the basis of abnormal weather may be granted only for the number of weather delay days in excess of the number of weather days listed as the Standard Baseline below for that month.

2. Standard Baseline for Average Climatic Range

a. The City has reviewed weather data available from the National Oceanic and Atmospheric Administration and determined a Standard Baseline of average climatic range for the State of Tennessee.

b. The Standard Baseline shall be regarded as the normal and anticipated number of calendar days for each month during which construction activity shall be expected to be prevented and suspended by cause of adverse weather. Suspension of construction activity for the number of days each month as listed in the Standard Baseline is to be included in the work and not eligible for an extension of the contract time.

c. The Standard Baseline, in days, is as follows:

| | | | | | |
|------------|------------|------------|------------|------------|------------|
| <u>JAN</u> | <u>FEB</u> | <u>MAR</u> | <u>APR</u> | <u>MAY</u> | <u>JUN</u> |
| <u>10</u> | <u>10</u> | <u>10</u> | <u>10</u> | <u>11</u> | <u>8</u> |
| <u>JUL</u> | <u>AUG</u> | <u>SEP</u> | <u>OCT</u> | <u>NOV</u> | <u>DEC</u> |
| <u>11</u> | <u>7</u> | <u>9</u> | <u>8</u> | <u>9</u> | <u>12</u> |

3. Adverse Weather and Weather Delay Days

a. Adverse weather is defined as the occurrence of one or more of the following conditions which prevents only exterior construction activity or access to the site within a 24-hour period:

1. Precipitation (rain, snow, or ice) in excess of one-tenth inch liquid measure.
2. Temperatures which do not rise above 32 degrees F by 10:00 AM.
3. Standing snow in excess of one inch.

b. Adverse weather days may include, if appropriate, “dry-out” or “mud” days when:

1. Precipitation (rain, snow, or ice) exceeds one-tenth inch liquid measure, and
2. There is a hindrance to site access or site work, such as excavation, backfill, and footings; but
3. May accumulate at a rate no greater than 1 make-up day for each day or consecutive days of rain that total 1.0 inch or more, liquid measure, unless specifically recommended otherwise by the Engineer.

c. An adverse weather day may be counted only if adverse weather prevents work on the project for 50 percent or more of the Contractor's scheduled work day, including a weekend day or holiday if the Contractor has scheduled construction activity that day.

4. Documentation and Submittals

- a. Monthly submit Daily Jobsite Work Log showing which and to what extent construction activities have been affected by weather.
- b. Submit actual weather data to support a claim for the time extension obtained from nearest NOAA weather station or other independently verified source approved by the Engineer at the beginning of the Project.
- c. Maintain a rain gauge, thermometer, and clock at the jobsite. Keep daily records of precipitation, temperature, and the time of each occurrence throughout the Project.
- d. Use the Standard Baseline data provided in this section when documenting actual delays due to weather in excess of the average.
- e. Organize claim and documentation to facilitate evaluation on a basis of calendar month periods, and submit in accordance with the procedures for claims established in Article 10 of these General Conditions.

ARTICLE 13 – TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

13.01 *Notice of Defects*

- A. Prompt notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor. Defective Work may be rejected, corrected, or accepted as provided in this Article 13.

13.02 *Access to Work*

- A. Owner, Engineer, their consultants and other representatives and personnel of Owner, independent testing laboratories, and governmental agencies with jurisdictional interests will have access to the Site and the Work at reasonable times for their observation, inspection, and testing. Contractor shall provide them proper and safe conditions for such access and advise them of Contractor's safety procedures and programs so that they may comply therewith as applicable.

13.03 *Tests and Inspections*

- A. Contractor is responsible for the initial and subsequent inspections of Contractor's Work to ensure that the Work conforms to the requirements of the Contract Documents. Contractor shall give Engineer timely notice of readiness of the Work for all required inspections, tests, or approvals and shall cooperate with inspection and testing personnel to facilitate required inspections or tests. Contractor shall establish an inspection program and a testing plan

acceptable to the Engineer and shall maintain complete inspection and testing records available to Engineer.

- B. Owner shall employ and pay for the services of an independent testing laboratory to perform all non-contractor inspections, tests, or approvals required by the Contract Documents except:
1. for inspections, tests, or approvals covered by Paragraphs 13.03.C and 13.03.D below;
 2. that costs incurred in connection with tests or inspections conducted pursuant to Paragraph 13.04.B shall be paid as provided in Paragraph 13.04.C; and
 3. as otherwise specifically provided in the Contract Documents.
- C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Engineer the required certificates of inspection or approval.
- D. Contractor shall be responsible for arranging and obtaining and shall pay all costs in connection with any inspections, tests, or approvals required for Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work; or acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work. Such inspections, tests, or approvals shall be performed by organizations acceptable to Owner and Engineer.
- E. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Engineer, Contractor shall, if requested by Engineer, uncover such Work for observation.
- F. Uncovering Work as provided in Paragraph 13.03.E shall be at Contractor's expense unless Contractor has given Engineer timely notice of Contractor's intention to cover the same and Engineer has not acted with reasonable promptness in response to such notice.
- G. Tests required by Contract Documents to be performed by Contractor and that require test certificates to be submitted to Owner or Engineer for acceptance shall be made by an independent testing laboratory or agency licensed or certified in accordance with Laws and Regulations and applicable state and local statutes. In the event state license or certification is not required testing laboratories or agencies shall meet the following applicable requirements:
1. "Recommended Requirements for Independent Laboratory Qualification", published by the American Council of Independent Laboratories.
 2. Basic requirements of ASTM E329, "Standard of Recommended Practice for Inspection and Testing Agencies for Concrete and Steel as Used in Construction" as applicable.

3. Calibrate testing equipment at reasonable intervals by devices of accuracy traceable to either the National Bureau of Standards or accepted values of natural physical constants.

13.04 *Uncovering Work*

- A. If any Work is covered contrary to the written request of Engineer, it must, if requested by Engineer, be uncovered for Engineer's observation and replaced at Contractor's expense.
- B. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, Contractor, at Engineer's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as Engineer may require, that portion of the Work in question, furnishing all necessary labor, material, and equipment.
- C. If it is found that the uncovered Work is defective, Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05.
- D. If the uncovered Work is not found to be defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, or both, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, Contractor may make a Claim therefor as provided in Paragraph 10.05.

13.05 *Owner May Stop the Work*

- A. If the Work is defective, or Contractor fails to supply sufficient skilled workers or suitable materials or equipment, or fails to perform the Work in such a way that the completed Work will conform to the Contract Documents, Owner may order Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of Owner to stop the Work shall not give rise to any duty on the part of Owner to exercise this right for the benefit of Contractor, any Subcontractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them.

B. If Owner stops Work under Paragraph 13.05.A. Contractor shall not be entitled to an extension of Contract Time or increase in Contract Price.

13.06 *Correction or Removal of Defective Work*

- A. Promptly after receipt of written notice, Contractor shall correct all defective Work, whether or not fabricated, installed, or completed, or, if the Work has been rejected by Engineer, remove it from the Project and replace it with Work that is not defective. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers,

architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or removal (including but not limited to all costs of repair or replacement of work of others).

B. When correcting defective Work under the terms of this Paragraph 13.06 or Paragraph 13.07, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.

C. Contractor shall promptly segregate and remove rejected products from the Site.

D. If rejected products or Work is not removed within 48 hours, the Owner will have the right and authority to stop the Work immediately and will have the right to arrange for the removal of said rejected products or Work at the cost and expense of the Contractor.

13.07 *Correction Period*

A. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the terms of any applicable special guarantee required by the Contract Documents) or by any specific provision of the Contract Documents, any Work is found to be defective, or if the repair of any damages to the land or areas made available for Contractor's use by Owner or permitted by Laws and Regulations as contemplated in Paragraph 6.11.A is found to be defective, Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions, and all to the satisfaction of the Owner:

1. repair such defective land or areas; or
2. correct such defective Work; or
3. if the defective Work has been rejected by Owner, remove it from the Project and replace it with Work that is not defective, and
4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others or other land or areas resulting therefrom.

B. If Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others) willshall be paid by Contractor.

C. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications.

D. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this Paragraph 13.07, the correction period hereunder with respect

to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.

- E. Contractor's obligations under this Paragraph 13.07 are in addition to any other obligation or warranty. The provisions of this Paragraph 13.07 shall not be construed as a substitute for, or a waiver of, the provisions of any applicable statute of limitation or repose.

F. Repetitive malfunction of an equipment or product item shall be cause for replacement and an extension of the correction period to a date one year following acceptable replacement. A repetitive malfunction shall be defined as the third failure of an equipment or product item following original acceptance.

13.08 *Acceptance of Defective Work*

- A. If, instead of requiring correction or removal and replacement of defective Work, Owner (and, prior to Engineer's recommendation of final payment, Engineer) prefers to accept it, Owner may do so. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) attributable to Owner's evaluation of and determination to accept such defective Work (such costs to be approved by Engineer as to reasonableness) and for the diminished value of the Work to the extent not otherwise paid by Contractor pursuant to this sentence. If any such acceptance occurs prior to Engineer's recommendation of final payment, a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work, and Owner shall be entitled to an appropriate decrease in the Contract Price, reflecting the diminished value of Work so accepted. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05. If the acceptance occurs after such recommendation, an appropriate amount ~~will~~shall be paid by Contractor to Owner.

13.09 *Owner May Correct Defective Work*

- A. If Contractor fails within a reasonable time, as defined by the Engineer, after written notice from Engineer to correct defective Work, or to remove and replace rejected Work as required by Engineer in accordance with Paragraph 13.06.A, or if Contractor fails to perform the Work in accordance with the Contract Documents, or if Contractor fails to comply with any other provision of the Contract Documents, Owner may, after seven days written notice to Contractor, correct, or remedy any such deficiency.
- B. In exercising the rights and remedies under this Paragraph 13.09, Owner shall proceed expeditiously. In connection with such corrective or remedial action, Owner may exclude Contractor from all or part of the Site, take possession of all or part of the Work and suspend Contractor's services related thereto, take possession of Contractor's tools, appliances, construction equipment and machinery at the Site, and incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, Owner's representatives, agents and employees, Owner's other contractors, and Engineer and Engineer's consultants access to the Site to enable Owner to exercise the rights and remedies under this Paragraph.

- C. All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 13.09 will be charged against Contractor, and a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount of the adjustment, Owner may make a Claim therefor as provided in Paragraph 10.05. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor's defective Work.
- D. Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this Paragraph 13.09.

ARTICLE 14 – PAYMENTS TO CONTRACTOR AND COMPLETION

14.01 *Schedule of Values*

- A. The Schedule of Values established as provided in Paragraph 2.07.A and as modified will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments on account of Unit Price Work will be based on the number of units completed.

14.02 *Progress Payments*

A. *Applications for Payments:*

1. At least 20 days before the date established in the Agreement for each progress payment (but not more often than once a month), Contractor shall submit to Engineer for review five copies of an Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment shall also be accompanied by a bill of sale, invoice, or other documentation warranting that Owner has received the materials and equipment free and clear of all Liens and evidence that the materials and equipment are covered by appropriate property insurance or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.
2. Beginning with the second Application for Payment, each Application shall include an affidavit of Contractor stating that all previous progress payments received on account of the Work have been applied on account to discharge Contractor's legitimate obligations associated with prior Applications for Payment.

3. Retainage:

- a. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.
- b. No form of collateral in lieu of cash will be acceptable as retainage.
- c. Amounts retained by the Contractor from payments due to suppliers and subcontractors (expressed as a percentage) shall not exceed that being retained by the Owner.

B. *Review of Applications:*

1. Engineer will, within 10 days after receipt of each Application for Payment, either indicate in writing a recommendation of payment and present the Application to Owner or return the Application to Contractor indicating in writing Engineer's reasons for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application.
2. Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by Engineer to Owner, based on Engineer's observations of the executed Work as an experienced and qualified design professional, and on Engineer's review of the Application for Payment and the accompanying data and schedules, that to the best of Engineer's knowledge, information and belief:
 - a. the Work has progressed to the point indicated;
 - b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, the results of any subsequent tests called for in the Contract Documents, a final determination of quantities and classifications for Unit Price Work under Paragraph 9.07, and any other qualifications stated in the recommendation); and
 - c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work.
3. By recommending any such payment Engineer will not thereby be deemed to have represented that:
 - a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract Documents; or
 - b. there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.

4. Neither Engineer's review of Contractor's Work for the purposes of recommending payments nor Engineer's recommendation of any payment, including final payment, will impose responsibility on Engineer:
 - a. to supervise, direct, or control the Work, or
 - b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or
 - c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work, or
 - d. to make any examination to ascertain how or for what purposes Contractor has used the moneys paid on account of the Contract Price, or
 - e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.

5. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 14.02.B.2. Engineer may also refuse to recommend any such payment or, because of subsequently discovered evidence or the results of subsequent inspections or tests, revise or revoke any such payment recommendation previously made, to such extent as may be necessary in Engineer's opinion to protect Owner from loss because:
 - a. the Work is defective, or completed Work has been damaged, requiring correction or replacement;
 - b. the Contract Price has been reduced by Change Orders;
 - c. Owner has been required to correct defective Work or complete Work in accordance with Paragraph 13.09; or
 - d. Engineer has actual knowledge of the occurrence of any of the events enumerated in Paragraph 15.02.A.

C. *Payment Becomes Due:*

1. ~~Ten~~ Thirty days after presentation of the Application for Payment to Owner with Engineer's recommendation, the amount recommended will (subject to the provisions of Paragraph 14.02.D) become due, and when due will be paid by Owner to Contractor.

D. *Reduction in Payment:*

1. Owner may refuse to make payment of the full amount recommended by Engineer because:
 - a. claims have been made against Owner on account of Contractor's performance or furnishing of the Work;

- b. Liens have been filed in connection with the Work, except where Contractor has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens;
 - c. there are other items entitling Owner to a set-off against the amount recommended; or
 - d. Owner has actual knowledge of the occurrence of any of the events enumerated in Paragraphs 14.02.B.5.a through 14.02.B.5.c or Paragraph 15.02.A.
2. If Owner refuses to make payment of the full amount recommended by Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and promptly pay Contractor any amount remaining after deduction of the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, when Contractor remedies the reasons for such action.
3. Upon a subsequent determination that Owner's refusal of payment was not justified, the amount wrongfully withheld shall be treated as an amount due as determined by Paragraph 14.02.C.1 and subject to interest as provided in the Agreement; if any.
4. Items entitling Owner to retain set-offs from the amount recommended, include but are not limited to:
 - a. Owner compensation to Engineer at an estimated average rate as specified in the Supplementary Conditions per each extra personnel hour for labor plus expenses because of the following Contractor-caused events:
 - (1) Witnessing retesting of corrected or replaced defective Work;
 - (2) Return visits to manufacturing facilities to witness factory testing or retesting;
 - (3) Submittal reviews in excess of three reviews by Engineer for substantially the same Submittal;
 - (4) Evaluation of proposed substitutes and in making changes to Contract Documents occasioned thereby;
 - (5) Hours worked by Contractor, in excess of normal work hours as defined by Article 6.02 of the General Conditions, necessitating Engineer to work overtime;
 - (6) Return visits to the Project by Engineer for Commissioning Activities not performed on the initial visit;
 - b. Fines levied against the Owner for Contractor's performance of NPDES Erosion and Sedimentation Control Measures or other permit violations.

- c. The repair, rebuilding or restoration of property improvements or facilities by the Owner as outlined in Paragraph 6.13.
- d. Liability for liquidated damages incurred by Contractor as set forth in the Agreement.

E. Retainage Held as Security

1. Notwithstanding any other provision of this Contract to the contrary, in the event the City shall have reasonable grounds to suspect that:
 - (a) The Contractor or associated person has breached the Affidavit of No Collusion contained in these Contract Documents or has breached such an affidavit in any other contract which Contractor may have with City; or
 - (b) The Contractor or associated person has violated or participated in a violation of the Sherman Act (15 U.S.C. Sec. 1-2), or the Racketeer Influenced and Corrupt Organizations Act (18 U.S.C. Sec.1961-1968), or the Hobbs Act (18 U.S.C. Sec. 1951), or the mail or wire fraud statutes (18 U.S.C. Sec. 1341, 1343), the false statements statement (18 U.S.C. Sec. 1001), or other similar provision of Federal or State law in connection with this Contract or with any other contract which the Contractor or associated person has, had, or shall have with the City (including without limitation the submission of bids on such a contract);

then the City shall have the right to withhold and retain any retainage described in this section as security for any damage claim arising from such action.
2. For purposes of this section, the term "associated person" shall include (a) in the case of a corporation: the corporation, its officers, directors, shareholders, employees and agents, and its parents, subsidiaries or affiliates, whether in existence at the time of the violation or subsequently formed or acquired; (b) in the case of a partnership or joint venture: the partnership or joint venture, its general or limited partners and joint venturers, its officers, employees and agents; and (c) in the case of a sole proprietorship: the individual proprietor, and his employees and agents. Where a partner or joint venturer is a corporation, the partnership or joint venture shall have attributed to it the actions of persons attributable to the corporation under paragraph (a) of this subsection.
3. The City shall promptly notify the Contractor in writing of the exercise of its right to retain such amounts.
4. The City shall have the right to retain such funds until the City's damage claims are finally determined. The claim shall be "finally be determined" when a court of competent jurisdiction enters judgment on the merits of any claim made for damages by the City (unless City appeals that judgment, in which event, when the appeal is decided). In the event that City voluntarily waives his damage claim by written instrument signed on City's behalf, then such claim shall be "finally determined" at the time such waiver is effective. City covenants that it will commence an action for damages with respect to its damage claim as soon as

practicable after it exercises its right for retaining such amounts for the causes set forth in this paragraph.

5. In the event such a claim is finally determined in favor of City, any amount of retainage for such claim shall be applied to satisfy the judgment. Any excess of retainage hereunder over the amount of such judgment, or in the event that a damage claim is finally determined in favor of Contractor or its associated person, the amount shall be promptly paid to Contractor, together with interest, at the applicable rate for post-judgment interest set forth in T.C.A. Sec. 47-14-121, provided that interest shall not be paid upon amounts which City could have otherwise properly retained under other provisions of this Contract.

6. Any claim, dispute, or other matter arising out of or relating to City's retention of payment for a damage claim under this section shall not be subject to arbitration. The City's failure to retain all or a portion of any payment due under this Contract pursuant to this section, even if grounds for such retention exists, shall not constitute a waiver of any of City's rights under this section.

14.03 *Contractor's Warranty of Title*

A. Contractor warrants and guarantees that title to all Work, materials, and equipment covered by any Application for Payment, whether incorporated in the Project or not, will pass to Owner no later than the time of payment, retainage notwithstanding, free and clear of all Liens.

B. No materials or supplies for the Work shall be purchased by Contractor or subcontractor subject to any chattel mortgage or under a conditional sale contract or other agreement by which an interest is retained by the seller. Contractor warrants that Contractor has good title to all materials and supplies used by Contractor in the Work, free from all liens, claims or encumbrances.

14.04 *Substantial Completion*

A. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Engineer in writing that the entire Work is substantially complete (except for items specifically listed by Contractor as incomplete) and request that Engineer issue a certificate of Substantial Completion. Specific items of Work that must be completed prior to the Engineer's issuance of a certificate of Substantial Completion include, but are not limited to, the following:

1. Correction of all deficient Work items listed by all state, local, and other regulatory agencies or departments.

2. All submittals must be received and approved by the Engineer, including but not necessarily limited to, the following:

a. Record documents.

b. Factory test reports, where required.

c. Equipment and structure test reports.

d. Manufacturer's Certificate of Proper Installation.

e. Operating and maintenance information, instructions, manuals, documents, drawings, diagrams, and records.

f. Spare parts lists.

3. All additional warranty or insurance coverage requirements have been provided.

4. All manufacturer/vendor-provided operator training is complete and documented.

5. Other items of Work specified elsewhere as being prerequisite for Substantial Completion.

- B. Promptly after Contractor's notification, Owner, Contractor, and Engineer shall make an inspection of the Work to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor in writing giving the reasons therefor.
- C. If Engineer considers the Work substantially complete, Engineer will deliver to Owner a tentative certificate of Substantial Completion which shall fix the date of Substantial Completion. There shall be attached to the certificate a tentative list of items to be completed or corrected before final payment. Owner shall have seven days after receipt of the tentative certificate during which to make written objection to Engineer as to any provisions of the certificate or attached list. If, after considering such objections, Engineer concludes that the Work is not substantially complete, Engineer will, within 14 days after submission of the tentative certificate to Owner, notify Contractor in writing, stating the reasons therefor. If, after consideration of Owner's objections, Engineer considers the Work substantially complete, Engineer will, within said 14 days, execute and deliver to Owner and Contractor a definitive certificate of Substantial Completion (with a revised tentative list of items to be completed or corrected) reflecting such changes from the tentative certificate as Engineer believes justified after consideration of any objections from Owner.
- D. At the time of delivery of the tentative certificate of Substantial Completion, Engineer will deliver to Owner and Contractor a written recommendation as to division of responsibilities pending final payment between Owner and Contractor with respect to security, operation, safety, and protection of the Work, maintenance, heat, utilities, insurance, and warranties and guarantees. Unless Owner and Contractor agree otherwise in writing and so inform Engineer in writing prior to Engineer's issuing the definitive certificate of Substantial Completion, Engineer's aforesaid recommendation will be binding on Owner and Contractor until final payment.
- E. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to remove its property and complete or correct items on the tentative list.

14.05 *Partial Utilization*

- A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner, Engineer, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose without significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions:
1. Owner at any time may ~~request-direct~~ Contractor in writing to permit Owner to use or occupy any such part of the Work which Owner believes to ~~be ready for~~ sufficiently progressed towards its intended use ~~and substantially complete~~. If and when Contractor agrees that such part of the Work is substantially complete, Contractor, Owner, and Engineer will follow the procedures of Paragraph 14.04.A through D for that part of the Work.
 2. Contractor at any time may notify Owner and Engineer in writing that Contractor considers any such part of the Work described in Paragraph 14.05.A.1 ready for its intended use and substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.
 3. Within a reasonable time after either such request, Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer does not consider that part of the Work to be substantially complete, Engineer will notify Owner and Contractor in writing giving the reasons therefor. If Engineer considers that part of the Work to be substantially complete, the provisions of Paragraph 14.04 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.
 4. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Paragraph 5.10 regarding property insurance.

14.06 *Final Inspection and Final Acceptance of the Work*

~~A. Upon written notice from Contractor that the entire Work or an agreed portion thereof is complete, Engineer will promptly make a final inspection with Owner and Contractor and will notify Contractor in writing of all particulars in which this inspection reveals that the Work is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.~~

A. Upon receipt of written notice from the Contractor that all items listed for completion or correction during the inspection for substantial completion have been performed and that the work has been completed in conformity with the Contract Documents, the Engineer shall promptly examine the work, in company with the City, making additional tests and investigations as he may deem proper and using due care and judgment normally exercised in the examination of the completed work by a properly qualified and experienced professional engineer and shall satisfy himself that the Contractor's statement appears to be correct. The Engineer shall then inform the City and, when applicable, regulatory agencies that the work is, in

his opinion, complete in apparent conformity with these Contract Documents and shall schedule the final inspection.

- B. Should the Engineer consider that the work is not finally complete, he will notify the Contractor in writing, stating reasons for his determination. The Contractor shall take immediate steps to remedy the stated deficiencies and/or conditions and, after correction of the deficiencies and/or conditions, send another written notice to the Engineer certifying that the work is complete. The Engineer, in company with the City, will re-inspect the work.
- C. After the final inspection and after the submission by the Contractor items required by these Contract Documents, the Engineer shall notify the City in writing that he has examined the work and that, in his opinion, it appears to conform to these Contract Documents and therefore recommends acceptance of the work and final payment to the Contractor. It is understood and agreed that such statement by the Engineer does not in any way relieve the Contractor or his Sureties from any duties, responsibilities, and obligations under these Contract Documents.
- D. After the Engineer recommends acceptance of the work covered by these Contract Documents and final payment to the Contractor, the City will, if it concurs in the Engineer's recommendation, promptly notify the Contractor in writing that the work is accepted. If the City does not concur in the Engineer's recommendation, the City will promptly notify the Contractor in writing that it does not accept the work as complete and stating the deficiencies and/or conditions that shall be corrected or resolved before final acceptance will be made. After the deficiencies and/or conditions are corrected or resolved and the City is satisfied that the work is complete, the City will notify the Contractor in writing that the work is considered complete and final acceptance is made. The guarantee period(s), as specified in these Contract Documents, shall begin on the date the Contractor is notified by the City that final acceptance of the work is made. Final acceptance of the work by the City will not be made until the Project Record Documents, operation and maintenance data and other required items are acceptable to the City.
- E. It is understood and agreed that said notice of final acceptance or final payment by the City shall not in any way be construed to relieve the Contractor, or his Sureties from any duties, responsibilities or obligations under or in connection with these Contract Documents.

14.07 *Final Payment*

A. Application for Payment:

1. After Contractor has, in the opinion of Engineer, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance, certificates of inspection, marked-up record documents (as provided in Paragraph 6.12), and other documents, Contractor may make application for final payment following the procedure for progress payments. Under no circumstances will Contractor's application for final payment be accepted by the Engineer until all Work required by the Contract Documents has been completed.
2. The final Application for Payment shall be accompanied (except as previously delivered) by:

- a. all documentation called for in the Contract Documents, including but not limited to the evidence of insurance required by Paragraph 5.04.B.6;
 - b. consent of the surety, if any, to final payment, if requested by the Engineer;
 - c. a list of all Claims against Owner that Contractor believes are unsettled;
 - d. an affidavit that all payrolls, bills for materials and equipment, and other indebtedness connected with the Work have been paid or otherwise satisfied;
 - e. the final Change Request Form signed by the Contractor to close the Contract;
 - f. certificate of occupancy issued by City of Chattanooga Inspection Department, if buildings are a part of the Project;
 - g. copy of Notice of Completion which had been filed with the appropriate office at the Hamilton County Tennessee Courthouse; and
 - h. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of or Liens filed in connection with the Work, if requested by the Engineer.
3. In lieu of the releases or waivers of Liens specified in Paragraph 14.07.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (i) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (ii) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner might in any way be responsible, or which might in any way result in liens or other burdens on Owner's property, have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien.

B. *Engineer's Review of Application and Acceptance:*

1. If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying all documentation as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations under the Contract Documents have been fulfilled, Engineer will, ~~within ten days after receipt of the final Application for Payment~~, indicate in writing Engineer's recommendation of payment and present the Application for Payment to Owner for payment. ~~At the same time~~ Thereupon Engineer will ~~also~~ give written notice to Owner and Contractor that the Work is acceptable subject to the provisions of Paragraph 14.09. Otherwise, Engineer will return the Application for Payment to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application for Payment. If the Application for Payment and accompanying documentation are appropriate as to form and substance, Owner will in accordance with the applicable State or local General Law, pay Contractor the amount recommended by Engineer.

C. *Payment Becomes Due:*

1. Thirty days after the presentation to Owner of the Application for Payment and accompanying documentation, the amount recommended by Engineer, less any sum Owner is entitled to set off against Engineer's recommendation, including but not limited to liquidated damages, will become due and will be paid by Owner to Contractor.

14.08 *Final Completion Delayed*

- A. If, through no fault of Contractor, final completion of the Work is significantly delayed, and if Engineer so confirms, Owner shall, upon receipt of Contractor's final Application for Payment (for Work fully completed and accepted) and recommendation of Engineer, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance to be held by Owner for Work not fully completed or corrected is less than the retainage stipulated in the Agreement, and if bonds have been furnished as required in Paragraph 5.01, the written consent of the surety to the payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by Contractor to Engineer with the Application for such payment. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of Claims.

14.09 *Waiver of Claims*

- A. The making and acceptance of final payment will constitute:
 1. a waiver of all Claims by Owner against Contractor, except Claims arising from unsettled Liens, from defective Work appearing after final inspection pursuant to Paragraph 14.06, from failure to comply with the Contract Documents or the terms of any special guarantees specified therein, or from Contractor's continuing obligations under the Contract Documents; and
 2. a waiver of all Claims by Contractor against Owner ~~other than those previously made in accordance with the requirements herein and expressly acknowledged by Owner in writing as still unsettled.~~

14.10 Labor and Material

- A. Contractor shall indemnify and save Owner harmless from all claims growing out of the lawful demands for payment by subcontractors, laborers, workmen, mechanics, material men, and furnishers of machinery and parts thereof, equipment, power tools, and all supplies, including commissary, incurred in the furtherance of the performance of this Contract. Contractor shall, at Owner's request, furnish satisfactory evidence that all obligations of the nature hereinabove designated have been paid, discharged, or waived. If Contractor fails to do so, then Owner may, after having served written notice on the said Contractor either pay unpaid bills, of which Owner has written notice, direct, or withhold from Contractor's unpaid compensation a sum of money deemed reasonably sufficient to pay any and all such lawful claims until satisfactory evidence is furnished that all liabilities have been fully discharged whereupon payment to Contractor shall be resumed, in accordance with the terms

of this Contract, but in no event shall the provisions of this sentence be construed to impose any obligations upon Owner to either Contractor or to Contractor's Surety. In paying any unpaid bills of Contractor, Owner shall be deemed the agent of Contractor and any payment so made by Owner shall be considered as payment made under the Contract by Owner to Contractor and Owner shall not be liable to Contractor for any such payment made in good faith.

14.11 Scope of Payment

A. The Contractor shall accept compensation provided in these Contract Documents as full payment for furnishing all labor, materials, supplies, tools, equipment, taxes, fees, contingencies, and other items necessary or convenient to the completed work and for performing all work contemplated and embraced in these Contract Documents; also for loss or damage arising from the nature of the work, or from the action of the elements, or from any unforeseen difficulties which may be encountered during the prosecution of the work until the acceptance by the City and for all risks of every description connected with the prosecution of the work; also for all expenses incurred in consequence of the suspension or discontinuance of the work as provided in these Contract Documents; and for completing the work in accordance with these Contract Documents. Neither the payment of any estimate nor of any retained percentage shall relieve the Contractor of any obligation to make good any defective work or material or of any provisions of these Contract Documents.

B. No compensation will be made in any case for loss of anticipated profits.

ARTICLE 15 – SUSPENSION OF WORK AND TERMINATION

15.01 Owner May Suspend Work

A. At any time and without cause, Owner may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by notice in writing to Contractor and Engineer which will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor ~~shall~~may be granted an adjustment in the Contract Price or an extension of the Contract Times, or both, directly attributable to any such suspension if Contractor makes a Claim therefor as provided in Paragraph 10.05.

B. The City shall have the authority to suspend the work wholly or in part, for such period as may be necessary, due to unsuitable weather, such other conditions as are considered unfavorable for the suitable prosecution of the work; or due to the failure on the part of the Contractor to carry out orders given, supply sufficient skilled workmen, supply suitable material, prosecute the work satisfactorily and in a workmanlike manner, make prompt payments to Subcontractors or for labor, materials, or equipment, or to perform any obligations or requirements of these Contract Documents. The Contractor shall immediately comply with the written order of the City to suspend the work wholly or in part. The suspended work shall be resumed when conditions are favorable and methods are corrected, as ordered or approved in writing by the City.

C. In the event that a suspension of the work is ordered by the City under Paragraph B above, the Contractor shall, at his expense, do all the work necessary to secure the work and the area affected by the work and to protect all previously completed work as specified herein or as

directed by the City. The suspension of the work by the City shall not relieve the Contractor of any duties, obligations, or responsibilities set forth in these Contract Documents. In the event the Contractor fails to secure and protect the work and area as specified or as ordered, the City will perform, or cause to be performed, all work considered necessary, and the cost thereof will be deducted from monies due or to become due the Contractor under the terms of these Contract Documents.

15.02 *Owner May Terminate for Cause*

A. The occurrence of any one or more of the following events will justify termination for cause:

1. Contractor's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure to adhere to the Progress Schedule established under Paragraph 2.07 as adjusted from time to time pursuant to Paragraph 6.04);
2. Contractor's disregard of Laws or Regulations of any public body having jurisdiction;
3. Contractor's repeated disregard of the authority of Engineer; ~~or~~
4. Contractor's violation in any substantial way of any provisions of the Contract Documents;
5. If Contractor abandons the Work, or sublets this Contract or any part thereof, without the previous written consent of Owner, or if the Contract or any claim thereunder shall be assigned by Contractor otherwise than as herein specified;
6. Contractor is adjudged bankrupt or insolvent;
7. Contractor makes a general assignment for the benefit of creditors;
8. A trustee or receiver is appointed for Contractor or for any of Contractor's property;
9. Contractor files a petition to take advantage of any debtor's relief act, or to reorganize under the bankruptcy or applicable laws;
10. Contractor repeatedly fails to make prompt payments to subcontractors or material suppliers for labor, materials or equipment, or
11. The payment of any compensation, irrespective of its character or form, or the giving of any gratuity, or the granting of any valuable favor, directly or indirectly, by the Contractor to any authorized representative of the City or Engineer.

B. If one or more of the events identified in Paragraph 15.02.A occur, Owner may, after giving Contractor (and surety) seven days written notice of its intent to terminate the services of Contractor, unless Contractor otherwise cures the deficiency in accordance with Paragraph 15.02.D.:

1. exclude Contractor from the Site, and take possession of the Work and of all Contractor's tools, appliances, construction equipment, and machinery at the Site, and use the same to the

full extent they could be used by Contractor (without liability to Contractor for trespass or conversion);

2. incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere; and
 3. complete the Work as Owner may deem expedient.
- C. If Owner proceeds as provided in Paragraph 15.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Owner arising out of or relating to completing the Work, such excess will be paid to Contractor. If such claims, costs, losses, and damages exceed such unpaid balance, Contractor shall pay the difference to Owner. Such claims, costs, losses, and damages incurred by Owner will be reviewed by Engineer as to their reasonableness and, when so approved by Engineer, incorporated in a Change Order. When exercising any rights or remedies under this Paragraph, Owner shall not be required to obtain the lowest price for the Work performed.
- D. Notwithstanding Paragraphs 15.02.B and 15.02.C, Contractor's services will not be terminated if Contractor begins within seven days of receipt of notice of intent to terminate to correct its failure to perform and proceeds diligently to cure such failure within no more than 30 days of receipt of said notice.
- E. Where Contractor's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Contractor then existing or which may thereafter accrue. Any retention or payment of moneys due Contractor by Owner will not release Contractor from liability.

~~F. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 5.01.A, the termination procedures of that bond shall supersede the provisions of Paragraphs 15.02.B and 15.02.C.~~

15.03 *Owner May Terminate For Convenience*

- A. Upon seven days written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate or discontinue, in whole or in part, the Contract. In such case, Contractor shall be paid for (without duplication of any items):
1. completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, ~~including fair and reasonable sums for overhead and profit on such Work;~~
 2. direct expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, ~~plus fair and reasonable sums for overhead and profit on such expenses;~~

3. all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred in settlement of terminated contracts with Subcontractors, Suppliers, and others; ~~and~~
 4. reasonable expenses directly attributable to termination; ~~and-~~
 5. ten percent overhead and profit for those costs agreed to in Paragraphs 15.03.A.1 through 15.03.A.4 above.
- B. Contractor shall submit within 30 calendar days after receipt of notice of termination a written statement setting forth its proposal for an adjustment to the Contract Price to include only the incurred costs described in this clause. Owner shall review, analyze, and verify such proposal and negotiate an equitable amount and the Contract may be modified accordingly.
- C. Contractor shall not be paid on account of loss of anticipated profits or revenue or other economic loss arising out of or resulting from such termination.

15.04 Contractor May Stop Work or Terminate

- A. If, through no act or fault of Contractor, (i) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (ii) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (iii) Owner fails for 30 days to pay Contractor any sum finally determined to be due, then Contractor may, upon seven days written notice to Owner and Engineer, and provided Owner or Engineer do not remedy such suspension or failure within that time, terminate the Contract and recover from Owner payment on the same terms as provided in Paragraph 15.03.
- B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Engineer has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay Contractor any sum finally determined to be due, Contractor may, seven days after written notice to Owner and Engineer, stop the Work until payment is made of all such amounts due Contractor, including interest thereon. The provisions of this Paragraph 15.04 are not intended to preclude Contractor from making a Claim under Paragraph 10.05 for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to Contractor's stopping the Work as permitted by this Paragraph.
- C. Except as allowed in Paragraph A above, the Contractor shall not suspend the work and shall not remove any equipment, tools, supplies, materials, or other items without the written permission of the City.

ARTICLE 16 – DISPUTE RESOLUTION

16.01 Methods and Procedures

- A. ~~Either Owner or Contractor may request mediation of any Claim submitted to Engineer for a decision under Paragraph 10.05 before such decision becomes final and binding. The mediation will be governed by the Construction Industry Mediation Rules of the American Arbitration~~

~~Association in effect as of the Effective Date of the Agreement. The request for mediation shall be submitted in writing to the American Arbitration Association and the other party to the Contract. Timely submission of the request shall stay the effect of Paragraph 10.05.E.~~

~~B. Owner and Contractor shall participate in the mediation process in good faith. The process shall be concluded within 60 days of filing of the request. The date of termination of the mediation shall be determined by application of the mediation rules referenced above.~~

~~C. If the Claim is not resolved by mediation, Engineer's action under Paragraph 10.05.C or a denial pursuant to Paragraphs 10.05.C.3 or 10.05.D shall become final and binding 30 days after termination of the mediation unless, within that time period, Owner or Contractor:~~

- ~~1. elects in writing to invoke any dispute resolution process provided for in the Supplementary Conditions; or~~
- ~~2. agrees with the other party to submit the Claim to another dispute resolution process; or~~
- ~~3. gives written notice to the other party of the intent to submit the Claim to a court of competent jurisdiction.~~

ARTICLE 17 – MISCELLANEOUS

17.01 *Giving Notice*

A. Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if:

1. delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended; or
2. delivered at or sent by registered or certified mail, postage prepaid, or by facsimile transmission and followed by written confirmation, to the last business address known to the giver of the notice.

B. All notices required of Contractor shall be performed in writing to the appropriate entity.

C. Electronic mail and messages will not be recognized as a written notice.

D. If the Contractor does not notify the Owner in accordance with Paragraph 10.05 of the belief that a field order, work by other contractors or the Owner, or subsurface, latent, or unusual unknown conditions entitles the Contractor to a Change Order, no consideration for time or money will be given the Contractor.

17.02 *Computation of Times*

A. When any period of time is referred to in the Contract Documents by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

17.03 *Cumulative Remedies*

- A. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract Documents. The provisions of this Paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

17.04 *Survival of Obligations*

- A. All representations, indemnifications, warranties, and guarantees made in, required by, or given in accordance with the Contract Documents, as well as all continuing obligations indicated in the Contract Documents, will survive final payment, completion, and acceptance of the Work or termination or completion of the Contract or termination of the services of Contractor.

17.05 *Controlling Law*

~~A. This Contract is to be governed by the law of the state in which the Project is located~~

A. Each and every provision of this Agreement shall be construed in accordance with and governed by Tennessee law. The parties acknowledge that this Contract is executed in Hamilton County, Tennessee and that the Contract is to be performed in Hamilton County, Tennessee. Each party hereby consents to the Hamilton Superior Court's sole jurisdiction over any dispute which arises as a result of the execution or performance of this Agreement, and each party hereby waives any and all objections to venue in the Hamilton Superior Court.

17.06 *Headings*

- A. Article and paragraph headings are inserted for convenience only and do not constitute parts of these General Conditions.

17.07 *Addresses*

A. Both the address given in the Bid form upon which this Agreement is founded, and Contractor's office at or near the site of the Work are hereby designated as places to either of which notices, letters, and other communications to Contractor shall be certified, mailed, or delivered. The delivering at the above named place, or depositing in a postpaid wrapper directed to the first-named place, in any post office box regularly maintained by the post office department, of any notice, letter or other communication to Contractor shall be deemed sufficient service thereof upon date of such delivery or mailing. The first-named address may be changed at any time by an instrument in writing, executed by Contractor, and delivered to and acknowledged by the Owner and Engineer. Nothing herein contained shall be deemed to preclude or render inoperative the service of any notice, letter, or other communication upon Contractor personally.

17.08 Forms and Record

- A. The form of all Submittals, notices, change orders and other documents permitted or required to be used or transmitted under the Contract Documents shall be determined by the Engineer.
- B. Contractor shall maintain throughout the term of the Contract, complete and accurate records of all Contractor's costs which relate to the work performed, including the extra work, under the terms of the Contract. The Owner, or its authorized representative, shall have the right at any reasonable time to examine and audit the original records.
- C. Records to be maintained and retained by Contractor shall include, but not be limited to:
1. Payroll records accounting for total time distribution of Contractor's employees working full or part time on the work;
 2. Cancelled payroll checks or signed receipts for payroll payments in cash;
 3. Invoices for purchases, receiving and issuing documents, and all other unit inventory records for Contractor's stores, stock, or capital items;
 4. Paid invoices and cancelled checks for materials purchase, subcontractors, and any other third parties' charges;
 5. Original estimate and change order estimate files and detailed worksheets;
 6. All project-related correspondence; and
 7. Subcontractor and supplier change order files (including detailed documentation covering negotiated settlements).
- D. Owner shall also have the right to audit: any other supporting evidence necessary to substantiate charges related to this agreement (both direct and indirect costs, including overhead allocations as they may apply to costs associated with this agreement); and any records necessary to permit evaluation and verification of Contractor compliance with contract requirements and compliance with provisions for pricing change orders, payments, or claims submitted by Contractor or any payees thereof. Contractor shall also be required to include the right to audit provision in the contracts (including those of a lump-sum nature) of all subcontractors, insurance agents, or any other business entity providing goods and services.

17.09 Assignment

- A. Contractor shall not assign, sell, transfer or otherwise dispose of the whole or any part of this Contract or any monies due or to become due hereunder without written consent of the Owner. In case Contractor assigns all or any part of any monies due or to become due under this Contract, the instrument of assignment shall contain a clause substantially to the effect that it is agreed that the right of the assignee in and to any monies due or to become due to Contractor shall be subject to prior liens of all persons, firms and corporations for services rendered or materials supplied for the performance of the Work called for under this Contract.

17.10 Use of Work by City

- A. Prior to substantial completion, the City may use any completed or substantially completed portions of the work, provided that such use will not substantially affect the Contractor's rights and obligations under the contract. It is understood and agreed that said use shall not constitute an acceptance of any such portions of the work.
- B. The City, or another Contractor under contract to the City, shall have the right to enter the premises for the purpose of doing work not covered by these Contract Documents. This provision shall not be construed as relieving the Contractor of the sole responsibility for the care and protection of the work, or the restoration of any damaged work except such as may be caused by agents, employees, or other contractors of the City.

17.11 Inspection by Public Agencies

- A. Authorized representatives of the Environmental Protection Agency, Department of the Interior, Tennessee Department of Public Health, and other governmental agencies having jurisdiction over the work or any part thereof shall have access to the work and any records relevant to the prosecution and progress of the work. The Contractor shall provide proper facilities for such access and inspection.

17.12 Hindrances and Delays

- A. The Contractor expressly agrees that the construction period named in these Contract Documents includes allowance for all hindrances and delays incident to the work. It is understood and agreed that no claim shall be made by the Contractor for hindrances or delays from any cause during the progress of the work, except as provided otherwise under the terms of these Contract Documents.

17.13 Losses from Natural Causes

- A. It is understood and agreed that all loss or damage arising out of the nature of the work, or from the action of the elements, or from floods or overflows, or from ground water, or from seepage, or from any unusual obstruction or difficulty, or from any other natural or existing circumstance either known or unforeseen, which may be encountered in the prosecution of the work, shall be sustained and borne by the Contractor at his own cost and expense.

17.14 New Job Opportunities

- A. The Contractor shall, to the maximum extent practicable, follow hiring and employment practices that will insure the availability of new job opportunities for unemployed and underemployed persons. The Contractor shall insert, or cause to be inserted, a similar provision in each contract with Subcontractors or Suppliers.

17.15 No Waiver of Legal Rights

- A. Neither the inspection by the City or Engineer or any of their officials, employees, or agents, nor any order by the City or Engineer for payment of money, or any payment for, or acceptance of, the whole or any part of the work by the City or Engineer, nor any extension of time, nor any

possession taken by the City or its employees, shall operate as a waiver of any provision of these Contract Documents, or of any power herein reserved to the City, or any right to damages herein provided, nor shall any waiver of any breach in this Contract be held to be a waiver of any other or subsequent breach.

B. Any waiver of any provisions of these Contract Documents shall be specific, shall apply only to the specified item or matter concerned and shall not apply to other similar or dissimilar items or matters.

17.16 Sewage, Surface, Subsurface and Flood Flows

A. The Contractor shall furnish all necessary equipment, materials and labor, at his expense, for handling, passing and disposing of all sewage, seepage, surface, subsurface and flood flows encountered at any time during the prosecution of the work. It is understood and agreed that the Contractor shall bear all risks associated with said flows; shall indemnify the City and the Engineer from any liabilities resulting from said flows; and shall not make any claim for additional compensation for delays or damage resulting from said flows. The manner of providing for these flows shall be satisfactory to the Engineer and in conformance with all applicable laws and regulations.

17.17 Maintenance of Existing Traffic

A. Satisfactory facilities shall be provided by the Contractor for maintaining public access and travel, and every effort shall be made to reduce any necessary inconveniences to a minimum.

END OF SECTION

Specification Section 00 80 00.14
Wage Rate General Decision

General Decision Number: TN150146 09/25/2015 TN146

Superseded General Decision Number: TN20140146

State: Tennessee

Construction Type: **Heavy Civil**
Including Water and Sewer Line Construction

Counties: Hamilton and Sequatchie Counties in Tennessee.

HEAVY CONSTRUCTION PROJECTS (Including Sewer/Water Construction).

Note: Executive Order (EO) 13658 establishes an hourly minimum Wage of \$10.10 for 2015 that applies to all contracts subject To the Davis-Bacon Act for which the solicitation is issued on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification Listed on this wage determination at least \$10.10 (or the Applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract. The EO minimum wage rate will be adjusted annually. Additional Information on Contractor requirements and worker protections Under the EO is available at www.dol.gov/whd/govcontracts.

| Modification | Number | Publication Date |
|--------------|----------|-------------------|
| | 0 | 01/02/2015 |
| | 1 | 06/26/2015 |
| | 2 | 09/18/2015 |
| | 3 | 09/25/2015 |

ELEC0175-012 06/01/2015

Hamilton County

Rates Fringes

ELECTRICIAN.....\$ 29.93 14.5%+6.40

ELEC0429-008 09/01/2015

Sequatchie County

Rates Fringes

Electrician.....\$ 24.84 11.90

* ENGI0917-022 05/01/2015

Rates Fringes

Operating Engineers:

Bulldozer and Crane.....\$ 26.72 9.90

Forklift.....\$ 24.53 9.90

LABO0846-001 05/01/2013

Rates Fringes

LABORER: Common or General.....\$ 13.85 4.90

SUTN2009-144 12/02/2009

Rates Fringes

LABORER: Flagger.....\$ 8.73 0.00

LABORER: Pipelayer.....\$ 11.68 0.00

OPERATOR:

Backhoe/Excavator/Trackhoe.....\$ 16.82 0.00

OPERATOR: Loader.....\$ 13.50 0.00

TRUCK DRIVER: Dump Truck.....\$ 10.76 0.00

WELDERS - Receive rate prescribed for craft performing Operation to which welding is incidental.

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Unlisted classifications needed for work not included within
The scope of the classifications listed may be added after
Award only as provided in the labor standards contract clauses
(29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification
And wage rates that have been found to be prevailing for the
Cited type(s) of construction in the area covered by the wage
Determination. The classifications are listed in alphabetical
Order of "identifiers" that indicate whether the particular
Rate is a union rate (current union negotiated rate for local),
A survey rate (weighted average rate) or a union average rate
(Weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed
In dotted lines beginning with characters other than "SU" or
"UAVG" denotes that the union classification and rate were
Prevailing for that classification in the survey. Example:
PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of
The union which prevailed in the survey for this
Classification, which in this example would be Plumbers. 0198
Indicates the local union number or district council number
Where applicable, i.e., Plumbers Local 0198. The next number,
005 in the example, is an internal number used in processing
The wage determination. 07/01/2014 is the effective date of the
Most current negotiated rate, which in this example is July 1,
2014.

Union prevailing wage rates are updated to reflect all rate
Changes in the collective bargaining agreement (CBA) governing
This classification and rate.

Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that
No one rate prevailed for this classification in the survey and
The published rate is derived by computing a weighted average
Rate based on all the rates reported in the survey for that
Classification. As this weighted average rate includes all
Rates reported in the survey, it may include both union and

Non-union rates. Example: SULA2012-007 5/13/2014. SU indicates
The rates are survey rates based on a weighted average
Calculation of rates and are not majority rates. LA indicates
The State of Louisiana. 2012 is the year of survey on which
These classifications and rates are based. The next number, 007
In the example, is an internal number used in producing the
Wage determination. 5/13/2014 indicates the survey completion
Date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a
New survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate
That no single majority rate prevailed for those
Classifications; however, 100% of the data reported for the
Classifications was union data. EXAMPLE: UAVG-OH-0010
08/29/2014. UAVG indicates that the rate is a weighted union
Average rate. OH indicates the state. The next number, 0010 in
The example, is an internal number used in producing the wage
Determination. 08/29/2014 indicates the survey completion date
For the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of
Each year, to reflect a weighted average of the current
Negotiated/CBA rate of the union locals from which the rate is
Based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * An existing published wage determination.
- * A survey underlying a wage determination.
- * A Wage and Hour Division letter setting forth a position on a wage determination matter.
- * A conformance (additional classification and rate) ruling.

On survey related matters, initial contact, including requests
For summaries of surveys, should be with the Wage and Hour
Regional Office for the area in which the survey was conducted
Because those Regional Offices have responsibility for the

Davis-Bacon survey program. If the response from this initial Contact is not satisfactory, then the process described in 2.) And 3.) Should be followed.

With regard to any other matter not yet ripe for the formal Process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) Is yes, then an Interested party (those affected by the action) can request Review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the Interested party's position and by any information (wage Payment data, project description, area practice material, Etc.) That the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an Interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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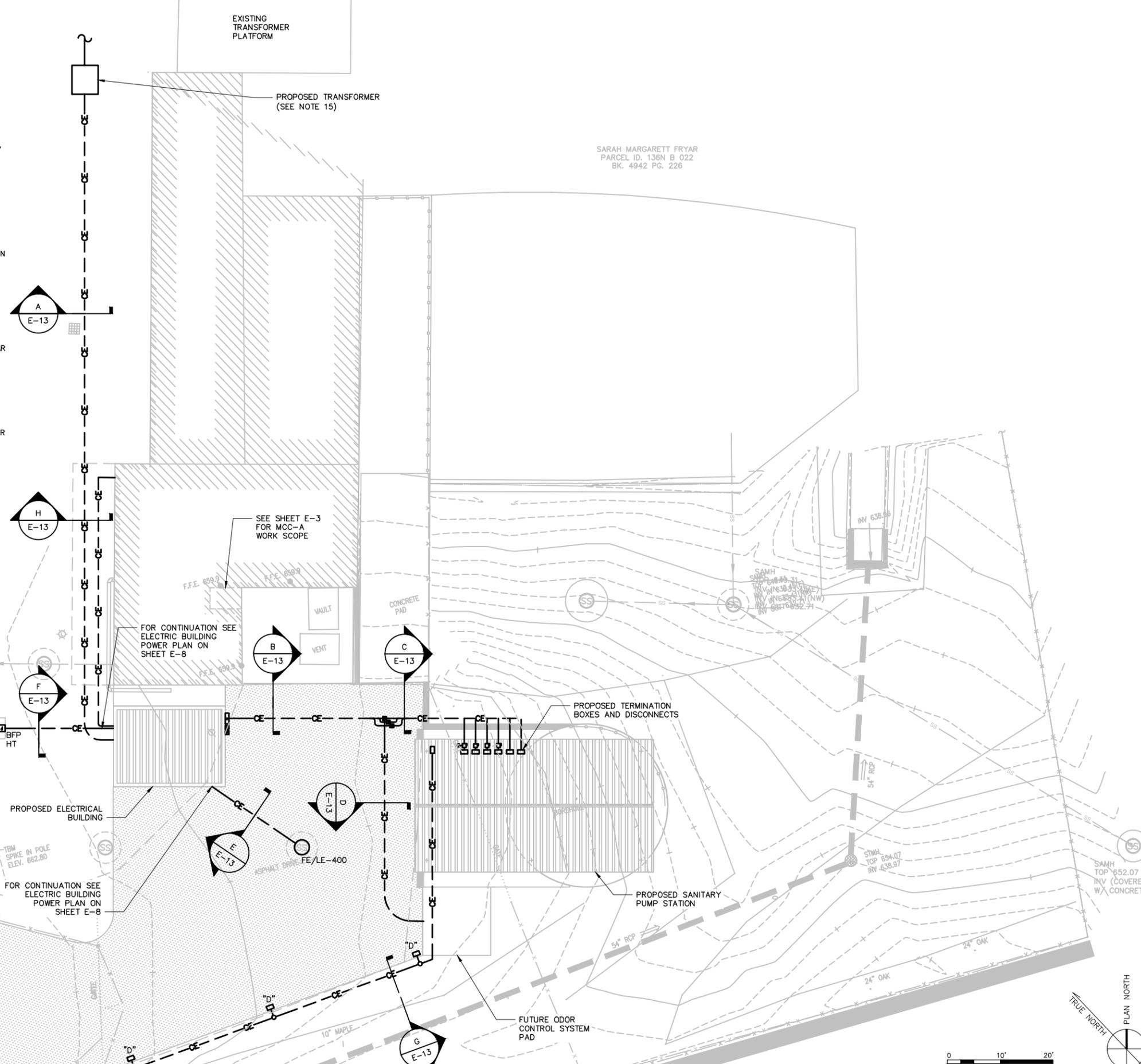
END OF GENERAL DECISION

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Sheets E-2, E-3, E-5, E-6, E-7, E-8, and E-10

NOTES

1. ALL ELECTRICAL SERVICES SHALL CONFORM TO LOCAL UTILITY GUIDELINES AND REGULATIONS.
2. ALL UTILITIES SHALL MEET NESC AND NFPA CODES AS APPLICABLE.
3. ALL INSTALLATIONS SHALL MEET STATE OF TENNESSEE GUIDELINES AND CODES.
4. ALL INSTALLATIONS SHALL MEET CITY OF CHATTANOOGA PUMPING STATION DESIGN CRITERIA GUIDELINES, DOWN LOADABLE FROM CITY'S WEBSITE.
5. ALL ELECTRICAL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE.
6. ALL METALLIC CONDUITS, ELECTRICAL EQUIPMENT, STEEL STRUCTURES, MOTOR FRAMES, ETC. SHALL BE CONNECTED TO THE GROUNDING SYSTEM PER ARTICLE 250 OF THE NATIONAL ELECTRICAL CODE. UTILIZE UL LISTED BONDING METHODS.
7. ALL EQUIPMENT LOCATIONS SHALL BE VERIFIED IN THE FIELD WITH OTHER TRADES. CONDUIT ROUTING AND EQUIPMENT LOCATIONS SHOWN ARE DIAGRAMMATIC ONLY. THE EXACT LOCATION OF ALL EQUIPMENT AND ROUTING OF CABLES AND CONDUITS SHALL BE COORDINATED WITH AND APPROVED BY THE OWNER'S REPRESENTATIVE DURING CONSTRUCTION.
8. LOCATIONS OF SERVICE TRANSFORMER, CONDUITS, BOXES, FITTINGS, ETC., ARE SHOWN DIAGRAMMATICALLY ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL SIZES, LOCATIONS, REVIEW AND COORDINATE WITH THE OTHER TRADES, POWER COMPANY, OWNER AND ENGINEER TO ENSURE THE DELIVERY AND PROPER INSTALLATION OF ALL ELECTRICAL EQUIPMENT, (I.E. CONTROL PANEL, SERVICE POLE, AREA LIGHTING, ETC.).
9. THE ELECTRICAL SERVICE SHALL BE 480/277V, 3 PHASE, 4 WIRE.
10. SEE SHEETS E-8 FOR BUILDING PLANS AND LAYOUTS.
11. SEE SHEET E-5 FOR PUMP STATION PLAN.
12. A MINIMUM SEPARATION OF 12" MUST BE MAINTAINED BETWEEN POWER AND CONTROL DUCTBANKS AND A MINIMUM SEPARATION OF 3" MUST BE MAINTAINED BETWEEN SIMILAR SERVICE DUCTBANKS.
13. AVOID DUCTBANKS CROSSING OVER EACH OTHER AS MUCH AS POSSIBLE. AT POINTS WHERE DUCTBANKS MUST CROSS OVER, A MINIMUM SEPARATION OF 8" MUST BE MAINTAINED.
14. PROVIDE YELLOW WARNING TAPE A MINIMUM OF 6" ABOVE DUCTBANKS. ALL POWER DUCTBANKS SHALL BE DYED RED.
15. THE CONTRACTOR IS RESPONSIBLE TO COORDINATE INSTALLATION FOR INCOMING POWER TO THE SITE WITH THE UTILITY COMPANY (PB) PER THEIR STANDARDS AND REQUIREMENTS.
16. THE ELECTRICAL INSTALLATION WITHIN THE FLOWMETER VAULT SHALL BE IN ACCORDANCE WITH ARTICLE 501 OF THE NEC FOR CLASS 1, DIVISION 2, GROUP D LOCATIONS AND NFPA-820.



CREATED: 6/17/2015 LAST SAVED: 6/22/2015 BY: KKURELLA PLOT DATE: 6/22/2015



100% SUBMITTAL
NOT RELEASED FOR
CONSTRUCTION

ORCHARD KNOB PUMP STATION
IMPROVEMENTS
CITY OF CHATTANOOGA, TN
CONSENT DECREE PROGRAM



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THIS DRAWING MUST BE USED IN CONJUNCTION WITH THE APPLICABLE OR GOVERNING TECHNICAL SPECIFICATIONS AND OTHER CONTRACT DOCUMENTS.

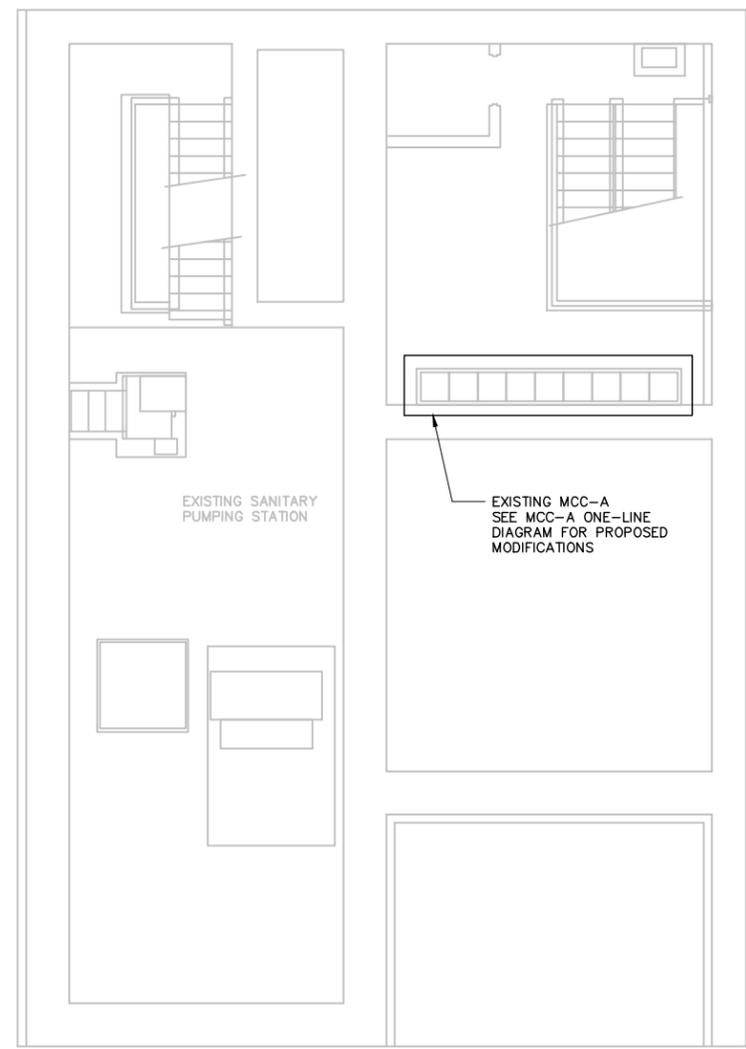
PROJECT NO: CT053653
DATE: JUNE 2015
DISC. LEAD: IMG DESIGNER: SRP CHECKER: WWG

SHEET TITLE: ELECTRICAL

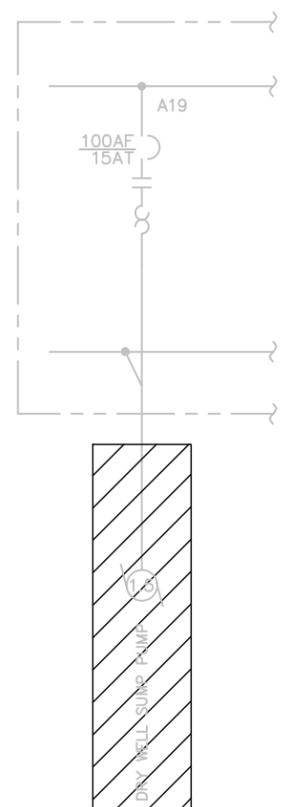
PUMP STATION ELECTRICAL SITE PLAN

SHEET E-2

CREATED: 6/17/2015
 LAST SAVED: 6/22/2015
 BY: KKURELLA
 PLOT DATE: 6/22/2015



ELECTRICAL MODIFICATION PLAN – ELEVATION 650.00
 NOT TO SCALE



EXISTING MCC-A ONE-LINE DIAGRAM (PROPOSED MODIFICATIONS)
 NOT TO SCALE

NOTES

1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE LATEST ACCEPTED EDITION OF THE NATIONAL ELECTRICAL CODE.
2. EXISTING SANITARY STATION SHALL REMAIN OPERATIONAL UNTIL THE NEW STATION IS OPERATIONAL TESTED APPROVED BY THE CITY OF CHATTANOOGA. THE CONTRACTOR SHALL PROVIDE TEMPORARY CONSTRUCTION POWER INSTALLATION THAT MEETS THE LATEST EDITION OF THE NEC CODE ARTICLE 590, AND ALL LOCAL REQUIREMENTS. SEE SPECIFICATIONS FOR MORE DETAILS.
3. THE CONTRACTOR SHALL COORDINATE WITH THE CITY OF CHATTANOOGA AND ENGINEER, AND SUBMIT A SEQUENCE OF CONSTRUCTION TO MEET THE ABOVE REQUIREMENT. THE CITY OF CHATTANOOGA AND ENGINEER RESERVE THE RIGHT TO APPROVE, DISAPPROVE OR REVISE AS DEEMED NECESSARY.
4. THE CONTRACTOR SHALL COORDINATE TO INSTALL NEW EQUIPMENT AND DISCONNECT EXISTING EQUIPMENT WITH MINIMUM DOWNTIME.
5. REFER TO GENERAL SHEETS FOR EQUIPMENT TO BE REMOVED OR ABANDONED.
6. REMOVE ALL EXISTING WIRING FROM DEMOLISHED EQUIPMENT BACK TO THEIR SOURCE OR ORIGIN. ABANDON ALL EXISTING CONDUITS IN-PLACE AND CAP.
7. CONTRACTOR SHALL NOT DISCARD ANY EQUIPMENT WITHOUT COORDINATION WITH CITY OF CHATTANOOGA.
8. THE ONE LINE MODIFICATION DRAWING IS PREPARED BASED ON A RECORD DRAWING DATED OCTOBER 8, 1976 WITHOUT A FIELD SURVEY. CONTRACTOR SHALL FIELD VERIFY THAT EQUIPMENT BEING ABANDONED IS ASSOCIATED WITH THE EXISTING SANITARY PUMP STATION BEING ABANDONED.
9. THE EXISTING 480V, MCC-A IS ALSO SERVING THE EXISTING STORM WATER PUMP STATION TO REMAIN IN SERVICE BEFORE, DURING AND AFTER THE CONSTRUCTION AND ACCEPTANCE OF NEW THE SANITARY PUMP STATION. THE CONTRACTOR SHALL FIELD VERIFY THAT THE STORM WATER PUMPING STATION IS NOT ADVERSELY AFFECTED.
10. REFER TO THE RECORD DRAWINGS 5191-48.4/49.2/50.2 – 480 VOLT MCC-A SINGLE LINE DIAGRAMS, SHEETS 1/2/3 FOR ADDITIONAL DETAILS.
11. CONTRACTOR SHALL LOCK OUT AND TAG OUT EQUIPMENT TO BE ABANDONED. SEE SPECIFICATION SECTION 02 41 00, DEMOLITION.



100% SUBMITTAL
 NOT RELEASED FOR
 CONSTRUCTION

ORCHARD KNOB PUMP STATION
 IMPROVEMENTS
 CITY OF CHATTANOOGA, TN
 CONSENT DECREE PROGRAM



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THIS DRAWING MUST BE USED IN CONJUNCTION WITH THE APPLICABLE OR GOVERNING TECHNICAL SPECIFICATIONS AND OTHER CONTRACT DOCUMENTS.

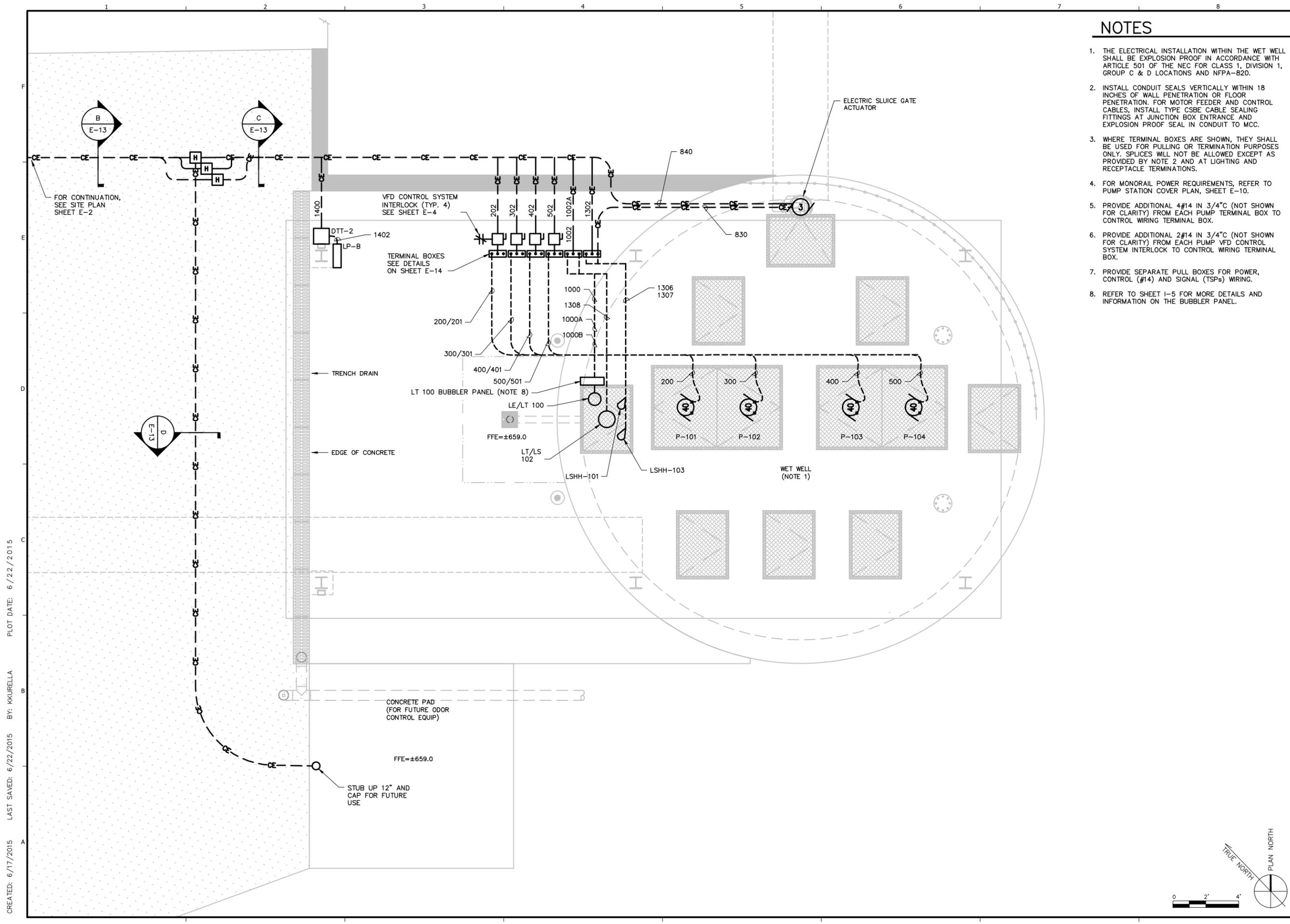
PROJECT NO: CT053653
 DATE: JUNE 2015

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| DISC. LEAD: IMG | DESIGNER: SRP | CHECKER: WWG |
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SHEET TITLE
 ELECTRICAL

PUMP STATION
 ELECTRICAL ABANDONMENT
 PLAN AND EXISTING ONE
 LINE DIAGRAM

SHEET
 E-3



NOTES

1. THE ELECTRICAL INSTALLATION WITHIN THE WET WELL SHALL BE EXPLOSION PROOF IN ACCORDANCE WITH ARTICLE 501 OF THE NEC FOR CLASS 1, DIVISION 1, GROUP C & D LOCATIONS AND NFPA-820.
2. INSTALL CONDUIT SEALS VERTICALLY WITHIN 18 INCHES OF WALL PENETRATION OR FLOOR PENETRATION. FOR MOTOR FEEDER AND CONTROL CABLES, INSTALL TYPE CSBE CABLE SEALING FITTINGS AT JUNCTION BOX ENTRANCE AND EXPLOSION PROOF SEAL IN CONDUIT TO MCC.
3. WHERE TERMINAL BOXES ARE SHOWN, THEY SHALL BE USED FOR PULLING OR TERMINATION PURPOSES ONLY. SPLICES WILL NOT BE ALLOWED EXCEPT AS PROVIDED BY NOTE 2 AND AT LIGHTING AND RECEPTACLE TERMINATIONS.
4. FOR MONORAIL POWER REQUIREMENTS, REFER TO PUMP STATION COVER PLAN, SHEET E-10.
5. PROVIDE ADDITIONAL 4#14 IN 3/4" CONDUIT (NOT SHOWN FOR CLARITY) FROM EACH PUMP TERMINAL BOX TO CONTROL WIRING TERMINAL BOX.
6. PROVIDE ADDITIONAL 2#14 IN 3/4" CONDUIT (NOT SHOWN FOR CLARITY) FROM EACH PUMP VFD CONTROL SYSTEM INTERLOCK TO CONTROL WIRING TERMINAL BOX.
7. PROVIDE SEPARATE PULL BOXES FOR POWER, CONTROL (#14) AND SIGNAL (TSPs) WIRING.
8. REFER TO SHEET I-5 FOR MORE DETAILS AND INFORMATION ON THE BUBBLER PANEL.



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CONSTRUCTION

ORCHARD KNOB PUMP STATION
IMPROVEMENTS
CITY OF CHATTANOOGA, TN
CONSENT DECREE PROGRAM



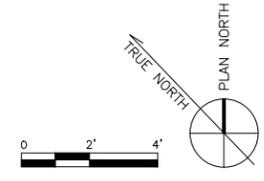
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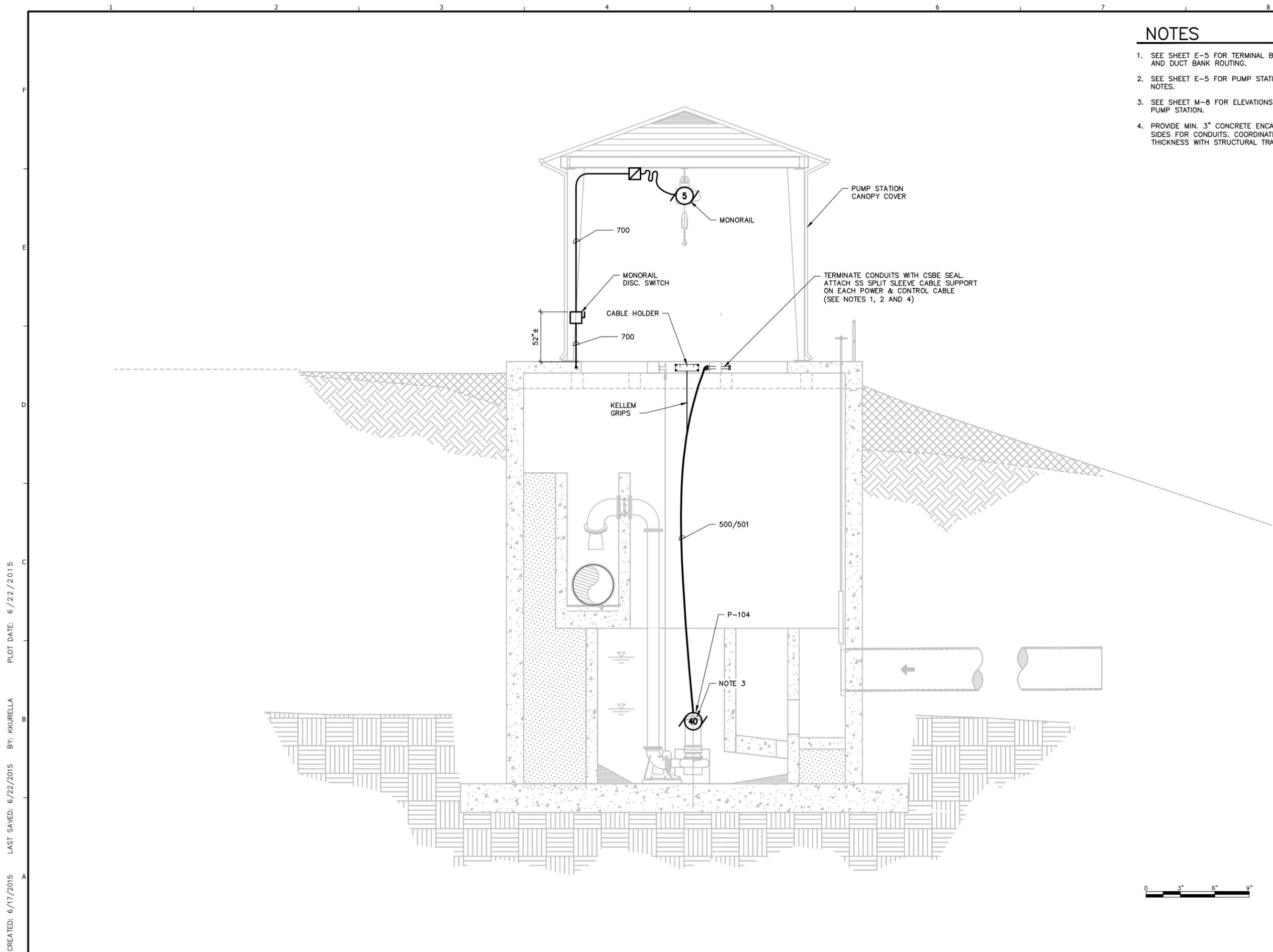
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PROJECT NO: CT053653
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SHEET TITLE
ELECTRICAL
PUMP STATION
CONDUIT LAYOUT

SHEET E-5

CREATED: 6/17/2015 LAST SAVED: 6/22/2015 PLOT DATE: 6/22/2015 BY: KKURELLA





NOTES

1. SEE SHEET E-5 FOR TERMINAL BOXES LOCATION AND DUCT BANK ROUTING.
2. SEE SHEET E-5 FOR PUMP STATION PLAN AND NOTES.
3. SEE SHEET M-8 FOR ELEVATIONS AND SECTIONS OF PUMP STATION.
4. PROVIDE MIN. 3" CONCRETE ENCASEMENT ON ALL SIDES FOR CONDUITS. COORDINATE TOP SLAB THICKNESS WITH STRUCTURAL TRADE.



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ORCHARD KNOB PUMP STATION
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CITY OF CHATTANOOGA, TN
CONSENT DECREE PROGRAM



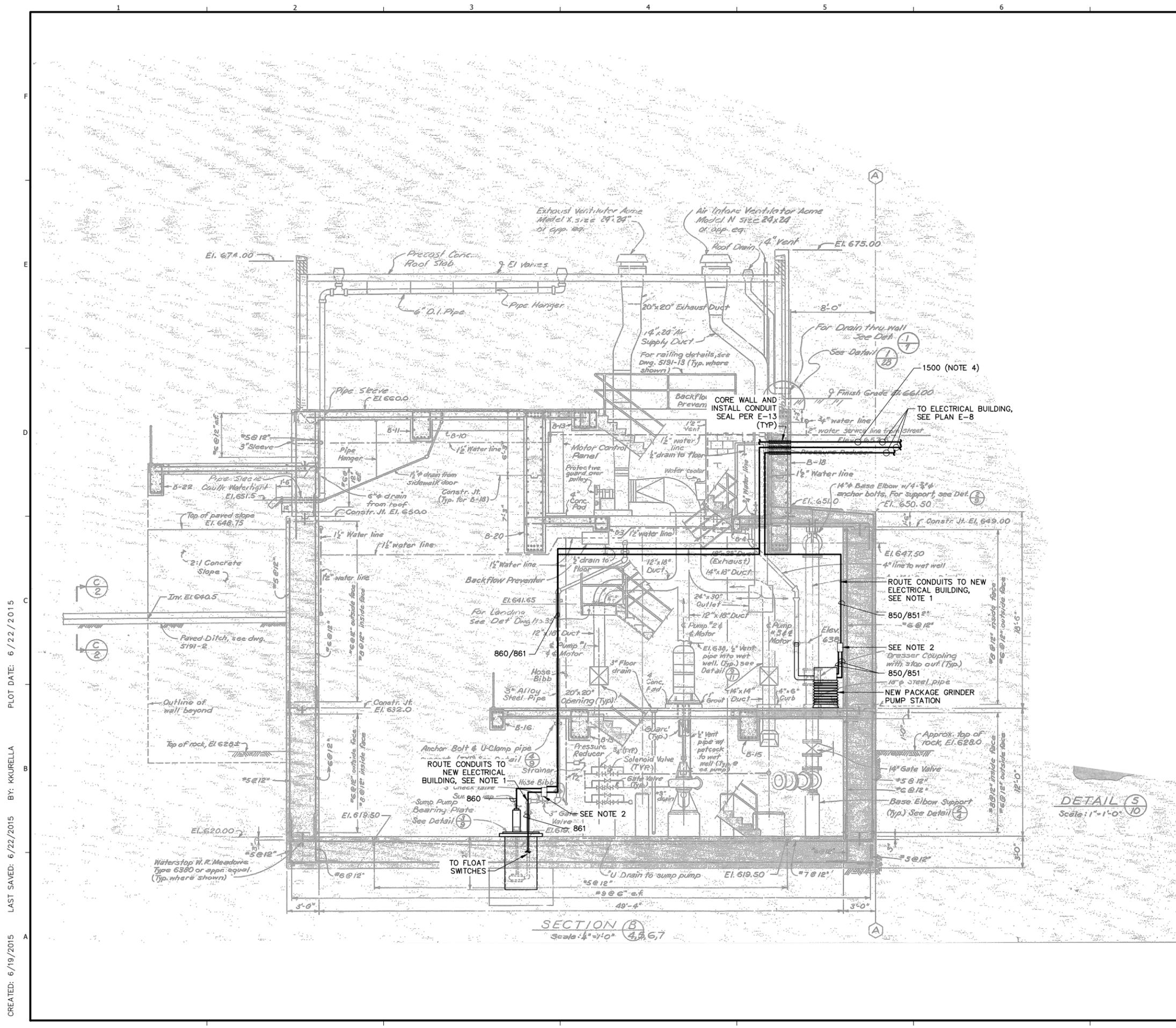
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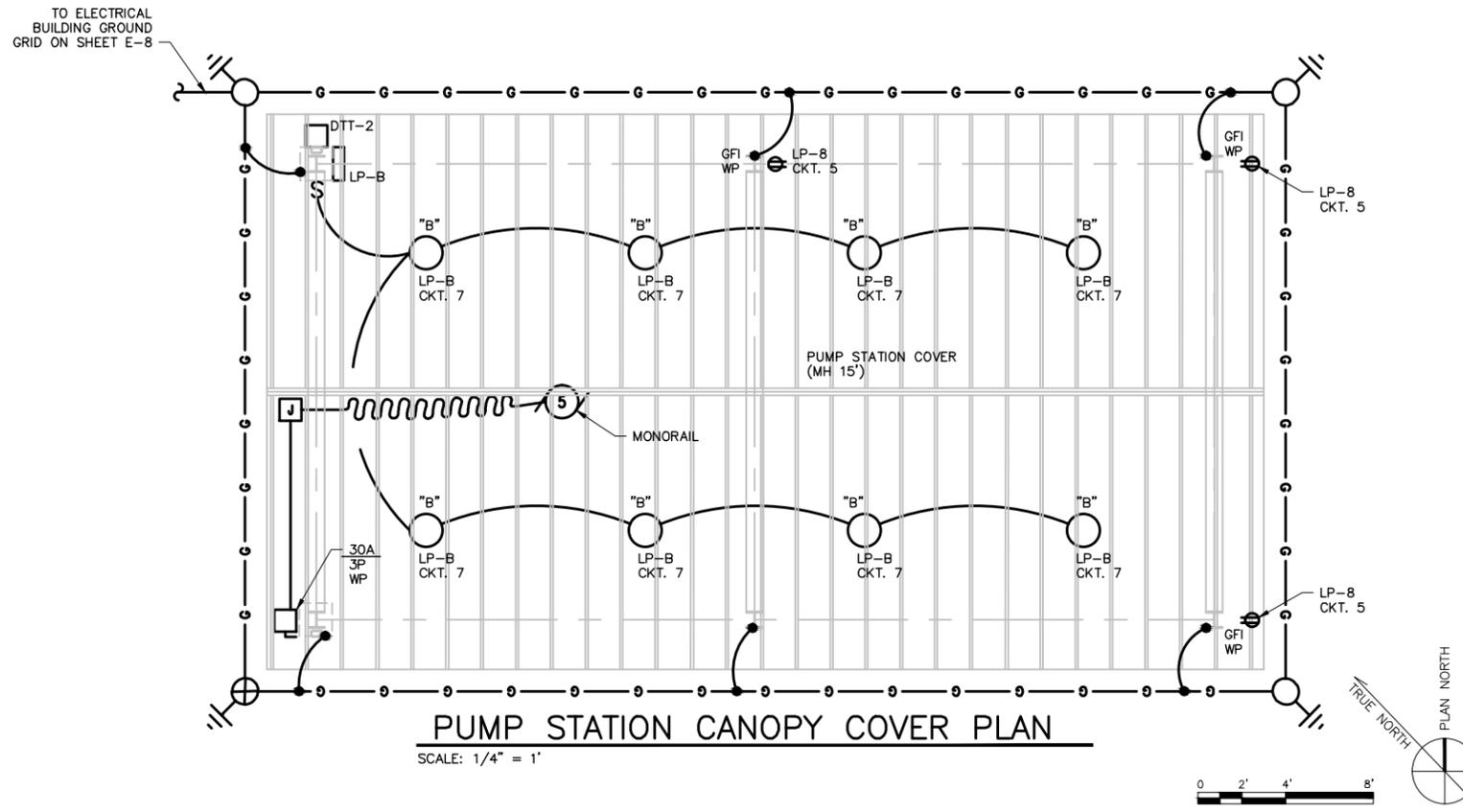
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PROJECT NO: CT053653
DATE: JUNE 2015
DISC. LEAD: IMG DESIGNER: SRP CHECKER: WWG

SHEET TITLE
ELECTRICAL

PUMP STATION SECTION

CREATED: 6/17/2015 LAST SAVED: 6/22/2015 BY: KKURELLA PLOT DATE: 6/22/2015





NOTES

1. ALL LIGHTING AND RECEPTACLE CIRCUITS SHALL BE 2#12 & 1#12 IN 3/4" C.
2. PROVIDE PUMP STATION COVER LIGHTNING PROTECTION SYSTEM AS PER SPECIFICATION SECTION 26 41 13 - LIGHTNING PROTECTION FOR STRUCTURES.



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CONSTRUCTION

ORCHARD KNOB PUMP STATION
IMPROVEMENTS
CITY OF CHATTANOOGA, TN
CONSENT DECREE PROGRAM



| TYPE | DESCRIPTION | MOUNTING | LUMINAIRE SCHEDULE | | | | Power Draw | | DESIGN BASIS MANUFACTURER / CAT. NO. | REMARKS |
|------|--------------------------------|----------|--------------------|----------|--------|---------|-------------|----------|--------------------------------------|------------------------------------|
| | | | QUANTITY | Watts-eq | TYPE | VOLTAGE | Total Watts | Total VA | | |
| A | FLUORESCENT LIGHT FIXTURE OPEN | SURFACE | 2 | 32 | F32-T8 | 120 | 75 | 82 | DAYRITE 2F232-PP-UUV-1/2-EB-FL-5 | PROVIDE WITH INSTALLATION HARDWARE |
| AE | FLUORESCENT LIGHT FIXTURE OPEN | SURFACE | 2 | 32 | F32-T8 | 120 | 75 | 82 | DAYRITE 2F232-PP-UUV-1/2-EB-FL-5 | SAME AS 'A' WITH EMERGENCY OPTION |
| B | ENCLOSED LOW BAY | PENDANT | 1 | 175 | PS MH | 120 | 200 | 218 | DAYRITE LC17MH | PROVIDE WITH INSTALLATION HARDWARE |
| C | WALLPACK | WALL | 1 | 70 | HPS | 120 | 130 | 109 | HCOPHONE WALLPACK V W407DHP12S2B | PROVIDE WITH INTEGRAL PHOTOCELL |
| D | AREA | POLE | 100 | 1 | LED | 120 | 110 | 120 | BETALED ARE-EDG TYPE II | PROVIDE WITH POLE AND POLE BASE |

*ALL MANUFACTURERS AND CATALOG NOS ARE SUBJECT TO BE EVALUATED AS EQUAL TO OTHER COMPETITIVE BRANDS

| REV | DATE | REVISION DESCRIPTION |
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PROJECT NO: CT053653
DATE: JUNE 2015
DISC. LEAD: IMG DESIGNER: SRP CHECKER: WWG

SHEET TITLE
ELECTRICAL

PUMP STATION
COVER LIGHTING PLAN

CREATED: 6/17/2015 LAST SAVED: 6/22/2015 PLOT DATE: 6/22/2015 BY: KKURELLA

Specification Section 40 05 53

Process Valves Four-Inches Diameter and Larger

Part 1 General

1.01 Description

- A. Scope:
1. CONTRACTOR shall provide all labor, materials, equipment, and incidentals as shown, specified, and required to furnish and install process valves, four-inch diameter and larger, and appurtenances, complete and operational.
- B. Coordination:
1. Review installation procedures under this and other Sections and coordinate installation of items that must be installed with or before process valves Work.
 2. Notify other contractors in advance of the installation of process valves and appurtenances to provide them with sufficient time for installing items included in their contracts that must be installed with or before process valves Work.
- C. Related Sections:
1. Section 05 05 33, Anchor Systems.
 2. Section 09 91 00, Painting.
 3. Section 33 05 05, Buried Piping Installation.
 4. Section 40 05 05, Exposed Piping Installation.

1.02 References

- A. Standards referenced in this Section are listed below:
1. American Bearing Manufacturers Association (ABMA).
 2. ANSI B16.1, Cast-Iron Pipe Flanges and Flanged Fittings.
 3. ANSI B16.34, Valves-Flanged, Threaded and Welding end. (ASME B16.34).
 4. ANSI/NSF 61 Drinking Water Components – Health Effects.
 5. API STD 594, Check Valves, Flanged Lug, Wafer and Butt-Welding.
 6. API STD 598, Valve Inspection and Testing.
 7. API STD 609, Butterfly Valves: Double Flanged, Lug-Type and Wafer-Type.
 8. ASTM A126, Specification for Gray Iron Castings for Valves, Flanges and Pipe Fittings.
 9. ASTM A193/A193M, Specification for Alloy-Steel and Stainless Steel Bolting Materials for High-Temperature Service.
 10. ASTM A194/A194M, Specification for Carbon and Alloy Steel Nuts for Bolts for High Pressure and High Temperature Service, or Both.
 11. ASTM A240/A240M, Specification for Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Pressure Vessels and for General Applications.
 12. ASTM A276, Specification for Stainless Steel Bars and Shapes.

13. ASTM A307, Specification for Carbon Steel Bolts and Studs, 60,000 psi Tensile Strength.
14. ASTM A351/A351M, Specification for Castings, Austenitic, Austenitic-Ferritic (Duplex), for Pressure-Containing Parts.
15. ASTM A380, Practice for Cleaning, Descaling and Passivation of Stainless Steel Parts, Equipment and Systems.
16. ASTM A536, Specification for Ductile Iron Castings.
17. ASTM A564/A564M, Specification for Hot-Rolled and Cold-Finished Age-Hardening Stainless Steel Bars and Shapes.
18. ASTM A743/A743 M, Specification for Castings, Iron-Chromium, Iron-Chromium-Nickel, Corrosion Resistant, for General Application.
19. ASTM B62, Specification for Composition Bronze or Ounce Metal Castings.
20. ASTM B98/B98M, Specification for Copper-Silicon Alloy Rod, Bar, and Shapes.
21. ASTM B138/B138M, Specification for Manganese Bronze Rod, Bar and Shapes.
22. ASTM B265, Specification for Titanium and Titanium Alloy Strip, Sheet and Plate.
23. ASTM B584, Specification for Copper Alloy Sand Castings for General Applications.
24. ASTM D429, Test Methods for Rubber Property - Adhesion to Rigid Substrates.
25. AWWA C500, Metal-Seated Gate Valves for Water Supply Service.
26. AWWA C501, Cast-Iron Sluice Gates.
27. AWWA C502, Dry-Barrel Fire Hydrants.
28. AWWA C504, Rubber-Seated Butterfly Valves.
29. AWWA C507, Ball Valves, 6-inch through 48-inch.
30. AWWA C508, Swing-Check Valves for Waterworks Service, 2-inch through 24-inch NPS.
31. AWWA C509, Resilient-Seated Gate Valves for Water Supply Service.
32. AWWA C540, Power-Actuating Devices for Valve and Slide Gates.
33. AWWA C550, Protective Interior Coatings for Valves and Hydrants.
34. AWWA Manual M49, Butterfly Valves: Torque, Head Loss, and Cavitation Analysis.
35. FS TT-C-494, Coating Compound, Bituminous, Solvent Type, Acid-Resistant.
36. NEMA MG 1, Motors and Generators.

1.03 Quality Assurance

- A. Manufacturer's Qualifications:
 1. Manufacturer shall have minimum of five (5) years of experience producing substantially similar materials and equipment to that required and be able to provide evidence of at least five installations in satisfactory operation for at least five (5) years.

- B. Component Supply and Compatibility:
1. Obtain each type of equipment and appurtenances included in this Section, regardless of the component manufacturer, from a single manufacturer of the type of process valve. For each type of valve, do not furnish valves of more than one (1) manufacturer.
 2. Supplier of each type of equipment specified shall review and approve or prepare all Shop Drawings and other submittals for all components associated with the type of process valve Supplier is furnishing.
 3. Components shall be suitable for use in the specified service conditions. Components shall be integrated into the overall assembly by the process valve manufacturer.

1.04 Submittals

- A. Action Submittals: Submit the following:
1. Shop Drawings:
 - a. Installation drawings showing orientation of valve in both plan and elevation view. Drawings shall clearly identify valve and its appurtenances, including controls, actuators, valve stems, and other components. Show dimensions of valves and appurtenances in relation to piping and structural and architectural components, where applicable.
 2. Product Data:
 - a. Product data sheets.
 - b. Complete catalog information, including dimensions, weight, specifications, and identification of materials of construction of all parts.
 - c. Corrosion resistance information to confirm suitability of valve materials for the application. Furnish information on chemical resistance of elastomers from elastomer manufacturer.
 - d. Cv values and hydraulic headloss curves.
 3. Testing Plans:
 - a. Submit plan for shop testing of each valve for which shop testing is specified, including testing plan's and test facility's limitations proposed.
- B. Informational Submittals: Submit the following:
1. Certificates:
 - a. Certificates of compliance with referenced standards, where applicable, including those of AWWA, NSF, and others required by ENGINEER.
 2. Manufacturer Instructions:
 - a. Submit manufacturer's instructions for handling, storing, and installing valves and appurtenances. Provide templates and setting drawings for valves and appurtenances that require anchor bolts or similar anchorages.
 3. Source Quality Control Submittals:
 - a. Submit copies of shop test results and inspection data, certified by manufacturer.

4. Field Quality Control Submittals:
 - a. Submit results of field tests required.
 5. Supplier's Reports:
 - a. When requested by ENGINEER, submit written report of results of each visit to Site by Supplier's serviceman, including purpose and time of visit, tasks performed and results obtained.
 6. Qualifications Statements:
 - a. When requested by ENGINEER, submit manufacturer's qualifications demonstrating compliance with the Specifications, including list of existing installations with contact names and telephone number(s) for each.
- C. Closeout Submittals: Submit the following:
1. Operating and Maintenance Data:
 - a. Furnish operation and maintenance manuals in accordance with Section 01 78 23, Operating and Maintenance Data.
 - b. Furnish in operations and maintenance manuals complete nameplate data for each valve and electric actuator.
- D. Maintenance Material Submittals: Submit the following:
1. Spare Parts, Extra Stock Materials, and Tools:
 - a. Spare Parts and Extra Stock Materials: Furnish as specified for each valve type.
 - b. Tools: Furnish two sets of special tools (excluding metric tools, if applicable) for each size and type of valve furnished.

1.05 Delivery Storage and Handling

- A. Packing, Shipping, Handling, and Unloading:
1. Deliver materials and equipment to Site to ensure uninterrupted progress of the Work. Deliver anchorage products that are to be embedded in concrete in ample time to prevent delaying the Work.
 2. Inspect boxes, crates, and packages upon delivery to Site and notify ENGINEER in writing of loss or damage to materials and equipment. Promptly remedy loss and damage to new condition in accordance with manufacturer's instructions.
 3. Conform to Section 01 65 00, Transportation and Handling.
- B. Storage and Protection:
1. Keep products off ground using pallets, platforms, or other supports? Store equipment in covered storage and prevent condensation and damage by extreme temperatures. Store in accordance with manufacturer's recommendations. Protect steel, packaged materials, and electronics from corrosion and deterioration.
 2. Conform to Section 01 66 00, Storage and Protection.

Part 2 Products

2.01 General

- A. Valves, General:
1. Provide each valve with manufacturer's name and rated pressure cast in raised letters on valve body.
 2. Provide valves with brass or Type 316 stainless steel nameplate attached with Type 316 stainless steel screws. Nameplates shall have engraved letters displaying the following minimum information:
 - a. Valve size.
 - b. Pressure and temperature ratings.
 - c. Application (other than water and wastewater).
 - d. Date of manufacture.
 - e. Manufacturer's name.
 3. Provide valves to turn clockwise to close, unless otherwise specified.
 4. Provide valves with permanent markings for direction to open.
 5. Manually operated valves, with or without extension stems, shall require not more than 40-pound pull on manual operator to open or close valve against specified criteria. Gear actuator and valve components shall be able to withstand minimum pull of 200 pounds on manual operator and input torque of 300-foot pounds to actuator nut. Manual operators include handwheel, chainwheel, crank, lever, and T-handle wrench.
- B. Valve Materials:
1. Valve materials shall be suitable for the associated valve's service or application, as shown.
 2. Protect wetted parts from galvanic corrosion caused by contact of different metals.
 3. Wetted components and wetted surfaces of valves used with potable water or water that will be treated to become potable shall conform to ANSI/NSF 61.
 4. Clean and descale fabricated stainless steel items in accordance with ASTM A380 and the following:
 - a. Passivate all stainless steel welded fabricated items after manufacture by immersing in pickling solution of six percent nitric acid and three percent hydrofluoric acid. Temperature and detention time shall be sufficient for removing oxidation and ferrous contamination without etching surface. Perform complete neutralizing operation by immersing in trisodium phosphate rinse followed by clean water wash.
 - b. Scrub welds with same pickling solution or pickling paste and clean with stainless steel wire brushes or by grinding with non-metallic abrasive tools to remove weld discoloration, and then neutralize and wash clean.
- C. Valve Joints:
1. Exposed Valves: Unless otherwise specified, provide with flanged ends conforming to ANSI B16.1. Pressure class of flanges shall be

equal to or greater than specified pressure rating of the associated valve.

2. Buried Valves: Unless otherwise specified, provide with mechanical or push-on joints, restrained or unrestrained, as required by piping with which valve is installed.
 3. For stainless steel bolting, except where nitrided nuts are required, use graphite-free anti-seize compound to prevent galling. Strength of joint shall not be affected by using anti-seize compound.
 - a. For submerged service, Type 316 cast stainless steel with stainless steel bushing for stem.
 - b. Maximum Stem Length Between Guides: Seven feet.
 - c. Stem guides shall be adjustable in two directions.
- D. Floor Boxes: Provide cast-iron floor boxes for valves that are to be operated from floor above valve. Boxes shall be equal in depth to floor slab. Boxes shall have cast-iron covers and be fitted with bronze bushing.

2.02 Elastomeric Duckbill Check Valves

- A. Duckbill check valves shall be manufactured of Neoprene reinforced elastomer with a strong spine for long-term performance.
- B. Style shall be one-piece, flat bottom flared top with straight bill, designed for minimum head-loss at all flow rates. Cracking pressure shall not exceed 1-inch water column.
- C. Connection to piping shall be slip on with stainless steel band. Where piping does not protrude through structure wall, provide epoxy coated carbon steel thimble/mounting plates for anchoring to headwalls.
- D. Provide duckbill check valves from one of the following:
 1. Red Valve Company, Inc., Tideflex Style TF-1.
 2. General Rubber Corporation.
 3. Or approved equal.

2.03 Anchorages and Mounting Hardware

- A. Comply with Section 05 05 33, Anchor Systems, except as modified in this Section.
- B. Obtain bolts, nuts, and washers for connection of valve and appurtenances to concrete structure or other structural members from valve Supplier.
- C. Bolts, nuts, and washers shall be of ample size and strength for purpose intended. Anchorages in concrete shall be at least 5/8-inch diameter.
- D. Provide stem guide anchorages of required strength to prevent twisting and sagging of guides under load.

- E. Materials: Provide bolts and washers of Type 316 stainless steel and nitrided nuts. Bolts shall have rolled threads. Bolts and nuts shall be electropolished to remove burrs.

2.04 Painting of Expose Valves, Hydrants and Appurtenances

- A. Exterior steel, cast-iron, and ductile iron surfaces, except machined surfaces of exposed valves and appurtenances, shall be finish painted in manufacturer's shop. Surface preparation, priming, finish painting, and field touch-up painting shall conform to Section 09 91 00, Painting.

Part 3 Execution

3.01 Inspection

- A. Examine conditions under which materials and equipment are to be installed and notify ENGINEER in writing of conditions detrimental to proper and timely completion of the Work. Do not proceed with the Work until unsatisfactory conditions have been corrected.

3.02 Installation

- A. General:
 - 1. Install valves and appurtenances in accordance with:
 - a. Supplier's instructions and the Contract Documents.
 - b. Requirements of applicable AWWA standards.
 - c. Applicable requirements of Section 33 05 05, Buried Piping Installation, and Section 40 05 05, Exposed Piping Installation.
 - 2. Install valves plumb and level. Install all valves to be free from distortion and strain caused by misaligned piping, equipment, and other causes.
 - 3. Position swing check valves and butterfly valves so that, when valve is fully open, valve disc does not conflict with piping system elements upstream and downstream of valve.
- B. Exposed Valves:
 - 1. Provide supports for large or heavy valves and appurtenances as shown or required to prevent strain on adjoining piping.
 - 2. Operators:
 - a. Install valves so that operating handwheels or levers can be conveniently turned from operating floor without interfering with access to other valves, piping, structure, and equipment, and as approved by ENGINEER.
 - b. Avoid placing operators at angles to floors or walls.
 - c. Orient chain operators out of way of walking areas.
 - d. Install valves so that indicator arrows are visible from floor level.

- C. Buried Valves:
 - 1. Install valve boxes plumb and centered, with soil carefully tamped to a lateral distance of four feet on all sides of box, or to undisturbed trench face if less than four feet.
 - 2. Provide flexible coupling next to each buried valve.

3.03 Field Quality Control

- A. Field Tests:
 - 1. Adjust all parts and components as required to provide correct operation of valves.
 - 2. Conduct functional field test on each valve in presence of ENGINEER to demonstrate that each valve operates correctly.
 - 3. Verify satisfactory operation and controls of motor operated valves.
 - 4. Demonstrate satisfactory opening and closing of valves at specified criteria requiring not more than 40 pounds effort on manual actuators.
 - 5. Test ten percent (10%) of valves of each type by applying 200 pounds effort on manual operators. There shall be no damage to gear actuator or valve.

END OF SECTION

Specification Section 01 22 00
Measurement and Payment

Part 1 General

1.01 Scope

- A. The Bid lists a lump sum bid for construction and place in satisfactory operation of the Work as shown on the Drawings and called for in these Specifications, including but not limited to, unclassified excavation, site grading, cast-in-place concrete wet well structure, influent, effluent, and metering piping and manholes and connections, four centrifugal non-clog submersible pumps, valves and piping system, precast concrete electrical building, electrical, associated instrumentation, and control systems, , fencing, paving, water line, hoist system and shed, odor-control pad, demolition of portions of the existing sanitary pump station building and equipment, and appurtenances.
- B. Required items of work and incidentals necessary for the satisfactory completion of the work which are not specifically listed in the Bid, and which are not specified in this section to be measured or to be included in one of the items listed in the Bid, shall be considered as incidental to the work. All costs thereof, including Contractor's overhead costs and profit, shall be considered as included in the lump sum or unit prices bid for the various Bid items. The Contractor shall prepare the Bid accordingly.
- C. Work includes furnishing all plant, labor, equipment, tools and materials, which are not furnished by the Owner and performing all operations required to complete the work satisfactorily, in place, as specified and as indicated on the Drawings.

1.02 Descriptions

- A. Payment will include all necessary and incidental related work not specified to be included in any other item of work listed in the Bid.
- B. Unless otherwise stated in individual sections of the Specifications or in the Bid, no separate payment will be made for any item of work, materials, parts, equipment, supplies or related items required to perform and complete the work. The costs for all such items required shall be included in the price bid for item of which it is a part.
- C. Should additional work be required due to scope changes or changes ordered by the Engineer, payment will be made on the basis of a change in the contract amount, based upon the supplemental unit prices, for such changes in the Work. The quantities listed in the supplemental section of the Bid may increase or decrease based upon the actual change of scope items or change orders required.

1.03 Cash Allowances

- A. General:
 - 1. The Contractor shall include in the Bid Total all allowances stated in the Contract Documents. These allowances shall cover the net cost of the services provided by a firm selected by the Owner. The Contractor's handling costs,

- labor, overhead, profit and other expenses contemplated for the original allowance shall be included in the items to which they pertain and not in allowances.
2. No payment will be made for nonproductive time on the part of testing personnel due to the Contractor's failure to properly coordinate testing activities with the work schedule or the Contractor's problems with maintaining equipment in good working condition.
 3. No payment shall be provided for services which fail to verify required results.
- B. Should the net cost be more or less than the specified amount of the allowance, the Contract will be adjusted accordingly by change order. The amount of change order will not recognize any changes in handling costs at the site, labor, overhead, profit and other expenses caused by the adjustment to the allowance.
- C. Documentation:
1. Submit copies of the invoices with each periodic payment request from the firm providing the services.
 2. Submit results of services provided which verify required results.
- D. Schedule of Cash Allowances:
1. Soils and Concrete Testing: Allow the amount provided in the Bid for the services of a geotechnical engineering firm and testing laboratory to verify soils conditions including compaction of backfill and similar issues and for the testing of concrete cylinders for poured in place concrete.

1.04 Erosion and Sedimentation Control

- A. General:
1. No separate payment shall be made for temporary and/or permanent erosion and sedimentation controls.
 2. No payment will be made for any portion of the Project for which temporary erosion and sedimentation controls are not properly maintained.
 3. Quantities for payment shall be based upon actual quantity constructed and authorized by the Engineer.

1.05 Earthwork

- A. Unclassified Excavation:
1. No separate payment will be made for unclassified excavation. The cost of such work and all costs incidental thereto shall be included in the lump sum price bid for the item to which the work pertains.
 2. No separate payment will be made for providing sheeting, bracing and timbering.
- B. Foundation Excavation:
1. Costs for undercutting, foundation preparation, and removal and replacement of unsuitable material, where shown on the Drawings or specified, shall be included in the lump sum bid.
 2. Payment for removal and replacement of unsuitable material which is ordered

by the Engineer which is not shown on the Drawings or specified shall be made at the unit price bid for:

- a. Replacement with General Backfill.
 - b. Replacement with Select Backfill.
 - c. Replacement with Sub-Base Material.
3. No separate payment will be made for concrete backfill of trenches beneath structures. The cost of this work and all costs incidental thereto shall be included in the lump sum price bid for the item to which the work pertains.
 4. Additional costs of corrective work, made necessary by unauthorized excavation of earth or rock, shall be borne by the Contractor.
- C. Dewatering: No separate payment will be made for dewatering required to accomplish the work.
- D. Backfilling: No separate payment will be made for backfilling or excavation, hauling and placement of borrow material. The cost of all such work and all costs incidental thereto shall be included in the lump sum price bid for the item to which the work pertains.

1.06 Trench Excavation and Backfill

- A. No separate or additional payment shall be made for any special or unique method, means, techniques or equipment necessary for the Contractor's compliance with these Specifications, regulatory requirements, permits, laws or regulations which govern this Project.
- B. Trench Excavation: No separate payment shall be made for trench excavation. All costs shall be included in the lump sum bid for the item to which it pertains.
- C. Sheeting, Bracing and Shoring: No separate payment will be made for providing sheeting, bracing and timbering.
- D. Trench Rock Excavation:
1. No separate payment will be made for Trench rock excavation.
 2. No allowance shall be made for excavating to extra widths for construction of manholes or other appurtenances, for excavating to sloping sides, or for excavations made necessary by the physical limitations of the Contractor's equipment. Cost of such additional rock excavation shall be included in the unit price bid for rock excavation.
- E. Dewatering Excavations: All costs of equipment, labor and materials required for dewatering shall be included in the lump sum price bid for the item to which it pertains.

1.07 Site Utilities

Solid sleeves and fittings necessary for connections to existing site utilities, even if not shown on the Drawings, are considered incidental to the Project and will not be paid for separately. Additionally, no payment will be made for fittings provided due to the

Contractor's sequence of construction, layout problems, tie-ins or repairs.

1.08 Additional Work

- A. Additional work or increase in the quantities of certain classes of work over those included in the lump sum bid, when ordered by the Engineer, shall be measured and paid for in accordance with the following Paragraphs. Measurement of the quantities of additional work shall be made by the Engineer.
- B. The unit prices bid shall be applicable to any single occurrence of additional work ordered by the Engineer, which do not exceed the quantity in the Bid. Should a single occurrence exceed the quantity in the Bid, the Contractor and the Owner shall both have the right to negotiate a new unit price which is more representative of the larger quantity of work being ordered by the Engineer for that single occurrence. The aforementioned shall not relieve the Owner of its right to require the Contractor to provide additional work at the unit prices bid, nor shall it limit the number of times the additional work can be ordered at the unit prices bid, as long as each single occurrence does not exceed the quantity in the Bid.
- C. The unit prices bid under Additional Work if ordered by the Engineer shall include all material costs, labor costs, overhead costs, schedule impact costs, incidental costs, and profit.

END OF SECTION