

# WALTON COUNTY BOARD OF COMMISSIONERS

Walton County, Georgia



## Standard Contract Documents & Technical Specifications *for the* *Construction of Roads & Bridges*

**2011 Edition**

Prepared By:

***Precision Planning, Inc.***

**Planners, Engineers, Architects & Surveyors**

**802 East Spring Street**

**Monroe, GA 30655**

**(770) 267-8800**

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# STANDARD CONTRACT DOCUMENTS & TECHNICAL SPECIFICATIONS

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For current GDOT Specifications, Special Provisions and Amendments, reference the following link on the GDOT Website: <http://dot.ga.gov/doingbusiness/TheSource/Pages/home.aspx>

This document has important legal consequences; consultation with an attorney is encouraged with respect to its use or modification. This document should be adapted to the particular circumstances of the contemplated Project and the Controlling Law.

# STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

Prepared by

**ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE**

and

Issued and Published Jointly By



PROFESSIONAL ENGINEERS IN PRIVATE PRACTICE  
*a practice division of the*  
NATIONAL SOCIETY OF PROFESSIONAL ENGINEERS

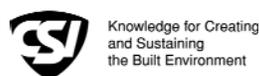
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These General Conditions have been prepared for use with the Suggested Forms of Agreement Between Owner and Contractor Nos. C-520 or C-525 (2002 Editions). Their provisions are interrelated and a change in one may necessitate a change in the other. Comments concerning their usage are contained in the EJCDC Construction Documents, General and Instructions (No. C-001) (2002 Edition). For guidance in the preparation of Supplementary Conditions, see Guide to the Preparation of Supplementary Conditions (No. C-800) (2002 Edition).

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## GENERAL CONDITIONS

### ARTICLE 1 - DEFINITIONS AND TERMINOLOGY

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#### 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.

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.

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.

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.

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.

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's submittals, and the reports and drawings of subsurface and physical conditions are not Contract Documents.

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 with whom Owner has entered into the Agreement.

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

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.

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.

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 1 of the Specifications. The General Requirements pertain to all sections of the Specifications.

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 in connection with the Work.

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.

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.

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.

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.

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 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. *Related Entity* -- An officer, director, partner, employee, agent, consultant, or subcontractor.

37. *Resident Project Representative*--The authorized representative of Engineer who may be assigned to the Site or any part thereof.

38. *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.

39. *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.

40. *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.

41. *Shop Drawings*--All drawings, diagrams, illustrations, schedules, 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.

42. *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.

43. *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.

44. *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.

45. *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, 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.

46. *Successful Bidder*--The Bidder submitting a responsive Bid to whom Owner makes an award.

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

48. *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 any Subcontractor.

49. *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.

50. *Unit Price Work*--Work to be paid for on the basis of unit prices.

51. *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, 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.

52. *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.

## 1.02 Terminology

A. The following words or terms are not defined but, when used in the Bidding Requirements or Contract Documents, have the following 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 requirements of and information in the Contract Documents and conformance with the design concept of the completed 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.

### 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:

- a. does not conform to the Contract Documents, or
- b. 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 which 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

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### 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 other, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance which either of them or any additional insured may reasonably request) which Contractor and Owner respectively are required to purchase and maintain in accordance with Article 5.

### 2.02 *Copies of Documents*

A. Owner shall furnish to Contractor up to four printed or hard copies of the Drawings and Project Manual. 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 in the Notice to Proceed. A Notice to Proceed may be given at any time within 30 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 start to perform the Work on the date when the Contract Times commence to run. 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 Effective Date of the Agreement (unless otherwise specified in 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; and

3. a preliminary Schedule of Values for all of the Work 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*

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.

### 2.07 *Initial Acceptance of Schedules*

A. At least 10 days before submission of the first Application for Payment 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 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.

2. Contractor's Schedule of Submittals will be acceptable to Engineer if it provides a workable arrangement for reviewing and processing the required submittals.

3. Contractor's Schedule of Values will be acceptable to Engineer as to form and substance if it 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 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 may reasonably be inferred from the Contract Documents or from prevailing custom or trade usage as being required to produce the intended 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.

##### 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.

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, or Engineer, or any of, their Related Entities, 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.

##### 3.03 *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 may discover 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 any provision of any Law or Regulation applicable to the performance of the Work or of any standard, specification, manual or code, or of any instruction of any Supplier, 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 knew 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, code, or instruction (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).

### 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;

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

3. Engineer's written interpretation or clarification.

### 3.05 *Reuse of Documents*

A. Contractor and any Subcontractor or Supplier or other individual or entity performing or furnishing all of the Work under a direct or indirect contract with Contractor, 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 Engineer's consultants, including electronic media editions; or

2. reuse any of 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 prohibition 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. Copies of data furnished by Owner or Engineer to Contractor or 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.

## 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 for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

#### 4.02 *Subsurface and Physical Conditions*

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

1. those reports of explorations and tests of subsurface conditions at or contiguous to the Site that Engineer has used in preparing the Contract Documents; and

2. those drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities) that Engineer has used in preparing the Contract Documents.

B. *Limited Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the general 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 Related Entities 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 at or contiguous to the Site 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 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 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, Owner and Engineer, and any of their Related Entities 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.

#### 4.04 *Underground Facilities*

A. *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; 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.

#### B. *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 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 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.

#### 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.

#### 4.06 *Hazardous Environmental Condition at Site*

A. *Reports and Drawings*: Reference is made to the Supplementary Conditions for the identification of those reports and drawings relating to a Hazardous Environmental Condition identified at the Site, if any, that have been utilized by the Engineer in the preparation of the Contract Documents.

B. *Limited Reliance by Contractor on Technical Data Authorized*: Contractor may rely upon the general 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 Related Entities 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.

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 to Contractor written notice: (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 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, 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, 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

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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 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 current 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 must be accompanied by a certified copy of the agent's authority to act.

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 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 in the Supplementary Conditions.

5.03 *Certificates of Insurance*

A. Contractor shall deliver to Owner, with copies to each additional insured 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 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.

5.04 *Contractor's Liability Insurance*

A. Contractor shall purchase and maintain such liability and other 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, include as additional insured (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, 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 completed operations insurance;

4. include contractual liability insurance covering Contractor's indemnity obligations under Paragraphs 6.11 and 6.20;

5. 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);

6. 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

7. with respect to completed operations insurance, and any insurance coverage written on a claims-made basis, remain in effect for at least two years after final payment.

a. 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 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, 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 an insured or additional insured;~~

~~2. be written on a Builder's Risk "all risk" or open peril or special causes of loss policy form that shall at least include insurance for physical loss or damage to the Work, temporary buildings, false work, 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 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 additional insured to whom a certificate of insurance has been issued.~~

~~B. Owner shall purchase and maintain such boiler and machinery 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, 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 an insured or additional insured.~~

~~C. All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained in accordance with 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 additional insured 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 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 Paragraph 5.06 will protect Owner, Contractor, Subcontractors, and Engineer, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or additional insureds (and the officers, directors, 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 additional insureds thereunder. Owner and Contractor waive all rights against each other and their respective officers, directors, 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 to be listed as insured or additional insured (and the officers, directors, 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 as trustee or otherwise payable under any policy so issued.~~

~~B. Owner waives all rights against Contractor, Subcontractors, and Engineer, and the officers, directors, 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, 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 insureds, 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 in accordance with Article 5 on the basis of non-conformance with the Contract Documents, the objecting party shall so notify the other party in writing within 10 days after receipt of the certificates (or other evidence requested) required by Paragraph 2.01.B. Owner and Contractor shall each provide to the other such additional information in respect of insurance provided as the other 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.

~~5.10 *Partial Utilization, Acknowledgment of Property Insurer*~~

~~A. If Owner 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 4.05, 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, 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. 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. The superintendent will be Contractor's representative at the Site and shall have authority to act on behalf of Contractor. All communications given to or received from the superintendent shall be binding on Contractor.

6.02 *Labor; Working Hours*

A. Contractor shall provide competent, 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.

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 legal holiday without Owner's written consent (which will not be unreasonably withheld) given after prior written notice to Engineer.

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, testing, start-up, and completion of the Work.

B. All materials and equipment incorporated into the Work shall be as specified or, if not specified, shall be of good quality and new, except as otherwise provided in the Contract Documents. All special warranties and guarantees required by the Specifications 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.

#### 6.04 Progress Schedule

A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.07 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 the Progress Schedule that will not result in changing the Contract Times. Such adjustments will comply with any provisions 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.

#### 6.05 Substitutes and "Or-Equals"

A. 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,

3) it has a proven record of performance and availability of responsive service; and

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 that 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 in 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

c) 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 or not 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

c) whether or not 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;

4) and 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 either a Change Order for a substitute or 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 item so proposed or submitted by Contractor, Contractor shall reimburse Owner for the charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the 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. 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.

G. All Work performed for Contractor by a Subcontractor or Supplier will 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 an additional insured 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, and Engineer, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or additional insureds (and the officers, directors, 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.~~

## 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, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, 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. Owner shall assist Contractor, when 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.

## 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 primary 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. 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.

#### 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, 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 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 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. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent 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. 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).

D. 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).

#### 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.

#### 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*

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

##### 1. Shop Drawings

a. Submit number of copies specified in the General Requirements.

b. Data shown on the Shop Drawings will 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*: Contractor shall also submit Samples to Engineer for review and approval in accordance with the acceptable schedule of Shop Drawings and Sample submittals.

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 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 determined and verified:

a. all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto;

b. the suitability of all materials with respect to intended use, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work;

c. all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto; and

d. shall also have 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.

2. Each 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 Drawing's 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 provide timely review of Shop Drawings and Samples in accordance with the Schedule of Submittals acceptable to Engineer. Engineer's review and approval 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 will not extend to means, methods, techniques, sequences, or procedures of construction (except where a particular means, method, technique, sequence, or procedure of con-

struction 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 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.

#### *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.

#### *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 Related Entities 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 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*

A. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, 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 .

B. In any and all claims against Owner or Engineer or any of their respective consultants, agents, officers, directors, partners, or employees 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, partners, employees, agents, consultants and subcontractors arising out of:

1. the preparation or approval of, or the failure to prepare or approve, maps, Drawings, opinions, reports, surveys, Change Orders, designs, or Specifications; or
2. giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage.

#### 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.

## ARTICLE 7 - OTHER WORK AT THE SITE

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### 7.01 *Related Work at Site*

A. Owner may perform other work related to the Project at the Site with Owner's employees, or via 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 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, a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work, and shall 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 their work and will only cut or alter their 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 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.

### 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 actions or inactions.

C. Contractor shall be liable to Owner and any other contractor for the reasonable direct delay and disruption costs incurred by such other contractor as a result of Contractor's action or inactions.

## ARTICLE 8 - OWNER'S RESPONSIBILITIES

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### 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 in respect of 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 in or relating to existing surface or subsurface structures at or contiguous to the Site that have been utilized by Engineer in preparing the Contract Documents.

8.06 *Insurance*

A. Owner's responsibilities, if any, in 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 in 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. If and to the extent Owner has agreed to furnish Contractor reasonable evidence that financial arrangements have been made to satisfy Owner's

obligations under the Contract Documents, Owner's responsibility in respect thereof will be as set forth in the Supplementary Conditions.

ARTICLE 9 - ENGINEER'S STATUS DURING CONSTRUCTION

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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 and will not be changed without written consent of Owner and Engineer.

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. 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 therefor 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 determine the actual quantities and classifications of Unit Price Work performed by Contractor. 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 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 believe 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.

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.

## ARTICLE 10 - CHANGES IN THE WORK; CLAIMS

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### 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).

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.B.

### 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.

### 10.04 *Notification to Surety*

A. If notice 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) is required by the provisions of any bond to be given to a surety, 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*

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 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 supporting data shall be delivered to the Engineer and the other party to the Contract within 60 days 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 Time 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

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### 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 include only the following items, and shall not include any of the costs itemized in Paragraph 11.01.B.

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 at the Site. 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.

d. Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, 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 the Work, 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.

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, expresses, 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 and 11.01.B.

*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 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**

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*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 (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 under Paragraph 12.01.B.2, 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;
  - 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 Paragraph 12.01.C.2.a 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;
  - 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 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, 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 be entitled to an equitable adjustment in Contract Times, 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 the Related Entities of each of them 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.

## 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. All 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, inspecting, and testing. Contractor shall provide them proper and safe conditions for such access and advise them of Contractor's Site safety procedures and programs so that they may comply therewith as applicable.

### 13.03 *Tests and Inspections*

A. 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.

B. Owner shall employ and pay for the services of an independent testing laboratory to perform all 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 said 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, it must, if requested by Engineer, be uncovered 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.

### 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.

#### 13.06 *Correction or Removal of Defective Work*

A. Promptly after receipt of 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.

#### 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:

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) will 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.

#### 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 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 be paid by Contractor to Owner.

#### 13.09 *Owner May Correct Defective Work*

A. If Contractor fails within a reasonable time 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

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### 14.01 *Schedule of Values*

A. The Schedule of Values established as provided in Paragraph 2.07.A 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 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. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

#### 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 on the Site 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, to the

results of any subsequent tests called for in the Contract Documents, to a final determination of quantities and classifications for Unit Price Work under Paragraph 9.07, and to 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. that 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 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 corrects to Owner's satisfaction the reasons for such action.

3. If it is subsequently determined 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.

#### 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 free and clear of all Liens.

#### 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.

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 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 Contractor in writing to permit Owner to use or occupy any such part of the Work which Owner believes to be ready for its intended use and substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor will certify to Owner and Engineer that such part of the Work is substantially complete and request Engineer to issue a certificate of Substantial Completion 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 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*

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.

#### 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.

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.7;
- b. consent of the surety, if any, to final payment;
- c. a list of all Claims against Owner that Contractor believes are unsettled; and
- d. 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.

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 or Owner's property might in any way be responsible 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 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 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.

##### 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.

## ARTICLE 15 - SUSPENSION OF WORK AND TERMINATION

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### 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 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.

### 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 disregard of the authority of Engineer; or

4. Contractor's violation in any substantial way of any provisions of the Contract Documents.

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:

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 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. 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.

B. 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.

### ARTICLE 16 - DISPUTE RESOLUTION

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#### 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 their intent to submit the Claim to a court of competent jurisdiction.

### ARTICLE 17 - MISCELLANEOUS

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#### 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, to the last business address known to the giver of the notice.

#### 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.

17.06 *Headings*

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

## Supplementary Conditions

These Supplementary Conditions amend or supplement the Standard General Conditions of the Construction Contract (No. C-700, 2002 Edition) and other provisions of the Contract Documents as indicated below. All provisions that are not so amended or supplemented remain in full force and effect.

The terms used in these Supplementary Conditions will have the meanings indicated in the General Conditions. Additional terms used in these Supplementary Conditions have the meanings stated below, which are applicable to both the singular and plural thereof.

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**SC-1.01.A.1. Add the following language to the definition of a Claim Paragraph 1.01.A.1:**

The assertion, assessment, or retention of liquidated damages by the Owner is not a Claim.

**SC-16.01.A Delete Paragraph 16.01.A in its entirety and insert the following:**

A. Either Owner or Contractor may request nonbinding mediation of any Claim submitted to Engineer for a decision under Paragraph 10.05 before such decision becomes final and binding. The nonbinding 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 nonbinding 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.

## SECTION 00800

### SUPPLEMENTARY GENERAL PROVISIONS

#### SECTION 1 - GENERAL

##### 1.1 SUPPLEMENTS

The supplements contained in these Supplementary General Provisions modify, change, delete from, or add to the General Conditions of these CONTRACT DOCUMENTS. Where any article, paragraph, subparagraph, or clause is modified by these supplements, the unaltered provisions of that article, paragraph, subparagraph, or clause shall remain in effect. Reference made in the General Conditions to Supplemental General Conditions or Special Conditions refer to these Supplementary General Provisions.

##### 1.2 GENERAL CONDITIONS

The General Conditions are general in scope and may refer to conditions not encountered on the work covered by these CONTRACT DOCUMENTS. Any provision of the General Conditions which pertains to a nonexistent condition and is not applicable to the work to be performed hereunder, or which conflicts with any provision of the Supplementary General Provisions or Specifications, shall have no meaning in these CONTRACT DOCUMENTS and shall be disregarded.

##### 1.3 CONTRACT DOCUMENTS

The CONTRACT DOCUMENTS cover all matters relating to the work the Contractor is obligated to perform. The CONTRACT DOCUMENTS are organized into various parts and sections for convenience. All parts and sections of the CONTRACT DOCUMENTS are complementary, and what is called for by any shall be as binding as if called for by all.

The CONTRACT DOCUMENTS, as defined herein, form the Contract between OWNER and the CONTRACTOR for the performance of the work covered by these CONTRACT DOCUMENTS. It is agreed by the OWNER and the CONTRACTOR, as evidenced by and through execution of the Contract, that all terms of the CONTRACT DOCUMENTS shall be binding on both parties to the Contract and shall be a part of the Contract, the same as if the CONTRACT DOCUMENTS are repeated therein.

##### 1.4 SPECIFICATIONS

No attempt has been made in the Specifications to segregate work to be performed by any trade or subcontract. Any segregation between the trades or crafts will be solely a matter for agreement between the CONTRACTOR and his employees and his SUBCONTRACTORS.

The Specifications as a whole will govern the construction of the entire work. The applicable provisions thereof will govern work to be performed under each section.

## 1.5 GOVERNING STANDARD SPECIFICATIONS

Standard specifications or other specifications of organizations, societies, governmental agencies, or bodies, referred to in these CONTRACT DOCUMENTS, are made a part of these CONTRACT DOCUMENTS the same as if repeated herein. Unless specifically stated otherwise, the standard shall be that adopted and published at the date of the Advertisement.

## 1.6 EXECUTION OF CONTRACT

The CONTRACTOR and the OWNER shall execute the prescribed Contract in six (6) counterparts, each of which shall be deemed an original document.

## 1.7 DIMENSIONS AND ELEVATIONS

Figured dimensions on drawings shall take precedence over measurement by scale, and detailed working drawings are to take precedence over general drawings and shall be considered as explanatory of them and not as indicating extra work.

## 1.8 ASSIGNMENTS

The CONTRACTOR shall not assign, in whole or part, this contract or any moneys due or to become due thereunder without the written consent of the OWNER.

## SECTION 2 - DEFINITIONS (Ref. Article 1)

### 2.1 AGREEMENT OR CONTRACT

The written agreement between the OWNER and the CONTRACTOR for the performance of the WORK in accordance with the requirements of the CONTRACT DOCUMENTS and for the payment of the agreed consideration therefor. 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.

### 2.2 CONTRACT DOCUMENTS

The Advertisement for Bids, Instructions to Bidders, Bid Form and associated documents, Bid Bond, Notice of Award, Performance Bond, Payment Bond, Agreement, General Conditions, Supplemental General Conditions, Supplementary General Provisions, Technical Specifications, Drawings, Addenda, Change Orders and Notice to Proceed shall constitute the 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.

## 2.3 DRAWINGS

Drawings, which are sometimes referred to herein as "plans" are defined as all (a) drawings furnished by OWNER as a basis for bids; (b) supplementary drawings furnished by OWNER to clarify and to define in greater detail the intent of the Contract Drawings and Specifications; (c) drawings submitted by the successful bidder with his bid, provided such drawings are acceptable to OWNER; (d) drawings furnished by OWNER to CONTRACTOR during the progress of the WORK; and (e) engineering data and drawings submitted by the CONTRACTOR during the progress of the WORK, provided such drawings are acceptable to OWNER.

## 2.4 ENGINEER

Shall be Walton County Public Works Department.

## 2.5 INFORMALITY

Any deviation in the bid proposal that does not alter the bid schedule format or place any conditions or qualifications on the bid.

## 2.6 OWNER: WALTON COUNTY BOARD OF COMMISSIONERS.

## 2.7 OWNER'S ATTORNEY

Person duly authorized by OWNER to act in the capacity of ATTORNEY.

## 2.8 AS ORDERED, AS DIRECTED, AS REQUIRED, AS PERMITTED, AS ALLOWED

Whenever in these CONTRACT DOCUMENTS the words "as ordered", "as directed", "as required", "as permitted", "as allowed", or words or phrases of like import are used, it shall be understood and agreed that the order, direction, requirement, permission, or allowance of OWNER is intended only to the extent of judging compliance with the terms of these CONTRACT DOCUMENTS. None of these terms shall imply that OWNER has any authority or responsibility for supervision of CONTRACTOR's forces or construction operations, such supervision is the sole responsibility of the CONTRACTOR.

## 2.9 PROJECT OBSERVER

An authorized representative of OWNER assigned to make periodic observations of the WORK performed by CONTRACTOR.

## 2.10 PERSON

The word "person" shall mean and include any individual, combination of individuals, partnership, society, association, joint stock company, corporation, firm, estate, receiver, trustee, assignee, referee, or any other person acting in a fiduciary or representative capacity, whether appointed by a court or otherwise.

## 2.11 PROVIDED

Whenever the term "provided" or "provide" is used in the Drawings or CONTRACT DOCUMENTS, it shall mean "provided complete in place", that is, "furnished and installed". Where "as shown", "as indicated", "as detailed", or other words of similar import are used, it is understood and agreed that references to the Drawings are intended unless otherwise expressly stated.

## 2.12 WRITTEN NOTICE

Any notice to the CONTRACTOR or OWNER by the other relative to any part of these CONTRACT DOCUMENTS in writing and considered delivered and the service thereof completed, when posted by United States Postal Service, or delivered with charges prepaid to any telegraph company for transmission to the CONTRACTOR or OWNER at the address set forth in these CONTRACT DOCUMENTS, or delivered in person to the CONTRACTOR or OWNER or his authorized representative on the Project. Any such notice shall be deemed to have been given or made as of the time of actual delivery, or in the case of mailing, when the notice should have been received in due course of posts, or in the case of telegrams, at the time of actual receipt thereof by the addressee.

## SECTION 3 - SUPPLEMENTARY CONDITIONS

### 3.1 COPIES OF CONTRACT DOCUMENTS

Upon execution of the Agreement, the OWNER will furnish the CONTRACTOR with two (2) copies of CONTRACT DOCUMENTS and four (4) sets of Construction Drawings. Additional copies will be furnished at normal cost of reproduction.

### 3.2 NOTICE TO PROCEED

CONTRACTOR will be issued a written "Notice to Proceed" by OWNER upon compliance by CONTRACTOR with award procedures. The date of issuance of the "Notice to Proceed" shall be date of beginning of the Contract time.

### 3.3 STARTING THE PROJECT

The CONTRACTOR shall begin WORK within ten (10) days after issuance of "Notice to Proceed" and shall diligently prosecute the WORK to completion within the Contract Time. The CONTRACTOR shall notify the OWNER and ENGINEER two (2) days in advance of the date he will begin operation.

### 3.4 EXAMINATION OF CONTRACT DOCUMENTS AND SITE OF WORK

The contractor shall thoroughly and carefully examine and be familiar with these CONTRACT DOCUMENTS and site of work. The failure of the CONTRACTOR to examine the CONTRACT DOCUMENTS or the site and to acquaint himself with conditions relating to the WORK shall not relieve him from any obligation of the CONTRACT DOCUMENTS.

### 3.5 PERFORMANCE AND PAYMENT BONDS

Simultaneously with the execution and delivery of the Contract, the CONTRACTOR shall furnish and file with the OWNER a properly executed Performance Bond on the prescribed form in an amount equal to one hundred percent (100%) of the total Contract Price as security for the faithful performance by the CONTRACTOR of all undertakings, covenants, terms, conditions, and agreements of the CONTRACT DOCUMENTS, including compliance with performance guarantees and for the repairs and/or replacement of defective or deficient work provided under the CONTRACT DOCUMENTS for a period one (1) year after the date of final acceptance by the OWNER.

The CONTRACTOR shall also furnish and file with the OWNER, at the same time the Performance Bond is furnished, a Payment Bond on the prescribed form in an amount equal to one hundred percent (100%) of the total Contract Price as security for the prompt payment by the CONTRACTOR to all persons supplying labor and materials in the prosecution of WORK provided by the CONTRACT DOCUMENTS.

The Contract shall not be in force or binding on the OWNER until the Performance Bond and Payment Bond have been provided.

### 3.6 INTENT OF CONTRACT DOCUMENTS

It is the intent of these CONTRACT DOCUMENTS to prescribe a complete work and that the CONTRACTOR shall (a) furnish all labor, materials, products, supplies, tools, equipment, required to successfully execute and complete the WORK in accordance with these CONTRACT DOCUMENTS and to complete the WORK in an acceptable manner, ready for use, occupancy, or operation by OWNER within the time specified herein; and (b) carry out all duties and obligations imposed by these CONTRACT DOCUMENTS. The CONTRACT DOCUMENTS cover all matters relating to WORK which the CONTRACTOR undertakes to construct or perform. The CONTRACT DOCUMENTS are complementary, and what is called for by any part shall be as binding as if called for by all. Any reference to one part of these CONTRACT DOCUMENTS shall be construed as a reference to all parts.

### 3.7 ADDITIONAL WORK OR CHANGES

The OWNER may, at any time, without invalidating the Contract or any of the terms or conditions of the CONTRACT DOCUMENTS and without notice to the Sureties, make alterations, deviations, additions to, or omissions from the Drawings and other CONTRACT DOCUMENTS, including an increase or decrease of the quantity of any item or portion of the WORK, as may be deemed by the OWNER to be necessary or advisable and to require such extra WORK as may be determined by the OWNER to be required for the proper completion of the WORK as specified herein.

Should conditions make it necessary to revise the quantities, no limit will be fixed for such increased or decreased quantities nor extra compensation allowed, provided the net monetary value of all such addition or subtraction in quantities of such items of work (i.e., difference in cost) shall not increase or decrease the total original contract price by more than twenty-five percent (25%).

Any additional work not included in this contract or intended to be included in this contract that is performed by the CONTRACTOR will be paid for as an "extra" providing the work has been previously authorized and the cost agreed upon in writing by OWNER.

Such extra work shall be subject to payment by fixing the prices and the method of payment and of doing the work, or compensation shall be provided for on the basis of reasonable cost of necessary labor and material and an allowance of fifteen (15%) percent for overhead and profit as may be stipulated by OWNER in the written authorization for the WORK. The cost may include all items of labor or materials; the use of power tools, and equipment actually used, power, and all items of cost such as public liability and Workmen's Compensation Insurance, pro rata charges for foremen; also social security, old age and unemployment insurance; however, no percentage for overhead and profit shall be allowed on items of social security, old age and unemployment insurance. Among the items considered as overhead are included insurance other than mentioned above, bond or bonds, superintendence, timekeeper, clerks, watchmen, use of small tools, incidental tools and equipment shall not exceed the charges listed in the latest edition of the "Contractor's Equipment Ownership Expenses" as published by the Associated General Contractors of America, Inc.

The CONTRACTOR shall give OWNER and ENGINEER access to all accounts, bills, payrolls, and vouchers relating to such extra work, and he agrees that he shall have no claim for compensation for such extra work in the case of items not covered by unit price unless a statement in writing of the actual cost of the same, fully itemized as to labor, materials, and other allowable costs is presented to ENGINEER before the fifteenth (15th) day of the month following that during which each specific order was complied with.

Any such changes will be set forth in a Change Order which will specify the change in WORK to be done, adjustment to Contract time, and the basis of compensation for the changes. A Change Order will not become effective until approved by the OWNER and accepted by the CONTRACTOR. After approval and acceptance, the Change Order will become a part of the CONTRACT DOCUMENTS.

### 3.8 INSURANCE REQUIREMENTS

The CONTRACTOR shall take out and maintain during the life of this Contract the various types and amount of insurance as required to protect the Public, the CONTRACTOR, the OWNER, officials and representatives of OWNER, representatives of all utility companies, state or federal department representatives, and any SUBCONTRACTOR performing work covered by this Contract from claims for property damages which may arise from operations under this Contract, whether such operations be by himself or by any SUBCONTRACTOR or anyone directly employed by either of them.

Without restricting the obligations and liabilities assumed under the CONTRACT DOCUMENTS, the CONTRACTOR shall, at his own expense, purchase and maintain in force until final acceptance of his work, the below listed forms of insurance coverage:

Certificates in quadruplicate from the insurance carrier stating the limits of liability and expiration date shall be filed with OWNER before operations begin. **Such certificates shall not merely name the types of policy provided, but shall contain a separate express statement of compliance with each of the requirements as set forth in this Section.**

All policies as hereinafter required shall be so written that the OWNER will be notified of cancellation or restrictive amendments at least thirty (30) days prior to the effective date of such cancellation or amendment.

Item A - Worker's Compensation and Employer's Liability Insurance as required or specified by Georgia State Law except that the policy must include employee's liability with a minimum limit of \$100,000 each accident, \$100,000 disease each employee with a \$500,000 disease policy limit.

The CONTRACTOR shall, before entering upon the performance thereof, secure Worker's Compensation Insurance for the benefit of and keep insured, during the life of said Contract, all employees engaged thereon who are required to be insured by the laws of the State of Georgia. In case the CONTRACTOR shall subcontract any portion of the WORK, he shall require that all employees of the SUBCONTRACTOR are properly covered by such Worker's Compensation Insurance.

Item B - Comprehensive General Liability Insurance coverage shall include the following:

- 1) Property damage to existing structures and equipment;
- 2) Direction Operations (including coverage for underground, explosion and collapse hazards)
- 3) Independent Contractors
- 4) Completed Operations/Products (To be maintained for a period of at least twelve (12) months from the date of Substantial Completion)
- 5) Contractual Liability (Blanket or specific coverage for the indemnification agreement as set forth in the General Conditions)
- 6) Personal Injury Liability Coverage
- 7) Broad Form Property Damage Coverage
- 8) Care, Custody and Control Coverage
- 9) Broad Form Blanket Contractual Liability

Comprehensive General Liability Insurance shall have a minimum limit of \$1,000,000 per occurrence combined single limit for bodily injuries liability and property damage liability. The original policies for OWNER's Protection Liability Insurance shall be delivered to the OWNER prior to the start of construction.

Item C - OWNER's Protection Liability Insurance in the name of OWNER including the interest of the Consulting Engineers, and other agencies and utilities as additional insured.

- 1) This policy shall have minimum limits of \$1,000,000 per occurrence combined single limit for bodily injury liability and property damage liability and shall include owned vehicles, hired and non-owned vehicles. Underlying coverage must equal \$1,000,000. Excess umbrella coverage must equal \$1,000,000.

Item D - Insurance Required by Others - Such Protective and Contractual Bodily Injury Liability Insurance and such Protective and Contractual Property Damage Liability Insurance as shall be required by any public bodies or utility companies whose property, facilities, or rights-of-way may be affected by the WORK under this Contract.

If any part of the WORK is sublet, insurance of the same types and limits as required by Items A, B, C, and D shall be provided by or on behalf of the SUBCONTRACTOR(s) to cover that part of the WORK they have contracted to perform.

### 3.9 SOCIAL SECURITY

The CONTRACTOR shall be and remain an independent CONTRACTOR with respect to all services to be performed hereunder and agrees to and does hereby accept full and exclusive liability for the payment of any and all contributions or taxes for social security, unemployment insurance, or old age retirement benefits, pensions, or annuities not or hereafter imposed under any State or Federal law which are measured by wages, salaries, or other enumeration paid to persons employed by the CONTRACTOR on work performed under the terms of this Contract, and further agrees to obey all lawful rules and regulations and to meet all lawful requirements which are now or hereafter may be issued or promulgated under said respective laws by any duly authorized State or Federal officials; and said CONTRACTOR also agrees to indemnify and save harmless the OWNER from any such contributions or taxes or liability thereof.

### 3.10 NORMAL WORKING HOURS

It is the intent of this Contract that the CONTRACTOR provides the necessary work force to complete the work during normal working hours within the Contract time. Normal working hours shall be defined as a day not greater than ten hours (8:00 a.m. to 6:00 p.m.) Monday thru Saturday with trade recognized legal holidays accepted.

No work beyond the normal working hours defined above requiring the presences of the ENGINEER or Construction Observer will be permitted, except in the case of an emergency, without the permission of the OWNER.

### 3.11 SUBCONTRACTS

The CONTRACTOR may subcontract portions of the WORK, however, he shall not award any work to any SUBCONTRACTOR without prior written approval of the OWNER. The CONTRACTOR shall give his personal attention to the fulfillment of the Contract and shall at all times keep the WORK under his control.

### 3.12 COOPERATION WITH GOVERNMENTAL DEPARTMENTS AND PUBLIC UTILITIES

The CONTRACTOR must be aware that due to the laws of the State of Georgia, he shall be responsible for making all necessary arrangements with the governmental departments, public utilities, public carriers, service companies and corporations owning or controlling roadways, railways, water, sewer, gas, electrical, telephone, and telegraph facilities such as pavements, tracks, piping, wires, cables, conduits, poles, and guys including incidental structures connected therewith, that are encountered in the WORK so that such items may be properly shored, supported and

protected, or the CONTRACTOR shall comply with requirements of such parties on the Project in order that they may perform their necessary work, and shall pay all charges and fees made by such parties for this work.

The CONTRACTOR's attention is called to the fact that there may be delays on the project due to work done by governmental departments, public utilities, and others in repairing or moving poles, and conduits. The CONTRACTOR shall cooperate with the above parties, in every way possible, so that the construction can be completed in the least possible time.

The CONTRACTOR shall have made himself familiar with all codes, laws, ordinances, and regulations which in any manner affect those engaged or employed in the WORK, or materials and equipment used in or upon the WORK, or in any way effect the conduct of the WORK, and no plea of misunderstanding will be considered on account of his ignorance thereof.

### 3.13 RECORD DOCUMENTS AND DRAWINGS

The CONTRACTOR shall maintain at the site of the WORK, two (2) sets of CONTRACT DOCUMENTS and Drawings throughout the course of the project. One (1) set of CONTRACT DOCUMENTS and Drawings will remain clean without markup for record purposes. The CONTRACTOR shall use the additional set for marking measurements, on-site changes, items of construction that are actually used, and other conditions as they are encountered during the course of the WORK. This marked-up set of CONTRACT DOCUMENTS and Drawings shall consist of red-lined copies of plans and shop drawings, shall indicate actual field dimensions, shall represent the WORK as actually constructed, and shall be recorded on a daily basis. Failure to produce these records on request of the ENGINEER shall constitute grounds to halt construction with no time extension until steps are taken to see that these records are being properly made.

Prior to the final payment, the CONTRACTOR shall furnish to the ENGINEER two (2) neatly marked sets of construction plans which accurately depict the "as-built" conditions and locates all valves, hydrants, wyes, manholes, cleanouts, lines, laterals, taps, meters, service connections, and pump stations, equipment, materials or parts, stockpiles and other constructed appurtenances. The ENGINEER shall promptly notify the CONTRACTOR in writing if additional information is required.

### 3.14 PUBLIC CONVENIENCE AND SAFETY

CONTRACTOR shall at all times conduct the WORK in such a manner as to ensure the least practicable obstruction to public travel. The convenience of the general public and of the residents along and adjacent to the WORK area shall be provided for in a satisfactory manner, consistent with the operation and local conditions. Traffic control or warning signs shall be placed immediately adjacent to the WORK, in a conspicuous position, at such locations as traffic demands.

If at any time, in the opinion of the ENGINEER, the WORK is not properly lighted, barricaded, and in all respects safe, to public travel or adjacent property, public or private, and if under such circumstances the CONTRACTOR does not or cannot immediately put the same into proper and approved condition, or if the CONTRACTOR or his representative is not upon the grounds so that he can be immediately notified of the insufficiency of safety precautions, then the OWNER, on recommendation of the ENGINEER, may put the WORK into a condition that shall be considered safe. The CONTRACTOR shall pay all expenses of labor and materials as may have been used for

this purpose by him or by the OWNER. Such action of the ENGINEER or OWNER, or their failure to take such action, shall in no way relieve the CONTRACTOR of the responsibility of any cost, loss or damage by any party sustained on account of the insufficiency of the safety precautions.

### 3.15 SHOP DRAWINGS AND SCHEDULES

At least five (5) days prior to the preconstruction conference, the CONTRACTOR shall submit to OWNER a proposed program of operation, showing how he proposes to complete his WORK within the specified time limit. This program shall outline the proposed sequence of operation, the rates of progress, projected monthly draws, and the dates when his WORK will be sufficiently advanced to permit the installation of WORK under other contracts (if applicable). The WORK under this contract shall be so scheduled that as sections are completed they can be placed into useful operation with a minimum of delay. The program shall be subject to the approval of OWNER and ENGINEER.

CONTRACTOR, at his own expense, shall submit for approval to ENGINEER, six (6) complete sets of shop drawings and schedules required for the WORK, and no WORK shall be fabricated by the CONTRACTOR, except at his own risk, until such approval has been given. Upon approval, ENGINEER shall return two (2) sets of shop drawings to CONTRACTOR and the remaining four (4) sets will be retained by ENGINEER.

CONTRACTOR shall submit all drawings and schedules sufficiently in advance of construction requirements to allow ample time for checking, correcting, resubmitting, and rechecking; and no claim by CONTRACTOR for delays arising from his failure in this respect will be allowed.

All shop drawings submitted, if not prepared by CONTRACTOR, must bear the stamp of approval of CONTRACTOR as evidence that the drawings have been checked by CONTRACTOR. Any submissions without this stamp of approval will not be considered and will be returned to CONTRACTOR for resubmission.

Where shop drawings as submitted by CONTRACTOR indicate a departure from the Contract which ENGINEER deems to be a minor adjustment in the interest of OWNER, not involving a change in the Contract Price or Contract Time, ENGINEER shall approve the drawing, but the approval will contain, in substance, the following notation:

"The modification shown on the attached drawings is approved in the interest of the OWNER to effect an improvement for the Project and is accepted with the understanding that it does not involve any change in the Contract Price or Contract time; that it is subject generally to all Contract stipulations and covenants; and that it is without prejudice to any and all rights of the OWNER under the Contract and Bond or Bonds."

Approval by ENGINEER of shop drawings will be general and shall not relieve CONTRACTOR from the responsibility for adherence to the Contract, nor shall it relieve him of the responsibility for any error which may exist.

### 3.16 WORK IN INCLEMENT WEATHER

CONTRACTOR is presumed to have taken all difficulties due to weather conditions into consideration in preparing his proposed Contract Price and in establishing his time for completion of

the WORK under this Contract. He must be prepared and must take all precautions to protect WORK from unfavorable weather and extremes of temperature, whether hot or cold. He shall provide approved facilities for protecting against unfavorable weather at all times, to the entire satisfaction of OWNER.

Completion time will not be extended for normal bad weather. Time for completion as stated in the CONTRACT DOCUMENTS includes time due to allowance for calendar days on which work cannot be performed out-of-doors. For the purpose of this Contract, CONTRACTOR agrees that he may expect to lose calendar days due to weather in accordance with the following table:

January 14 days	May 6 days	September 2 days
February 14 days	June 3 days	October 3 days
March 10 days	July 4 days	November 5 days
April 7 days	August 2 days	December 9 days

If the total accumulated number of working days lost to the weather for any month exceeds the total accumulated number to be expected for that month, time for completion will be extended by the number of calendar days needed to include the excess number of working days lost. All requests for time extensions must be submitted in writing to the OWNER by the 15th day of each month following the month that had excessive weather delays. No consideration will be given to late requests. No changes in the contract sum will be authorized because of adjustment of contract time due to weather.

### 3.17 ONE YEAR CORRECTION PERIOD

The CONTRACTOR shall warrant the work for a period of one (1) year after the date of substantial completion. One month prior to the end of the one-year warranty period, an eleven (11) month inspection shall be held at the job site with the OWNER, CONTRACTOR, and ENGINEER. The purpose of this inspection shall be to identify and correct work which has become defective during the Warranty Period. The correction of such work shall be prompt and at the CONTRACTOR's expense.

### 3.18 PROGRESS PAYMENT APPLICATION

**CONTRACTOR shall submit to ENGINEER, on forms furnished by ENGINEER, no later than the 25th day of each month,** a progress payment request for the amount of work accomplished, products furnished, and products stored at the site during the previous month. Progress payment request shall be signed by the CONTRACTOR and be supported by such data as OWNER may reasonably require. If payment is requested for products not incorporated in the WORK, but delivered and suitably stored at or near the site, the progress payment request shall also be accompanied by such supporting data, satisfactory to OWNER, as will establish OWNER's title to said products and protect his interest therein, including appropriate insurance.

ENGINEER shall, within ten (10) days after receipt of each progress payment request, either indicate in writing his recommendation of the payment request, or return the progress payment request to CONTRACTOR indicating in writing his reasons for refusing to approve it.

A progress payment will not be made when, in the judgement of OWNER or ENGINEER, the

WORK is not proceeding in accordance with the provisions of these CONTRACT DOCUMENTS.

OWNER shall, within thirty (30) days after approval of progress payment request, pay CONTRACTOR a partial payment based on the approved progress payment request, less the retainage and other deductions pursuant to the terms of these CONTRACT DOCUMENTS (Reference Section 00510, Article 5 - Payment Procedures).

It is understood and agreed that the approval of the progress payment request and the paying of a partial payment shall not be construed as acceptance of any work, materials, or products and shall not relieve CONTRACTOR in any way from his responsibilities and obligations under these CONTRACT DOCUMENTS.

### 3.19 RETAINAGE AND FINAL PAYMENT APPLICATION (Reference Article 20)

Upon completion and after final acceptance of the WORK by the OWNER, the ENGINEER will authorize the preparation of a final pay request for the work done by CONTRACTOR and the value thereof. Preparation of the final price and final payment request will not be authorized until the affidavits, release of liens and other statements and certifications required of CONTRACTOR under these CONTRACT DOCUMENTS have been received by OWNER. ENGINEER will submit to OWNER the final price and final payment request, together with a certification stating that the work is complete and in substantial conformance with these CONTRACT DOCUMENTS. The entire balance found to be due CONTRACTOR, including retained percentages, but except such sums as may be retained under any provisions of these CONTRACT DOCUMENTS, will be paid to CONTRACTOR.

Retainage shall be in accordance with Georgia State Law, O.C.G.A. § 13-10-80, as amended.

Final payment to CONTRACTOR by OWNER shall not serve to release CONTRACTOR or his sureties from their obligation or responsibilities under or in connection with these CONTRACT DOCUMENTS.

Acceptance by CONTRACTOR of final payment shall be and shall operate as a release to OWNER of all claims and all liability to CONTRACTOR other than claims in stated amounts as may be specifically excepted by CONTRACTOR for all things done or furnished in connection with work under these CONTRACT DOCUMENTS and for every act and neglect of OWNER and others relating to or arising out of this work.

### 3.20 EASEMENTS AND RIGHTS-OF-WAY

The WORK herein specified is located in Walton County, Georgia. The CONTRACTOR's operations must be confined inside such property, rights-of-way or easement lines. Whenever it is required as a part of this contract to perform work within the limits of private property easements or in rights-of-way, such work shall be done in conformity with all permits and agreements between the OWNER and the owners of such, and whether or not such a condition be part of the agreement, care shall be taken to avoid injury to the premises entered, which premises shall be left in a neat and orderly condition by the removal of rubbish and the grading of surplus materials and the restoration of said private property to the same general condition as existed prior to the start of construction. The CONTRACTOR shall not (without the consent from the proper parties) enter or occupy with men, tools, or equipment, any land outside the rights-of-way or private property.

### 3.21 STORING OF MATERIALS

All materials and equipment required in the WORK may be stored in areas directed by the OWNER, but all such materials, tools, and machinery shall be neatly and compactly piled in such a manner as to cause the least inconvenience to the property owners and the traffic. All fire hydrants must, at all times, be kept free and unobstructed and water and gas shut-off boxes, underground power and telephone line manholes must be left uncovered by such materials.

Materials, tools, and machinery shall not be piled or placed against shade trees unless such trees shall be amply protected against injury therefrom. All materials, tools, and machinery stored upon public thoroughfares must be provided with sufficient warning lights at night time to alert traffic of such obstruction.

### 3.22 USE OF UTILITIES OR STRUCTURES

The OWNER shall have the right to connect any sewer, conduit, pipe line, or structure within the WORK and its appurtenances herein described, or to grant permits to make connection therewith, at any time after the item has been tested and approved by the ENGINEER prior to final acceptance by OWNER. The CONTRACTOR shall not interfere with the making of such connections, and no extra allowances shall be made to said CONTRACTOR on account thereof.

### 3.23 USE OF STREETS

During the process of the WORK, the CONTRACTOR shall make ample provision for both vehicular and foot traffic on any public road, and shall indemnify and save harmless the OWNER from any expense whatsoever due to his operations over said roadways. The CONTRACTOR shall also provide free access to all driveways, fire hydrants, water valves, and gas valves located along the line of his WORK. Gutters and waterways must be kept open or other provisions made for the removal of storm water. Street intersections may be blocked by one-half at a time only with the written permission from the OWNER and the Georgia D.O.T., and the CONTRACTOR shall lay and maintain temporary driveways, bridges, and crossings, such as in the opinion of the ENGINEER are necessary to reasonably accommodate the public. In the event of the CONTRACTOR's failure to comply with these provisions, the OWNER may cause the same to be done, and still deduct the cost of such work from any moneys due or to become due the CONTRACTOR under this new agreement, but the performance of such work by the OWNER or at its instance, shall serve in no way to release the CONTRACTOR from his general or particular liability for the safety of the public or the WORK.

No pavement cuts are to be left unfilled overnight, except in emergencies, and in such cases, adequate precautions must be exercised to protect traffic.

### 3.24 PROTECTION OF EXISTING BUILDINGS AND STRUCTURES

The CONTRACTOR shall, at his own expense, shore up and protect any buildings, bridges, or other public or private structures which may be encountered or endangered in the execution of the WORK, and that may not be otherwise provided for, and he shall repair and make good any damages caused to any such property by reason of his operations. No payment will be made for said work or material except that such lumber as the ENGINEER may order left in place as permanent supports for these structures, shall be paid for as provided in the Specifications.

### 3.25 ACCESS ROADS

Streets, roads, and drives used by the CONTRACTOR for access to and from the sites of his work shall be protected from damage in excess of that caused by the normal traffic of vehicles used for or in connection with construction work. Any such damage done shall be repaired immediately and left in good condition at the end of the construction period. During dry periods of weather, dirt roads used for access to and from work sites shall be watered periodically to eliminate and control dust.

### 3.26 LINE AND GRADE

Alignment and grade shall be the responsibility of the CONTRACTOR.

### 3.27 WATER SUPPLY

All water for construction purposes, as well as the expense of having the water conveyed about the WORK, shall be provided by the CONTRACTOR and the cost of this work shall be included in the Unit or Lump Sum price bid for the various Items of the WORK to be done under this Contract except as indicated in Division 01.. The source, quality, and quantity of water furnished shall, at all times, be acceptable to all governing agencies and the ENGINEER.

### 3.28 SEWAGE AND WATER FLOWS

The CONTRACTOR shall furnish all the necessary equipment, shall take all necessary precautions and shall assume the entire cost of handling and properly disposing of any water, sewage, seepage, storm, surface, and flood flows which may be encountered at any time during the construction of the WORK and in such manner as to not endanger or damage property. The manner of providing for these flows shall meet with the approval of the ENGINEER and the entire cost of said work shall be included in the Unit or Lump Sum Prices bid for the various Sections of the WORK to be done under this Contract.

END OF SECTION

SECTION 00820

SPECIFIC PROJECT REQUIREMENTS

PART 1 GENERAL

This Section shall consist of "Specific Regulatory Requirements and Guidelines" that shall govern the project as described within these Contract Documents. These requirements are outlined below:

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<b>DESCRIPTION</b>	<b>PAGE NUMBER</b>
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# Equal Employment Opportunity Executive Order 11246 As Amended By Executive Order 11375

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U.S. Department of Labor  
Employment Standards Administration  
Office of Federal Contract Compliance Programs

OFCCP-4 November 1975

Under and by virtue of the authority vested in me as President of the United States, it is ordered as follows:

PART I - NONDISCRIMINATION IN GOVERNMENT EMPLOYMENT<sup>1</sup>  
PART II- NON DISCRIMINATION IN EMPLOYMENT BY GOVERNMENT  
CONTRACTORS AND SUBCONTRACTORS

## **Subpart A - Duties of the Secretary of Labor**

1.02 SEC. 201. The Secretary of Labor shall be responsible for the administration of parts II and III of this order and shall adopt such rules and regulations and issue such orders as he deems necessary and appropriate to achieve the purposes thereof.

## **Subpart B - Contractors' Agreements**

SEC. 202. Except in contracts exempted in accordance with section 204 of this order, all Government contracting agencies shall include in every Government contract hereafter entered into the following provisions:

During the performances of this contract, the contractor agrees as follows:

(1) The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The contractor will take affirmative action to ensure that applicants are employed and that employees are treated during employment without regard to their race, color, religion, sex, or national origin. such action shall include, but not be limited to the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the contracting officer setting forth the provisions of this nondiscrimination clause.<sup>2</sup>

(2) The contractor will in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, or national origin.<sup>3</sup>

(3) The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice, to be provided by the agency contracting officer, advertising the labor union or workers' representative of the contractor's commitments under Section 202 of Executive Order No. 11246 of September 24, 1965, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(4) The contractor will comply with all provisions of Executive Order No. 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

(5) The contractor will furnish all information and reports required by Executive

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<sup>1</sup>Secs. 101 through 106 of pt. 1 of Executive order 11246 dealing with discrimination in Federal employment were superseded by Executive Order 11478. Executive Order 11478, which is concerned exclusively with Government employment, expanded considerably the obligation of the Government itself to undertake equal employment opportunity within its own organization. Executive Order 11478 was signed by President Richard Nixon on August 8, 1969.

Order No. 11246 of September 24, 1965, and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the contracting agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations and orders.

(6) In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of such rules, regulations, or orders, this contract may be cancelled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts in accordance with procedures authorized in Executive Order No. 11246 of September 24, 1965, and such other sanctions may be imposed and remedies involved as provided in Executive Order No. 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by Law.

(7) The contractor will include the provisions of paragraphs (1) through (7) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to Section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the contracting agency may direct as a means of enforcing such provisions including sanctions for noncompliance; Provided, however, That in the event the contractor becomes involved in, or threatened with, litigation with a subcontractor or vendor as a result of such directions by the contracting agency, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

SEC. 203 (a) Each contractor having a contract containing the provisions prescribed in Section 202 shall file, and shall cause each of his subcontractors to file, compliance reports with the contracting agency or the Secretary of Labor as may be directed. Compliance reports shall be filed within such times and shall contain such information as to the practices, policies, programs, and employment policies, programs, and employment statistics of the contractor and each subcontractor, and shall be in such form, as the Secretary of Labor may prescribe.

(b) Bidders or prospective contractors or subcontractors may be required to state whether they have participated in any previous contract subject to the provisions of this order, or any preceding similar executive order, and in that event to submit, on behalf of themselves and their proposed subcontractors, compliance reports prior to or as an initial part of their bid or negotiation of a contract.

(c) Whenever the contractor or subcontractor has a collective bargaining agreement or other contract or understanding with a labor union or an agency referring workers or providing or supervising apprenticeship or training for such workers, the compliance report shall include such information as to such labor union's or agency's practices and policies affecting compliance as the Secretary of Labor may prescribe: Provided, That to the extent such information is within the exclusive possession of a labor union or an agency referring workers or providing or supervising apprenticeship or training and such labor union or agency shall refuse to furnish such information to the contractor, the contractor shall so certify to the contracting agency as part of its compliance report and shall set forth what efforts he has made to obtain such information.

(d) The contracting agency or the Secretary of Labor may direct that any bidder or prospective contractor or subcontractor shall submit, as part of his compliance report, a statement in writing, signed by an authorized officer or agent on behalf of any labor union or agency referring workers or providing or supervising apprenticeship or other training, with which the bidder or prospective contractor deals, with supporting information, to the effect that the signer's practices and policies do not discriminate on the grounds of race, color, religion, sex, or national origin, and that the signer either will affirmatively cooperate in the implementation of the policy and provisions of this order or that it consents and agrees that

recruitment, employment, and the terms and conditions of employment under the proposed contract shall be in accordance with the purposes and provisions of the order. In the event that the union or the agency shall refuse to execute such a statement, the compliance report shall so certify and set forth what efforts have been made to secure such a statement and such additional factual material as the contracting agency or the Secretary of Labor may require.<sup>4</sup>

SEC 204. The Secretary of Labor may, when he deems that special circumstances in the national interest so require, exempt a contracting agency from the requirement of including any or all of the provisions of Section 202 of this order in any specific contract, subcontract, or purchase order. The Secretary of Labor may, by rule or regulation, also exempt certain classes of contracts, subcontracts, or purchase orders: (1) whenever work is to be or has been performed outside the United States and no recruitment of workers within the limits of the United States is involved; (2) for standard commercial supplies or raw materials; (3) involving less than specified amounts of money or specified numbers of workers; (4) to the extent that they involve subcontracts below a specified tier. The Secretary of Labor may also provide, by rule, regulation, or order, for the exemption of facilities of a contractor which are in all respects separate and distinct from activities of the contractor related to the performance of the contract; Provided, That such an exemption will not interfere with or impede the effectuation of the purposes of this order; And Provided further, That in the absence of such an exemption all facilities shall be covered by the provisions of this order.

### **Subpart C- Powers and Duties of the Secretary of Labor and the Contracting Agencies**

SEC. 205. Each contracting agency shall be primarily responsible for obtaining compliance with the rules, regulations, and orders of the Secretary of Labor with respect to contracts entered into by such agency or its contractors. All contracting agencies shall comply with the rules of the Secretary of Labor in discharging their primary responsibility for securing compliance with the provisions of contracts and otherwise with the terms of this order and of the rules, regulations, and orders of the Secretary of Labor issued pursuant to this order. They are directed to cooperate with the Secretary of Labor and to furnish the Secretary of Labor such information and assistance as he may require in the performance of his functions under this order. They are further directed to appoint or designate, from among the agency's personnel, compliance officers. It shall be the duty of such officers to seek compliance with the objectives of this order by conference, conciliation, mediation, or persuasion.

SEC. 206 (a) The Secretary of Labor may investigate the employment practices of any Government contractor or subcontractor, or initiate such investigation by the appropriate contracting agency, to determine whether or not the contractual provisions specified in Section 202 of this order have been violated. Such investigation shall be conducted in accordance with the procedures established by the Secretary of Labor and the investigating agency shall report to the Secretary

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<sup>4</sup>Ibid.

of Labor any action taken or recommended.

(b) The Secretary of Labor may receive and investigate or cause to be investigated complaints by employees or prospective employees of a Governing contractor or subcontractor which allege discrimination contrary to the contractual provisions specified in Section 202 of this order. If this investigation is conducted for the Secretary of Labor by a contracting agency, that agency shall report to the Secretary what action has been taken or is recommended with regard to such complaints.

SEC. 207. The Secretary of Labor shall use his best efforts, directly and through contracting agencies, other interested Federal, State, and local agencies, contractors, and all other available instrumentalities to cause any labor union engaged in work under Government contracts or any agency referring workers or providing or supervising apprenticeship or training for or in the course of such work to cooperate in the implementation of the purposes of this order. The Secretary of Labor shall, in appropriate cases, notify the Equal Employment Opportunity Commission, the Department of Justice, or other appropriate Federal agencies whenever it has reason to believe that the practices of any such labor organization or agency violate Titles VI or VII of the Civil Rights Act of 1964 or other provision of Federal law.

SEC. 208. (a) The Secretary of Labor, or any agency, officer, or employee in the executive branch of the government designed by rule, regulation, or order of the Secretary, may hold such hearings, public or private, as the Secretary may deem advisable for compliance, enforcement, or educational purposes.

(b) The Secretary of Labor may hold, or cause to be held, hearings in accordance with subsection (a) of this section prior to imposing, ordering, or recommending the imposition of penalties and sanctions under this order. No order for debarment of any contractor from further Government contractors under Section 209 (a) (6) shall be made without affording the contractors an opportunity for a hearing.

#### **Subpart D - Sanctions and Penalties**

SEC. 209. (a) In accordance with such rules, regulations, or orders as the Secretary of Labor may issue or adopt, the Secretary of the appropriate contracting agency may:

(1) Publish, or cause to be published, the names of contractors or unions which it has concluded have complied or have failed to comply with the provisions of this order or of the rules, regulations, and orders of the Secretary of Labor.

(2) Recommend to the Department of Justice that, in cases in which there is substantial or material violation or the threat of substantial or material violation of the contractual provisions set forth in Section 202 of this order, appropriate proceedings be brought to enforce those provisions, including the enjoining, within the limitations of applicable law, of organizations, individuals, or groups who prevent directly or indirectly, or seek to prevent directly or indirectly, compliance

with the provisions of this order.

(3) Recommend to the Equal Employment Opportunity Commission or the Department of Justice that appropriate proceedings be instituted under Title VII of the Civil Rights Act of 1964.

(4) Recommend to the Department of Justice that criminal proceedings be brought for the furnishing of false information to any contracting agency or to the Secretary of Labor as the case may be.

(5) Cancel, terminate, suspend, or cause to be cancelled, terminated, or suspended any contract or any portion of portions thereof, for failure of the contractor or subcontractor to comply with the nondiscrimination provisions of the contract. Contracts may be cancelled, terminated, or suspended absolutely or continuance of contracts may be conditioned upon a program for future compliance approved by the contracting agency.

(6) Provide that any contracting agency shall refrain from entering into further contracts, or extensions or other modifications of existing contracts, with any noncomplying contractor, until such contractor has satisfied the Secretary of Labor that such contractor has established and will carry out personnel and employment policies in compliance with the provisions of this order.

SEC. 209. (b) Under rules and regulations prescribed by the Secretary of Labor, each contracting agency shall make reasonable efforts within a reasonable time limitation to secure compliance with the contract provisions of this order by methods of conference, conciliation, mediation, and persuasion before proceedings shall be instituted under subsection (a) (2) of this section, or before a contract shall be cancelled or terminated in whole or part under subsection (a) (5) of this section for failure of a contractor or subcontractor to comply with the contract provisions of this order.

SEC. 210. Any contracting agency taking any action authorized by this subpart, whether on its own motion, or as directed by the Secretary of Labor, or under the rules and regulations of the Secretary, shall promptly notify the Secretary of such action. Whenever the Secretary of Labor makes a determination under this section, he shall promptly notify the appropriate contracting agency of the action recommended. The agency shall take such action and shall report the results thereof to the Secretary of Labor within such time as the Secretary shall specify.

SEC. 211. If the Secretary shall so direct, contracting agencies shall not enter into contracts with any bidder or prospective contractor unless the bidder or prospective contractor has satisfactorily complied with the provisions of this order or submits a program for compliance acceptable to the Secretary of Labor, or if the Secretary so authorizes, the contracting agency.

SEC. 212. Whenever a contracting agency cancels or terminates a contract, or whenever a contractor has been debarred from further Government contracts,

under Section 209 (a) (6) because of noncompliance with the contract provisions with regard to nondiscrimination, the Secretary of Labor, or the contracting agency involved, shall promptly notify the Comptroller General of the United States. Any such debarment may be rescinded by the Secretary of Labor or by the contracting agency which imposed the sanction.

### **Subpart E - Certificates of Merit**

SEC. 213. The Secretary of Labor may provide for issuance of a U.S. Government certificate of merit to employers or labor unions, or other agencies which are or may hereafter be engaged in work under Government contracts, if the Secretary is satisfied that the personnel and employment practices of the employer, or that the personnel, training, apprenticeship, membership, grievance and representation, upgrading, and other practices and policies of the labor union or other agency conform to the purposes and provisions of this order.

SEC. 214. Any certificate of merit may at any time be suspended or revoked by the Secretary of Labor if the holder thereof, in the judgment of the Secretary, has failed to comply with the provisions of this order.

SEC. 215. The Secretary of Labor may provide for the exemption of any employer, labor union, or other agency from any reporting requirements imposed under or pursuant to this order if such employer, labor union, or other agency has been awarded a certificate of merit which has not been suspended or revoked.

## **PART III- NONDISCRIMINATION PROVISIONS IN FEDERALLY ASSISTED CONSTRUCTION CONTRACTS**

SEC. 302. Each executive department and agency which administers a program involving Federal financial assistance shall require as a condition for the approval of any grant, contract, loan, insurance, or guarantee thereunder which may involve a construction contract, that the applicant for Federal assistance undertake and agree to incorporate, or cause to be incorporated, into all construction contracts paid for in whole or in part with funds obtained from the Federal Government or borrowed on the credit of the Federal Government pursuant to such grant, contract, loan, insurance, or guarantee, or undertaken pursuant to any Federal program involving such grant, contract, loan, insurance, or guarantee, the provisions prescribed for Government contracts by Section 202 of this order or such modification thereof, preserving in substance the contractor's obligations thereunder, as may be approved by the Secretary of Labor, together with such additional provisions as the Secretary deems appropriate to establish and protect the interest of the United States in the enforcement of those obligations. Each such applicant shall also undertake and agree: (1) to assist and cooperate actively with the administering department or agency and the Secretary of Labor in obtaining the compliance of contractors and subcontractors with those contract provisions and with the rules, regulations, and relevant orders of the Secretary; (2) to obtain and to furnish to the administering department or agency and to the Secretary of Labor such information as they may require for the supervision of such compliance; (3) to carry out sanctions and penalties for violation of such obligations imposed upon contractors and subcontractors by the Secretary of Labor or the administering department or agency pursuant to Part II, Subpart D, of this order; and (4) to refrain

from entering into any contract subject to this order, or extension or other modification of such a contract with a contractor debarred from Government contracts under Part II, Subpart D, of this order.

SEC. 302. (a) "Construction contract" as used in this order means any contract for the construction, rehabilitation, alteration, conversion, extension, or repair of buildings, highways, or other improvements to real property.

(b) The provisions of Part II of this order shall apply to such construction contracts, and for purposes of such application, the administering department or agency shall be considered the contracting agency referred to therein.

(c) The term "applicant" as used in this order means an applicant for Federal assistance or, as determined by agency regulation, other program participant, with respect to whom an application for any grant, contract, loan, insurance, or guarantee is not finally acted upon prior to the effective date of this part; and it includes such an applicant after he becomes a recipient of such Federal assistance.

SEC. 303 (a) Each administering department and agency shall be responsible for obtaining the compliance of such applicants with their undertakings under this order. Each administering department and agency is directed to cooperate with the Secretary of Labor, and to furnish the Secretary such information and assistance as he may require in the performance of his functions under this order.

(b) In the event an applicant fails and refuses to comply with his undertakings, the administering department or agency may take any or all of the following actions: (1) cancel, terminate, or suspend in whole or part the agreement, contract, or other arrangement with such applicant with respect to which the failure and refusal occurred; (2) refrain from extending any further assistance to the applicant under the program with respect to which the failure or refusal occurred until satisfactory assurance of future compliance has been received from such applicant; and (3) refer the case to the Department of Justice for appropriate legal proceedings.

(c) Any action with respect to an applicant pursuant to subsection (b) shall be taken in conformity with Section 602 of the Civil Rights Act of 1964 (and the regulations of the administering department or agency issued thereunder), to the extent applicable. In no case shall action be taken with respect to an applicant pursuant to clause (1) or (2) of subsection (b) without notice and opportunity for hearing before the administering department or agency.

SEC. 304. Any executive department or agency which imposes by rule, regulation, or order requirements of nondiscrimination in employment, other than requirements imposed pursuant to this order, may delegate to the Secretary of Labor by agreement such responsibilities with respect to compliance standards, reports,

and procedures as would tend to bring the administration of such requirements into conformity with the administration of requirements imposed under this order: Provided, That actions to effect compliance by recipients of Federal financial assistance with requirements imposed pursuant to Title VI of the Civil Rights Act of 1964 shall be taken in conformity with the procedures and limitations prescribed in Section 602 thereof and the regulations of the administering department or agency issued thereunder.

#### **PART IV - MISCELLANEOUS**

SEC. 401. The Secretary of Labor may delegate to any officer, agency, or employee in the executive branch of the Government, any function or duty of the Secretary under Parts II and III of this order, except authority to promulgate rules and regulations of a general nature.

SEC. 402. The Secretary of Labor shall provide administrative support for the execution of the program known as the "Plans of Progress."

SEC. 403. (a) Executive Orders Nos. 10590 (Jan. 18, 1955), 10722 (Aug. 5, 1957), 10925 (Mar. 6, 1961), 11114 (June 22, 1963), and 11162 (July 28, 1964), are hereby superseded and the President's Committee on Equal Employment Opportunity established by Executive Order No. 10925 is hereby abolished. All records and property in the custody of the committee shall be transferred to the Civil Service Commission and the Secretary of Labor, as appropriate.

(b) Nothing in this order shall be deemed to relieve any person of any obligation assumed or imposed under or pursuant to any executive order superseded by this order. All rules, regulations, orders, instructions, designations, and other directives issued by the President's Committee on Equal Employment Opportunity and those issued by the heads of various departments or agencies under or pursuant to any of the executive orders superseded by this order, shall, to the extent that they are not inconsistent with this order, remain in full force and effect unless and until revoked or superseded by appropriate authority. References in such directives to provisions of the superseded orders shall be deemed to be references to the comparable provisions of this order.

SEC. 404. The General Services Administration shall take appropriate action to revise the standard Government contract forms to accord with the provisions of this order and of the rules and regulations of the Secretary of Labor.

SEC. 405. This order shall become effective 30 days after the date of this order.

LYNDON B. JOHNSON

THE WHITE HOUSE  
September 24, 1965

**E.E.O. CLAUSE: During performance of this contract, Contractor agrees as follows:**

1. Contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. Contractor will take affirmative action to ensure that

applicants are employed, and employees are treated during employment without regard to their race, color, religion, sex, or national origin. Such action shall include, but not be limited to the following: Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. Contractor agrees to post in conspicuous places, available to employees and applicant for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

2. Contractor will, in all solicitation or advertisements for employees places by or on behalf of Contractor, state that all qualified applicant will receive consideration for employment without regard to race, color, religion, sex or national origin.
3. Contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representative of Contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
4. Contractor will comply with all provisions of Executive Order 11246 of September 2, 1965, and of the rules, regulations and relevant orders of the Secretary of Labor.
5. Contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations and orders.
6. In the event of Contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be cancelled, terminated or suspended in whole or in part of Contractor may be declared ineligible for further Government contracts of federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies involved as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.
7. Contractor will include the portion of the sentence immediately preceding paragraph 4.3.1 and the provisions of paragraphs 4.3.1 through 4.3.7 in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to Section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. Contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance. Provided, however, that in the event a Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency, Contractor may request the United States to enter into such litigation to protect the interests of the United States.

**STANDARD FEDERAL EQUAL EMPLOYMENT, OPPORTUNITY CONSTRUCTION  
CONTRACT SPECIFICATIONS (EXECUTIVE ORDER 11246)**

1. As used in these specifications:
  - a. "Covered area" means the geographical area described in the solicitation from which this contract resulted;
  - b. "Director" means Director, Office of Federal Contract Compliance Programs, United States Department of Labor, or any person to whom the Director delegates authority;
  - c. "Employer Identification Number" means the Federal Social Security Number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941.
  - d. "Minority" includes:
    - (i) Black (all persons having origins in any of the Black African racial groups, not of Hispanic origin);
    - (ii) Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish Culture or origin, regardless of race);
    - (iii) Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands); and
    - (iv) American Indian or Alaskan Native (all persons having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership and participation or community identification).
2. Whenever the Contractor, or any Subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of \$10,000 the provisions of these specifications and the Notice which contains the applicable goals for minority and female participation and which is set forth in the solicitations from which this contract resulted.
3. If the Contractor is participating (pursuant to 41 CPT 60-4.5) in a Hometown Plan approved by the U. S. Department of Labor in the covered area either individually or through an association, its affirmative action obligations on all work in the Plan area (including goals and timetables) shall be in accordance with that Plan for those trade which have unions participating in the Plan. Contractors must be able to demonstrate their participation in and compliance with the provisions of any such Hometown Plan. Each Contractor or Subcontractor participating in an approved Plan is individually required to comply with its obligations under the EEO clause, and to make a good faith effort to achieve each goal under the Plan in each trade in which it has employees. The overall good faith performance by other Contractors or Subcontractors toward a goal in an approved Plan does not excuse any covered Contractor's or Subcontractor's failure to take good faith efforts to achieve the Plan goals and timetables.

4. The Contractor shall implement the specific affirmative action standards provided in paragraphs 7a through p of these specifications. The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minority and female utilization the Contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. The Contractor is expected to make substantially uniform progress toward its goals in each craft during the period specified.
5. Neither the provisions of any collective bargaining agreement, nor the failure by a union with whom the Contractor has a collective bargaining agreement, to refer either minorities or women shall excuse the Contractor's obligations under these specifications. Executive Order 11246, or the regulations promulgated pursuant thereto.
6. In order for the non-working training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees must be employed by the Contractor during the training period, and the Contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U. S. Department of Labor.
7. The Contractor shall take specific affirmative actions to ensure equal employment opportunity. The evaluation of the Contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its actions. The Contractor shall document these efforts fully, and shall implement affirmative action steps at least as extensive as the following:
  - a. Ensure and maintain a working environment free of harassment, intimidation and coercion at all sites, and in all facilities at which the Contractor's employees are assigned to work. The Contractor, where possible, will assign two or more women to each construction project. The Contractor shall specifically ensure that all foremen, superintendents and other on-site supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities.
  - b. Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to community organizations when the Contractor or its unions have employment opportunities available, and maintain a record of the organizations' responses.
  - c. Maintain a current file of the names, addresses and telephone numbers of each minority and female off the street applicant and minority or female referral from a union, a recruitment source or community organization and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the Contractor by the union or, if referred, not employed by the Contractor, this shall be documented in the file with the reasons therefore, along with whatever additional actions the Contractor may have taken.
  - d. Provide immediate written notification to the Director when the union or unions with which the Contractor has a collective bargaining agreement has not referred to the Contractor a minority person or woman sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Contractor's efforts to meet its obligations.
  - e. Develop on-the-job training opportunities and/or participate in training programs for the area

which expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the Department of Labor. The Contractor shall provide notice of these programs to the sources complied under 7b above.

- f. Disseminate the Contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting its EEO obligations; by including it in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc; by specific review of the policy with all management personnel and with all minority and female employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.
- g. Review, at least annually, the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, lay-off, termination or other employment decisions including specific review of these items with on-site supervisory personnel such as Superintendents, General Foremen, etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed and disposition of the subject matter.
- h. Disseminate the Contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the Contractor's EEO policy with other Contractors and Subcontractors with whom the Contractor does or anticipates doing business.
- i. Direct its recruitment efforts, both oral and written, to minority, female and community organizations, to schools with minority and female students and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than one month prior to the date for the acceptance of applications for apprenticeship or other training by any recruitment source, the Contractor shall send written notification to organizations such as the above, describing the openings, screening procedures, and tests to be used in the selection process.
- j. Encourage present minority and female employees to recruit other minority persons and women and, where reasonable, provide after school, summer and vacation employment to minority and female youth both on the site and in other areas of a Contractor's workforce.
- k. Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR Part 60-3.
- l. Conduct, at least annually, an inventory and evaluation at least of all minority and female personnel for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities.
- m. Ensure that seniority practices, job classifications, work assignments and other personnel practices, do not have a discriminatory effect by continually monitoring all personnel and

employment related activities to ensure that the EEO policy and the Contractor's obligations under these specifications are being carried out.

- n. Ensure that all facilities and company activities are nonsegregated except that separate or single-user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.
  - o. Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction contractors and suppliers, including circulation of solicitations to minority and female contractor associations and other business associations.
  - p. Conduct a review, at least annually, of all supervisors' adherence to and performance under the Contractor's EEO policies and affirmative action obligations.
8. Contractors are encouraged to participate in voluntary associations which assist in fulfilling one or more of their affirmative action obligations (7a through p). The efforts of a contractor association, joint contractor-union, contractor-community, or other similar group of which the contractor is a member and participant may be asserted as fulfilling any one or more of its obligations under 7a through p of these Specifications provided that the Contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program are reflected in the Contractor's minority and female workforce participation, makes a good faith effort to meet its individual goals and timetables, and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the Contractor. The obligation to comply, however, is the Contractor's and failure of such a group to fulfill an obligation shall not be a defense for the Contractor's noncompliance.
9. A single goal for minorities and a separate single goal for women have been established. The Contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, the Contractor may be in violation of the Executive Order if a particular group is employed in a substantially desperate manner (for example, even though the Contractor has achieved its goals for women generally, the Contractor may be in violation of the Executive Order if a specific minority group of women is underutilized).
10. The Contractor shall not use the goals and timetables or affirmative action standards to discriminate against any person because of race, color, religion, sex or national origin.
11. The Contractor shall not enter into any Subcontract with any person or firm debarred from Government contracts pursuant to Executive Order 11246.
12. The Contractor shall carry out such sanctions and penalties for violation of these specifications and of the Equal Opportunity Clause, including suspension, termination and cancellation of existing subcontractors as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementing regulations, by the Office of Federal Contract Compliance Programs. Any Contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Executive Order 11246, as amended.
13. The Contractor, in fulfilling its obligations under these specifications, shall implement specific

affirmative action steps, at least as extensive as those standards prescribed in paragraph 7 of these specifications, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the Contractor fails to comply with the requirements of the Executive Order, the implementing regulations, or these specifications, the Director shall proceed in accordance with 41 CFR 60-4.8.

14. The Contractor shall designate a responsible official to monitor all employment related activity to ensure that the company EEO policy is being carried out, to submit reports relating to the provisions hereof as may be required by the Government and to keep records. Records shall at least include for each employee the name, address, telephone numbers, construction trade, union affiliation if any, employee identification number when assigned, social security number, race, sex, status (e.g., mechanic, apprentice, trainee, helper or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, contractors shall not be required to maintain separate records.
15. Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance or upon the application of requirements for the hiring of local or other area residents (e.g., those under the Public Works Employment Act of 1977 and the Community Block Grant Program).

**NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY (EXECUTIVE ORDER 11246)**

1. The Offeror's or Bidder's attention is called to the "Equal Opportunity Clause and the "Standard Federal Equal Employment Opportunity Construction Contract Specifications" set forth herein.
2. The goals and timetables for minority and female participation, expressed in percentage terms for the Contractor's aggregate workforce in each trade on all construction work in the covered area, are as follows:

Timetables	Goals for Minority Participation for each trade	Goals for Female Participation in each trade
Until Further Notice	(insert goal)*	6.9%

These goals are applicable to each non-exempt contractor's total onsite construction workforce, regardless of whether or not part of that workforce is performing work on a Federal, Federally assisted or non-Federally related project, contract or sub-contract.

The contractor's compliance with the Executive Order and the regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3(a), and its efforts to meet the goals established for the geographical area where the contract resulting from this solicitation is to be performed. The hours of

minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, the Executive Order and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

3. The Contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within 10 working days of award of any construction subcontract in excess of \$10,000 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address and telephone number of the subcontractor; employer identification number; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the contract is to be performed.
4. As used in this Notice, and in the contract resulting from this solicitation, the "covered area" is (insert description of the economic area in which the contract will be performed, giving the city, SMSA or non SMSA designation, and a list of the counties included in the economic area).

\*Note: See the Federal Register, Vol 44, No. 175, dated 9-7-79, for appropriate goals arranged by economic area. The goal for female participation is 6.9% statewide.

CONSTRUCTION CONTRACT GOALS (FROM FEDERAL REGISTER, SEPT. 7, 1979)

ECONOMIC AREA GOAL

\*\*AUGUSTA, GA.\*\*

SMSA Counties:	27.2%
COLUMBIA	
RICHMOND	
AIKEN (SC)	

Non-SMSA Counties:	32.8%
BURKE	TALIAFERRO
EMANUAL	WARREN
GLASCOCK	ALLENDALE (SC)
JEFFERSON	BAMBERG (SC)
JENKINS	BARNWELL (SC)
LINCOLN	EDGEFIELD (SC)
MCDUFFIE	MCCORMICK (SC)

\*\*ATLANTA, GA.\*\*

SMSA Counties: 21.2%

BUTTS	FULTON
CHEROKEE	GWINNETT
CLAYTON	HENRY
COBB	NEWTON
DEKALB	PAULDING
DOUGLAS	ROCKDALE
FAYETTE	WALTON
FORSYTH	

Non-SMSA Counties: 19.5%

BANKS	JACKSON
BARROW	JASPER
BARTOW	LAMAR
CARROLL	LUMPKIN
CLARKE	MADISON
COWETA	MORGAN
DAWSON	OCONEE
ELBERT	OGLETHORPE
FANNIN	PICKENS
FLOYD	PIKE
FRANKLIN	POLK
GILMER	RABUN
GORDON	SPALDING
GREENE	STEPHENS
HABERSHAM	TOWNS
HALL	UNION
HARALSON	UPSON
HART	WHITE
HEARD	

\*\*COLUMBUS, GA.\*\*

SMSA Counties: 29.5%

COLUMBUS	MUSGOGEE
CHATTAHOOCHEE	

NON-SMSA Counties: 31.6%

CHAMBERS (ALA)	SCHLEY
LEE (ALA)	STEWART
HARRIS	SUMTER
MARION	TALBOT
MERIWETHER	TROUP
QUITMAN	WEBSTER

**\*\*MACON, GA.\*\***

SMSA Counties:		27.5%
BIBB	JONES	
HOUSTON	TWIGGS	

NON-SMSA Counties:		31.7%
BALDWIN	PEACH	
BLECKLEY	PULASKI	
CRAWFORD	PUTNAM	
CRISP	TAYLOR	
DODGE	TELFAIR	
DOOLY	TREUTLEN	
HANCOCK	WASHINGTON	
JOHNSON	WHEELER	
LAURENS	WILCOX	
MACON	WILKENSON	
MONROE		

**\*\*SAVANNAH, GA.\*\***

SMSA Counties:		30.6%
BYRAN	EFFINGHAM	
CHATHAM		

NON-SMSA Counties:		29.8%
APPLING	MCINTOSH	
ATKINSON	MONTGOMERY	
BACON	SCREVEN	
BULLOCH	TATTNALL	
CANDLER	TOOMBS	
COFFEE	WAYNE	
EVANS	BEAUFORT (SC)	
JEFF DAVIS	HAMPTON (SC)	
LIBERTY	JASPER (SC)	
LONG		

**\*\*ALBANY, GA.\*\***

SMSA Counties:		32.1%
DOUGHERTY		
LEE		

NON-SMSA Counties: 31.1%

BAKER	IRWIN
BEN HILL	LANIER
BERRIAN	LOWNDES
BROOKS	MILLER
CALHOUN	MITCHELL
CLAY	RANDOLPH
CLINCH	SEMINOLE
COLQUITT	TERRELL
COOK	THOMAS
DECATUR	TIFT
EARLY	TURNER
ECHOLS	WORTH
GRADY	

\*\*JACKSONVILLE, FLA\*\*

NON-SMSA Counties: 22.2%

BRANTLEY	GILCHRIST (FLA)
CAMDEN	HAMILTON (FLA)
CHARLTON	LAFAYETTE (FLA)
GLYNN	LEVY (FLA)
PIERCE	MANON (FLA)
WARE	PUTNAM (FLA)
BRADFORD (FLA)	SUWANNEE (FLA)
COLUMBUS (FLA)	

\*\*CHATTANOOGA, TENNESSEE\*\*

SMSA Counties: 12.5%

CATOOSA  
DADE  
WALKER

NON-SMSA Counties: 8.8%

CHATTANOOGA  
MURRAY  
WHITFIELD

## **LABOR STANDARDS**

### **LABOR STANDARDS AND REQUIREMENTS**

Contractors performing work on this project must fulfill requirements of the Davis-Bacon Act, the Copeland Anti-Kickback Act, the Contract Work Hours Standards Act, and the Executive Non-Discrimination Order No. 11246. Section 601 of the Civil Rights Act also applies to this project. Contractor shall conform to the following requirements:

1. A copy of the applicable wage rate schedule must be posted by Contractor and maintained where it can be seen easily by all employees.
2. All employees working on the site must be paid at least once a week.
3. Rates of pay shall be at least the minimum shown on the applicable wage rate schedule for each classification.
4. Employees must be paid for overtime at one and one-half (1-1/2) times his regular rate for all time over forty (40) hours any week.
5. No classification of employees shall be employed on the project unless the classification appears on the wage rate schedule.
6. Each week as work progresses, Contractor must submit to Engineer/Architect copies of all weekly payrolls and required attachments stipulated therein. Payroll Forms may be obtained from Engineer/Architect upon request.
7. Contractors shall include the wage determination and all the labor standards provisions in all subcontracts as herein specified.
8. Contractor shall make employment records available for inspection by authorized representatives of Owner or the Department of Labor and will permit employees to be interviewed during working hours by these representatives. Payroll records will be maintained during the course of the work by Contractor, including a copy of the payroll of each subcontractor, and they shall be preserved for a period of three (3) years thereafter.

Payroll records of each subcontractor shall be submitted to principal Contractor each month and then submitted to Engineer/Architect for review each month.

9. In the event of a violation of the Labor Standards Provisions of the Contract by Contractor or any subcontractor, Owner may, after notice to Contractor, suspend further payments or proceed to terminate the Contract as provided in the Labor Standards provisions.

## **CERTIFICATION OF NONSEGREGATED FACILITIES**

By the submission of this bid, the bidder, offerer, applicant or subcontractor certifies that s/he does not maintain or provide for his/her employees any segregated facility at any of his/her establishments, and that s/he does not permit employees to perform their services at any location, under his/her control, where segregated facilities are maintained. S/He certifies further that s/he will not maintain or provide for employees any segregated facilities at any of his/her establishments, and s/he will not permit employees to perform their services at any location under his/her control where segregated facilities are maintained. The bidder, offerer, applicant or subcontractor agrees that a breach of this certification is a violation of the Equal Opportunity Clause of this contract. As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, rest rooms and wash rooms, restaurants and other eating areas, time clocks, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation and housing facilities provided for employees which are segregated by explicit directive or are in fact segregated on the basis of race, color, religion, or national origin, because of habit, local custom, or otherwise. S/He further agrees that (except where s/he has obtained identical certifications from proposed subcontractors for specific time periods) s/he will obtain identical certification from proposed subcontractors prior to the award of subcontracts exceeding \$10,000 which are not exempt from the provisions of the Equal Opportunity Clause; that s/he will retain such certifications in his/her files; and that s/he will forward the following notice to such proposed subcontractors (except where proposed subcontractors have submitted identical certifications for specific time periods).

## **COMPLIANCE WITH CLEAN AIR AND WATER ACTS**

This contract is subject to the requirements of the Clean Air Act, as amended, 42 USC 1857 et seq., The Federal Water Pollution Control Act, as amended, 33 USC 1251 et seq., and the regulations of the Environmental Protection Agency with respect thereto, at 40 CFR Part 15, as amended from time to time.

In compliance with said regulations:

1. The Contractor shall require of subcontractors that any facility to be utilized in the performance of any nonexempt contract or subcontract is not listed in the List of Violating Facilities issued by the Environmental Protection Agency (EPA) pursuant to 40 CFR 15.20.
2. The Contractor will comply with all the requirements of Section 114 of the Clean Air Act, as amended (42 USC 1857c-8) and Section 308 of the Federal Water Pollution Control Act as amended, (330 USC 1318) relating to inspection, monitoring, entry, reports, and information, as well as all other requirements specified in said Section 114 and Section 308, and all regulations and guidelines issued thereunder.
3. The Contractor will provide prompt notice of any notification received from the Director, Office of Federal Activities, EPA, indicating that a facility utilized or to be utilized for the contract is under considerations to be listed on the EPA List of Violating Facilities.
4. The Contractor will include or cause to be included the criteria and requirements to paragraph (1) through (4) of this section in every nonexempt subcontract and take such action as the Government will direct as a means of enforcing such provisions.

END OF SECTION

## SECTION 00840

### ADMINISTRATIVE AND PROCEDURAL ITEMS AND FORMS

#### PART 1 GENERAL

- 1.01 This section of the CONTRACT DOCUMENTS references the various forms and other documents that will become a part of these CONTRACT DOCUMENTS during the course of the WORK.

#### PART 2 MATERIALS

##### 2.01 FORMS AND DOCUMENTS

- A. Partial Payment Estimate
- B. Contractor's Affidavit and Lien Waiver
- C. Contract Change Order
- D. Field Order
- E. Statement of Substantial Completion

#### PART 3 EXECUTION

- 3.01 ENGINEER shall provide CONTRACTOR with sufficient copies of the above listed forms and/or documents where applicable for submittal by CONTRACTOR during course of the WORK. (Examples of the listed forms are included in this Section. CONTRACTOR may use these and/or photo copies of same for submittal)
- 3.02 ENGINEER shall use these forms for administrative and procedural duties. (Examples of the listed forms are included in this section)

<b>PARTIAL PAYMENT ESTIMATE</b>	CONTRACT NO. _____
	PARTIAL PAYMENT ESTIMATE NO. _____
	PAGE ____ OF ____.

OWNER: _____	CONTRACTOR: _____	PERIOD OF ESTIMATE FROM _____ TO _____
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CONTRACT CHANGE ORDER SUMMARY			ESTIMATE
NO.	ADDITIONS (\$)	DEDUCTIONS (\$)	
			1. Original Contract _____
			2. Change Orders _____
			3. Revised Contract (1 + 2) _____
			4. Work Completed* _____
			5. Stored Materials* _____
			6. Subtotal (4 + 5) _____
			7. Retainage _____
			8. Previous Payments _____
			9. Amount Due (6-7-8) _____
<b>TOTALS</b>	_____	_____	* Detailed breakdown attached.
<b>NET CHANGE</b>	_____	_____	

CONTRACT TIME		
Original (days) _____ Revised _____ Remaining _____	On Schedule Yes _____ No _____	Starting Date _____ Projected Completion _____

<p><b>CONTRACTOR'S CERTIFICATION:</b> The undersigned Contractor certifies that to the best of their knowledge, information and belief the work covered by this payment estimate has been completed in accordance with the contract documents, that all amounts have been paid by the Contractor to his subcontractors and suppliers for work for which previous payment estimates were issued and payments received from the Owner, and that current payment shown herein is now due.</p> <p><b>Contractor</b> _____ By _____ Date _____</p> <p><b>APPROVED BY OWNER:</b> <b>Owner</b> _____ By _____ Date _____</p>	<p><b>ENGINEER'S STATEMENT:</b> The undersigned states that to the best of their knowledge and belief, the quantities shown in this estimate are correct.</p> <p><b>Engineer: Walton County Public Works Department</b></p> <p>By _____ Date _____</p>
---	--

WALTON COUNTY, GEORGIA

CONTRACTOR'S AFFIDAVIT AND LIEN WAIVER

WHEREAS, \_\_\_\_\_ (CONTRACTOR) has been paid in full by the Walton County Board of Commissioners (OWNER) for labor, materials, and/or equipment furnished under a contract dated \_\_\_\_\_, except as contained on the attached payment request.

AND WHEREAS, said labor, materials, and/or equipment was applied to real property located in Walton County for \_\_\_\_\_  
\_\_\_\_\_ for the Walton County Board of Commissioners.

THEREFORE, in consideration of the reliance of OWNER upon this agreement and final payment by OWNER, the CONTRACTOR does hereby:

1. Certify to OWNER that all subcontractors and suppliers to the project have been paid in full.
2. Release, waive, and forever quitclaim unto the OWNER any and all manner of liens CONTRACTOR now has or may acquire in the real property associated with Project.
3. Agree to indemnify and hold harmless OWNER, its successors or assigns, against any loss claim or lien asserted by a subcontractor or supplier against OWNER or against the real property associated with Project.

IN WITNESS WHEREOF, CONTRACTOR has caused this release to be signed by its duly authorized owner, partner, or corporate officer on the \_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_. Sworn to and subscribed before me this \_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

(NAME OF CONTRACTOR)

By: \_\_\_\_\_

Attest: \_\_\_\_\_

Notary Public

**CONTRACT CHANGE ORDER**

Contract No.	Order No.:	Date:
Project Title:		State:
Owner:		County:

TO: \_\_\_\_\_  
 (Contractor)

You are hereby requested to comply with the following changes from the contract plans and specifications.

Description of Changes (Supplemental Plans & Specs. Attached)	Decrease In Contract Price	Increase In Contract Price
<b>TOTAL</b>		

Justification: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Previous Contract Amount: \_\_\_\_\_ \$ \_\_\_\_\_  
 Amount of Change Order: \_\_\_\_\_ \$ \_\_\_\_\_  
 Current Contract Amount: \_\_\_\_\_ \$ \_\_\_\_\_

Previous Contract Time                      Days: \_\_\_\_\_                      Date: \_\_\_\_\_  
 Change in Contract Time                      Days: \_\_\_\_\_  
 Current Contract Time                      Days: \_\_\_\_\_                      Date: \_\_\_\_\_

REQUESTED: \_\_\_\_\_  
 (Contractor)    (Date)  
 RECOMMENDED: \_\_\_\_\_  
 (Walton County Public Works)                      (Date)  
 ACCEPTED: \_\_\_\_\_  
 (Walton Co. Board of Commissioners)                      (Date)

This document will be used as a record of any changes to the original construction contract.



STATEMENT OF SUBSTANTIAL COMPLETION

Project: \_\_\_\_\_

Engineer's Project No: \_\_\_\_\_

Contractor: \_\_\_\_\_

Contract For: \_\_\_\_\_ Contract Date: \_\_\_\_\_

This Statement\* of Substantial Completion applies to all Work under the Contract Documents or to the following specified parts thereof:

To: \_\_\_\_\_  
OWNER

And To: \_\_\_\_\_  
CONTRACTOR

The Work to which this Statement\* applies has been observed by authorized representatives of OWNER, CONTRACTOR and ENGINEER, and that Work is hereby declared to be substantially complete in accordance with the Contract Documents on

\_\_\_\_\_  
Date of Substantial Completion

A tentative list of items to be completed or corrected is attached hereto. This list may not be all-inclusive, and the failure to include an item in it does not alter the responsibility of CONTRACTOR to complete all the Work in accordance with the Contract Documents. When this Statement\* applies to a specified part of the Work the items in the tentative list shall be completed or corrected by CONTRACTOR within \_\_\_\_\_ days of the above date of Substantial Completion.

Executed by ENGINEER on \_\_\_\_\_, 20\_\_\_\_.

By: \_\_\_\_\_

The CONTRACTOR accepts this Statement\* of Substantial Completion on \_\_\_\_\_, 20\_\_\_\_.

\_\_\_\_\_  
Contractor

By: \_\_\_\_\_

The OWNER accepts the work or designated portion thereof as substantially complete and will assume full possession thereof on \_\_\_\_\_, 20\_\_\_\_.

By: \_\_\_\_\_

\*A PROFESSIONAL ENGINEER'S STATEMENT OF CONDITIONS COMPRISES A DECLARATION OF HIS PROFESSIONAL JUDGEMENT. IT DOES NOT CONSTITUTE A WARRANTY OR GUARANTEE, EXPRESS OR IMPLIED, NOR DOES IT RELIEVE ANY PARTY OF HIS RESPONSIBILITY TO ABIDE BY CONTRACT DOCUMENTS, APPLICABLE CODES, STANDARDS, REGULATIONS AND ORDINANCES.

SECTION 01025

MEASUREMENT AND PAYMENT

Measurement and payment shall be in accordance with the Georgia Department of Transportation Standard Specifications Construction of Transportation Systems, 2001 Edition.

END OF SECTION

## SECTION 01300

### SUBMITTALS

#### PART 1 - GENERAL

##### 1.01 REQUIREMENTS INCLUDED

###### A. Shop Drawings and Product Data

1. CONTRACTOR shall submit complete drawings, engineering data and manufacturer's published instructions and recommendations for all equipment, materials, and products to be incorporated into WORK to ENGINEER for review and approval. Submittal of drawings and engineering data shall be in accordance with requirements of Supplementary General Provisions. Shop Drawings and/or engineering data, as appropriate, shall be submitted for the following: (including, but not limited to)
  - a. Pipe, manholes, structures.
  - b. Miscellaneous iron castings and gratings, manhole frames and covers and manhole steps.
  - c. Concrete: Proposed mix design of each class of concrete. All concrete and masonry accessories and steel reinforcement, including bending diagrams and bar schedule, ties, spreaders, chairs, inserts, for coatings, waterstops, curing and sealing compounds, and epoxy bonding agents.
  - d. Premixed grouts and mortars: Submit laboratory reports to ENGINEER for approval. Submittal must include sieve analysis of fine and coarse aggregate and mix design. Test results and reports required by manufacturer and testing standards shall be submitted to ENGINEER for his review.
  - e. Grass seed, fertilizer, and commercial mulch.
  - f. All Material certifications as required by the State of Georgia Standard Specifications Construction of Transportation Systems, 2001 Edition.
2. Costs associated with all material testing shall be at the Contractor's expense.
3. Shop drawings and engineering data shall be prepared by original equipment vendors or fabricators, as applicable. Purchase specifications by CONTRACTOR or Supplier shall not be acceptable as substitute for actual vendor drawings and data.
4. Shop drawings and each item of engineering data shall bear CONTRACTOR's approved stamp as per Supplementary General Provisions.

## 1.02 PROCEDURES

- A. Deliver submittals to ENGINEER at 400 Pike Boulevard, P.O. Box 2210, Lawrenceville, Georgia 30046-2210.
- B. Transmit each item identifying Project, CONTRACTOR, SUBCONTRACTOR, major supplier; identify pertinent drawing sheet and detail number, and specification section number, as appropriate. Identify deviations from CONTRACT DOCUMENTS. Provide space for CONTRACTOR and ENGINEER review stamps.
- C. Comply with progress schedule for submittals related to WORK progress. Coordinate submittal of related items.
- D. After ENGINEER review of submittal, revise and resubmit as required, identifying changes made since previous submittal.
- E. Distribute copies of reviewed submittals to concerned persons. Instruct recipients to promptly report any inability to comply with provisions.

## 1.03 CONSTRUCTION PROGRESS SCHEDULES

- A. Submit initial construction progress schedules in duplicate within ten (10) days after date of OWNER-CONTRACTOR Agreement. After review by ENGINEER, revise and resubmit as required. Submit revised schedules with each Application for Payment, reflecting changes since previous submittal.
- B. Submit horizontal bar chart with separate bar for each major trade or operation, identifying first work day of each week.
- C. Show complete sequence of construction by activity, identifying WORK of separate stages and other logically grouped activities. Show projected percentage of completion for each item of WORK as of time of each Application for Progress Payment.
- D. Show submittal dates required for shop drawings, product data, and samples, and product delivery dates, including those furnished by OWNER and those under Allowances.
- E. Revise schedule to list change orders, for each application for payment.

#### 1.04 SAMPLES

- A. CONTRACTOR shall furnish, at ENGINEER'S request, samples of materials utilized in fabrication or production of equipment, materials, products supplied under these Specifications. Cost of samples requested shall be paid for by CONTRACTOR. Samples will be tested by qualified independent testing laboratory selected by ENGINEER to determine if mechanical and chemical properties of materials supplied are in accordance with requirements of these Specifications and CONTRACT DOCUMENTS. OWNER shall pay for laboratory testing of material samples provided by CONTRACTOR. CONTRACTOR shall pay for all retests made necessary by failure of materials, etc., to conform to requirements set forth herein.
- B. Submit samples to illustrate functional characteristics of the product, with integral parts and attachment devices. Coordinate submittal of different categories for interfacing work.
- C. Include identification on each sample, giving full information.

#### 1.05 OPERATION AND MAINTENANCE MANUALS

Unless otherwise indicated, all items of major equipment shall be supplied with a minimum of six (6) copies of complete operation and maintenance manuals.

#### PART 2 - PRODUCTS

Not Used.

#### PART 3 - EXECUTION

Not Used.

END OF SECTION

SECTION 01511  
TEMPORARY POWER

PART 1 GENERAL

1.01 SCOPE

This section is intended to include requirements for temporary electricity.

1.02 REQUIREMENTS INCLUDED

- A. Temporary Electrical Service
- B. Operation and Maintenance
- C. Removal

1.03 COSTS

- A. The CONTRACTOR shall be responsible for the costs of all items necessary for the installation of temporary power. The cost of these items shall be factored into the project unit prices. Obtain and pay for permits and inspections.
- B. Pay for installation, operation, maintenance, and removal of system.
- C. Pay costs of energy consumed.

PART 2 PRODUCTS

2.01 MATERIALS

- A. May be new or used, adequate to the purpose.
- B. Devices and Equipment: Standard devices, meeting UL requirements.

PART 3 EXECUTION

3.01 INSTALLATION

Install initial service at time of site mobilization.

3.02 OPERATION AND MAINTENANCE

Maintain system to provide continuous service.

3.03 REMOVAL

Remove temporary materials and equipment when permanent system is operational.

END OF SECTION

## SECTION 01515

### TEMPORARY WATER

#### PART 1 GENERAL

##### 1.01 SCOPE

This section is intended to include requirements for temporary water to be provided by CONTRACTOR.

##### 1.02 REQUIREMENTS INCLUDED

- A. Temporary water service
- B. Maintenance
- C. Removal

##### 1.03 SERVICE REQUIREMENTS

Water Quality: Water used for flushing and testing of water systems shall be potable water.

##### 1.04 USE OF EXISTING SYSTEM

Existing system may be used for temporary water with owners permission.

##### 1.05 COSTS

CONTRACTOR shall pay all costs necessary to provide water for temporary potable use and for testing. The cost of the water shall be factored into the project unit prices. CONTRACTOR shall reimburse OWNER at current commercial rates where such water is available.

#### PART 2 PRODUCTS

##### 2.01 MATERIALS

- A. Materials may be new or used, adequate to the purpose.
- B. Drinking Water Dispensers; Standard products.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install initial service at time of job mobilization.
- B. Modify and extend service as work progresses.
- C. Size piping to supply construction needs.
- D. Provide pumps, pressure tanks, automatic controls, and storage tanks as necessary to pressurize system.
- E. Disinfect piping used for drinking water.

3.02 MAINTENANCE

Maintain system to provide continuous service with adequate pressure to outlets, including OWNER's system when temporary service is connected.

3.03 REMOVAL

Restore existing and permanent facilities used for temporary purposes to original condition.

END OF SECTION

## SECTION 01516

### TEMPORARY SANITARY FACILITIES

#### PART 1 GENERAL

##### 1.01 SCOPE

This section is intended to include requirements for temporary sanitary facilities provided by CONTRACTOR, including provisions for CONTRACTOR'S use of existing and permanent facilities.

##### 1.02 REQUIREMENTS INCLUDED

- A. Temporary Sanitary Facilities
- B. Maintenance and Service
- C. Cleaning

##### 1.03 USE OF EXISTING FACILITIES

Do not use existing sanitary facilities.

##### 1.04 USE OF PORTABLE FACILITIES

- A. CONTRACTOR shall provide portable sanitary facilities at such places as approved by the OWNER.
- B. CONTRACTOR shall pay all costs for installation, maintenance, and removal of temporary sanitary facilities.

#### PART 2 PRODUCTS

##### 2.01 MATERIALS

May be new or used, adequate to the purpose, which will not create unsanitary conditions.

##### 2.02 TOILET FACILITIES

Enclosed portable self-contained units or temporary water closets and urinals, secluded from public view.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Provide facilities at time of site mobilization.
- B. Modify and extend services as work progresses.

3.02 MAINTENANCE AND SERVICE

- A. Clean areas of facilities weekly and maintain in a sanitary condition.
- B. Provide toilet paper, paper towels, and soap in suitable dispensers.

3.03 REMOVAL

Remove portable units when other facilities are available or prior to Substantial Completion.

END OF SECTION

## SECTION 01701

### CONTRACT CLOSEOUT PROCEDURES

#### PART 1 GENERAL

##### 1.01 REQUIREMENTS INCLUDED

Administrative provisions for Substantial Completion and for final acceptance.

##### 1.02 RELATED REQUIREMENTS

Section 01720 - Project Record Documents.

##### 1.03 SUBSTANTIAL COMPLETION

- A. When the CONTRACTOR considers the work substantially complete, he shall prepare a punch list of uncompleted items and send to the ENGINEER for review. At the same time the CONTRACTOR shall request in writing that the ENGINEER schedules a pre-final inspection.
- B. The ENGINEER will review the punch list submitted by the CONTRACTOR and determine if the project is substantially complete.
- C. If the ENGINEER determines that the project is not substantially complete, he will notify the CONTRACTOR in writing which items need to be finished before the project can be considered substantially complete. The CONTRACTOR shall continue working to complete all punch list items and resubmit a revised punch list when he considers the work is substantially complete.
- D. When the ENGINEER determines that the work is substantially complete, he will schedule a pre-final inspection with the OWNER, CONTRACTOR and ENGINEER. A final punch list will be prepared at this time.
- E. After all punch list items have been completed, the CONTRACTOR shall send a request in writing to the ENGINEER to schedule a final inspection. When all punch list items are complete, the ENGINEER will issue a certificate of substantial completion.

##### 1.04 FINAL COMPLETION

- A. When the CONTRACTOR considers that all of the WORK is complete, he shall submit the following certificates:
  - 1. All WORK has been completed and inspected for compliance with the CONTRACT DOCUMENTS and all deficiencies listed with the certificate of substantial completion have been corrected.

2. All equipment and systems have been tested, adjusted and are fully operational.
  3. OWNER's personnel have been fully instructed in the operation of all equipment (include sign off for each system).
  4. WORK is complete and ready for final inspection.
- B. Should ENGINEER's inspection find WORK incomplete, he will promptly notify CONTRACTOR in writing listing observed deficiencies.
  - C. CONTRACTOR shall remedy deficiencies and send a request for another final inspection.
  - D. When ENGINEER finds work is complete, he will process final pay request documents.

#### 1.05 REINSPECTION FEES

Should status of completion of WORK require reinspection by ENGINEER due to failure of WORK to comply with CONTRACTOR's claims on pre-final or final inspection, the OWNER will back charge the CONTRACTOR for each extra reinspection required of the ENGINEER. The CONTRACTOR shall reimburse the OWNER by certified check prior to final payment of retainage.

#### 1.06 CLOSEOUT SUBMITTALS

- A. Evidence of Compliance with Requirements of Governing Authorities:
  1. Certificate of Occupancy as required by local codes.
  2. Certificates of Inspection approvals required for plumbing, mechanical and electrical systems as required by local codes if applicable.
  3. Completed form as indicated on page 01701-5 of this Section.
- B. Project Record Documents: Under provisions of Section 01720.
- C. Evidence of Payment and Release of Liens: In accordance with Conditions of the Contract.
- D. Consent of Surety to Final Payment.

#### 1.07 APPLICATION FOR FINAL PAYMENT

- A. Prior to application for final payment, the CONTRACTOR shall give the ENGINEER a list of all additions or deletions not previously approved by change order.
- B. The ENGINEER will review this list and prepare a final close-out change order for the items that are justified by the terms of the contract or approved by field order.
- C. After approval of the final close-out change order, the CONTRACTOR may submit his application for final payment.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

END OF SECTION

## SECTION 01710

### FINAL CLEAN-UP

#### PART 1 GENERAL

##### 1.01 REQUIREMENTS INCLUDED

Final clean-up of site, roadway and buildings.

##### 1.02 DESCRIPTION

Execute clean-up prior to inspection for Substantial Completion of the WORK.

##### 1.03 DISPOSAL REQUIREMENTS

Remove and dispose of waste materials, rubbish, debris and trash in compliance with provisions of governing laws, codes, ordinances and regulations. **Do not burn or bury rubbish, trash, debris and waste materials on Project site.**

#### PART 2 PRODUCTS

##### 2.01 CLEANING MATERIALS

- A. Use materials which will not create hazards to health or property, and which will not damage surfaces.
- B. Use only materials and methods recommended by manufacturer of material being cleaned.

#### PART 3 EXECUTION

##### 3.01 PERIODIC CLEANING

- A. On a regular and frequent basis during progress of WORK, perform cleaning necessary to keep Project site and adjacent properties free from unsightly and unsafe accumulation of scrap and waste materials, debris, rubbish and trash resulting from construction operations.
  - 1. Provide sufficient trash bins and containers for collection of scrap and waste material, debris, rubbish and trash.
  - 2. Provide separate, closable top metal containers for collection of oil and paint soaked rags; empty volatile substance cans and other waste products subject to spontaneous combustion.

3. Designate approved eating areas and provide covered containers conforming to local health codes for collection of waste paper and left-over foodstuffs. Enforce usage of containers by workmen.
- B. Dispose of scrap and waste materials, debris, rubbish and trash by one of the following optional methods:
1. Provide services of company regularly engaged in refuse disposal operations, including usage of large metal dump-type trash containers.
  2. Use own forces and equipment for loading, hauling and disposal.
- C. Remove accumulations of scrap and waste materials as bins and containers are filled and not less than once per week.
1. Remove containers containing products subject to spontaneous combustion daily.
  2. Remove containers containing waste paper and left-over foodstuff daily.
  3. Legally dispose of all waste materials, rubbish, volatile materials and cleaning materials off Project site.
  4. Dispose of no materials in waterways.

### 3.02 DUST CONTROL

#### Site Work

When working on unpaved or torn up streets, CONTRACTOR shall maintain a water truck on site for dust control. All dusty work sites in residential areas shall be watered at least twice per day and whenever directed by the OWNER's representative.

### 3.03 FINAL CLEANING

#### Site Work

1. All piles of dirt and rocks are to be removed from the work area.
2. All disturbed areas are to be grassed and mulched according to these specifications.
3. All construction debris is to be removed to an approved disposal site.
4. All streets are to be swept with a mechanical sweeper.

### 3.04 INSPECTION

Prior to occupancy by OWNER of any designated portion of WORK, conduct inspection in presence of OWNER to verify WORK is properly clean and ready for acceptance by OWNER.

END OF SECTION

## SECTION 02100

### SITE PREPARATION

#### PART 1 GENERAL

##### 1.01 SCOPE OF WORK

- A. WORK to be performed under this section shall consist of clearing and grubbing the site within the limits of the Contract as shown on Drawings and disposal of all waste materials.
- B. WORK also included under this section shall include the removal and replacement of existing fences and the erection of temporary fences.
- C. Definitions
  - 1. Clearing: The removal and disposal of all exposed objectionable matter such as: trees, brush, logs, buildings, fences, poles, rubbish, loose boulders and other debris resting on or protruding through the ground surface.
  - 2. Grubbing: The removal and disposal of all objectionable matter such as: logs, poles, stumps, structures, boulders, rubbish, and other debris which is embedded in the soil.

##### 1.02 REGULATORY REQUIREMENTS

- A. Conform to applicable code for disposal of debris.
- B. Conform to local Fire Department Codes for burning debris on site. Contractor shall obtain all necessary permits prior to burning on site.

#### PART 2 PRODUCTS

##### 2.01 MATERIALS

- A. Materials used for protection of trees and vegetation not to be removed during clearing operations shall be at Contractor's option. Materials chosen shall be approved by the ENGINEER prior to installation and upon installation shall be approved by the ENGINEER to ensure maximum protection to vegetation.
- B. Materials used for the repair of trees and vegetation damaged outside clearing limits shown on Drawings shall be at Contractor's option but must be approved by the ENGINEER prior to use.
- C. Wound paint shall be a standard bituminous product.
- D. Herbicides shall not be used unless written approval is given by OWNER.

- E. Explosives shall not be used unless written approval is given by OWNER.
- F. Materials used for the replacement or relocation of existing fences shall be of equal or superior quality to those fence materials existing prior to construction unless specified otherwise on the plans.

## PART 3 EXECUTION

### 3.01 CLEARING

- A. No tree, shrub, or other landscaping plants shall be removed unless absolutely necessary for the construction of the proposed improvements. All shrubs or landscaping plants removed or damaged during construction shall be replaced by the Contractor at his expense, with landscaping approved by the ENGINEER.
- B. Limits of clearing shall be contained within the areas within Right-of-way, Easement and Construction limits as shown on Drawings.
- C. Existing fences that, at the direction of OWNER, can be reused shall be carefully removed and stored at such a distance they shall not be damaged by construction activity.
- D. Fences that cannot be reused shall be removed to such a distance to allow construction activity and shall be replaced with new materials similar to existing fences upon completion of construction.

### 3.02 GRUBBING

- A. The limits of grubbing shall be contained within Right-of-way, Easement and Construction limits as shown on Drawings.
- B. Stumps and roots shall be grubbed and removed to a depth not less than 2 feet below existing grade or bottom of foundation structure.
- C. All holes or cavities which extend below the subgrade elevation of proposed WORK shall be filled with crushed rock or other suitable material and compacted to the same density as the surrounding material.

### 3.03 PROTECTION

- A. Streets, roads, adjacent property, and other works to remain shall be protected throughout the work in accordance with local laws and ordinances.
- B. Contractor shall make every effort to protect existing bench marks, R/W markers, monuments, iron pins, property corner markers, etc. If any are disturbed or destroyed, CONTRACTOR shall provide services of a registered land surveyor to replace the markers, as directed by OWNER, at no expense to OWNER.

- C. No trees shall be cut outside of areas designated without specific approval of ENGINEER, and any trees designated shall be protected from damage by CONTRACTOR's construction operations.
- D. Existing trees and other vegetation to remain shall be protected as directed by OWNER:
  - 1. Trees shall be protected by fencing, barricades, or wrapping.
  - 2. Shrub and bushes shall be protected by fencing, barricades, or wrapping. Wrapping of bushes and shrubs with plastic film will not be permitted.
  - 3. Shallow-rooted plants shall be protected at ground surface under and in some cases outside the spread of branches by fencing, barricades, or ground cover protection.
- E. In the event that archaeological resources are uncovered, CONTRACTOR shall notify OWNER prior to proceeding with WORK.
- F. It shall be the responsibility of the CONTRACTOR to inspect the site, determine the amount of work required, and include this work in his proposal.
- G. CONTRACTOR is to erect temporary fences as necessary to preserve the privacy of all affected property owners whose existing fences are being removed or relocated. Temporary fences shall be of sufficient strength and quality to prevent escape of animals and livestock and to prevent the intrusion of animals and people.
- H. It is CONTRACTOR's responsibility to coordinate the removal and erection of fences with each affected property owner and to maintain any temporary and relocated fences throughout the contract period.
- I. CONTRACTOR shall assume all costs incurred by any property owner in the loss of animals or livestock due to an insufficiency of replaced or temporary fences during the contract period and maintenance period thereafter.
- J. It is the CONTRACTOR's responsibility to secure any insurance necessary to protect himself in the event of loss or damage to any animals, livestock and property for the duration of the project and maintenance period.

### 3.04 DISPOSAL

- A. All trees within the working easements shown on the CONTRACT DOCUMENTS are property of the existing land owners. If the property owner wishes to keep the timber, the CONTRACTOR shall cut the timber in reasonable lengths and stack such timber on OWNER's property. If the property owner does not wish to keep the timber, the timber shall become the property of the CONTRACTOR and shall be removed from the site and disposed of at the CONTRACTOR's expense. All stumps, rubbish, and other material, not suitable as timber, shall be removed from the site at the CONTRACTOR's expense.
- B. CONTRACTOR shall remove and dispose of all excess material resulting from clearing or site preparation operations. CONTRACTOR shall dispose of such materials in a manner acceptable to OWNER and the local governing authority and at an approved location where such materials can be lawfully disposed.
- C. CONTRACTOR may, at no cost, retain any materials of value from clearing operations for his own use or disposal by sale unless otherwise stated in these Specifications. Such material shall be removed from construction area before date of completion of WORK under these Specifications. OWNER assumes no responsibility for protection or safekeeping of any materials so retained by CONTRACTOR.
- D. Materials will not be disposed of by burying unless approved by OWNER. Buried materials will be covered with not less than 2 feet of earth material.
- E. Burning will be permitted if the required permits have been acquired from the local Fire Department. Burning will be permitted only at times when conditions are considered favorable for burning and at locations approved by proper State or local authorities. Materials to be burned shall be piled neatly and, when in a suitable condition, shall be burned completely. Piling for burning shall be done in such a manner and in such locations as to cause the least fire risk. All burning shall be so thorough that the materials are reduced to ashes. No logs, branches, or charred pieces shall be permitted to remain. CONTRACTOR shall at all times take special precautions to prevent fire from spreading to areas beyond the limits of cleared areas and shall have available at all times, suitable equipment and supplies for use in preventing and suppressing fires. Unguarded fires will not be permitted.
- F. Material to be removed from site shall be removed as it accumulates to prevent any unsightly spoil areas.

### PART 4 MEASUREMENT AND PAYMENT

No separate measurement or payment will be made for site preparation of water lines or other pipes, or for any other appurtenance facilities such as valves, fire hydrants, etc. Payment for all work shall be included in the unit prices bid per linear foot of the various sizes and type of pipe laid or for the number of units installed for the valves, fire hydrants, etc. as provided for in contract Bid Schedule.

END OF SECTION

## SECTION 02225

### EARTHWORK FOR UTILITIES

#### PART 1 GENERAL

##### 1.01 SCOPE OF WORK

Work under this section shall include all operations necessary for excavating, backfilling and compaction of material necessary for the construction of pipelines and all appurtenant facilities including concrete saddles, pipe protection, etc., and for the disposal of waste and unsuitable materials.

##### 1.02 REFERENCES

- A. American Society for Testing and Materials (ASTM), Annual Book of Standards
  - 1. ASTM D 698, Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400) ft-lbf/ft<sup>3</sup>.
  - 2. ASTM D 2321, Standard Practice for Underground Installation of Thermoplastic Pipe for Sewers and Other Gravity-Flow Applications.
  - 3. ASTM D 2922, Standard Test Methods for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth).
- A. Occupational Safety and Health Administration (OSHA), Code of Federal Regulations 29 CFR Part 1926, Subpart P – Excavation, latest revision.

##### 1.03 GENERAL

Elevations of the existing ground and the elevations of existing grades of structures are believed to be reasonably correct, but do not purport to be absolutely so, and, together with any schedule of quantities are presented only as an approximation. The CONTRACTOR shall satisfy himself, however, by actual examination of the site of the WORK as to the existing elevations and the amount of work required under this section. If the CONTRACTOR is not willing to accept any ground surface elevations indicated upon the Drawings for payment, he shall so notify the ENGINEER prior to starting any excavation work.

#### PART 2 PRODUCTS

##### 2.01 BEDDING STONE

Class IA or IB aggregate materials in accordance with ASTM D 2321.

## 2.02 BACKFILL

Reused or imported earth free of stone, clods, broken rock, or concrete larger than 3 inches in largest dimension, or organic matter, rubbish, or other unsuitable material.

## PART 3 EXECUTION

### 3.01 INSPECTION

- A. Verify bedding and backfill material to be used are acceptable. Do not use frozen material.
- B. Verify areas to be backfilled are free of debris, snow, ice, or water, and surfaces are not frozen.

### 3.02 PREPARATION

- A. Identify required lines, levels, contours, and datum.
- B. When necessary, compact subgrade surfaces to density requirements for backfill material.

### 3.03 SHEETING, SHORING AND BRACING

- A. CONTRACTOR shall be responsible for supporting and maintaining all excavations required even to the extent of sheeting and shoring the sides and ends of excavations with timber or other supports. All sheeting, shoring and bracing shall have sufficient strength and rigidity to withstand the pressure exerted and to conform with OSHA 29 CFR Part 1926, Subpart P – Excavations, latest revision.
- B. Excavations adjacent to existing or proposed utilities, buildings and structures, or in paved streets or alleys shall be sheeted, shored and braced adequately to prevent undermining beneath or subsequent settlement of such structures or pavements. Underpinning of adjacent utilities and structures shall be done when necessary to maintain utilities and structures in safe condition. The CONTRACTOR shall be held liable for any damage resulting to such utilities, structures or pavements as a result of his operations.
- C. The need and adequacy of sheeting, shoring, bracing, or other provisions to protect men and equipment in a trench or other excavation shall be the sole and exclusive responsibility of CONTRACTOR.

### 3.04 EXCAVATION

- A. Trench Excavation
  - 1. Trench excavation shall consist of the removal of materials necessary for the construction of pipelines and all appurtenant facilities including collars, concrete saddles, and pipe protection called for on Drawings.

2. Excavation for pipelines shall be made in open cut unless otherwise shown on Drawings. Trenches shall be cut true to lines and grades shown on Drawings. Minimum pipe cover shall be 48" measured from the top of pipe to the ground surface.
  3. Use of motor-powered trenching machine will be permitted but full responsibility for the preservation, replacement, and/or repair of damage to any existing utility services and private property shall rest with CONTRACTOR.
  4. Bell holes for bell and spigot pipe and/or mechanical joint pipe shall be excavated at proper intervals so the barrel of the pipe will rest for its entire length upon the bottom of the trench or bedding material.
  5. Pipe trenches shall not be excavated more than 400 feet in advance of pipe laying and all work shall be performed to cause the least possible inconvenience to the public. Adequate temporary bridges or crossings shall be constructed and maintained where required to permit uninterrupted vehicular and pedestrian traffic.
  6. Unless otherwise specified herein or shown on Drawings, wherever pipe trenches are excavated below elevation shown on Drawings, CONTRACTOR, at his own expense, shall fill the void thus made to proper grade with Class D concrete or with compacted layers of crushed rock or other material conforming to requirements specified herein for backfill.
  7. In all cases where materials are deposited along open trenches they shall be placed so that no damage will result to the WORK and/or adjacent property in case of rain or other surface wash.
  8. Remove soft, spongy, or otherwise unstable materials encountered at elevation of pipe which will not provide a firm foundation for the pipe. Extend bedding depth as necessary to reach firm materials.
- B. Any unauthorized excavation shall be corrected at the CONTRACTOR's expense.
  - C. Protect bottom of excavations and soil adjacent to and beneath foundations from frost.
  - D. Grade top perimeter of excavation to prevent surface water run-off into excavation.
  - E. Notify ENGINEER of unexpected subsurface conditions and discontinue work in affected area until notification to resume work.

### 3.05 DEWATERING

- A. CONTRACTOR shall provide and maintain at all times during construction, ample means and devices with which to promptly remove and properly dispose of all water from any source entering the excavations or other parts of the WORK. Dewatering shall be accomplished by methods which will ensure a dry excavation and preservation of final lines and grades of bottoms of excavations. Methods of dewatering may include sump pumps, well points, deep wells, or other suitable methods which do not damage or weaken structures, foundations, or subgrades. Shallow excavations may be dewatered using open ditches provided such ditches are kept open and free-draining at all times. Dewatering methods used shall be acceptable to ENGINEER. Footing pits or trenches shall be protected by small earth dikes and plastic covers when they are left open in rainy weather.
- B. Unless specifically authorized by ENGINEER, groundwater encountered within the limits of excavation shall be depressed to an elevation not less than twelve (12) inches below the bottom of such excavation before pipe laying or concreting is started and shall be so maintained. No concrete structures shall be exposed to unequal hydrostatic forces until the concrete has reached its specified 28-day strength. Water shall not be allowed to rise above bedding during pipe laying operations. CONTRACTOR shall exercise care to prevent damage to pipelines or structures resulting from flotation, undermining, or scour. Dewatering operations shall commence when ground or surface water is first encountered and shall be continued until such times as water can safely be allowed to rise in accordance with provisions of this section.
- C. Standby pumping equipment shall be kept on the job site. A minimum of one standby unit (one for each ten in the event well points are used) shall be available for immediate installation should any pumping unit fail. Installation of well points or deep wells shall be adequately sized to accomplish the WORK. Drawings or design of proposed well point or deep well dewatering systems shall be submitted to ENGINEER for review.
- D. CONTRACTOR shall not operate dewatering devices (i.e., pumps, etc.) before the hour of 8:00 AM and after the hours of 8:00 PM in a residential area unless otherwise approved by ENGINEER or OWNER.
- E. If foundation soils are disturbed or loosened by the upward seepage of water or an uncontrolled flow of water, the affected areas shall be excavated and replaced with foundation backfill at no cost to OWNER. Foundation backfill shall be placed in bottom of trench to within 6" of the bottom of pipe. Six (6) inches of bedding stone shall be placed over the top of the foundation backfill.
- F. CONTRACTOR shall dispose of water from the WORK in a suitable manner without damage to adjacent property. Conveyance of water shall be such as to not interfere with construction operations or surrounding property owners. No water shall be drained into WORK built or under construction without prior consent of ENGINEER. CONTRACTOR will be held responsible for the condition of any pipe or conduit which he may use for drainage purposes, and all such pipes or conduits shall be left clean and free of sediment.

- G. Storm water runoff shall be controlled by means of temporary erosion control methods specified in Section 02270, as shown on Drawings, or as directed by ENGINEER.
- H. Water shall be disposed of in such a manner as not to be a menace to public health and in accordance with applicable Environmental Protection Agency, Corps of Engineers, and State Environmental Protection Division standards and permits.

### 3.06 BEDDING/BACKFILLING

- A. The backfilling of trenches shall be started immediately after construction of same has been viewed by the Project Observer. Bedding and backfill material shall be earth or aggregate in accordance with Part 2 and the Drawings. Material shall be deposited in the initial horizontal layer to the spring line of the pipe (before compaction) on each side of the pipe. The initial layer shall be thoroughly tamped or rammed around the pipe until the initial layer's density is equal to the density of the adjacent undisturbed soils. The second bedding material layer shall be deposited horizontally to a depth to provide a cover of 12 inches over top of pipe. The remainder of the backfill shall be placed in horizontal layers 18 inch (maximum) in depth. The second and subsequent bedding/backfill layers shall be compacted by compaction tools to a density equal to or greater than the density of the adjacent undisturbed soils, except under roads, structures, and driveways.
- B. Compact aggregate and soil backfill under roads, structures, and driveways to a minimum of 95% of maximum dry density at not less than 2% below nor more than 2% above the optimum moisture content as determined by ASTM D 698.
- C. All backfilling shall be done in such a manner that the pipe or structure over or against which it is being placed will not be disturbed or injured. Any pipe or structure injured, damaged or moved from its proper line or grade during backfilling operations shall be removed and repaired to the satisfaction of OWNER and then re-backfilled.
- D. Backfilling shall not be done in freezing weather except by permission of the ENGINEER, and shall not be done with frozen material or upon frozen materials.
- E. All backfilling shall be left with smooth, even surfaces, properly graded and shall be maintained in this condition until final completion and acceptance of the work. Where directed by the ENGINEER, the backfill shall be mounded slightly above the adjacent ground.
- F. Leave stockpile areas completely free of excess fill materials. After construction and cleanup, stockpile areas shall be seeded.

### 3.07 SUBSURFACE OBSTRUCTIONS

- A. In excavating, backfilling, and laying pipe, care must be taken not to remove, disturb, or injure any existing water, telephone, gas pipes, storm drainage pipe, headwalls or catch basins, or other conduits or structures, without the approval of the ENGINEER. If necessary, the CONTRACTOR at his own expense, shall sling, shore up, and maintain such structures in operation, and shall repair any damage to them. Before final acceptance of the work, he shall return all such structures to as good condition as before the work started.

- B. The CONTRACTOR shall give sufficient notice to the interested utility of his intention to remove or disturb any pipe, conduit, etc., and shall abide by their regulations governing such work. In the event that any subsurface structure becomes broken or damaged in the execution of the work, the CONTRACTOR shall immediately notify the proper authorities, and shall be responsible for all damage to persons or property caused by such breaks. Failure of the CONTRACTOR to promptly notify the affected authorities shall make him liable for any needless loss so far as interference with the normal operation of the utility.
- C. When pipes or conduits providing service to adjoining buildings are broken during progress of the work, the CONTRACTOR shall repair them at once.
- D. Delays such as would result in buildings or residences being without services overnight or for a needlessly long period during the day will not be tolerated. Should it become necessary to move the position of a pipe, conduit or structure, it shall be done by the CONTRACTOR in strict accordance with the instructions given by the ENGINEER or the utility involved.
- E. The OWNER or the ENGINEER will not be liable for any claim made by the CONTRACTOR based on underground obstructions being different from that indicated in these CONTRACT DOCUMENTS or Drawings.

### 3.08 BORROW EXCAVATION

Wherever the backfill of excavated areas or the placement of embankments or other fills require material not available at the site, suitable material shall be obtained from other sources. This may require the opening of borrow pits at points not immediately accessible to the WORK. In such cases, CONTRACTOR shall make arrangements with the property owner and shall pay all costs incident to the borrowed material including royalties, if any, for the use of the material. Before a borrow pit is opened, the quality and suitability of the material to be obtained shall be approved by the ENGINEER. Any soil tests required for approval of the borrowed material proposed, shall be at the OWNER's expense.

### 3.09 DISPOSAL OF WASTE AND UNSUITABLE MATERIALS

- A. Materials removed by excavation, which are suitable for the purpose, shall be used to extent possible for backfilling pipe trenches and for making embankment fills, subgrades or for such other purposes as may be shown on Drawings. Materials not used for such purposes shall be considered waste material and shall be disposed of at the CONTRACTOR's expense.
- B. Waste materials shall be spread in uniform layers and neatly leveled and shaped. Spoil banks shall be provided with sufficient and adequate openings to permit surface drainage of adjacent lands.
- C. Unsuitable materials, consisting of rock, wood, vegetable matter, debris, soft or spongy clay, peat, and other objectionable material so designated by the ENGINEER, shall be removed from the work site and disposed of by CONTRACTOR at his expense.
- D. No waste material shall be dumped on private property unless written permission is furnished by owner of property and unless a dumping permit is issued from local jurisdiction.

### 3.10 TESTING

- A. Compaction of fill and backfill to the specified moisture-density relationship of soils shall be verified by in-place density tests using ASTM D 2922 or other ASTM in-place density tests approved by the ENGINEER. Maximum density determination and in-place density tests shall be performed by a soils technician chosen by the OWNER and paid for by the CONTRACTOR. Frequency and location of tests shall be adequate to ensure proper compaction has been achieved.
- B. Areas not meeting the required compaction shall be recompacted until the desired degree of compaction is achieved.

### 3.11 PROTECTION

Protect excavation by shoring, bracing, sheet piling, underpinning, or other methods required to prevent cave-in of loose soil into excavation. Protection shall be in accordance with OSHA 29 CFR Part 1926, Subpart P-Excavations, latest revision.

### 3.12 FINAL GRADING

- A. After other earthwork operations have been completed, finished surfaces shall be left in smooth and uniform planes such as are normally obtainable from use of hand tools. If CONTRACTOR is able to obtain required degree of evenness by means of mechanical equipment, he will not be required to use hand labor methods. Slopes and ditches shall be neatly trimmed and finished.
- B. Unless otherwise specified or shown on the Drawings, all finished ground surfaces shall be graded and dressed to present a surface varying not more than plus or minus 0.10 foot. Any finished surfaces resulting in inadequate drainage or washouts shall be corrected by the CONTRACTOR at his expense.

### 3.13 SETTLEMENT

- A. CONTRACTOR shall be responsible for all settlement of backfill, fills, and embankments which may occur during warranty period.
- B. CONTRACTOR shall make, or cause to be made, all repairs or replacements made necessary by settlement within 30 days after receipt of written notice from ENGINEER or OWNER.

## PART 4 MEASUREMENT AND PAYMENT

No separate measurement or payment will be made for site preparation of water lines or other pipes, or for any other appurtenance facilities such as valves, fire hydrants, etc. Payment for all work shall be included in the unit prices bid per linear foot of the various sizes and type of pipe laid or for the number of units installed for the valves, fire hydrants, etc. as provided for in contract Bid Schedule.

END OF SECTION

## SECTION 02227

### TRENCH ROCK REMOVAL

#### PART 1 GENERAL

##### 1.01 SCOPE OF WORK

- A. Removal of all rock materials discovered during excavation for the purpose of construction. Removal shall include drilling and/or blasting incidental thereto and disposal of excavated materials.
- B. When necessary for prosecution of the WORK, the use of explosives to assist rock removal may be exercised by CONTRACTOR provided this use is in compliance with all local, State, Federal and other Governmental regulations applying to transportation, storage, use and control of explosives.

##### 1.02 RELATED WORK

- A. Section 02200 - Earthwork
- B. Section 02225 - Earthwork for Utilities

##### 1.03 REFERENCES

- A. NFPA 495 - Code for the Manufacture, Transportation, Storage, and Use of Explosive Materials.
- B. OSHA 2207 - Construction Industry Standards, Subpart T - Demolition.

##### 1.04 QUALITY ASSURANCE

Explosives Firm: Company specializing in explosives for disintegration of subsurface rock with documented experience.

##### 1.05 REGULATORY REQUIREMENTS

- A. Conform to applicable code for explosive disintegration of rock.
- B. Obtain permits from authorities having jurisdiction before explosives are brought to site or drilling is started.
- C. All explosives shall be stored securely in compliance with all laws and ordinances, and all such storage places shall be clearly marked DANGEROUS EXPLOSIVES. Blasting caps, electric blasting caps, detonating primers, and primed cartridges shall not be stored in the same magazine with other explosives or blasting agents. Locked storage shall be provided satisfactory to the ENGINEER, never closer than 1000 feet from any road, building, or camping area.

## PART 2 PRODUCTS

### 2.01 MATERIALS

- A. Rock (Definition): Solid mineral material with a volume in excess of 1/2 cu yd that cannot be broken down and removed by use of heavy construction equipment, such as a Caterpillar Model 215 track-type hydraulic excavator equipped with a short tip radius rock bucket or a bulldozer such as a Caterpillar Model D8K track-type tractor equipped with single tooth hydraulic ripper, without drilling or blasting. Materials which can be loosened with a pick, hard pan, boulders less than 1/2 cu yd in volume, chert, clay, soft shale, soft and disintegrated rock and any similar material shall not be considered as rock. (All materials to be considered unclassified or common excavation.)
- B. Explosives: Shall be suitable for intended purposes at the CONTRACTOR's option subject to review by OWNER and ENGINEER.
- C. Delay Devices: Type recommended by explosives firm to be used as accessory to explosives. Subject to review by ENGINEER.
- D. Blasting Mat: When the use of explosives is necessitated during prosecution of the WORK, CONTRACTOR shall incorporate the use of blasting mats of type recommended by explosives firm to lessen the danger of projectiles occasionally resultant from blasting of rock.

## PART 3 EXECUTION

### 3.01 INSPECTION

- A. CONTRACTOR shall verify site conditions and note irregularities affecting work of this Section prior to performing any operations involving explosives. CONTRACTOR shall submit to OWNER for review a detailed plan for using explosives to include, but not limited to:
  - 1. Sequence of WORK
  - 2. Equipment
  - 3. Protection to be provided for existing structures to remain
  - 4. Personnel
    - a) Training
    - b) Previous experience with the use of explosives in similar situation
- B. Beginning work of this Section means acceptance of existing condition.

- C. Rock in utility trenches shall be excavated over the horizontal limits of excavation and to depths as follows:

Size of Pipeline (Inches)	Depth of Excavation Below Bottom of Pipe (Inches)
Less than 4	6
4 to 6	8
Over 8	12

Space below grade for pipe shall then be backfilled with minus 3/4-inch crushed rock or gravel or other approved materials and tamped to proper grade.

### 3.02 ROCK REMOVAL - MECHANICAL METHOD

- A. Excavate for and remove rock by the mechanical method.
- B. Where pipes are constructed on concrete cradles, rock shall be excavated to bottom of cradle as shown on plans.
- C. Where rock foundation is obtained at grade for over 50 percent of area of any one structure, the portion of foundation that is not rock shall be excavated below grade to reach a satisfactory foundation of rock. The portion below grade shall be backfilled with Class C concrete.
- D. Where rock foundation is obtained at grade for less than fifty (50%) of any one structure and satisfactory rock cannot be found over the remaining area by reasonable additional excavation, the rock shall be removed for a depth of twelve (12) inches below grade and the space below grade shall be backfilled with crushed stone as specified for pipelines.
- E. Rock excavation near existing pipelines or other structures shall be conducted with utmost care to avoid damage. Injury or damage to other structures and properties shall be promptly repaired to the satisfaction of OWNER and by CONTRACTOR at his own expense.
- F. Rock excavation for all structures and adjacent trenches under this Contract and any other rock excavation directed by OWNER shall be completed before construction of any structure is started in the vicinity.
- G. Remove excavated material from site.
- H. CONTRACTOR shall correct unauthorized rock removal by backfill to grade with Class C concrete in accordance with backfilling and compaction requirements of Section 02200 (Earthwork) and Section 02225 (Earthwork for Utilities) at his own expense.

### 3.03 ROCK REMOVAL - EXPLOSIVES METHODS

- A. If rock is uncovered requiring the explosives method for rock disintegration and removal, the ENGINEER shall be notified immediately so that the surface can be examined. Blasting will not be permitted unless written authorization is given by ENGINEER. (All materials removed shall be considered common excavation).
- B. The CONTRACTOR shall notify any owners of adjacent buildings or structures, and any public utility owners having structures or other installations above or below ground, in writing prior to use of explosives. Such notice shall be given sufficiently in advance so that they may take such steps as they may deem necessary to protect their property from injury and/or damage.
- C. Rock excavation by use of explosives shall be conducted with due regard for safety of persons and property in the vicinity and in strict conformance with requirements of local, State and Federal ordinance, laws and regulations governing the use of explosives.
- D. Blasting shall be conducted so as not to endanger persons or property, and whenever required, the blast shall be covered with mats or otherwise satisfactorily confined. The CONTRACTOR shall be held responsible for and shall make good any damage caused by blasting or accidental explosions.
- E. The CONTRACTOR shall permit only authorized and qualified persons to handle and use explosives.
- F. Smoking, firearms, matches, open flame lamps, and other fires, flame or heat producing devices and sparks shall be prohibited in or near explosive magazines or while explosives are being handled, transported or used.
- G. No person shall be allowed to handle or use explosives while under the influence of intoxicating liquors, narcotics, or other dangerous drugs.
- H. All explosives shall be accounted for at all times. Explosives not being used shall be kept in a locked magazine, unavailable to persons not authorized to handle them. The CONTRACTOR shall maintain an inventory and use record of all explosives. Appropriate authorities shall be notified of any loss, theft, or unauthorized entry into a magazine.
- I. No explosives or blasting agents shall be abandoned.
- J. CONTRACTOR's employees authorized to prepare explosive charges or conduct blasting operations shall use every reasonable precaution including, but not limited to, visual and audible warning signals, flags, or barricades, to ensure safety.

- K. It shall be CONTRACTOR's responsibility to incorporate the use of seismic monitoring should rock excavation, by use of explosives, occur within 300 feet of any residential, commercial, or of any miscellaneous structure. Blasting conducted near dams or bridge foundations shall incorporate the use of a seismic monitor should such blasting occur within 500 feet of said dam and/or bridge foundation. CONTRACTOR shall maintain all seismic records and blasting logs to be furnished to ENGINEER upon request.
- L. Disintegrate rock and remove from excavation.
- M. Cut away rock at excavation bottom to form level bearing.
- N. Remove shaled layers to provide sound and unshattered base for pipe foundations.
- O. Remove excavated material from site.
- P. Correct unauthorized rock removal or overbreak in accordance with backfilling and compaction requirements at his own expense.

#### 3.04 FIELD QUALITY CONTROL

Provide for visual inspection of bearing surfaces and cavities formed by removed rock for inspection by ENGINEER or his representative prior to laying of pipe.

### PART 4 MEASUREMENT AND PAYMENT

#### 4.01 TRENCH ROCK REMOVAL

- A. Quantities for trench rock removal shall be expressed in cubic yards, as defined below, in accordance with the plans and specifications.
- B. If rock is encountered, the CONTRACTOR is to expose the rock for the length of the proposed trench. The OWNER or ENGINEER shall then attain sufficient topographic data to establish the limits of the rock to be excavated.
- C. The quantity of rock to be paid for shall be calculated from the upper surface data obtained to one foot below the pipe invert multiplied by three foot trench width. No additional payment shall be made for manhole excavation or benching. The price for this work shall be included in the unit price bid for trench rock removal.

END OF SECTION

## SECTION 02523

### RESTORING SIDEWALKS, DRIVEWAYS, CURBS AND GUTTERS, AND STORM DRAINAGE STRUCTURES

#### PART 1 GENERAL

##### 1.01 SCOPE OF WORK

WORK included in this Section consists of repair or replacement of sidewalks, driveways, curbs and gutters, and storm drainage structures.

##### 1.02 RELATED WORK

Section 02225 - Earthwork for Utilities

##### 1.03 REFERENCES

- A. Georgia Department of Transportation (GDOT) Standard Specifications, Construction of Transportation System, 2001 Edition.
- B. American Society for Testing and Materials (ASTM) Annual Book of Standards: ASTM C 150, Standard Specification for Portland Cement.

#### PART 2 PRODUCTS

##### 2.01 CRUSHED STONE BASE

Stone base shall be a Graded Aggregate Base conforming to Section 815 of GDOT Standard Specifications.

##### 2.02 CONCRETE

Shall be ready-mixed concrete conforming to ASTM C 150, Type II Concrete.

##### 2.03 HOT MIX ASPHALTIC CONCRETE

Mix Type "E" conforming to Section 400 of GDOT Standard Specifications.

##### 2.04 STORM DRAIN PIPE

In accordance with Section 550 of GDOT Standard Specifications.

##### 2.05 TACK COAT

In accordance with Section 413 of GDOT Standard Specifications.

## PART 3 EXECUTION

### 3.01 GENERAL

- A. Restore all sidewalks, driveways, curbs and gutters, and storm drains to or better than the original, but not less thickness or quality than specified herein or shown on the Drawings.
- B. Carefully backfill any excavated area on which sidewalks, driveways or curbs and gutters are to be placed as specified in Section 02225 of these Specifications as applicable.
- C. If, prior to the expiration of the warranty period, any sidewalk storm drain, driveway or curb and gutter which has been damaged, due to undermining, or for any other cause which may be attributed to the work of the CONTRACTOR, the CONTRACTOR shall remove such damaged work and all loose earth. He shall then backfill with crushed stone base, properly compacted and replace damaged material/structure.
- D. WORK which the CONTRACTOR may do in connection with the replacement and repair of damaged work during the period of maintenance, shall be done at his expense, in accordance with the rules and requirements of the authority within whose jurisdiction such pavement is located, and in accordance with the additional requirements of the specifications, and the CONTRACTOR shall furnish evidence to the ENGINEER that the work has been completed to the satisfaction of such authority.
- E. Before replacing any sidewalk, driveway or curb and gutter, remove the existing sidewalk, driveway and/or curb and gutter back from the edge of excavation at least 12 inches or to the nearest joint if the nearest joint is within two (2) feet.
- F. All cuts shall be made by channeling machine, pneumatic tools, or such other methods as will furnish a straight clean cut in the concrete without undue shattering.
- G. The CONTRACTOR shall provide crushed stone base over trenches after completion of backfill.
- H. Should settlement, cracks or other indications of failure appear in concrete, pavement, driveways, curbs, pipes, or other structures the defective material shall be removed to the extent necessary to secure firm, undisturbed bearing and shall be relaid in a satisfactory manner.

### 3.02 CURB AND GUTTER

- A. Portland Cement Concrete curbs and gutters shall conform to Section 441 of Georgia D.O.T. Standard Specifications. Match existing curb. Construct 1/2" wide expansion joints with premolded joints filler across curb at all tangent points and at fifty feet intervals and one inch wide expansion joint filler and 3/4" joint sealing between curbs and concrete paving. Finish curb surface with dense uniform texture equal to burlap drag, and cross-score with 1/4" deep cross joints at ten foot intervals.

- B. Concrete curbs and gutters shall be finished in accordance with GDOT Standard Specifications. Face forms shall be removed as soon as possible and the exposed surfaces finished with a wood float. Straightedging, done along the edge of the gutter and top of curb and median shall conform to those requirements for the adjacent pavement, but with no irregularities to exceed 1/4 inch in 10 feet.
- C. Machine methods of placing may be used, providing the end result is satisfactory.

### 3.03 CONCRETE SIDEWALK

- A. CONTRACTOR shall relay/restore all sidewalks disturbed by the CONTRACTOR during construction.
- B. Sidewalks shall conform to requirements of Section 441 of Georgia D.O.T. Standard Specifications. Minimum sidewalk thickness shall be 4 inches. Provide transverse contraction joints at 6' interval by cutting a groove in the fresh concrete 1" deep with a jointer having an approved radius and a cutting blade not over 1/8" thick.
- C. Construct 1/2" wide expansion joints with premolded joint filler across walks at a maximum of fifty feet intervals. Finish to a broom and burlap drag gritty surface. Tool all joints and all edges to provide smooth border between sections. Match existing sidewalks.
- D. Concrete sidewalks shall be given a finish made by stiff-bristle brooming. The surface shall be tested with a 10 foot straightedge laid parallel to the centerline. Any irregularities in excess of 1/4 inch in 10 feet shall be eliminated while the concrete is still plastic. Concrete sidewalk constructed as curb cut (wheelchair) ramps shall have a rough or textured finish.

### 3.04 RESTORING STORM DRAINAGE PIPE

- A. The CONTRACTOR shall restore and replace storm drainage pipe and appurtenances when they are disturbed during execution of the work under this Contract at no additional cost to the OWNER.
- B. The storm drainage structures shall be replaced to the same horizontal and vertical location prior to their removal or disturbance.
- C. Materials used in the replacement of storm drainage structures shall be of the same size, type, and length of that removed.
- D. Storm drainage pipe damaged due to the negligence on the part of the CONTRACTOR shall be replaced at the CONTRACTOR'S expense.

### 3.05 CONCRETE AND ASPHALT DRIVEWAYS

- A. CONTRACTOR shall restore all driveways disturbed by the CONTRACTOR during construction.
- B. Driveway sections shall be removed by saw cutting pavement.

- C. Construct driveways in accordance with the Drawings, and GDOT Standard Specification Section 400 for asphalt, and GDOT Section 430 for concrete. Finished elevations shall match existing elevations.

#### 3.06 GRAVEL DRIVEWAYS

- A. CONTRACTOR shall restore all driveways disturbed by the CONTRACTOR during construction.
- B. Construct driveways in accordance with the Drawings, and GDOT Standard Specification Section 310. Finished elevations shall match existing elevations.

#### 3.07 CLEAN UP

- A. Before work shall be considered complete, remove material not used and rubbish of every character from job site.
- B. Any subsequent settlement of pavement, exposed surfaces, or backfill shall be repaired and the surface shall be brought to grade.
- C. Any and all items disturbed by the construction shall in every case be restored to their original or better condition as closely as possible prior to completion of the construction.

### PART 4 MEASUREMENT AND PAYMENT

#### 4.01 GRAVEL DRIVEWAY REPAIR

- A. The quantities of gravel driveway repair for which payment will be made shall be expressed in linear feet of material measured along the centerline of the trench for pipe lines and appurtenances placed in or across existing gravel driveways. Where trench excavations cross in gravel areas, the measurement shall be continuous along the centerline of the main line, with the intervals being measured from the edge of trench to the edge of trench or edge of driveways.
- B. Payment for gravel driveway installed under these specifications shall be made for the quantities determined in the manner specified above at the applicable contract price. This amount, so paid, shall be compensation in full for furnishing all labor, materials, tools, equipment, services and other work in connection with or incidental to the construction.

#### 4.02 FREEBORES

- A. Measurement of all freebores shall be made from end of bore to end of bore along the centerline of actual bore length. Payment shall be per linear foot of freebores as provided in Bid Schedule and shall include the carrier pipe and miscellaneous items necessary to complete installation as specified.

- B. Unit price bid shall include cost of any warning signs and/or flagmen that may be required.
- C. No payment shall be made for incomplete or unacceptable bores, for realignment, or for increased length for the convenience of the CONTRACTOR.

END OF SECTION

## SECTION 02645

### FIRE HYDRANTS

#### PART 1 GENERAL

##### 1.01 SUMMARY

CONTRACTOR shall furnish all labor, equipment, and materials and install at location indicated on Drawings, or as directed, fire hydrants as necessary or required for proper completion of the work under this Contract.

##### 1.02 REFERENCES

American Water Works Association (AWWA), C502, Standard for Dry-Barrel Fire Hydrants.

#### PART 2 PRODUCTS

##### 2.01 MATERIALS

- A. Hydrants shall be manufactured in full compliance with AWWA C502, minimum 250 psi. working pressure and as herein amended.
- B. Hydrants shall be M & H 129, Mueller A-423 Super Centurion 250, or US Pipe Metropolitan M-94.
- C. Hydrants shall be three-way, post type, dry top traffic model with compression main valve opening against and closing in the direction of normal water flow. Hydrants shall have a 4 ½" pumper nozzle and two 2 ½" hose nozzles.
- D. Internal main valve diameter shall have a 5-1/4" opening.
- E. Hydrants shall have name of manufacturer, year manufactured, and nominal valve size in legible, raised letters cast on barrel of bonnet.
- F. Dry Top Bonnet
  - 1. Shall be constructed with moisture-proof lubrication chamber which provides automatic lubrication of threads and bearing surfaces each time hydrant is operated.
  - 2. Assembly shall be comprised of top "O" ring serving as dirt and moisture barrier and a lower "O" ring which shall serve as a pressure seal.
- G. Operating Nut
  - 1. Shall be of regular pentagon shape measuring 1½" point to flat; i.e. National Standard, and shall open by turning counter-clockwise (left).

2. Nozzle caps shall have same cross-section as operating nut and shall come with heavy duty, non-kinking chains.
3. Chains shall be securely affixed to hydrant upper barrel and permit free turning of caps.

H. Traffic Design

1. Hydrant barrel sections shall be connected at groundline in a manner that will prevent damage to hydrant when struck by vehicle.
2. Main valve rod sections shall be connected at groundline by frangible coupling.
3. Standpipe and groundline safety construction shall be such that the hydrant nozzles can be rotated to any desired position without disassembling or removing top operating components and top section of hydrant standpipe.

I. Main valve shall be made of synthetic rubber and formed to fit the valve seat accurately.

J. Main Valve Seat

1. Shall be of bronze and assembly into hydrant shall involve bronze to bronze thread engagement.
2. Two (2) "O" ring seals shall be provided as positive pressure seal between the bronze seat ring and shoe.
3. Valve assembly pressure seals shall be obtained without employment of torque compressed gaskets.
4. Hydrants shall be designed to allow removal of all operating parts through hydrant barrel by means of single, light weight disassembly wrench without excavation.

K. Drain

1. Mechanism shall be designed to operate automatically with the operation of main valve and shall allow a momentary flushing of drain ports.
2. Minimum of two (2) internal and two (2) external bronze lined drain ports shall be required in main valve assembly to drain hydrant barrel.
3. Inlet connection shall be cast iron inlet elbow and shall have 6" mechanical joint connection.
4. Barrel extension sections shall be available in 6" increments complete with rod, extension coupling and necessary flanges, gaskets and bolts so that extending hydrant can be accomplished without excavating.

5. No lead will be allowed in nozzle installation.
6. Hydrants shall be tested in strict accordance with AWWA C502 at supplier's expense. Certificate of compliance shall be furnished to OWNER upon request.

## 2.02 SPARE PARTS

CONTRACTOR shall provide the OWNER with two breakaway traffic repair kits.

## PART 3 EXECUTION

### 3.01 SETTING HYDRANTS

- A. Hydrants shall be placed at locations indicated on CONTRACT DRAWINGS in manner to provide complete accessibility and so that possibility of damage from vehicles and injury to pedestrians will be minimized.
- B. Hydrants to be installed so the finish grade is at the hydrant bury line.
- C. Extension required to bring hydrant to proper grade shall be furnished and installed by CONTRACTOR at his expense.
- D. Fire hydrant assembly shall consist of the ductile iron tee, gate valve, ductile iron lead pipe, and hydrant. Tie rods or pipe retainers may be used to restrain assembly. PVC IS NOT ALLOWED FOR HYDRANT ASSEMBLY.

### 3.02 PAINTING, COATING AND LUBRICATING

- A. Iron parts of hydrant shall be thoroughly cleaned inside and outside.
- B. Unless otherwise stipulated or directed, surface shall be coated or painted with, or dipped in, an asphalt or bituminous base paint or coating, except for the exterior portion above the groundline.
- C. Hydrants shall be covered with two (2) coats of paint, the first being allowed to dry thoroughly before applying second coat.
- D. Exterior of hydrant valve above finished groundline shall be thoroughly cleaned and painted in shop with two (2) coats of Koppers Primer 621, or approved equivalent.
- E. Following installation, hydrants shall be painted with two (2) field coats of Glamortex Enamel, silver in color, as manufactured by Inertol Company, or approved equivalent.
- F. Bronze, threaded and contact moving parts shall, during shop assembly, be lubricated and protected by coating of rust proof compound to prevent damage in shipment.

PART 4 MEASUREMENT AND PAYMENT

4.01 FIRE HYDRANTS

- A. The quantity of the size and type of fire hydrants will be the actual number installed by the CONTRACTOR and approved by the ENGINEER.
- B. The price bid shall include all related appurtenances to construct and install the fire hydrants from the in-line tee to the fire hydrant itself. This price shall include the fire hydrant, all labor, necessary equipment, valve fittings, rodding, blocking, valve box and collar, hydrant valve and tee, spares, and all other related appurtenances. Fire hydrants shall be paid for at the unit price bid.

4.02 SALVAGE EXISTING FIRE HYDRANT

- A. The quantity of fire hydrant salvages will be the actual number salvaged.
- B. The unit price bid shall include, but not be limited to, earthwork, removal of fire hydrant assembly, delivery of assembly to location determined by WCWSA, and all related materials and labor.

END OF SECTION

## SECTION 02660

### WATER DISTRIBUTION SYSTEMS

#### PART 1 GENERAL

##### 1.01 SUMMARY

WORK covered by this Section consists of furnishing and installing water distribution pipes and appurtenances, including, but not limited to, reaction blocking, testing, and disinfection.

##### 1.02 RELATED WORK

- A. Section 02225 - Earthwork for Utilities
- B. Section 02665 - Water Service Connections

##### 1.03 REFERENCES

- A. Cement Mortar Lining for Ductile Iron and Gray Iron Pipe and Fittings for Water (AWWA C104).
- B. Gray Iron and Ductile Iron Fittings, 3 inches through 48 inches, for Water and Other Liquids (AWWA C110).
- C. Ductile Iron Compact Fittings, 3 inches through 16 inches, for water and other liquids (AWWA C153).
- D. Rubber Gasket Joints for Ductile Iron and Gray Iron Pressure Pipe and Fittings (AWWA C111).
- E. Ductile Iron Pipe, Centrifugally Cast in Metal Molds or Sand Molds, for Water of Other Liquids (AWWA C151).
- F. Standard Specification for Polyvinyl Chloride (PVC) Plastic Pipe (SDR-PR and Class T)(ASTM D-2241).
- G. Rigid Polyvinyl Chloride Compounds and Chlorinated Polyvinyl Chloride Compounds (ASTM D-1784).
- H. Standard Specification for Oriented Polyvinyl Chloride (PVCO) Pressure Pipe (ASTM 1483).
- I. Gate Valves, 3 through 48 in. NPS, for Water and Sewage Systems (AWWA C500).
- J. Rubber-Seated Butterfly Valves (AWWA C504).

- K. Resilient-Seated Gate Valves, 3 through 12 NPS, for Water and Sewage Systems (AWWA C509).
- L. Installation of Gray and Ductile Cast Iron Water Mains and Appurtenances (AWWA C600).
- M. Disinfecting Water Mains (AWWA C651).
- N. Joints for Plastic Pressure Pipes Using Flexible Elastomeric Seals (ASTM D-3139).
- O. Elastomeric Seals (Gaskets) for Joining Plastic Pipe (ASTM F-477).
- P. American Water Works Associations, Section C-900 (Latest Edition)
- Q. Standard Practice for Underground Installation of Thermoplastic Pressure Piping (ASTM D2774).

#### 1.04 SUBMITTALS

Submit manufacturer's certifications for all pipe, valves, and fittings shipped to the job site. The certifications shall state that all specified tests have been made and the results thereof comply with the requirements of this Specification. Each certificate shall be signed for the manufacturer by a person having legal authority to bind the manufacturer.

#### 1.05 DELIVERY, STORAGE, AND HANDLING

- A. CONTRACTOR shall be responsible for safe unloading, storage and care of material furnished by or to him until it has been incorporated into work.
- B. Unload pipe, fittings, or valves by lifting with hoists or skidding to avoid damage.
  - 1. Pipe shall not be unloaded by rolling or dropping off trucks.
  - 2. Pipe handled on skidways shall not be skidded or rolled against pipe already on ground.
- C. Unload material at site of work, near place where it will be placed in trench.
  - 1. Materials shall be placed so as to least interfere with traffic.
  - 2. Provide signs, lights, and barricades as necessary to protect public.
- D. Handle material carefully to prevent breakage and to avoid damage to coatings and linings.
  - 1. Keep interior of pipe, fittings, and valves, free of dirt or foreign matter at all times.
  - 2. Do not place materials in drainage ways or ditches.

- E. Materials that cannot be placed along site of the work shall be stored at CONTRACTOR's expense. OWNER's storage yards may be utilized if available.

1.06 SITE CONDITIONS

Water used for construction, testing, or disinfection will be furnished by OWNER through connections to OWNER's water system made by CONTRACTOR upon approval by OWNER. **CONTRACTOR WILL PAY OWNER FOR WATER AT CURRENT RATES.**

PART 2 PRODUCTS

2.01 DUCTILE IRON PIPE

- A. Shall conform to latest requirements of AWWA C151.
- B. Shall be cement mortar lined in accordance with AWWA C104 standard thickness.
  - 1. Unless otherwise specified, pipe shall have push-on compression type joints conforming to AWWA C111 or AWWA C153 (Latest Editions).
  - 2. Unless otherwise specified, pressure class shall be 350 psi and wall thickness shall be as follows:

Pipe Diameter	Wall Thickness (Inches)	Pressure Class (psi)
4 Inches	0.25	350
6 Inches	0.25	350
8 Inches	0.25	350
10 Inches	0.26	350
12 Inches	0.28	350

- 3. Pipe used for major or minor creek crossings shall have restrained or ball joint pipe as shown on the Drawings.

2.02 PLASTIC PIPE (PVC)

- A. 3" Diameter and Smaller
  - 1. Polyvinyl Chloride (PVC) pipe 3" diameter and smaller shall conform to requirements of ASTM D-2241.
  - 2. Pipe shall be pressure Class 200 (SDR 21).

3. PVC plastic extrusion compound shall meet requirements of ASTM D-1784 for Class 12454-B (PVC 1120).
4. Pipe and couplings shall bear National Sanitation Foundation Testing Laboratories, Inc., seal of approval for potable water use.

#### 2.03 DUCTILE IRON FITTINGS

- A. Fittings for ductile iron pipe and PVC pipe shall be cast or ductile iron and shall conform to requirements of AWWA C110 or AWWA C153 and shall be cement mortar lined in accordance with AWWA C104 standard thickness.
- B. Joints shall conform to AWWA C111.
- C. Fittings shall be mechanical joint unless otherwise specified on Drawings.
- D. Gaskets for PVC pipe shall be duct tip transition type compatible with type of pipe used.

#### 2.04 Steel Casing

- A. Steel casing pipe shall be spiral or straight seam welded steel pipe conforming to ASTM A 139, Grade A. Minimum wall thickness of steel pipe for roadway crossings shall be 0.250 inches.
- B. Steel casing shall be coated on the outside with Type II, coal tar enamel in accordance with AWWAC203.

#### 2.05 GATE VALVES

- A. Shall conform to requirements of AWWA C509 for resilient seated gate valves, iron body, with bonded epoxy coating conforming to AWWA C550.
- B. Shall be designed for 200 psi working pressure and 400 psi hydrostatic test pressure.
- C. Shall be of iron body, bonded epoxy, and shall have non-rising bronze stem, and shall be wrench operated.
- D. Valves shall open by turning counter-clockwise.
- E. Operating nuts shall be standard two inches square.
- F. Suitable stem guides shall be provided, where required.
- G. Shall be furnished with mechanical joint suitable for connection to pipe into which it will be installed for buried service.
- H. Small Gate Valves: Valves smaller than 3 inches shall conform to level of quality and manufacturing standards established for valves 3 inches and larger by respective AWWA Standards.

## 2.06 VALVE MARKERS

- A. Shall be furnished with each valve installed as indicated on the drawings, with exception of fire hydrant valves.
- B. Shall be of Class A concrete (GA D.O.T. Specifications) four inches by five feet (4" x 5') long, same construction as that of highway right-of-way marker, with letter "V" firmly made into marker six inches below top with 1¼ inch brass plug, one inch below letter "V" which shall be imprinted with distance between valve and marker.

## 2.07 VALVE BOXES AND COVERS

- A. Shall be provided with valves.
- B. Shall be of adjustable screw type, of length required with a minimum 6" of adjustment allowed, and installed as shown on standard details of CONTRACT DRAWINGS.
- C. Shaft shall be 5¼ inch diameter with base to be minimum of 8¾ inch diameter by 9-inch height inside.
- D. Base size and extension piece shall be as required for each individual size of valve and depth.

## 2.08 TAPPING VALVES

- A. CONTRACTOR is to submit the manufacturer, size, and type of mechanical joint tapping sleeve and valve to the ENGINEER for review and approval prior to installation.
- B. Valves and tapping sleeves shall be furnished at locations indicated on CONTRACT DRAWINGS, together with necessary appurtenances.
- C. Tapping machines and competent supervision shall be provided for making of taps in presence of ENGINEER or RESIDENT PROJECT OBSERVER.
- D. Tapping sleeves shall be properly sized to fit existing pipe and shall be of split sleeve type with ends suitable for connection into pipe line into which it will be installed. If fabricated tapping sleeves are used, the largest tap allowed shall be one size smaller than the existing main. The new water main may be increased in size beyond the installed tapping sleeve and valve.
- E. Valves furnished with sleeves shall conform to requirements herein above for gate valves, except for modifications required to permit use of full size cutter through valves.
- F. Outlet of valves shall be mechanical joint for joining with water mains.

## PART 3 EXECUTION

### 3.01 ALIGNMENT AND GRADES

- A. Pipe and appurtenances shall be installed at locations shown on the CONTRACT DRAWINGS and to position, alignment, and grade shown thereon, or in event of conflict, as directed by ENGINEER.
- B. Depth of Pipes
  - 1. Shall be 48 inches measured from finished grade to top of pipe unless otherwise specified.
  - 2. Where obstructions are encountered, depth may be greater than 48 inches.
  - 3. Depths less than 48 inches may be used only when approved by ENGINEER in writing.
- C. Valves shall be installed with stems vertical.
- D. Pipe Curvatures shall be within horizontal or vertical permissible deflection at joint, as specified by manufacturer or AWWA Specification C600 (Latest Edition).

### 3.02 INSTALLING PIPE

- A. General
  - 1. Pipe and appurtenances shall be installed only when trench conditions are suitable.
  - 2. Trenches must be dry.
  - 3. Proper implements, tools, and facilities shall be provided by CONTRACTOR for safe and convenient performance of the work.
- B. Installation
  - 1. Lower pipe, fittings, valves, and hydrants carefully into trench piece by piece by means of derrick, ropes, or other suitable tools or equipment.
  - 2. Prevent damage to water main materials and protective coatings and linings.
  - 3. Do not drop or dump water line materials into trench.
  - 4. Carefully examine pipe and fittings for cracks and other defects while suspended above trench immediately before installation in final position. Defective pipe or fittings shall be clearly marked and shall be removed from site.
  - 5. Clean bell and spigot ends of each piece of pipe thoroughly before pipe is laid.

6. Prevent foreign material from entering pipe while it is being placed in line.
  - a) Provide protective covering for ends of pipe until connection is made to adjacent pipe, if necessary.
  - b) No debris, tools, clothing, or other materials shall be placed in pipe during laying operations.
7. As each length of pipe is placed in trench, spigot end shall be centered in bell and pipe forced home and brought to correct line and grade.
  - a) Pipe shall be secured in place with approved backfill material tamped around it.
  - b) Precautions shall be taken to prevent dirt from entering joint space.
8. Open ends of pipe shall be closed by watertight plug, or other means approved by Engineer, at times when pipe laying is not in progress. If water is in trench, plug shall remain in place until trench is pumped completely dry. Water shall not be allowed to run into pipe at any time during construction.
9. Lay pipe with bell ends facing in direction of laying, unless directed otherwise by Engineer. Where pipe is laid on grade of 10 percent or greater, laying shall start at bottom and shall proceed upward with bell ends of pipe upgrade.

### 3.03 CUTTING PIPE

Cut pipe for inserting valves, fittings, or closure pieces in neat and workmanlike manner without damage to pipe or lining and so as to leave smooth end at right angles to axis of pipe.

### 3.04 DETECTION OF PIPE

- A. Detection tape and wire shall be placed above the water line, as shown on Drawings. Detection wire shall be used for non-ferrous pipe only. Detection tape shall be used for all pipes.
- B. Place tape in trench with printed side up and parallel to the finished surface.
- C. Take necessary precautions to ensure tape is not pulled, distorted, damaged, or otherwise misplaced in completing trench backfill.

### 3.05 JOINTING

- A. Jointing of pipe, fittings, and valves shall be made in strict compliance with manufacturer's printed instructions.
- B. Mechanical Joints
  1. Thoroughly clean outside of spigot and inside of bell.

2. Clean gasket.
3. Tighten nuts with torque limiting wrench.
4. Nuts spaced 180 degrees apart shall be tightened alternately in order to produce equal pressure.

C. Push-On Joints

1. Furnish and install adaptors if required to join bells and spigots of different sizes.
2. Thoroughly clean inside of bell and outside of spigot end.
3. Insert and lubricate gasket using lubricant furnished or recommended by pipe manufacturer.
4. Spigot end of pipe shall be entered into socket with care used to keep joint from contacting ground.
5. Complete joint by forcing plain end to bottom of socket with forked tool or jack-type tool.

3.06 SETTING VALVES AND FITTINGS

- A. Valves, fittings, plugs, and caps shall be set and joined to pipe in manner specified above for cleaning, laying and joining pipe.
- B. Valves shall be set plumb and a valve box shall be provided for every valve.
  1. Valve box shall not transmit shock or stress to valves and shall be centered and plumb over wrench nut of valve, with box cover flush with surface of finished pavement or such other level as may be directed.
  2. **FOR INSTALLATION WHERE THERE ARE ROADSIDE DITCHES, VALVES AND VALVE BOXES SHALL BE PLACED ON THE BACK SIDE OF THE DITCH AT LEAST FIVE (5) FEET FROM THE CENTERLINE OF THE DITCH.**
- C. Backfill around valves shall be carefully tamped in 6 inch layers for full depth of trench with valve box in place.
- D. Provide concrete pad at surface as indicated on CONTRACT DRAWINGS.

3.07 ANCHORAGE

- A. Plugs, caps, tees, bends, and valves, unless otherwise specified, shall be provided with reaction blocking.

- B. Reaction blocking shall be concrete of a mix not leaner than 1 part cement to 2-1/2 parts sand and 5 part stone, and having a compressive strength of not less than 3,000 psi after 28 days.
- C. Blocking shall be placed between solid, unexcavated earth and fitting to be anchored; area of bearing on pipe and on ground in each instance shall be that shown on CONTRACT DRAWINGS or as directed by ENGINEER.
- D. Blocking shall, unless otherwise shown or directed, be so placed that pipe and fitting joints will be accessible for repair.
- E. Metal harness of tie rods or clamps of adequate strength to prevent movement may be used instead of concrete blocking if approved by ENGINEER in writing.
- F. Steel rods or clamps shall be galvanized or bituminous coated.

### 3.08 CONNECTION TO EXISTING MAINS

- A. CONTRACTOR shall coordinate with officials of existing water system regarding connections to existing mains.
- B. Connection to existing mains shall be made at such time as to minimize disruption of water service to public.
- C. Approximate locations of required connections to existing mains are shown on CONTRACT DRAWINGS, but it is CONTRACTOR's responsibility to ascertain exact locations of these mains.
- D. Connections to existing mains shall be made in a complete and workmanlike manner using proper fittings and specials to suit actual conditions.
- E. Existing pipes which are cut or damaged by CONTRACTOR shall be repaired, reconnected, and returned to service in equal or better condition.

### 3.09 STREAM AND UTILITY CROSSINGS

- A. Where indicated on CONTRACT DRAWINGS, or required by conditions encountered, pipe shall be placed beneath stream beds or ditches, around, over, or under sewers, culverts, gas mains, telephone ducts, water mains, or other structures.
  - 1. Do not pass pipe through any drainage pipe, culvert, sewer, or manhole.
  - 2. Provide minimum of 48 inches under stream beds or ditches, unless approved by Engineer in writing.
  - 3. Provide minimum of 6 inch earth or sand cushion between proposed water line and any other utility or structure, or as indicated on drawings.
- B. Where water lines are installed below free flowing streams and storm drainage ditches, ductile iron pipe shall be used for three feet either side of stream bed.

- C. When water lines are installed under wet weather ditches and when approved by ENGINEER, iron pipe is not required.

### 3.10 HYDROSTATIC TESTS

- A. Pressure and leakage tests will be required individually **on each section of line between valves** and shall be conducted in accordance with AWWA C600 and/or AWWA C605.
- B. Pressurization – After the pipe has been laid, all newly laid pipe or each and every valved section thereof shall be subjected to a hydrostatic pressure of 150 psi. Each valved section of pipe shall be slowly filled with water, and the specified test pressure (based on the elevation of the lowest point of the line or section under test and corrected to the elevation of the test gauge) shall be applied using a pump connected to the pipe. Valves shall not be operated in either the opened or closed direction at differential pressures above the rated pressure. The system should be allowed to stabilize at the test pressure before conducting the hydrostatic test.
- C. Air removal – Before applying the specified test pressure, air shall be expelled completely from the section of piping under test. If permanent air vents are not located at all high points, corporation cocks shall be installed at these points to expel the air as the line is filled with water. After the air has been expelled, the corporation cocks shall be closed and the test pressure applied. At the conclusion of the pressure test, the corporation cocks shall be removed and the pipe plugged or left in place as required by the ENGINEER.
- D. Examination – Any exposed pipe, fittings, valves, hydrants, and joints shall be examined carefully during the test. Any damage or defective pipe, fittings, valves, hydrants, or joints that are discovered following the pressure test shall be repaired or replaced with reliable material, and the test shall be repeated until satisfactory results are obtained.
- E. Testing allowance defined – Testing allowance shall be defined as the quantity of makeup water that must be supplied into the newly laid pipe or any valved section thereof to maintain pressure within 5 psi of the specified test pressure after the pipe has been filled with water and the air has been expelled. Testing allowance shall not be measured by a drop in pressure in a test section over a period of time.
- F. Testing allowance – No pipe installation will be accepted if the amount of makeup water is greater than that determined by the following formula:

$$L = \frac{SD \sqrt{P}}{148,000}$$

where L is the allowable leakage in gallons per hour; S is the test length in feet; D is the pipe diameter in inches and P is the average test pressure in pounds per square inch.

- G. Locate, remove, and replace any defective pipe, valves, fittings, or hydrants.

- H. Repeat tests until results are satisfactory to ENGINEER. CONTRACTOR shall submit to the ENGINEER written pressure test results, which shall be signed at the time of inspection by the Town's representative.

### 3.11 DISINFECTION

- A. Pipe, fittings, valves, and appurtenances which have been exposed to contamination by construction shall be thoroughly cleaned, chlorinated, drained, and flushed in accordance with AWWA C651.
- B. Procedure
  1. Flush line prior to disinfection. Flushing shall produce minimum velocity of 2.5 feet per second in pipe.
  2. Disinfect pipe in strict accordance with procedures given in AWWA C651.
  3. Disposal of the heavily chlorinated water shall be in accordance with AWWA C651. The environment to which this water will be discharged shall be inspected. If there is any question that the water will damage the environment, a reducing agent shall be used to neutralize the chlorine.
  4. CONTRACTOR shall have sample analyzed for bacteriological quality by a certified laboratory.
- C. Repeat disinfection procedure until bacteriological analysis results are acceptable to OWNER and Health Department.
- D. Water mains and appurtenances must be completely installed, flushed, disinfected, and satisfactory bacteriological sample results received prior to permanent connections being made to the existing water system, or service connections activated to individual water customers. Sanitary construction practices must be followed during installation of the final connection, so that there is no contamination of the new or existing water main with foreign matter or groundwater.

### 3.12 CLEAN-UP AND RESTORATION

- A. Before work shall be considered complete, material not used and rubbish of every character must be removed from job site.
- B. Fences and other private or public facilities and structures disturbed must be in essentially a good condition as existed before work was done.
- C. Subsequent settlement of pavement or backfill, or erosion over or in trenches shall be replaced or repaired by CONTRACTOR and surface brought to grade.
- D. Special precautions shall be taken to prevent storm water erosion of trenching.

- E. Storm water culverts and structures shall be kept cleaned of mud, debris, and silt caused by construction.
- F. Any and all items disturbed by construction shall in every case be restored to their original conditions, as closely as possible, after completion of construction.

#### PART 4 MEASUREMENT AND PAYMENT

##### 4.01 WATER LINES

- A. The quantities of the various sizes and types of water lines will be measured along the centerline of the pipe from center of fitting to center of fitting or to the end of the pipeline. No deduction will be made for fittings or valves.
- B. The price bid shall include, but not be limited to, the pipe material indicated, all fittings, gaskets, bolts, glands, concrete blocking, detection tape and wire, connections to existing water mains, all labor, equipment, clearing and removal and disposal of clearing debris, stripping, storing, and replacement of top soil in lawn and garden areas, excavation, dewatering of trenches, removal and replacement of signs and mailboxes in the path of construction activities, replacement of mailbox approaches, fences, curb and gutter, protection of existing utilities (both overhead and underground), storm pipes, culverts, drainage ditches, all benching, sheeting and bracing, crushed stone bedding, tamping and compaction and backfilling, roadway shoulder repairs, traffic maintenance and protection, dressing and final grading, grassing, testing, cleanup, and all other work incidental to place the water line as shown or indicated in the CONTRACT DOCUMENTS.

##### 4.02 VALVES

- A. The quantities of the various sizes and types of valves will be the actual number installed by the CONTRACTOR and approved by the ENGINEER.
- B. The price bid shall include, but not be limited to, the valve, all labor, necessary equipment, fittings, rodding, blocking, concrete pad, valve box or manhole. Valves shall be paid for at the unit price bid. No separate payment shall be made for connecting to existing lines. It shall be included in the price bid for tapping sleeve and valves.

##### 4.03 FITTINGS

Fittings shall be included in the cost of the water line.

##### 4.04 TAPPING SLEEVE AND VALVE

- A. The quantities of the various sizes and types will be the actual number installed by the CONTRACTOR and approved by the ENGINEER.
- B. The price bid shall include, but not be limited to, the valve, tapping sleeve, valve box, valve marker, concrete pad, all labor and necessary equipment. Valves shall be paid for at the unit price bid. No separate payment shall be made for connecting to existing lines.

4.05 WET CUT-IN

- A. The quantities of the various sizes and types will be the actual number installed by the CONTRACTOR and approved by the ENGINEER.
- B. The price bid shall include, but not be limited to, all fittings, labor, necessary equipment, and other work in connection with or incidental to the construction of this bid item.

4.06 RAISE EXISTING VALVE BOX

- A. The quantity will be the actual number of existing valve boxes raised.
- B. The unit price bid shall include, but not be limited to, earthwork, additional riser section, new valve box (if needed), and all related materials and labor.

END OF SECTION

## SECTION 02665

### WATER SERVICE CONNECTIONS

#### PART 1 GENERAL

##### 1.01 SCOPE OF WORK

WORK covered by this Section consists of furnishing all materials and installation of all single residence and small commercial service connections to the water system.

##### 1.02 RELATED WORK

Section 02660 - Water Distribution System

##### 1.03 REFERENCES

- A. Polyethylene (PE) Pressure Pipe, Tubing, and Fittings, 1/2 inch through 3 inch, for Water (AWWA C901).
- B. Cold Water Meters - Displacement Type (AWWA C700).
- C. Specifications for Gray-Iron Castings (ASTM A-48-74).

#### PART 2 PRODUCTS

##### 2.01 SERVICE TUBING

- A. Shall be 3/4 inch polyethylene pipe rated for a working pressure of 200 psi at 73 degrees F. Pipe shall conform to ASTM D2737-SDR9.
- B. Tubing O.D. shall be compatible with accessories specified herein below.

##### 2.02 ACCESSORIES

- A. Shall be compatible with pipe furnished.
- B. Service saddles shall be heavy duty double strap malleable iron service saddles. Iron body shall meet ASTM A-47 ductile iron. Bolts or straps shall be minimum 1/2" diameter steel with stainless nuts.
- C. Corporation stop shall be Ford Catalog Number F1000, 3/4-inch size.
- D. Curb stop shall be FORD catalog number B43-332 W, 3/4" size.

PART 3 EXECUTION

3.01 GENERAL

- A. Service connections shall be installed in the same manner as water distribution mains, and in accordance with Section 02660 of these Specifications, except for depth which shall be 18 inches at the meter box.
- B. Meter boxes shall be placed as shown on the construction drawings or as directed by OWNER.
- C. Service connections shall be made where directed by the OWNER.
- D. Jack and bore service tubing under pavement. No pavement cutting will be permitted.
- E. Disinfection shall be in strict accordance with AWWA C651. CONTRACTOR shall have sample analyzed for bacteriological quality by a certified laboratory.

PART 4 MEASUREMENT AND PAYMENT

4.01 WATER SERVICE RELOCATION

- A. The quantity of existing water service relocations will be the actual number relocated.
- B. The unit price bid shall include, but not be limited to, saddle, corporation stop, service piping, and all related materials and labor.

4.02 WATER SERVICE LINE RECONNECTION

- A. The quantity of existing water service line reconnections will be the actual number reconnected.
- B. The unit price bid shall include, but not be limited to, saddle, corporation stop, service piping, and all related materials and labor.

END OF SECTION

## SECTION 02750

### PROTECTION, RELOCATION AND RESTORATION OF EXISTING UTILITIES

#### PART 1 GENERAL

##### 1.01 SCOPE OF WORK

- A. CONTRACTOR shall relocate or restore, as indicated on CONTRACT DRAWINGS or as directed by ENGINEER, all existing utilities. **The Utilities Protection Center (UPC) must be contacted at least three regular business days before work begins. The UPC can be reached at the state-wide toll-free number: 811.**
- B. CONTRACTOR shall be required, at his own expense, to do everything necessary to protect, support, and sustain all sewers, culverts, water, or gas pipes, electric lights, power, telephone, or telegraph poles or conduits, and other fixtures laid across or along site of WORK, even to the extent of using hand labor in making trench openings under or over these. OWNER, as well as company or corporation owning said pipes, poles, or conduits must be notified in advance of same by CONTRACTOR, before any such fixtures are removed or disturbed. In case any of said sewer, gas, or water pipes, service pipes, electric lights, power, telephone or telegraph poles or conduits, or other fixtures are damaged they shall be repaired by authorities having control of the same, and expense of said repairs shall be paid by CONTRACTOR or deducted from monies which are due or to become due said CONTRACTOR under this Contract.
- C. No underground or overhead facilities encountered shall be disturbed without proper authority from OWNER, and then only in such manner as OWNER may prescribe and approve.
- D. Should it become necessary to change position, or permanently or temporarily remove any electric conduits, telephone conduits, water pipes, gas pipes, sewerage pipes, or other pipes, conduits, or wires in order to clear structure being built or to permit CONTRACTOR to use a particular method of construction CONTRACTOR shall cease work if necessary, until satisfactory arrangements shall have been made by owners of said pipes, wires, or conduit, to properly care for or relocate same as necessary to permit WORK to proceed as required for proper completion of Contract.
- E. No claims for damages will be allowed CONTRACTOR on account of any delay occasioned thereby.

##### 1.02 GENERAL CONDITIONS

- A. In addition to showing structures to be built under this Contract, Drawings show certain information obtained by ENGINEER regarding pipes, pole lines, conduits, and other structures which exist along lines of WORK, both at and below surface of ground.

- B. ENGINEER and OWNER expressly disclaim any responsibility for accuracy or completeness of information given on Drawings with regard to existing structures, and CONTRACTOR will not be entitled to any extra compensation on account of inaccuracy or incompleteness of such information, said structures being indicated only for convenience of CONTRACTOR who must verify information to his own satisfaction.
- C. Information given upon Drawings will not relieve CONTRACTOR of his obligation to support and protect all pipes, conduits, and other structures which may be encountered during construction of WORK, and to make good all damages done to such pipes, conduits, and other structures, as provided in these Contract Documents.
- D. CONTRACTOR shall locate all underground obstructions prior to excavation so as to prevent any damage to those services or other utilities.
- E. Any such damages must be repaired without delay and cost of such repairs must be borne by CONTRACTOR. All costs for temporary services are the full financial responsibility of the CONTRACTOR.

## PART 2 PRODUCTS

NOT USED

## PART 3 EXECUTION

### 3.01 RELOCATION OF WATER LINES

- A. Only when directed and approved by ENGINEER shall any water mains, service lines, or water meters be relocated during progress of WORK.
- B. Material used during relocation of any water mains or appurtenances shall be of same size and strength as existing material.
- C. When existing water lines and appurtenances are removed for relocation and are not to be replaced by new material, they shall be suitably stored until they are relocated.
- D. When existing water lines and appurtenances are removed for relocation and are to be replaced by new material, remaining materials shall be disposed of by CONTRACTOR at his expense.

### 3.02 RELOCATION OF SANITARY SEWERS

- A. Only when directed and approved by ENGINEER shall any sanitary sewer lines or service laterals be relocated during progress of WORK.

- B. Material used during relocation of any sanitary lines shall be of same size and strength as existing material. As a minimum, materials shall be as specified herein.
- C. Removed material during relocation of sanitary sewers shall be disposed of by CONTRACTOR at his expense.

### 3.03 RELOCATION OF ELECTRIC POWER POLES AND CONDUITS

- A. Only when directed and approved by ENGINEER shall power pole relocation and electric service be relocated during progress of WORK. Relocation shall be performed by Local Electrical Department.
- B. Temporary electrical service shall be provided when permanent electric service will be interrupted for more than one day.
- C. Cost of relocation of all electric utilities shall be responsibility of CONTRACTOR.

### 3.04 RELOCATION OF GAS LINES

- A. Only when directed and approved by ENGINEER shall any gas mains and gas services be relocated during progress of WORK. Relocation shall be performed by local gas company.
- B. Temporary gas service shall be provided when permanent gas service will be interrupted for more than one day.
- C. Cost of relocation for gas mains shall be responsibility of CONTRACTOR.

### 3.05 RELOCATION OF TELEPHONE

- A. Only when directed and approved by ENGINEER shall any telephone/cable television cable and conduit be relocated during progress of WORK. Relocation shall be performed by local telephone company..
- B. Temporary telephone service by digital phone service shall be provided when telephone service will be interrupted for more than one day.
- C. Cost of relocation of telephone/cable television cables and conduits, and temporary phone service, shall be responsibility of CONTRACTOR.

## PART 4 MEASUREMENT AND PAYMENT

No separate measurement or payment will be made for protection, relocation and restoration of existing utilities for water lines or other pipes, or for any other appurtenant facilities such as valves, fire hydrants, etc. unless shown otherwise on the Bid Schedule. Payment for all such work shall be included in the unit prices bid per linear foot of the various sizes and type of pipe laid as provided for in contract Bid Schedule.

END OF SECTION

## SECTION 02905

### SITE RESTORATION

#### PART 1 GENERAL

##### 1.01 SCOPE OF WORK

- A. Work included in this section consists of, but is not limited to: the restoration of pavement (asphalt, concrete and granular), driveway, concrete curbs and gutters, sidewalks, fences, walls, underground and above ground utilities, repair, replacement and/or relocation. Restoration of the landscaping, i.e., shrubs, trees and grassing, is also part of this work.
- B. The CONTRACTOR shall visit the site prior to submitting a bid and become familiar with the existing conditions. No additional compensation or time extensions will be given due to the contractor's execution of the work described above.
- C. No separate payment will be made for work covered under this section. Costs should be included with the price bid for other items.

##### 1.02 QUALITY ASSURANCE

- A. The CONTRACTOR shall notify the Utility Protection Center at least 72 hours prior to beginning any construction. Call TOLL FREE: 811.
- B. Any existing site improvements damaged during construction will be repaired at the CONTRACTOR's expense, to its existing condition or as directed by the ENGINEER.

#### PART 2 PRODUCTS

##### 2.01 MATERIALS

Existing materials may be reused when restoring the construction site to original condition unless those materials have been damaged or deteriorated in any way. If material cannot be reused as determined by the ENGINEER, it shall be replaced with new material of like type.

#### PART 3 EXECUTION

##### 3.01 GENERAL

Particular care shall be taken to minimize disturbance to existing site improvements within the limits of construction. The CONTRACTOR will take whatever measures are necessary to prevent damage which may include, but is not limited to, erection of barriers, tree protective fencing, shoring and bracing of excavations and staging of the construction.

### 3.02 CONSTRUCTION

All work will proceed in an orderly sequence and the construction will be done in a workmanlike manner. No excavations will be allowed to remain open overnight and they will either be properly backfilled or covered with steel plates to allow safe crossing of trenches by vehicles and/or pedestrians.

### 3.03 MAINTENANCE

- A. The CONTRACTOR will notify the ENGINEER to review restored areas as soon as construction is complete and no further disturbances/damages would be likely to occur.
- B. The CONTRACTOR shall warrant the work free from defects of material and workmanship for a period of one year after acceptance.
- C. Clean up work areas by removing any scraps, rubbish or surplus material and dispose of them properly off the project site.
- D. Wash and hose down paved surfaces to remove all mud, debris, and other extraneous material, just prior to final review.

## PART 4 MEASUREMENT AND PAYMENT

No separate measurement or payment will be made for site restoration. Payment for all such work shall be included in the unit prices bid per linear foot of the various sizes and types of pipe laid as provided for in the contract Bid Schedule.

END OF SECTION